The "Lucian Blaga" University of Sibiu, Romania

The LBUS Library

The Librarians' Association of Romania

FIRST INTERNATIONAL CONFERENCE in ROMANIA

on

Information Literacy / Cultura Informaţiei

CONFERENCE PROCEEDINGS

April 21st - 23rd 2010, Sibiu, Romania

Editors:
Prof. dr. Angela REPANOVICI
Dr.eng. Maria Rodica VOLOVICI

Sibiu - 2010

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Honorary President of the conference
Prof.dr. Constantin OPREAN
Rector of the "Lucian Blaga" University of Sibiu

Foreword

*The **First International Conference in Romania on Information Literacy**, Sibiu 2010, stands for a major event that gives the specialists in Librarianship and Information Science the great opportunity to meet in a friendly and proficient atmosphere.*
*The Conference is organized by the **Library of the „Lucian Blaga" University of Sibiu** togheter with the **Librarians' Association of Romania**, the Information Literacy Department.*

Conference Themes

- Information Literacy (IL)
- IL and research
- Developing the IL practitioner
- Measuring impact
- Using technology to teach information literacy
- Information Science in Library
- Digital Library for online teaching and learning
- The creation of effective learning environments
- The challenges posed by diversity
- Making connections: cross-sectorial initiatives
- Innovative practice
- Information Organization, Information Architecture and Information Retrieval

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Libraries and Information Literacy

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Abstract

Information Literacy involves the development of theoretical and practical knowledge that allows the identification of information needs, followed by the location, evaluation and use of the retrieved information, in an attempt to solve a problem, to find an answer, and to use the information retrieved by processing it into a **new product with added value**.

The terminology and the concepts specific to Information Literacy in the English language are compared and contrasted with the terminology in French and Romanian. The skills specific to developing an information literate person are featured along with the steps one has to take in order to make proper use of information during one's lifelong learning. Libraries and librarians of all types are all agents directly involved in promoting Infrmation Literacy, in fostering the development of the information society and in assisting citizens to function efficiently in an increasingly computerized society. Libraries initiate and develop programs to assist the public in finding the information they need and at the same time to develop the skills that will empower them to become independent searchers and efficient users of information. Librarians collaborate with educational institutions in curriculum development, to ensure that the outcomes of teaching and learning include developing adequate skills of retrieving and evaluating information that is to be used efficiently and fairly, within the framework of information ethics.

Best practices in American libraries are highlighted with application to the context of the Romanian library scene.

Key words: information literacy, lifelong learning, information evaluation, use and users of information

(urmează textul din prezentarea în Power-Point, în româneşte)

Puțină terminologie

- Information
  - Informație vs. Informare
  - Produs / Proces
- Communication
  - Comunicație / Comunicare
  - Produs / Proces
- Information literacy / la culture (la maîtrise) de l'information
  - Alfabetizare informaționala
  - Cultura informaționala
  - Cultura informației
  - Inteligența informațională
- Computer literacy

Cultura informaţiei / Societatea informaţiei

- Noile tehnologii
  - De informare
    - Creare, stocare, transmisie de date
  - De comunicare
    - De transmisie de date
- Inteligenţa artificială
  - Organizarea şi regăsirea informaţiei
- Internetul
- Cantitatea de informaţie

Cultura informaţiei

- Un ansamblu de cunoştinţe teoretice şi practice ce permit identificarea unei nevoi informaţionale, urmată de localizarea, evaluarea şi utilizarea informaţiei găsite, într-un demers de rezolvare a unei probleme, de găsire a unui răspuns şi de comunicare a informaţiei regăsite şi prelucrate, printr-un produs nou cu valoare adaugată.

Etape

- Nevoia de informare
- Acces
- Selecţie
- Evaluare
- Organizare
- Utilizare
- Rezolvarea unei probleme (Problem solving)
- Luarea de decizii (Decision making)
- Gandire critică (Critical thinking)
- PRODUS NOU, CU VALOARE ADAUGATĂ!

Cultura informaţiei

- Pentru a avea o cultură informaţională o persoană trebuie:
  - să conştientizeze necesitatea informaţiei,
  - să poată localiza,
  - să poată evalua şi
  - să poată utiliza eficient informaţia.

(ALA, 1989)

Societatea informaţiei

- Revoluţia informaţiei
- Cantitatea de informaţii
- Rata de creştere a informaţiei
  - în format digital
- Explozia informaţională
- Măsurarea informaţiei
  - Statistici
- Information overload syndrome
  - http://www.youtube.com/watch?v=CXFEBbPIEOI

Aptitudinea / Abilitatea

1. De a recunoaste nevoia de informare
2. De a identifica modalităţi de rezolvare a nevoii de informare
3. De a identifica strategii de a localiza informaţii
4. De a localiza şi accesa informaţii
5. De a compara şi evalua informaţii obtinute din diverse (re)surse
6. De a organiza, folosi şi transmite (comunica) celor din jur informaţia (re)găsită
7. De a sintetiza, prelucra şi valorifica informaţia existentă într-un produs nou, contribuind astfel la crearea de cunoştinţe (produse informaţionale) noi

Societatea cunoaşterii

- Societatea bazată pe cunoaştere, învăţare, instruire, educaţie
- Life Long Learning (LLL)
- Life Long Literacy (LLL)
- Învăţarea / instruirea / educaţia permanentă
- Învăţarea / instruirea / educaţia continuă
- Învăţarea / instruirea / educaţia / cunoaşterea pe tot parcursul vieţii

Tipuri de Literacy / Informare / Cunoaştere

- Alphabetic
- Functional
- Social
- Information
- Digital information
- Health
- Financial
- Computer
- IT
- Visual

Rolul bibliotecii în Cultura informaţiei

- Relaţia dintre utilizatori şi bibliotecă s-a schimbat odată cu apariţia
  - Internetului
  - A resurselor electronice
- Biblioteca îşi redefineşte
  - Identitatea, serviciile, colecţiile, utilizatorii
  - Misiunea, spaţiile
- Biblioteca devine creatoare de conţinut
- Biblioteca devine filtru, promovează info de calitate

Rolul bibliotecarului în Cultura informaţiei

- Bibliotecarul devine o punte de legătură/ un mediator/ între informaţie şi utilizator/client
- Bibliotecarul facilitează accesul la informaţie
- Bibliotecarul devine Instructor / Învăţător / Pedagog
- Bibliotecarul colaborează cu cadrele didactice din universitate, nu numai cu studenţii

Cultura informaţiei: Obiective

- îi ajută pe studenţi şi profesori:
- Să devină căutători de informaţie eficienţi
- Să folosească informaţia în diverse contexte sociale (la studii, în societate, la locul de muncă, acasă)

Scopul final

- Utilizatorul
- Va folosi eficient IT pentru IR
- Va regăsi info independent sau cu ajutorul intermediarului
- Va evalua info
- Va încorpora noua info într-o bază de info şi sistem de valori la nivel personal
- Va folosi info nou dobândită în mod conştient şi creator pt a defini noi perspective
- Va aplica noile cunoştinţe în viaţa de zi cu zi
- Va transmite celor din jur cunoştinţele nou dobândite
- E-aptitudini
- E-abilitati
- E-Inteligenta
- E-Education
- E-Learning
- E-Teaching
- E-Society
- E-Medicine
- E-Health
- E-Publishing
- E-Library
- E-Book

- E-Privacy
- E-Trust
- E-Risk
- E-guvernare
- E-administrare
- E-Business

- E-Procurement
- E-Commerce
- E-Art
- E-Science
- E-Collaboration
- E-Inclusion

Patru elemente ale unui program de Cultura informaţiei: Reforma curiculară

1. Asigurarea de resurse ce pot duce la dezvoltarea de aptitudini (regăsire de informaţie **de calitate** pe internet). Ex: asistenţa directă la point of need, seminarii, workshopuri, tutoriale online.

2. Dezvoltarea şi promovarea de curicule (indiferent de curs!!!) care să includă printre obiective dobândirea de aptitudini specifice societăţii informării. Teme ce presupun cercetare independntă şi cu ajutorul bibliotecarului.

3. Curicule ce necesită angajarea în activităţi de instruire ce presupun interacţiunea permanentă cu informaţia digitală.

4. Curicule ce conduc la dezvoltarea aptitudinilor de evaluare a informaţiei, de dezvoltare a gândirii critice bazată pe cercetare şi documentare ce au la bază practici de informare. Curs obligatoriu Regăsirea de info şi utilizarea informaţiei predat de bibliotecari.

Christine Bruce (2002). Information Literacy as a catalyst for educational change: a background paper. www.nclis.gov/libinter

Învăţământul superior

- Association of College and Research Libraries (ACRL)
- 5 standarde
- 22 indicatori de performanţă
- Traduse în română cu acordul ACRL
    - http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf
    - http://www.acrl.org/ala/mgrps/divs/acrl/standards/profstandards.pdf

Cultura informaţiei

- Cultura informaţiei reprezintă chintesenţa dezvoltării sociale, culturale şi economice a tuturor naţiunilor şi comunităţilor, a instituţiilor şi indivizilor în secolul XXI.

- Asimilarea culturii informaţiei constituie parte componentă a drepturilor fundamentale ale omului de a învăţa pe parcursul întregii vieţi

    Unesco, Towards an Information Literate Society

http://portal.unesco.org/ci/en/ev.php-URL_ID=13272&URL_DO=DO_TOPIC&URL_SECTION=201.html

Information literacy

- "key to social, cultural and economic development of nations and communities, institutions and individuals in the 21st century" and declared its acquisition as "part of the basic **human right** of life long learning"

  Unesco, Towards an Information Literate Society

  http://portal.unesco.org/ci/en/ev.php-URL_ID=13272&URL_DO=DO_TOPIC&URL_SECTION=201.html

Resurse

- Information Literacy-Resources for Those Who Teach It
  - http://www.librarysupportstaff.com/teachlib.html#websites
- LOEX—Clearinghouse for Library Instruction and Information Literacy
  - http://www.emich.edu/public/loex/loex.html
- Standarde
  - http://dis.shef.ac.uk/literacy/standards.htm
- IFLA
  - http://www.ifla.org/en/information-literacy
- YouTube

Câteva exemple

- Cum să facem o prezentare powerpoint
- Cum să facem căutari în baze de date
- Cum evaluăm informația pe Internet
- Plagiatura
- Cum să începem o cercetare
- Folosirea fotografiilor pentru cercetare/documentare
- Cum să facem o bibliografie
- Cum să folosim biblioteca
- Tutoriale online
  - http://www.librarysupportstaff.com/ed4you.html

YouTube

- The Wayne State University Libraries now have a YouTube channel dedicated to teaching our users how to take advantage of all kinds of library resources.
  There are currently several videos posted to teach users anything from finding books and articles to identifying plagiarism and evaluating Web sites for credible information.
  - http://www.youtube.com/user/wsuinst#p/a

Alte exemple

- Cum să folosim retelele de socializare prin Internet
- Cum să facem cumpărături pe Internet
- Cum să folosim serviciile online ale diverselor instituții guvernamentale
- Cum să regăsim informație medicală online
- Cum să ne arhivăm colecția de fotografii personale
- Cum să folosim BlackBoard

Servicii pentru profesori

- Office for Teaching and Learning (OTL)
  - http://www.otl.wayne.edu/
- Programe pentru cadrele didactice
- Seminarii, mese rotunde, schimburi de experiență
- Folosirea noilor tehnologii în predare
- Asistența personalizată
- Sandbox

Ce vă propun

- Stabilirea unui cadru de colaborare institutională de tip LOEX
- Constituirea unui depozit centralizator al tutorialelor (cu acces liber)
- Toate tipurile de biblioteci pot contribui
- Poate fi chiar Biblioteca Universitatii Lucian Blaga Sibiu sau Secția de Cultura Informației a ABR
- Introducerea în programa universitară pentru anul I a unui curs obligatoriu de Cultura Informației predat de bibliotecari
- Constituirea unui oficiu (de tipul OTL) de asistență pentru profesori
- Disponibilitatea bibliotecarului de a ajuta, de a se pune la dispoziția celui care are nevoie de asistență (student, profesor, publicul larg)

CCC

Colaborare-Coordonare-Comunicare

Un bun exemplu

- Seacția de Cultura Informației -- BAR

17 May - World Information Society Day

- In March 2006 the UN General Assembly proclaimed 17 May as World Information Society Day.
- The Day will help raise awareness of the possibilities that the use of the Internet and other information and communication technologies can bring to societies and economies, as well as of ways to bridge the digital divide.
    - http://www.un.org/depts/dhl/events/infosociety/

Zâmbiți, vă rog!

http://www.matraguna.net/2009/08/yellow-smiley-face-fata-galbena.html

Un film creat in 2009 ale carui personaje sunt Mia si Florin Popescu, doi soti in jur de 50 ani care incearca sa comunice prin internet cu fiul lor Alex care este in SUA. Cei doi incearca sa intre in contact cu fiul lor prin Yahoo Messanger in baza instructiunilor trimise de acesta intr-o scrisoare ... savuros ! (15 min.)

The Increasing Importance of Information Literacy as a 21st Century Skill[*]

Serap KURBANOĞLU

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Never before in the history of the planet have so many people –on their own-

had the ability to find so much information

about so many things and about so many other people

T. L. Friedman, 2005

Introduction

The concept of information literacy has long been discussed and its importance for life long learning has long been recognized in the literature of librarianship and information science. Today, as the amount of information increases, quality of information becomes uncertain due to the new technologies and tools such as Web 2.0 which allow everyone to participate in creating and spreading information. Additionally, characteristics of the new generation (known as Internet or Google generation), such as believing that what is on the web is correct, require high level critical thinking skills. As a result, information literacy skills become a survival skill in the information age, and the traditional content and the mode of information literacy instruction require alteration.

Information Literacy and Life Long Learning

Transition to an information society demands today's societies to restructure themselves. There is neither an individual nor an occupation today, which hasn't been affected by the current economic, social and technological change. It is almost obligatory for any individual to become acquainted with these new developments. Individuals who fail to keep up with the change are likely to fall progressively behind, and to become less employable and less competitive (Candy, 2002). An existing or static body of knowledge is no longer enough to cope with information explosion, changing work patterns and rapid growth of technologies. While providing countless opportunities, developments have dramatically altered the knowledge and abilities individuals need to live productively. As a result, there is a pressure for learning throughout life to meet the challenge of change. On one hand, life long learning helps to maintain economic competitiveness and employability; on the other hand, it is the best way to figth against the social exclusion. There is no doupt that lifelong learning is the key to ensuring social integration and to achieving equal opportunities.

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[*] This paper is a revised and enlarged edition of a paper presented in the *Electronic Library: International Scientific Conference,* Belgrade, September 25th-28th, 2008.

Lifelong learning refers to learning across the lifespan. It extends well beyond the boundaries of formal education, and promotes the development of knowledge and competences that will enable each individual to adapt himself/herself to the information society (Candy, 2002). Lifelong learning can be defined as a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and enjoyment in all roles, circumstances and environments (WILL, 1994). Lifelong learning offers the opportunity for people to bring their knowledge up to date and enables them to work consciously at extending their intellectual, vocational and personal horizons by seeking to understand and grasp the significant advances of recent times, which have affected and transformed their worlds (Chapman, 2002).

Societies of the information age need confident and independent learners equipped for lifelong learning. Hence, the manpower needed by today's societies can be described as effective consumers of information who can find, evaluate, use, produce and share information. Information literacy forms the basis for lifelong learning by enabling learners to become more self-directed, and assume greater control over their own learning (Abid, 2004). An information-literate individual, who has the ability to use information to acquire knowledge, is an independent lifelong learner and is able to contribute productively, effectively and responsibly to the society (AASL & AECT. 1998). Information literate people are critical thinkers and effective consumers of information. Information literacy – the ability to recognize an information need and then locate, evaluate, and effectively use the needed information – is the key skill required not only for lifelong learning but also for success in the information-based societies. An information literate individual knows how to learn and is capable to achieve lifelong learning.

Information literate individuals are well prepared for whatever challenges and changes arise in their careers and personal lives (Breivik, 2000). Information literacy is about developing people's critical and creative abilities and it is part of the basic entitlement of every individual to freedom of expression and the right to information and is instrumental in building sustaining democracy (Abid, 2004).

Information Literacy as a Survival Skill in the 21st Century

Information literacy has been recognized as a survival skill in the information age. The impact of the new century on information literacy can be emphasized mainly under two main categories: The increasing importance of the information literacy skills, and the expanding content and the changing mode of information literacy instruction.

Increasing Importance of Information Literacy

Mastering information literacy skills is crucial to survival in a world where change is the basic driving force of the daily life. Information is, in fact, the most precious resource of the mankind. The challenge today is to make sense of a world described by some as "information overload". The issue is no longer not having enough information; it is the opposite – too much information, in various formats and not all of equal value (Rockman, 2004). Today individuals are faced with diverse information choices in their studies, in the workplace, and in their lives. Information is available through community resources, special interest organisations, manufacturers and service providers, media, libraries, and the Internet.

In a time of millions of Internet sites, billions of Web pages, more than a million items in a typical medium-sized academic library, about 170 terabytes of information on the surface of World Wide Web, some 92,000 terabytes of information on deep web, millions of active weblogs (blogs) (Lyman and Varian 2003), the ability to act confidently and not be paralyzed by information

overload is critical. These ongoing proliferation of information poses special challenges in accessing, evaluating, understanding and using information in an ethical manner; and requires infromation literacy skills to meet these challlenges.

Increasingly, information comes unfiltered. This raises questions about authenticity, validity, and reliability. New technologies associated with Web 2.0 allow everyone to participate in exploring, creating, spreading and commenting on information. This trend toward user-driven content is growing with the use of Web 2.0 tools such as, social networking, blogs, wikis, tagging, and folksonomies, which make it easier to communicate, collaborate and share information (Secker, 2008). Web 2.0 tools enable the rapid production and consumption of information. The line between the creation and consumption of content is blurred (Godwin, 2006). Web 2.0 sources are another form of publication and the lack of peer review and editorship are the challenges they introduce. They are not of the same reliability as traditional resources, but this does not eliminate their value, this however increases importance of critical thinking skills.

The new generation, who were born during the computer age and grew up in a technological world are referred to as *Generation Y, Echo Boomers, The Plug-and-Play-Generation, Millenials, The Game Boy Generation, The-Cut-and-Paste Generation* (Rockman, 2004). Although they may have taught themselves how to surf the Internet, download files, or send e-mail, they have not taught themselves to be efficient in their searches, or to evalute the sources of the information they are using. They are computer literate, but numerous studies have shown that they are not information literate. Certain caharacteristics of this generation, such as navigating the web by trial and error and ignoring manuals and help sheets, believing that everything is on the Web and what is written down and on the Web is correct, being either confused or ignorant about ethical issues of the content they are using, cutting and pasting rather than reading and understanding what they find (Godwin, 2006; Salo, 2006), prove that information literacy skills become curial than ever for this generation.

Furthermore, especially with the development of Web 2.0 technologies and sources, ethical issues such as intellectual property rights, privacy, and plagirism have become blurred. Ease of copying information, difficulties in identifying the original source of information, reuse of information without acknowledgement and lack of knowledge on how to cite these new sources of information are just a few problems to address.

The need for guidance on how to access relevant information among the piles of information available in a timely manner, and more crucially, the ethical use and evaluation of the quality of information have never been so important. Individuals of the twenty first century require assistance more then ever through the information maze, particularly with the growth of unfiltered content deriving from Web 2.0 applications.

The Expanding Content and The Changing Mode of Information Literacy Instruction

The uncertain quality and expanding quantity of information resources, variable methods of access to information, challenges in evaluating and using information in an ethical manner and the characteristics of the new generation imply changes in information literacy instruction.

First of all, the content of information literacy instruction needs to be expanded to cover new sources of information, mainly Web 2.0 sources, such as blogs, wikis and social networks as well as how to access, use, contribute, evaluate and cite them. Web 2.0 tools, such as RSS feeds, tags and folksonomies should also be covered along with the privacy and copyright issues of social software

Secondly, the mode of information literacy instruction needs to be changed. Librarians need to meet the new generation of users where they are. Since information literacy becomes even more critical, librarians need new teaching tools which attract rather than patronise or bore the users. Web 2.0 seems to be one of the best options to meet new generation's learning styles and time-shifting requirements.

Web 2.0 technologies offer libraries many opportunities such as serving their existing audiences better, reaching out beyond the walls and Web sites of the institution, reaching potential beneficiaries where they happen to be, and reaching them in association with the task that they happen to be undertaking (Miller, 2005)

Web 2.0 has potential for teaching and learning. For instance, blogs could be be used for active learning and also for marketing, wikis could be used to encourage collaborative work in classes, blogs and wikis could be used for developing evaluative skills, YouTube could be used to upload video materials for promotional or training purposes, Facebook could be used to publicise various instructional activities, podcasts technology could be used for library tours, Second Life could be used to offer training sessions. Evidence suggests that several libraries are already experimenting with these ideas (Godwin, 2006; Secker, 2008).

Librarians will need to use the new tools (Web 2.0) where appropriate, to promote their information literacy instruction. This technology should be used if librarians are to appear relevant to the new generation.

Conclusion

Information literacy skills have been recognized as one of the most salient skills for the individulas of information societies for many reasons. First of all, it is a prerequisite for lifelong learning as well as for the creation of new knowledge. Secondly, it is vital for participative citizenship, social inclusion and for the competitive advantage of individuals, enterprises, regions, and nations. Thirdly it is esential for socio-economic development and for survival in the future.

Today, certain developments such as proliferation of information resources, the uncertain quality of information and the challenges in evaluating and using it in an ethical manner along with the characteristics of the new generation constantly enhance the importance of information literacy skills.

Since the importance of information literacy proliferates, librarians' role as information literacy instructors requires a serious consideration of new teaching tools to attract the Internet generation. Following the developments of Web 2.0, Library 2.0 and Librarian 2.0, *Information Literacy Instruction 2.0* which would give library users a participatory role in the development and improvement of instruction programs can be suggested. Users, should they desire, would be able to tailor information literacy instruction to best meet their own needs and would be involved in training other users. Librarians would know when users are lost, and would offer immediate and real-time assistance to solve the information problem in their hands; and would be able to use this opportunity to equipe their users with information literacyl skills.

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Information literacy in the South Eastern European region: the way forward

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Abstract

A diagnosis of the state of information literacy in the SEE region, based on earlier research and insights (Proposal for an IL Platform and an Action Plan for Central and South-East European Countries, UNESCO "Training the Trainers in Information Literacy" Workshop, Ankara) gives the overall impression that the majority of countries in this part of Europe is lagging behind information literacy achievements. Due to the impact of information literacy on the development of knowledge-based societies and economies, the lack of clearly stated information literacy agendas deepens social and economical disparities and divides between this region and other parts of Europe.

The authors of this paper believe that the obstacles to information literacy in the countries across the region are more or less the same and that this similarities are caused by the fact that information literacy is a highly contextual phenomenon, determined by different socio-technical, political or historical factors. On the other hand, all those countries are experiencing changes and transformations that provide opportunities to increase awareness of the vital importance of information literacy.

In the paper the authors will analyze the variables that have determined the poor state of information literacy in the region, point out concrete opportunities that emerge from contextual factors experienced by all those countries (e.g. educational reforms, the Bologna Agreement) and discuss further steps that need to be done in order to achieve some advancement in this field.

1. Introduction

Learning and subsequently lifelong learning is one of the most persistent and widespread concepts determining strategies and policies in a wide range of sectors and areas. Lifelong learning is regularly recognized and integrated into different policies, e.g. educational, information, communication, social, labour and other policies, and it determines developments in public discourse and everyday life.

Since information is the basic building block of education, and information and learning processes have always been connected and interrelated, with lifelong learning, information literacy (IL) gets implicitly woven into diverse policies, conceptual frameworks and implementation structures. IL, i.e. the ability to find, evaluate, use and manage information can be perceived as the cluster of capacities that have the potenial to support learning and function as a prerequisite for lifelong learning. A strong correlation between education and IL is well expressed through often cited statements, such as, "information literacy as a catalyst for educational change" [5] or "information literacy as a prerequisite for lifelong learning", which are commonly used in explaining and promoting the concept.

Previous to attaining this current significant position IL went through a long-lasting process of growth in theoretical and applied understanding characterized by numerous terminological and conceptual contradictions. The analysis of the development of information literacy and the phenomena that have influenced it shows a multifaceted and multidimensional nature of its concept. Primarily, IL developed in response to the issues that were necessitated by the developments within the information society [9].

Due to the described relevance, one would expect a firm and high position of IL on research and practical agendas worldwide; nevertheless, this is not the rule. Many geographic regions in the world are lagging behind positive global Information Literacy developments, and the SEE (South-East European) region is certainly one of these regions. Altough it is challenging to make meaningful general remarks on the state of IL in this region given the wide diversity of cultures in this European area, nevertheless several key initiatives and events provide useful insights from which concrete consclusions can be drawn.

2. The case of South-East Europe

2.1. Contextual factors determining IL

The SEE region may be described as an area determined by transition, change and reforms, an area of diversity and disparities in terms of politics and intergovernmental memberships (e.g. some countries are members of the EU; some are candidate countries or are recognized as potential candidate countries), or in terms of social, cultural and economic development (some countries are rather developed, others rather underdeveloped and transitional).

Despite this diversity, several strings of common developments that potentially may influence IL are visible accross the region. First and foremost, considerable funds and energy are being spent on the development of Information- and Knowledge-based societies. Until now, these efforts mainly where directed towards the building of stable information and communication infrastructures and skills that are directed towards the technical use of such infrastructure, like digital or computer literacy.

The second common string of actions very visible in SEE countries relates to reforms in the education sector, which are region-wide visible mainly at the tertiary level and known as the Bologna Process (The Bologna Declaration, 1999). Countries from the SEE region are signatories of this major reform and are currently in the process of bringing their university curricula in line with the Bologna Process principles that recognize Lifelong Learning as an essential element within a harmonized European Higher Education Area. New educational theories like constructivism have provided the arguments for introducing IL into classrooms. According to these new theories, education is not so much a transfer of information and knowledge as it is a process that involves creation, reflection and critical awareness and critical thinking. Hence, the ability to meaningfully interact with a wealth of information is deemed more important than ever [9].

2.2. IL in SEE: state-of-the-art

Despite described affirmative factors relating to Information society developments or educational reforms, the the SEE region is lagging behind global positive developments. Any state-of-the art report must rely on criteria how to measure developments in the respective field. Although universally accepted uniform criteria regarding the assessment of development of IL are not aggreed upon yet, a broad consensus how to determine the level of information literacy in one country or area is proposed and articulated in a publication supported by IFLA and Unesco [11]. The goal of the report was to identify IL trends around the world, whereat five broad subjects of measurement of IL developments where identified:
- resources for user education (e.g. online learning tools, tutorials)

- publications devoted to the subject
- organizations (organizations, professional groups)
- training programs for IL facilitators
- communication events (conferences, meedings etc.)

Apparently, the identified criteria are relative easy to determine and analyze. A deeper and more exact characterization would include the measurement of the level of integration of IL in school or university curricula and programs, IL offerings in public libraries, its level of inclusion within the public sphere (strategies and policies), perceptions relating to IL among different stakeholders etc.

Assessing the situation in SEE countries according to these criteria is a challenging (albeit necessary) task, due to disparities and diversities that determine this part of Europe. A vague estimation and overview based on literature reviews and the analysis of web resources (e.g. InfoLit Global http://www.infolitglobal.info/en/) leads to the conclusion that the majority countries have not made the minimal necessary progress in that direction.

An informed and valuable insight into the state of Information Literacy across the region was recently provided by two important UNESCO co-sponsored workshops that addressed specific IL challenges in this part of Europe. The first meeting, the Workshop on Information Literacy Initiatives for Central and South-East European Countries took place in 2006 in Ljubljana, Slovenia. The second, also co-organized by UNESCO, was held in Ankara, Turkey, as a part of a series of eleven Training-the-Trainers in Information Literacy («TTT») workshops that covered all regions of the world. [10]

Those events have shown that both strings of development visible in SEE countries that have the potential to influence IL developments (orientation towards building information societies and educational reforms) did not explicitly lead to IL achievements or clear and straightforward IL strategies.

On the one hand, the concepts of Information or Knowledge-based societies have received significant attention and support from political authorities. Anyway, this orientation is tried to be accomplished through ICTs and capacity building directed towards the use of technology (computer or ICT literacy). Nevertheless the „using technology" logic is not sufficient, since for a truly information society it is necessary that citizens efficiently search for, access, retrieve, understand, evaluate and use the information retrieved [12].

Furthermore, the Bologna Declaration [4] and its subsequent documents [3],[5], do not address IL directly, but along with lifelong learning, IL is implicitly woven into the Bologna Process along with other fundamental contemporary educational reforms. Moreover, the student-centred and goal-focussed approach of the Bologna Process, as well as the increased focus on the students' ability to apply knowledge, emphasizes the need for transferable and generic skills. [10]. Therefore, one could expect references within educational reforms towards information literacy, although this did not happened within countries from the SEE region, which was highlighted and confirmed by presenters and participants during the two Unesco co-sponsored events.

For example, the responses of the participants at the Workshop in Ljubljana revealed the following [1]:
- although the concept of Information Literacy is generally known, most of the countries in the region do not have specific Information Literacy policies and strategies or any other related policies or other provisions which address the Information Literacy issue;
- with few exceptions, the majority of the universities in South-East European countries do not provide Information Literacy courses or programmes for acquiring basic information competencies for their students (at least, IL is not integrated in a systematic way across study programms and curricula);

- there are almost no major ongoing projects on Information Literacy development in the countries in the region.
- probably the greatest challenge represents the prevailing confusion between Information Literacy and Computer Literacy. Unfortunately, librarians and other information professionals still tend to treat computer and Information Literacy as one and the same concept.

Such a state of art was confirmed at the TTT workshop in Ankara where participants volunteered to make presentations about either the current status of IL developments or best practices in their countries. The answers provided by the presenters from the SEE region confirmed (Pejova, 2008):
- an insufficient focus on Information Literacy in education;
- an insufficient support for the library and information sector;
- limited cross-country, regional and global cooperation;
- a lack of firm evidence of existing Information Literacy skill levels; and
- poor Information Literacy skills in the workplace.

Furthermore, a clear correlation can be drawn between countries with well-developed information and library infrastructures, and in particular the ones with well developed information and library schools, which have a higher level of understanding of the issues, and have at least taken the first steps toward designing initiatives and programmes for Information Literacy development.

Presentations at the aforementioned workshops, as well as informal follow-up surveys that have been conducted within these events, revealed that the Information Literacy activities across the region are still very weak and in the case of many countries undefined, unrecognized, underestimated and un-rewarded [10]. IL and user education are in general a peripheral rather then a central concern for academic and school libraries; most instructional activities are conducted on an ad hoc, informal or individual basis, usually by the librarian who is providing one or two hour sessions at the beginning of semester or school year, or providing basic generic instruction to incoming freshmen (but even this limited approach is not the rule). Few professionals in the field would argue that such minimal exposure to Information Literacy instruction can ever truly fulfil the goals of IL [2].

3. Educational and library traditions as major inhibiting contextual factors in see countries

The ubiquity of the notion of information literacy is not an indicator of it's uniform presence in the form of projects, practical implementations or articulated strategies. Due to the fact that information literacy goes beyond library and educational concerns and is (like every literacy) "a social practice rather than a skill that varies in accordance with socio-cultural contexts and customs" [7], there are expected similarities between countries or regions that share a similar context, or, vice versa, there are disparities between countries that experience a different context.

Likewise, similarities in the SEE region are caused by the fact that information literacy is a highly contextual phenomenon, determined by different socio-technical, political or historical factors. Therefore existing frameworks and best practice models from e.g. the USA or Australia can't just be copied and transferred since the framework is very different. The contextual similarities and issues that are shared by many countries in this particular European region refer to different variables [10], eg. variables from the educational or library sector.

One of the determining variables may be desceibed as prevailing *traditions of education*. Those traditions of education relate to the general approaches taken to teaching/learning processes. The lecture-based model predominated in the classroom for many decades, if not centuries. For most of the students in European countries it still isn't common to be active during lectures, to discuss or debate issues in the classroom, to interact constantly with many different information resources and

learn from them. Within this lecture- or transition-based approach to learning there was no need for information literacy. Although changes were brought about by launching educational reforms in many of these countries with new focuses on lifelong learning, critical thinking, problem solving etc., and educational institutions struggle to redefine themselves as a result of these reforms, established learning patterns and the respective complete absence of earlier Information Literacy achievements caused a very slow adoption of the concept in transitional educational environments.

The second variable that has influenced the poor state of Information Literacy in this European region are *traditions in librarianship*, i.e. an evident lack of common and widespread practices of user education, rare evidence on teacher-librarian partnerships and low acceptance of the concept and status of a teacher-librarian. In many South-East European countries librarians are not, by default, perceived as teaching personnel even in cases when they have educational qualifications but, rather, as supporting personnel. Therefore, librarians are usually not assertive enough about their teaching capabilities and responsibilities, and have to struggle to get their voices heard in the classroom. This circumstance has heavily inhibited the idea of Information Literacy, which embodies the idea of teacher-librarian collaboration at its very core.

The described marginalization is the nucleus of the „information literacy problem" in many countries: if information literacy carries little weight in the eyes of the educational system, the labour market or the social context, librarians can prepare and offer the most attractive or useful information literacy programs that will not be used and rest on the margins of educational system or society in general. This constellation leads to the recommendation of a top-down approach in the form of declared information literacy policy statements on the national and international level that will recognize it as a development resource. Crucial for the achievement of top-down approaches is the raising of IL awareness within various stakeholders outside the library community. Future IL events or workshops should therefore include considerations as to how best to approach those «external» stakeholders, how to devise national strategies and how to create alliances to promote IL in various institutional and sectoral settings (e.g. partnerships with educational leaders, teachers, university or school management, etc.), or even how to propose and devise policies and approach policy decision makers.

4. Positive initiatives and developments

Although the situation accentuates the need for more intensive and more comprehensive information literacy activities within the region, some important and groundbreaking steps have been already undertaken. Positive examples incluce IL literacy strategic plans, e.g. in Slovenia, where the document "The principles for the implementation of information literacy at the universities in Slovenia: the role of libraries in an information literate university" is beeing prepared [8]. The aim of the document is to stimulate systematic, professional and scientifically based development of information literacy programmes at the university education institutions in Slovenia. This document, which includes translation of the shortened version of ACRL IL standards and the recommendations of the EnIL (European Network of Information Literacy) for EU countries, emphasizes the importance of information literacy in the higher education and the role of libraries in that regard. Analyzing the state of information literacy in Slovenia it proposes guidelines for application of information literacy programmes in Slovenia. Naturally, the pure existence of such a framework document is not sufficient, it has to be promoted and adapted by significant stakeholders and decision makers. For example, the mentioned document will be prososed to the Education programme Commission for the 1. and 2. degree of Bologna.

In Croatia another approached has been undertaken. A long-term IL strategy has been devised at the Department of Information Sciences in Zagreb, where two IL courses are offered. One course is aimed for future librarians and information professionals who have enrolled in Master or Bachelor studies at this Department to gain specialized theoretical and practical knowledge on IL (i.e.

understanding IL, how to develop IL programs, pedagogical considerations etc.). Such approaches, oriented towards teaching future Information Literacy professionals, are not the norm in other LIS schools or Departments in the SEE region. It is far more common to integrate IL content on a fragmentary, basis into existing courses (e.g. courses on school libraries, public libraries, and academic libraries).

A second course is offered for all students by the Faculty of Humanities and Social Sciences, who are required to study different disciplines and fields and will receive a teacher's degree after completing their studies. The aim of this course is to introduce future teachers to the IL concept since the cooperation and collaboration between librarians and teachers is often cited as one of the main precondition for successful IL initiatives. By introducing this student population to IL, a firm platform for future partnerships in developing and teaching IL programs and initiatives is thereby created. Currently IL for future teachers is an elective course; the goal is to make it mandatory for gaining teacher competencies. Offering an IL course at the Postgraduate level with the aim of attracting future researchers and thereby form a human resources research pool for IL is also an important segment in fostering IL developments.

An important indicator of the level of social acceptance and maturity of a concept are events or conferences dedicated to this particular concept. Beside the two Workshops organized in Ljubljana and Ankara, several such IL meetings and conferences where held or are announced[1]. Such events are fostering communication flows necessary for launching IL projects and form the basis for national/regional strategies that would involve policy makers and educational authorities The mentioned events demonstrate the willingness of this part of the world to work on and promote IL.

5. IL more important than ever?

Information literacy, in its central features, has always been influenced and determined by the current information environment. The concept itself appeared partly as the result of a growing heterogeneity and complexity of information, information resources and information structures. Today the information environment underwent paradigmatic changes, foremost initiated by the web 2.0. Within this environment, information consumers can not be perceived any more as an uncritical mass of consumers since they have been granted the role of active citizens who display various modes of use and response to media and information outputs, but also co-create content enabled by digital technologies. In the last two decades, higher education institutions, libraries and other service providers in the learning, information and cultural sector have recognized the potentials offered by networks and multimedia for the enhancement and upgrade of their services.

Nevertheless, „2.0 developments" are not only referring to changes in service provision, their potential of paradigmatic changes lies in building, sharing and using knowledge. It opens up possibilities of small interest groups and individuals to represent their opinions, establish contacts, build-up networks and supply diverse content characterized by anonymity, pseudonimity and less hierarchical discourses. Phenomenons like anonymity or pseudonimity can be described as problems and anomalies that currently determine information environments, but they are vital for reinforcing the position of IL on research and practical agendas worldwide. Having in mind the intensive use of web 2.0 tools and services on a global scale, including SEE countries, where the boom of the Google generation with its specific information behaviour patterns is equally visible as in other parts of the world, the aforementioned IL interventions and strategies are deemed more important then ever. An analysis of the core key words that describe the main problems higher

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[1] In October 2006 the 2nd Joint Conference of Special and Academic Libraries entiteled Information Literacy between theory and practice: the role of academic and special libraries was held in Ljubljana, Slovenia; the major International conference dedicated to IL was held in October 2007 in Belgrade, Serbia, while the First International conference in Romania on Information Literacy will be held in April 2010.

education is currently facing (triggering the research process, locating high quality information, accessing and evaluating information, organizing it, plagiarism etc.) shows that those can be directly mapped to key concepts that define information literacy. This does not mean that IL is the ultimate panacea for solving problems occurring in learning environments, but it certainly is a valid strategy and logical means for dealing with existing anomalies.

6. Conclusion: the way forward

Some most important hallmarks of democratic societies are values like the universal access to information, freedom of expression and the diversity of viewpoints. A lot of countries in the SEE region do not have a long tradition of democracy and are therefore highly motivated and eager to support and establish the free flow of information in their societies. For this reason many countries make a lot of efforts by investing into information infrastructures. Despite these favourable constellation the way to a truly democratic information society is still ahead, partly because the application of information literacy in diverse professions, education systems, the workplace and community life is generally absent.

As mentioned before, variations and discrepancies between countries regarding IL in terms of policies, traditions or cultural backgrounds are common. Having said this, each county will define it's own IL path. However, when analyzing the SEE region, many issues and challenges are relative similar since the countries from this region share similar trditions, context and cirucumstances. IL is a context-sensitive phenomenon that varies in accordance with socio-cultural contexts and customs, therefore regional initiatives between countries that share experiences and contextual factors are a reasonable endeavour.

There are certainly a lot of pathways that could and should be taken in order to make advancements in the IL field. In order to do this, one of the first steps should encompass the expansion and promulgation of the IL concept which is still too confined to the library discourse. Having in mind the educational traditions from the past, present reforms and the unfavorable position of librarians within educational systems, national/regional strategies that would involve close collaboration between policy- or strategic decision-makers, educational authorities and librarians should be perceived as an important priority. Such top-down approaches are necessary to overcome barriers caused by traditions in education and librarianship, like non-existing partnerships between librarians and teachers that hinder IL implementations in a systematic manner. The capacity-building of experts and professionals outside the library-discourse would certainly foster the needed top-down approaches. Therefore, the creation of IL courses that are offered to students who will receive a teacher's degree after completing their studies is a long-term, sustainable and important venue for putting the IL agenda into motion in this region.

Furthermore, strategies for taking action should be directed towards fostering of information flows regarding postitive examples, best practices and successful programs that would be gathered in the European context, precisely in regions with countries that have similar eduacational traditions, backgrouds, stages of economic development.

Such actions are more important then ever. The Google generation which displays a problematic information behavior pattern is a worldwide phenomenon. Coupled with the promulgation of web 2.0 tools and services and the information behavior anomalies of new generations of information users we are currently facing a situation that elevates new and exiting potentials, but also endangers core social values and hallmarks of society and more specific education, like critical thinking skills, understanding and application of good practice in searching, establishing the validity of sources and, by extension, attributing them when appropriate.. Due to correlations between IL, modern education and democratic values, the affirmation of IL in SEE countries could be helpful in overcoming disparities in research, educational, economic innovation capacities that prevent SEE conuntries from fulfilling their potential.

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Information literacy in Serbia: Initiatives and strategies

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Abstract

The general aspiration towards joining the European Union and creating the knowledge society in Serbia involve significant challenges for the Country. One of the most demanding changes that Serbian libraries will be facing consists of implementing information literacy (IL), i.e. citizens that are prepared for lifelong learning in a world that is overloaded with information of all sorts. The essential premise of this paper lies with two convictions of the authors: that, on the one hand, libraries are a natural environment for the development of information literacy, and on the other, information literacy must contribute to the citizens' quality of living.

The paper will offer a general overview of the current status of IL in Serbia, the actors in the IL process, the programs, the initiatives, and, above all, what the role of libraries in this endeavor is.

Key words: Information literacy, knowledge society, library's mission, libraries in Serbia, information literacy in Serbia

Introduction

Many dilemmas and misunderstandings follow the idea and practice of information literacy which we could justly describe as myths of information literacy. The most widespread include: 1) information literacy is predominantly a technological, not a social or educational phenomenon, 2) information literacy develops on its own, with the spread of information and communications technologies in everyday life, 3) information literacy matters only in formal educational institutions, i.e. school system, and 4) there is a fundamental, qualitative difference between traditional education of users in libraries and information literacy.

On the other pole of these myths stand the authors that justly appeal to the fact that the matter of information literacy is neither easy nor simple, pointing to the numerous paradoxes and aporias of information society. We wallow in information, yet we crave true knowledge. The more new information and communications means there are, the less time we have for one another and less true communication and sociability we achieve. Contemporary man reads and researches increasingly less, receiving fulfilment from trivial media and information resources, floating on the surface of things, neglecting the attitude of a researcher and critic of the society in which he lives. Virtual reality appears as a surrogate of real life. In a context like this, libraries must restore their own responsibility and find their place in the information vicious circle.

In Serbia, where the internet took roots in 1996, which invests slightly over 62 euros per capita in the development of information technology and in which fewer than 2 per mille inhabitants have an ECDL permit,[1] the dilemmas related to information literacy also increase with the uneven development of certain regions, difficulties in restructuring the productive and service sectors, and the slow legal regulation of the still budding and underdeveloped information sector.

This paper will review the basic problems related to the adoption of the information literacy concept in Serbia, and the implications of those issues to Serbian libraries. The essential premise of this paper lies with two convictions of the authors: that, on the one hand, libraries are a natural environment for the development of information literacy, and on the other, information literacy must contribute to the citizens' quality of living.

Information Literacy and Libraries

Knowledge society as the emerging social paradigm has established a new model of relations, new concept of the organisation, different system of values, need for an educational reform and another view of what an educated person is, alongside with the expanded concept of literacy. Traditional or elementary literacy, which includes the ability to read, write and perform basic mathematical operations, has been proven inadequate for orientation in the information and knowledge society. The new, expanded concept of literacy encompasses a set of skills like computer literacy, media literacy, digital literacy and information literacy. We shall give a brief survey of each of the listed skills, with special emphasis on the concept of information literacy and its relation to contemporary librarianship.

Computer literacy is defined as the ability to use computer systems, networks and programmes. Although this skill is often identified with information literacy, these are two distinct phenomena: computer literacy primarily comprises the knowledge of technology and its functioning, whereas information literacy rather treats the contents, quality and relevance of information sources. In order for a person to be information literate, they have to possess elementary computer knowledge. However, computer literacy does not imply information literacy as well: a person may be technologically educated and competent, and yet need help regarding the quality of retrieved information.

Media literacy includes the ability to understand, use, analyse and interpret messages in all mass media forms – newspapers, magazines, the radio, television and the internet. Media literacy stimulates people to think critically and understand the media messages expressed in image, sound and language.

Digital literacy implies the ability to use and understand hypertext and multimedia content. Digital literacy also refers to information available on the internet, but to all digitised material and cultural heritage available in the form of multimedia presentation.

We can conclude that literacy in the 21st century comprises a complex of new and intertwined skills and abilities. Nevertheless, it is only information literacy that opens up the path to selecting relevant information and knowledge from the torrent of data that overwhelms us in the world of modern media and technologies.

The term information literacy was first used by the US informatician Paul Zurowski in 1974, defining this concept as an efficient use of information in problem solving, and in 1989 the

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[1] European Computer Driving Licence – ECDL has been a standard of information literacy in the European Union since 2003. Judging the information literacy of the Serbian inhabitants according to this criterion, only 10,500 out of more than 8 million Serbs are capable of living in the information age. In 2008 an ECDL could be obtained in 135 testing centres in Serbia, at a cost of 250 euros per person. In 2010 ECDL is far from being prerequisite for finding a job in Serbia.

American Library Association formulated today's widely accepted definition according to which those persons are information literate who have learned how they should learn, because they know how human knowledge is organised, how to find the right information and how to use it efficiently.[2] Information literacy qualifies people for lifelong learning and for being successful in the dynamic surroundings of highly developed information technologies.[3] Various definitions of information literacy have several elements in common: the ability to efficiently search through information, information selection and assessment, the use of a broad spectrum of communications technologies, the consciousness of the problem of information reliability and authenticity, the efficient information transmission to other people.

The development of the information literacy concept has its technological, but also its social and ethical aspects. It seemed that technology, especially the development of the internet, would solve the education crisis resulting from the conflict of traditional pedagogic principles and demands of the information age, and thus open up a perspective of knowledge and learning society.

The well-known UNESCO document *Learning: the Treasure Within*, published in 1994 under the editorship of Jacques Delors, points to the fact that information technology facilitates quick data access, but that, for the process of its utilisation, it is necessary to know the processes of collection, selection, organisation and assessment of information. The mentioned UNESCO study treats the "digital divide", i.e. the increasingly wider rift between informationally rich and poor countries. This divide does not exist only between various states, but also between individuals who know how to use new information and communications technologies and those that have not mastered these skills yet. Therefore, both schools and libraries bear the special responsibility to enable every individual to face the abundance of information and to express their critical and creative spirit in selecting, ranking and using information resources. There are some authors who define information literacy not only as a prerequisite for lifelong learning, but also as one of the fundamental human rights in the 21st-century global society.

Seen from the sociological and philosophical points of view, the realisation of the information literacy concept can be understood as the reaffirmation of the Enlightenment idea of the indissoluble relation of knowledge, human liberty and democracy. More than two hundred years ago, Condorcet in his *Sketch for a Historical Picture of the Progress of the Human Mind* laid out the idea of mankind's constant progress on the basis of knowledge and education. Condorcet explains the Enlightenment doctrine that the spreading of science and education to every individual will result in the abolition of all inequalities between nations and produce a true perfection of the human kind. The spread of information and knowledge through the advancement and democratisation of education will have a decisive role in establishing the political liberties and human happiness. Therefore even now should we approach the information literacy concept not only as a technological ability, but also as a sort of instrument of human liberty and equality and as the skill to critically assess the intellectual, human and social potentials and limitations of information resources and technologies.

The promptenss and readiness of libraries to adapt their goals to technological and social changes now and in the future will stand as a measure of their vitality, social status and influence. Among the new goals the libraries have to include the development and promotion of information literacy

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[2] Presidental Committee on Information Literacy: Final Report, 1989,
http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm, (25.03.2010)

A Progress Report on Information Literacy: An Update on the American Library Association Presidential Committee on Information Literacy: Final Report**,** March 1998,
http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/progressreport.cfm, (25.03.2010)

[3] Sonja Špiranec, Mihaela Banek Zorica, *Informacijska pismenost - teorijski okvir i polazišta* (Information Literacy – Theoretical Framework and Fundamentals), Zavod za informacijske studije, Zagreb, 2008.

both among librarians themselves and in the whole community of users. Information literacy in libraries demands an active and committed approach to users that has two essential innovative aspects: the transformation from an objective-based approach to actual problems of users and encouragement of their independent research, and the emphasis on the need of lifelong and creative learning.

We are now witnessing a new change in the dominant functions of libraries. The key importance is assigned to the information analysis that pervades all library processes. Viewed historically, this function also existed in the first libraries, when the analysis of documents appeared for the purpose of classifying and systematising them. A systematised order of documents is the prerequisite of housing and accessing the collections. In time, the information analysis function has developed and become more complex both formally and essentially, having come the long way from collection arrangement to intricate reference-bibliographic methods and the building of new information systems. In an electronic environment, the information analysis function assumes new forms and content. In the world's large libraries special services are formed for semantic information processing, which approach information processing from the level of their sense and meaning. Their task is to study the content, not just the form of published knowledge.

If we accept the claim that information analysis now is the new dominant function of library work, it is accompanied at the social function level by the axiological orientation function in the information universe. This relation has become increasingly important since the advent of the internet, when we feel the express necessity of a stricter organisation of the very disorganised global information infrastructure. Librarians as a professional groupation that naturally pursues classification, systematisation and organisation of documents, also have the obligation and chance to contribute to solving the problem of systematisation and assessment of electronic publications as a future form of scientific, and everyday communication as well.

The future of librarianship is related to the conception and practice of virtual library, imagined as the entirety of information resources available to the user through global computer networks. Therefore the functions and information analysis and assessment, and of navigation and orientation in the new information reality are essential to all the types of libraries, both for scientific and increasingly for public libraries. In information society the library becomes an institution that, besides the classic carriers of recorded knowledge and experience, must pay more attention to collecting, processing, organising, preserving, protecting and using electronic resources. To these traditionally librarian functions, regardless of the technological environment, we should also add the task of content processing, assessment and qualitative selection of electronic publications. Although the last task is not completely new to the librarians either, it assumes a special importance in the world of internet communication. The social responsibility of library-information work now is more prominent than in the entire history of librarianship so far.

The new role of librarians in the future will also require fundamental changes in the approach to educating library-information experts. In a situation when the user has the possibility of independent access to distant databases, both bibliographic and factographic and full-text databases, the essential mediating role of librarians is necessary mostly in complex searches, selection and assessment of retrieved data. The standard form of library work will incresingly turn into the content analysis of information and analytic processing of electronic documents that include text, image, sound and video recording.

Contemporary computer networks and systems are often overloaded with ephemeral information of little value. They contain more and more information of commercial and entertaining character. It is the task of the libraries to select really valuable records of knowledge and experience from that infinite sea and preserve them for the future generations. In this process, information analysis as an intrasystemic library function and axiological-orientational social function are not only technical and organisational tasks, but they demand a broader, sociologically and axiologically founded approach to all user categories.

Although one can justly say that information literacy is relevant to the entire user population in contemporary libraries, this proces is of special importance to those users whose professional status depends on the quality and speed of retrieved information, like students or scholars. Taking the earlier quoted definition of information literacy as a point of departure, we list several essential tasks of their training for an active use of library resources in the electronic environment: identification of information needs, selection of relevant information, formulation of search queries, distinction between popular and scientific sources of information, distinction between primary and secondary information resources, using Boolean operators in searches, selection of strategies for database search, understanding the problem of information overload, critical use of information resources, organisation and transmission of retrieved information, correct citation of used sources and copyright observance on the internet, readiness for lifelong learning.

Information literacy in Serbia

Accession to the European Union has been defined as Serbia's most important strategic goal, for the achievement of which it is necessary that individuals, the civil sector and the state administration should work in harmony. The way to the EU is seen as the way to a more modern society of stable democracy and developed economy, and the political and economic demands stipulated by the EU as the prerequisites of individual development and responsibility, with a simultaneous expansion of European space of peace and democracy.

The European Union has set a goal to itself that it should create the circumstances for economic development based on the production of knowledge and the rise of information society, which is described as a *society where anybody can create, access, use and share information and knowledge* and which *enables individuals, communities and nations to realise their full potential and enhance the quality of their lives in a sustainable way*. In principle, instead of the three recent sectors, agricultural, industrial and service, information society has a new one – the information sector, which comprises a wide array of knowledge and professions, from scholarship to invention, via information and communications distribution, information processing and transaction management, through computer and telecommunications equipment and programmes, broker and insurance business to the functioning of the government and parliament. These components of contemporary information economy clearly stand out: information production (scientific research and development, education, creative endeavour), information distribution (publishing, librarianship, television), direction and management of information transactions (in the fields of telecommunications, banking, brokerage), development of information technologies, means of support (buildings, maintenance), and this economy has given rise to a new typology of information employees: creative workers in the IT field (scientists, engineers, designers, programmers, analysts…), employees in maintenance and data processing (system administrators, database administrators, operators and other staff in computer laboratories), professionals in the domain of information collecting, processing and disseminating (instructors, consultants, librarians), and the manipulants, who directly connect the users to information (postal and bank clerks, book-keepers, employees in holdings circulation of libraries).

After two unsuccessful attempts at drafting the national strategy of information society development, in 1997 and 2002, the Ministry of Science and Technology of the Republic of Serbia adopted a document of the same title in October 2006. Written in the circumstances of relatively stable economic growth and increased foreign investment, this strategy did not envisage the latest world economic crisis, the slackening of IT markets in Serbia beginning in autumn 2008, and the increasingly more obvious consequences of industrial infirmity, high unemployment rate and insufficient investment in research and development. Even not taking that into account, the author of the *National Strategy of Information Society Development* failed to demonstrate a visionary spirit and to assign libraries a more responsible place in the overall process of social informatisation. In the text of the strategy libraries are mentioned twice in the context of digitisation (digital libraries,

digital archives / libraries), twice in the catalogue of the institutions that should have broadband internet connections, and once in the context of developing the government-to-citizen public services (public libraries). Due to the essence of their social roles, libraries are not mentioned regarding the legislative framework, national information infrastructure and *e*-education, and by doing so the adopted text of the *Strategy* is sending a message that information society is rather a technical than a social category. It does not have in mind the essence of human communication with recorded knowledge, and it does not treat lifelong learning as a precisely developed concept. Finally, the text of the *Strategy* would offer less reason to worry if it had not been preceded by the *Higher Education Act* disastrous to libraries and librarians, and if an entire set of acts on culture, and the future library law as well, were not to draw on it.

The integral library-information system of the Republic of Serbia consists of: the national and central libraries (National Library of Serbia in Belgrade and Matica Srpska Library in Novi Sad), university libraries (Svetozar Marković University Library in Belgrade, Nikola Tesla University Library in Niš, Univeristy Library in Kragujevac, Central University Library in Novi Sad and University Library in Novi Pazar), then the Serbian Academy od Sciences and Arts Library, Serbian Patriarchate Library and Yugoslav Army Central Library, a network of public libraries and networks of higher-education, school and special libraries. Military and religious libraries are part of this system, but only to a certain extent.

It is interesting to find out that even in such a unfavourable general framework the libraries have sought their own ways of development. After in 2002 the National Digitisation Centre was established (as a project initiative, not as a state institution), it attracted libraries and made them almost the most important partner on the project. The National Library of Serbia (NBS) has been developing a digital library since 2003, and since 2008 it has been a member of the World Digital Library, with more than a million digitised documents. A number of public libraries, like the libraries in Kruševac, Čačak and Sombor, in cooperation with the local archives, have initiated projects of local cultural heritage digitisation, and the Svetozar Marković University Library in Belgrade is the carrier of the Ph.D. and M.A. thesis digitisation project. There have been some praiseworthy examples of cooperation like the one between the National Library of Serbia and the Vladislav Petković Dis Čačak City Library, on the basis of which in January 2010, the famous interwar edition of children's literature, "The Golden Book", digitised in Čačak, was donated to the Digital NBS.[4]

However, it is hard to tell how much the digital objects at our disposal are actually being used. There has been no research to cover this topic, and the familiarity with the general situation makes one conclude that they are being treated rather as a trend, as a quality of modernisation or status symbols, than as something that improves the quality of life and satisfies the citizens' real needs. We know from experience that Serbian secondary school students have classes of information literacy, but that they enrol in the first year of college with only a vague conception of the possibilities of searching library materials; in practice we can even see senior students who have difficulty in relating the use of libraries and their grades; conversations with students reveal that they most often prepare for examinations with the aid of scripts, lecture notes and books, and that they come to classes unprepared without experiencing them as a chance for interactive work and exchange of opinions; it is hard not to notice that students in large university centres spend much time in *social networking* actions, but that they scarcely use electronic resources for learning. However, we also know that the all-pervasive crisis of reading has taken its toll on Serbia as well, and that society is not confronting it with organised actions; we are aware that these libraries do not engage in long-term, systematic training of students in library resource use, and that there is a real chasm between students' information skills and the possibility to, for example, use over 30,000

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[4] The digital Golden Book is available at: http://www.cacak-dis.rs/dig_bibl/index.html,
and http://digital.nb.rs/collection/gbca-zlatna-knjiga

electronic journals at the University Library; we trust that efficient work of reference librarians would be a quality step forward…

The situation is also unenviable when it comes to public libraries: the percentage of population with the membership in public libraries of Serbia in 2008 is 6,36% (8,06% in Vojvodina and 5,72% in Serbia proper), and library holdings turnover was only 0,56 (even less in Vojvodina – 0,46, and in Serbia proper – 062). One of the most serious problems of the public library network is an insufficient volume of material acquisition. The cultural policy of the current Ministry of Culture stipulates the purchase of publications from the present production as one of the three strategic actions in the library-information field.[5] The Belgrade Public Library, as the largest public library in Serbia, is the leader in the programmes of information literacy and web 2.0 technology introduction to library work, but its level of activity is not typical of Serbian circumstances. According to a 2007 poll, the Belgrade region is 7 times more developed than the Serbian south, but the difference is increasing having in view the fact that the local self-management in the capital is decidedly intent on strengthening the public library system.

Problems in the operation of school libraries can be traced not so much in the number of books (an average 14,7 per student) as in their inappropriate subject-matter (57% of reading intended for first-language lessons), in a conspicuously high number of libraries not having the essential information aids, and in an unstable structure, a constant fluctuation of about 1,200 employees out of whom only one half actually occupy a librarian's position. The Zemun High School Electronic Library stands out as an exception, with a formed repository of learning objectives grouped in: instruction material organised by subject boards, psychological-pedagogical materials, school librarians' database, students' work, video and audio recordings defined by subject, and the electronic books. The learning objectives (an element of knowledge or an entire lesson) were produced by the teachers and students or by teams of teachers and students in our school and in others. Part of the repository consists of links to select learning objectives in other reference institutions.[6]

Through the problems listed looms the need to professionalise the library activity in Serbia. Although the first state-appointed librarian in this country was employed in 1853, librarianship in Serbia was qualified as a scientific discipline only in 2007. The Ministry of Science and Technological Development did that in the passing of the University Act, solving the paradox according to which there was university education in librarianship and library information science, scientific-research papers were written and academic titles conferred, but the discipline itself was not included in the group of sciences studied in our institutions of higher education.[7] The problem of professionalisation of the library activity on the one hand and the problem of verifying the scientific librarian community in Serbia on the other, imply a dialogue on the position of graduate librarians and of those that have acquired that title at work, on the manner of passing the licencing examinations and promotions, assessment of scientific achievement on the part of library employees, stimulation of young librarians to scientific commitment, recruitment of scholars for

[5] Владимир Шекуларац, Мрежа јавних библиотека Србије у периоду 2000 - 2008. година http://www.nb.rs/view_file.php?file_id=2623, (25.03.2010.)

[6] Zemun is a municipality within Belgrade, and Zemun High School celebrated its 150th anniversary in 2008. Gordana Stokić Simončić, Slavica Janković: Školski bibliotekar – pred izazovima reforme obrazovanja (The School Librarian Facing Challenges of the Educational Reform)
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[7] The Department of Library and Information Science at the Faculty of Philology in Belgrade marks 20 years of continuous work in the year 2010. Since 2006 it has organised its courses in coordination with the Bologna Process, and the syllabus and curriculum were accredited in 2010. Courses last four years at the B.A. level, and one year at the master's level.
The Teacher Training Faculty in Sombor began educating school librarians in 2005/06, in the three-year B.A. courses, and the curriculum was accredited in 2009.

solving problems of the trade, work in trade organisations, professional and scientific periodicals, awards, evaluation methods, citation, consulting… The Library Law, whose draft is under way, should mark a turning point and clearly define the master's level as a necessary prerequisite for performing professional librarians' tasks, and the terms under which other educational profiles are employed at libraries.

Conclusion

The absence of a clear and consequent national strategy in the development of information literacy does not mean that information literacy in Serbia is not developing, but that it is developing sporadically and not efficiently enough. Instead of the system working as a whole, individual actions and initiatives are taken that are, from their own perspectives, trying to bridge the gap between the demands of the global information age and the situation in the field. The coordination of initiatives, ideas and strategies would bring about more focus and much quicker results in terms of raising the percentage of informationally literate population and their capacity for lifelong learning.

The current position of libraries and librarianship in Serbia reflects all *childhood diseases* of the information literacy concept. Although national strategies have not valorised their true potential adequately, libraries in Serbia now operate in a society that is demonstrating an increased level of strategic orientation to scientific development and trying to make more investment in scientific research, education and culture. Library initiatives, project organisation, participation in international projects, work in international associations and professional education imply that the librarians, with all objective obstacles, understand information literacy as their regular duty. The future efforts of libraries and librarians on redesigning their own mission must be clearly directed towards a noticeable and measurable contribution to the well-being of the community in which they work.

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Library Network Support Services LNSS: embedding information literacy and collaboration across the Shannon Consortium

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Abstract

This information rich society presents a challenge to identify and utilize best pedagogical strategies to achieve information literacy (IL)- *the trademark pedagogy of librarianship* (1). IL is vital in capitalising on the diverse and often overwhelming range of information choices with which we are continually faced. These challenges are compounded further by the internet a gift which has presented us with near instantaneous access to the World's information but has also forced us to develop strategies for confronting issues concerning accessibility, reliability, authenticity and validity as well as information overload.

This paper charts the journey of the Library Network Support Services (LNSS) project- a unique collaborative effort between the "Shannon Consortium" libraries of Limerick Institute of Technology, University of Limerick, Mary Immaculate College, Limerick and the Institute of Technology, Tralee. Comprising of arguably the most important issue in education today that of Information Literacy this paper concerns the LNSS project and its innovative use of Reusable Learning Resources to embed transferrable information literacy skills across the Shannon Consortium.

Following in depth project scoping consisting of extensive international research into Resusable learning, Information Literacy suites, learning outcomes, learning design and multimedia as well as analysis of the needs of learners and existing Information Literacy initiatives across the consortium it quickly became apparent of the need to aim the Information Literacy suite at undergraduates and postgraduates audiences. Following extensive consultation with the stakeholders using workshop, meeting and interview techniques and identification of appropriate Information Literacy suites it soon became clear that the LNSS would need to develop initiatives which would disseminate both lower and higher order Information Literacy skills. The learning design would need to include lower order Information Literacy skills such as searching and evaluating information as well as higher order skills such as research management and good practice, getting published and writing skills as well as career planning.

This process led the LNSS to the conclusion that in order to address these dual needs the development of two distinct information literacy suites would be necessary. It was agreed that both suites would need to build on existing Information Literacy module design by incorporating use of multimedia technology and interactivity thereby contributing positively to active learning. The aim is not just to promote information literacy over the duration of the project but to embed reusable and transferrable life-long learning skills the effect of which will permeate throughout the partner institutions with lasting effect thereby supporting e learning, blended learning and distance education.

We propose to depict the origin and development of the LNSS project including such elements such as project scoping and research, marketing and customisation of each suite. We will also cover a new proposal to develop *Student Study Skills Online*- 15 hours of highly interactive content and diagnostic tests in areas such as *Academic writing, Information Literacy and Knowing yourself as a learner* inclucing diagnostic tests as well as depiction of IL training methods for Library staff as well as other issues such as project mainstreaming and importantly methods of embedding and collaboration for IL.

What is LNSS?

Library Network Support Services (LNSS) is deeply committed to collaboration and capacity building and exploring reusability, sharing, repurposing and reusing existing and innovative IL content, services and initiatives. Consisting of Shannon Consortium partners Limerick Institute of Technology, Institute of Technology Tralee Co. Kerry, Mary Immaculate College Limerick and the University of Limerick the partnership is committed to a bold vision to transform the higher education landscape in the region in a unique integrated approach across a university, a teacher education institution, and two Institutes of Technology. Its mission is to enhance and champion IL initiatives across the Shannon Consortium through the introduction of innovative web based support services and supporting information literacy teaching and training responding to the changing expectation of library users. The aim is to select, develop, implement and evaluate a suite of IL initiatives to International IL standards for the partner's libraries as a framework of support for learners over 2008 for rollout in 2009/2010 consisting of web based interactive IL modules. The LNSS project has a lifespan of 2.5 years lasting from 2008-2011 and is funded by the Strategic Innovation Fund (SIF) which encouraged colleges to collaborate and compete for finance to meet wider economic and social targets.

As the project progresses steadily through 2010 and nearly all of its goals have been or are in the process of being achieved such as rollout of online modular IL suites LNSS are now exploring new territory such as the development of Student Study Skills Online- a collaboration with 15 leading universities form around the world and Epigeum Ltd. - a spin off company of Imperial College.

LNSS realise that international collaboration is vital for the development of IL and have formed RINGIDEA – a European collaboration involving Ireland (LNSS), Romania, Greece and Norway to develop cutting edge IL initiatives and products through organisation of workshops, conferences and the identification and exploitation of suitable EU funding mechanisms such as Tempus IV all for the development of IL services and initiatives for education.

Not just content with developing standard IL content such as referencing, citation and plagiarism, internet searching and evaluation, the research question etc. LNSS have chartered new territory as it drives information literacy in the Shannon Consortium and the "phenomenal push toward librarians demonstrating their pedagogical skills (Bloom and Deyrup 2003). Stand alone IL Modules dealing with areas such as research ethics, intellectual property, research methods, dealing with your research supervisor, the literature review have been developed incorporating innovative multimedia and active learning. The limitations of overly text based IL modules as emphasised by Xiao e al (2004) have meant that LNSS were careful to ensure that the IL modules selected for development incorporated use multimedia and active learning exercises and particularly online video.

LNSS and IL: repurpose and reuse rather than reinvent.

The decision to select information literacy content from suitable providers rather than design in-house was guided by research into the cost of designing e learning/information literacy modules. Extensive research into the cost of designing content in house had shown that LNSS could achieve better results by assessing, selecting and modifying content from suitable vendors. Several studies have examined the high cost of developing e learning (Rumble 2001; Lee et al 2004). While e learning must be successful in reaching learning outcomes, have easy accessibility, have a consistent and accurate message, be easy to use, entertaining, memorable, relevant and if possible result in reduced training costs (Angeliki et al 2005 cited in Steen 2008) it need not be developed from scratch and existing best models may be adapted and utilized thereby avoiding duplication, repetition and ensuring cost efficiencies.

Selecting suitable online modular information literacy initiatives.

At the beginning of the project research was conducted and coordinated by the LNSS Librarian Project Coordinator into online information literacy suites in existence worldwide. Criteria for assessment was influenced by Reusable Learning object design and practice (University of Cambridge 2003). Identification of suitable IL suites for modification and development and also staff training needs pertaining to the Library staff development component of the project were made possible by the LNSS Stakeholder Workshop which was held October 6th 2008. This was a very important event for the development of the project. This workshop which attended by senior library staff from across the Shannon Consortium and it allowed the identification of suitable IL suites following assessment of each using criteria as mentioned earlier. Research and assessment of the many suites in existence conducted in the previous months had revealed 9 IL suites which were in contention. At the workshop stakeholders were given a short presentation for each of the 9 suites which were in contention. Prior to these presentations stakeholders agreed on the following criteria with which to assess and score each resource: meets a variety of learning styles; degree of interactivity; ability to stand alone (with no need to customise); ability to customise if desired; caters for different IL needs of students; level of ongoing maintenance required (from a systems point of view); student appeal but professional looking. Using a typical scoring mechanism two information literacy suites emerged: Epigeum research Skills Online, an online research and information literacy skills resource aimed at postgraduates and researchers and the Cranfield Online Information Literacy Tutorial largely geared towards undergraduates were selected for implementation and rollout by LNSS.

The Cranfield product was selected as it catered effectively for various learning styles, featured active learning activities in each module, was customisable to some extent and needed not be customised if required. It catered for lower order information literacy skills, pillars one to four of the SCONUL Seven Pillars Advisory Committee in Information Literacy 1999 as well as higher order skills, SCONUL's pillars five to seven (Hunn and Rossiter 2007). Learning outcomes for each tutorial were written and reviewed by library professionals and then mapped against each of the SCONUL Seven Pillars of Information Literacy. The resource also had high student appeal due to its effective navigation and use of engaging active learning activities tests as well as online video.

Epigeum Research Skills Online also met the criteria impressively. It met a variety of learning styles and provided active learning activities in each module. Unlike many online information literacy modules which are essentially static or cumbersome to modify at best, the resource is updated regularly with regular Update Workshops run by the supplier and modification can also be made within the organisation and so the resource is essentially a living thing which can change, adapt and be repurposed to meet the needs of students. The interface is sophisticated and attractive to the user. Similar to the Cranfield product it is always clear to the user where they are in the tutorial and has impressive innovative use of online video, metaphor and engaging learning activities.

Information literacy and staff development initiatives

Delivering information literacy skills training has particularly over the last decade become a core function of academic libraries and librarians throughout the world (Brown 2007). Stakeholders and particularly the LNSS Steering Group were concerned that it was not enough just to upload information literacy suites to our servers in the hope that students would locate and use them. Library staff would require training in information concepts and practice as well as teaching skills in order to deliver effective information skills training. The importance of having experts in information literacy skills training and use of a *train the trainer's* approach to instil a

comprehensive knowledge of information literacy in persons who can return to their organisations and training and inspire others was realised (Horton 2008).

Project scoping conducted at the LNSS Stakeholder Workshop identified Web 2.0, teaching and information literacy skills as major staff development needs for Shannon Consortium institutions and to address this need the LNSS have organised and championed a new hands-on immersive Web 2.0 online learning course giving staff an opportunity to open "a whole new bag of tricks to use and connect with our users" (Godwin 2007), to explore tools such as Blogger, Flikr, YouTube and del.icio.us and the impact these tools are having on libraries and library services. Participants use freely available online tools to complete a number of active learning activities over a 12 week period leading to empowerment and greater participation in this *transparent library* of the 21st century (Casey and Stephens 2008)

LNSS: mainstreaming, embedding, collaboration.

Although LNSS has in theory a definite lifespan, an important requirement is a strong and consistent commitment to mainstreaming and sustainability activities. LNSS must not just deliver its immediate goals, it must also look to the future and seek out new products, services and initiatives to keep information literacy, library staff development and perhaps most importantly the impressive collaboration that has been achieved through the running of IL workshops, seminars and Library Staff development courses alive into the future.

The participation of library professionals in information literacy takes many different forms. The ideal one is to have a program that is part of the curricula because information literacy requires sustained development throughout all formal educational levels, primary, secondary, and tertiary (IFLA 2006). The level and quality of IL provision in educational institutions worldwide differs greatly. In some institutions and with reference to the work of Peacock (2007) *extra-curricula* information literacy learning through information literacy learning activities which develop generic enabling skills and are supplemental to the core curriculum of students are being implemented. At another level *inter curricula* information literacy activities in the form of tutorials, workshops and/or short training and information sessions on basic information skills in consultation with, or at the request of, the individual teaching academic and or Department are being followed in a more integrated and embedded approach. *Intra-curricula* where information literacy is fully embedded in student life and courses facilitating deep, durable learning and transferable understanding and application of information literacy and skills is the difficult goal which most libraries are attempting to achieve. Within LNSS partner libraries elements of all 3 types are visible although full Intra curricular IL will take much time and effort.

LNSS strategy for embedding IL has involved providing IL services/forging string links with Academic Departments, providing information skills services both in class as requested by lectures and through training arranged in the Library, providing services/forging strong links with Research Departments e.g. training in referencing and citation,

research methods, research ethics, conferencing skills, the literature review, intellectual property, dealing with your research supervisor, Endnote; providing services/forging strong links with Learning Support Units e.g. Dissertation Workshops for final year students, Mature Student Workshops; workshops for: Learning Support Unit Tutors. A certain amount of embedding of IL online modules into courses has occoured and lecturers use modules themselves for assignment purposes e.g. to test the level of referencing and citation skills.

Vital for mainstreaning and sustaibability is the continuous scanning for new IL products and iniatives and also the promotion and fostering of international cooperation for the development of

IL services. Having rolled out new products Epigeum Research Skills Online and Cranfield Information Literacy Tutorial across Shannon Consortium libraries LNSS are not standing still but are moving forward into new teritory are are developing Student Study Skills Online with Epigeum Ltd.- a spin off company of Imperial College London and 15 leading universities. Student Study Skills Online will see LNSS develop 15 online modules covering course topics and diagnostic tests aimed at all learner types incorporating extensive and innovative use of multimedia; e.g. online video, quizzes, simulation- active learning with modules such as academic writing, reading skills, information literacy and working in groups, transition points (school or work to university), getting the most from your time at university , knowing yourself as a learner , working at a distance / part-time study ,working in groups, information literacy , reading skills, academic writing – argument based-essays, academic writing – projects and lab reports , academic writing – reflective writing, avoiding plagiarism, managing your time, presenting your work and managing budgets.

For LNSS collaboration and capacity building across the Shannon Consortium is vital but the international dimension is important. With this in mind in 2008 LNSS formed the RINGIDEA network involving educational institutions in Ireland (LNSS), Romania, Greece and Norway with the aim of identifying new IL initiatives, products and services and their development for the benefit of EU countries. Already RINGIDEA have run several workshops and seminars in Romania and Norway and some its members are very much involved in forthcoming international conferences in Sibiu, Romania and Chania, Greece.

2009/2010 saw LNSS team up with the UK based CSG Information Literacy Group (CILIP) to host what is arguably the most important international conference dedicated to Information Literacy. March 29th-31st 2010 saw LNSS host the LILAC Librarian's Information Literacy Conference in Limerick city which was attended by over 300 delegates. LNSS are also firmly committed to collaboration nationally and have run national information literacy seminars in Ireland involving universities and Institutes of Technologies from all over the country.

Conclusion

Focussed on reusability and repurposing rather than reinvention and duplication of resources; on collaboration and resources sharing rather than isolation and unwitting repetition; on capacity building and integration the LNSS are delivering information literacy across the Shannon Consortium and beyond. For all who are engaged in learning in this information rich society the challenge to achieve information literacy is vital in capitalising on the diverse and often overwhelming range of information choices with which we are continually faced. These challenges are compounded further by the Internet- a gift which has presented us with near instantaneous access to the World's information but which has also forced us to develop strategies for confronting issues concerning accessibility, reliability, authenticity and validity as well as information overload. Such challenges require a united and collaborative approach, a commitment to resource sharing and the courage to repurpose, reuse, adapt and improve to enable embedding if IL and lifelong learning.

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FIRST INTERNATIONAL CONFERENCE in ROMANIA on

Information Literacy

Sibiu, April 22, 2010

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Abstract

From the Federal Republic of Germany, Dipl.-Biol. Ralf Brugbauer, Executive Director of the University Library Bayreuth (Bavaria) and Honorary Senator of the Lucian Blaga University, will send a greeting to the organizers and guests of the FIRST INTERNATIONAL CONFERENCE on **Information Literacy** in ROMANIA.

He will report on the worldwide growth of information services and will disclose the important task libraries should perform by helping to navigate through the information jungle. He also will throw a glance at the activities of the German libraries in this area of work.

Dear Rector Oprean, dear President Schaal, dear Rodica Volovici,

ladies and gentlemen!

First of all I would like to thank you for allowing me to speak a greeting to you at the "FIRST INTERNATIONAL CONFERENCE in ROMANIA on Information Literacy".

I feel connected with the Lucian Blaga University, and especially with its library, ever since I was allowed to be involved in the planning and implementation of the new building. With its new library Lucian Blaga University of Sibiu got a new face. The modern facility for infrastructure now provides its scholars and students excellent working conditions.

This library is now in the center of the "FIRST INTERNATIONAL CONFERENCE on Information Literacy in ROMANIA". It is now established as a site of national and international exchange. This is a great honor, and I want to make Lucian-Blaga-University and its librarians, led by Dr. Rodica Volovici, a great compliment. "Information Literacy" is one of the most important and urgent issues to be discussed internationally, not only at the universities and their libraries but also in the entire education policy. On that note, I would like to congratulate the organizers on this current selection of topics.

Let me say a few brief words from the perspective of a German librarian.[1]

Many printed reference works are now replaced by the Internet. It provides access to information on all possible fields that are stored on servers around the world. The knowledge of mankind is now doubling every five years, particularly the amount of scientific information increases exponentially.[2] In 2005 about 10 exabytes (a number produced by 18 zeros) of new information - a million times as much as the Library of Congress in the United States currently stores in its reading rooms and magazines.[3] The offers of information within the different media types are more numerous. For example, in Germany about 100,000 books, including e-books, are published annually, worldwide there are about one million books published per year.

The number of specialist databases and journals is growing by the increasing differentiation of science subjects in their disciplines. Also there is a rapidly growing number of Internet sites worldwide. From early June to early August 2005, their number grew by over five million to 70 million. This represents a monthly increase of 3.5%.[4]

W. James Potter estimates the number of about 2.5 billion individual documents to which the Internet provides access. The "Deep Web", the part of the Internet, which will not be indexed by search engines or is protected by passwords, is believed to be 400 to 550 times larger than the freely accessible part of the network.

Not only the amount of newly added information is a problem. The information is out of date even faster than before and therefore will be updated constantly. This leads to a shortening of knowledge cycles, the validity of knowledge is decreasing and the demand for "current" knowledge is growing.[5] The problem of "information overload", the overwhelming flood of data not to be controlled, and the question of how to separate the important from the unimportant, truth from falsehood, is solved by most information seekers frighteningly simple: You enter a term into a search engine - usually Google - and use the sources from the first three to five matches. In particular, students often do not use the provided information resources of libraries as the content of high-quality online databases, online library catalogs and subject guides. Instead they prefer to use untested and unverified Internet sources.

For students - but not only for students - the independent and wise use of information in today's society has become an increasingly important skill. Not only in Romania, I´m thinking of the Library Association in Romania, but also in Germany, the libraries noted teaching information literacy as an important field of activity. Libraries must change from a reactive information site (starting from pull services) to proactive "teaching libraries" (to perform push services).

More and more libraries and librarians in Germany offer seminars and teaching courses, together with scientific lecturers, take exams and work on e-learning modules. The topics range from information research on information processing and management to publishing. So that they cover a wide range of information skills.

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Therefore must also be clarified:

Which tasks should a library perform within the university? How is cooperation between the libraries and the faculties regulated and do the libraries get support from the university administration for their commitment ? In Germany, a guideline was developed by the librarians, which describes the relationship between the university and the libraries in this area.[6]

To provide high-quality learning opportunities, it is essential that libraries cooperate and form networks. In the German-speaking countries for example many educational materials, online tutorials, etc. are provided on the common website "www.informationskompetenz.de."[7]

Together with scientists and computer specialists librarians are committed to improve and facilitate information searches. This applies not only since the invention of Online Public Access Catalogs, electronic reference and factual databases. The aim is to help the library user find a way through the information jungle. But in spite of all activities in the field of "Cloud Computing", the "Metadata Harvesting and the development of" Discovery Systems " it will take some time until a "one-stop-operation" leads to the widest possible but also accurate scientific information. However, to achieve this goal, - if it can really be achieved -, librarians must be committed to teaching information literacy and have to expand it to a central library service.

The pre-condition to generate new knowledge is the ability to deal with a variety of information. For me, this is one of many reasons to wish the FIRST INTERNATIONAL CONFERENCE on Information Literacy in ROMANIA " interesting posts, stimulating discussions and a successful outcome.

Thank you for your attention!

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Library Literacy: the Step before Information Literacy

Robert CORAVU
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Abstract

Acquiring library skills is the first step that a person must take to become information literate. The article pleads for the university library's role in training students to become aware of today's possibility they have access to: knowledge resources and information options. There are a few examples of activities developed by "Carol I" Central University Library of Bucharest, regarding training in library skills and not only.

Information literacy/library literacy: similarities and differences

Starting the 70's and continuing with the next decade, concerns regarding library's provision of user education programmes have grown in intensity, leading to the publication of numerous articles regarding this subject [1].

Over time, more terms were used to define a set of activities which had the purpose of "helping people to derive the most benefit from using a library" [2]: some were focused on the training institution – the library („library education", „library instruction", "instruction in library use", "library orientation"), other were focused on the training objective – the library user ("client education", "reader education", "reader instruction", "user education", „user assistance"), and other were focused on a librarian specific type of training („bibliographic instruction").

Bibliographic instruction has been used on a large scale before the Internet age. This term refers strictly to user training for locating information in a library: bibliographic instruction consists in „instructional programs designed to teach library users how to locate the information they need quickly and effectively" [3].

A broader term than bibliographic instruction is *user education*, defined as „all the activities involved in teaching users how to make the best possible use of library resources, services and facilities, including formal and informal instruction delivered by a librarian or other staff member one-on-one or in a group" [4]. As Feather & Surges notes [5], user education intents to help the user to be "self-reliant in locating, sorting and repacking information", it prepares him for „self-evaluation of information" and it is considered to be "essential for a new user and desirable for an experienced one".

In parallel (but on a smaller scale) it was also used the term of *library literacy*, somehow integrating. Bell [6] defines library literacy as following: „In the academic setting, library literacy refers to the acquisition of a range of skills relating to identification of and familiarity with sources and information seeking processes, usually through formal bibliographic instruction and informal user education".

So, *bibliographic instruction*, *user education* and *library literacy* are terms referring to the use of information resources available from library. In the last decades, especially after the Internet prevalence on a global scale, they were replaced by the integrating concept of *information*

literacy. Unlike *library literacy*, *information literacy* implies attaining a set of information abilities, which are independent of the type of information resources or by the place they can be found. According to the well-known definition offered by the American Library Association (ALA) Presidential Committee on Information Literacy, "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" [7]. In a world in which quantity of information and the multitude of the channels on which this information is transmitted have become overwhelming, the accent is placed on developing critical thinking skills.

Which is the librarian's role in attaining information literacy skills? It was written a lot on this subject. The general conclusion is that: as in the print age, in the Internet age library must play an important role in this process. But now, unlike Internet age, library is not the only player on the field, but it is only one of many. From the entire area of abilities a person must have in order to be considered information literate, there are a few abilities for which library expertise is, if not exclusive, at least the most adequate.

Library skills and the identity of the library

The students start the university life with a baggage of knowledge acquired along his previous experiences, either in their scholar or personal experience. Their information behavior was formed by the contact with different information resources, among who it is supposed to be the library – usually a school/high school library and/or a public library. Their previous experiences about library use determine how they relate and how quickly they learn to orient themselves in the new library type, in which they will have to step once they'll be in university: the academic library.

The empiric observation of freshmen students entering an academic library – in our case „Carol I" Central University Library of Bucharest – shows that their information behavior is oriented on the use of Internet resources. This can't represent a surprise because it is specific to the "Google generation" all over the world. Another empiric observation, however, can make us think: the level of library literacy skills of our freshmen students is, usually, very low. The relationship between preferences for electronic resources and low level of library literacy skills it is not necessary a causal one. Here comes, as a determinant factor, the specific of the education system: if students were more stimulated or constrained to go to the library in school and high school, in the moment they enter in university they would already had at least basic library skills.

So, generalizing a little, the Romanian freshmen student comes from the unstructured Internet universe and enters in the library universe, in which knowledge is systematically organized. On the one side, there is an ocean of information governed by a few rules, on the other side – an institution with her rules, in which access to information is subjected to this rules. The typology of freshmen student information needs itself is different from the typology of a high school student: his information needs becomes more complex and satisfying them is a more important purpose for his becoming.

Our freshmen student comes into the library with expectations formed by the intensive use of the Internet: a simple search, Google-like, will return a set of results in which he will find what he is interested of. The reality they face is different: in the online catalogue of a library, the search is different from Google search – a word is not searched in the library collection's full text, but will be made using significant words from the bibliographic point of view. This leads to the situation in which, to search for a specific subject it is necessary more than simply typing some words in a search box…

In library science literature there are a lot of discussions about the necessity of library adaptation to the specific of the contemporary user of information. The library of today has

really made some important steps in this direction, being a more adaptable institution than the traditional library. In the same time, a fundamental question arises: how far can library adaptation go, so as to keep its identity? If for the medium user, the search model is given by Google search engine, will ever library be able to give up the content description (by indexing and/or classification)? If the "organizing" model of information for some is Word Wide Web, will library be forced to give up the idea of organizing her collections? If someday the answer to these questions will be affirmative, this will mean that either library as institution died, or was replaced by another institution, which can't longer be called library.

Learning how to use a library, the freshmen student will learn that the access to valuable information is not so easy and it requires some specific skills. The library is maybe the first institution that teaches him that there is life – i.e. information – beyond Internet and that this information is structured and organized for his own benefice. He has to learn the ABC of the library, in order to gain access to this organized knowledge.

Library and information literacy related activities in "Carol I" Central University Library of Bucharest

Library skills can be divided in two categories: *transferable* and *specific*. The transferable library skills are those skills that can be used in any library: strategies of searching information in an online catalogue, how to use a reference work etc. The specific library skills refers to the way the library is organized (i.e. what type of publications are available on open shelves, what type of organizing criteria is used in that library, the way that knowledge domains are displaced in study rooms, which is the destination of the study rooms – for books/serials/audiovisual documents etc.), classification system used, available services, eventual costs involved in offering those services a.s.o.

In „Carol I" Central University Library of Bucharest there are many specific organizational and structural elements, which distinguish it from other libraries. That is the reason we pay a lot of attention to training those users who steps for the first time in our library, to help them acquire some specific library skills. All new users, before getting a library card, are obliged to make an orientation tour in the library, made by a librarian. During this tour which takes about 15 minutes, users are briefly presented: library spaces, main library services, online catalogue, the way they are able to make a difference, depending on the shelf marks, from publications available on open shelves to the publications that are in closed stacks, the way they can get a place in the study room, assisted by the *Reader's Management System* (our library is the only library in the country that uses this software) etc. While they are waiting for the orientation tour, users can watch an instructional movie made by the library, in which all this information are widely presented (the movie is also available on library website, at http://www.bcub.ro/continut/prezentare/filmBCU_flash/Untitled-1.html).

User's education doesn't stop at this basic level. We also put an emphasis on training users and librarians for use of scientific databases provided by the library. The number of participating students at those training courses, taught by our librarians or by vendor's representatives, grew constantly in 2005-2008 period (in 2009 the training sessions were dedicated especially to librarians – see fig. 1).

	2005	2006	2007	2008	2009
☐ Librarians	232	160	574	311	334
■ Students and PhD candidates	93	100	316	990	94
☐ Academic Staff/Researchers	36	28	52	37	13
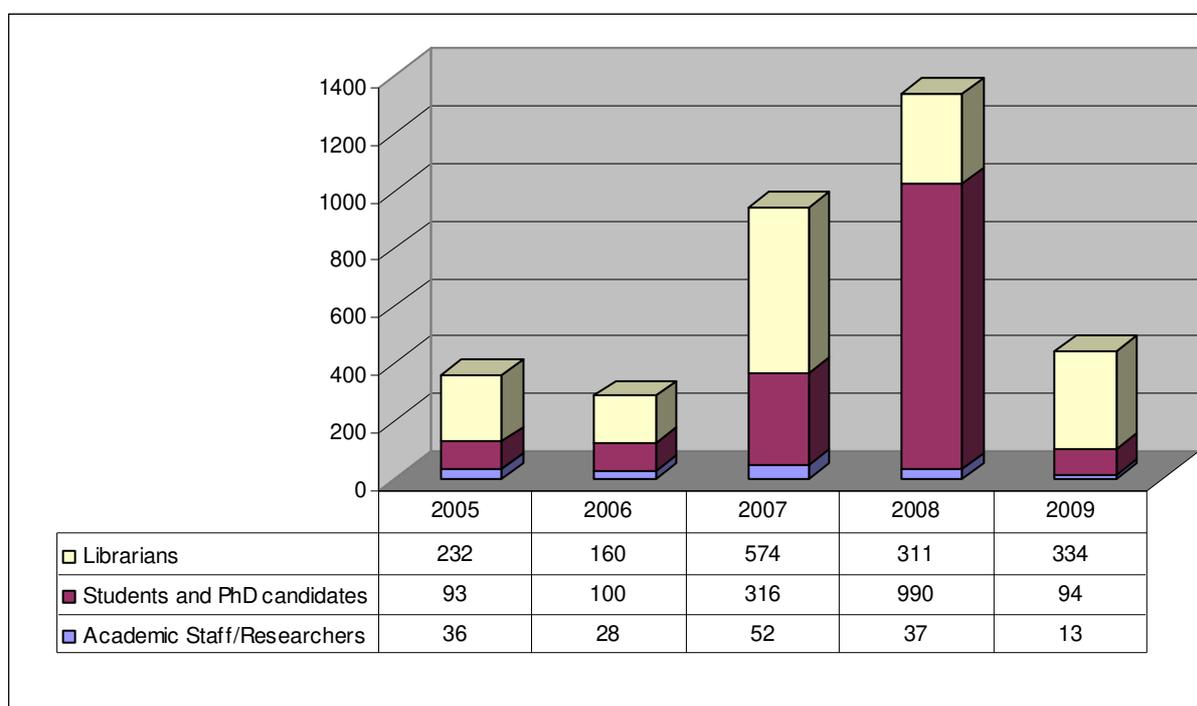
Fig. 1 The attendance of the training courses for the use of scientific databases

Conclusion

Acquiring library skills is, in our opinion, the first step a person must take in order to become information literate. Knowledge must precede the process of evaluation. In order to adopt an efficient search strategy, you must know very well the entire typology of information resources. It is what a university library offers to its students: the possibility of getting in touch with the entire range of information resources, on all media. Knowing these resources and the methods developed along the millenniums by the library for organizing information, the student will be more prepared to manage the Internet virtual space.

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Information Literacy and Information Resources Management in Modern Library

"To know where you can find anything that in short is the largest part of learning". - Anonymous

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Abstract

Information literacy has a major role in this era of the information society. For this reason information literacy is gaining a very high profile as an essential aspect within education. From a modern library perspective information research management concern the process of managing information resources, information technology and a subset of information processes involved in the information life-cycle. The goal of information resources management is to help people and organizations access, process and use. The article provides a point of view about information life-cycle as a benchmark in information management.

The purpose of this paper is to present the concept of information literacy, how information resources management assures access to information and services and the role of librarian such as information literate person.

Keywords: information literacy, information life-cycle, information technology literacy, information resources management, information literate person.

1. Introduction

The term information literacy (IL), is generally defined as the ability to access, evaluate, organize, and use information from a variety of sources. Being information literate requires knowing how to clearly define a subject or area of investigation; select the appropriate terminology that expresses the concept or subject under investigation; formulate a search strategy that takes into consideration different sources of information and the variable ways that information is organized; analyze the data collected for value, relevancy, quality, and suitability; and subsequently turn information into knowledge (ALA 1989). This involves a deeper understanding of how and where to find information, the ability to judge whether that information is meaningful, and ultimately, how best that information can be incorporated to address the problem or issue at hand. [1]

In the modern world, libraries face a dual challenge: increase efficiency and improve user experiences. It's a tall order but we're already seeing the necessary changes in many areas to enable this to happen.

In such context, information resource management is an idea whose time has come. Information resource management is a philosophical and practical approach to managing information. Because information is a valuable resource to be managed like other resources, IRM contributes directly to accomplishing organizational goals and objectives. It provides an integrated approach to managing the entire life cycle of information—from creation, to dissemination, to archiving or destruction—so as to maximize the overall usefulness of information. [2]

The purpose of the library is to make information and communications technology policy development and implementation publications easily accessible; therefore, like other resources, information should receive serious management attention.

2. The Role of Information Literacy (IL) and Information Resource Management (IRM) in providing Information

Information literacy is not a static and limited idea, but a dynamic concept that continues to grow to incorporate a larger set of skills essential for a life of meaning in an information era.

Information literacy is the capacity to identify what information is needed, understand how the information is organized, identify the best sources of information for a given need, locate those sources, evaluate the sources critically, and share that information. It is the knowledge of commonly used research techniques.[3]

The explosion of information and information sources has informed modern societies of the growing importance of special skills in accessing and using information from different sources and media efficiently and effectively. Such skills are known as information literacy (IL) skills. End-users of information are increasingly becoming overwhelmed by and frustrated with the sheer quantities of information available, especially with the advances in information technology (IT). Information literacy (IL) has thus become one of the most vital sets of skills for the twenty-first century. Information literacy has been defined as 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" (ACRL 2000). It has also been defined as a self empowering attitude and commitment by individuals and people, at all levels of society, to seek, access, analyse, translate, transform information and create knowledge to solve problems to achieve personal, social, occupational and learning goals for the improvement of their quality of life (IFLA/ALP 2007). Information literacy skills are a fusion of library literacy, computer literacy, media literacy, technological literacy, critical thinking, ethics and communication which when acquired would empower individuals to become independent life-long learners.[4].

The term information literacy, sometimes referred to as information competency, is generally defined as the ability to access, evaluate, organize, and use information from a variety of sources. Being information literate requires knowing how to clearly define a subject or area of investigation; select the appropriate terminology that expresses the concept or subject under investigation; formulate a search strategy that takes into consideration different sources of information and the variable ways that information is organized; analyze the data collected for value, relevancy, quality, and suitability; and subsequently turn information into knowledge (ALA 1989). This involves a deeper understanding of how and where to find information, the ability to judge whether that information is meaningful, and ultimately, how best that information can be incorporated to address the problem or issue at hand.

Information literacy is seen as an umbrella term comprising [5]:
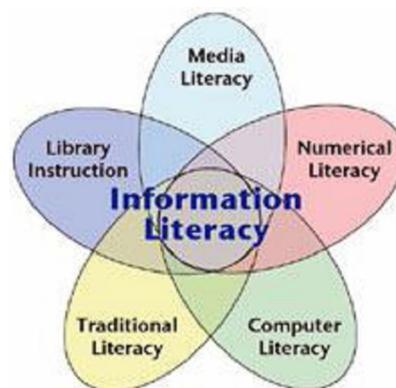

Fig.2.1 – Aspects of IL

- Media literacy – the set of skills, attitudes and knowledge necessary to understand and utilize various kinds of mediums and formats in which information is communicated such as images,

sound, and video… knowing when and how to use print newspapers and journals, magazines, radio, broadcast television, CDROM, , PDF, or HTML text formats, JPEG and so forth (Horton, 2008).

- Numerical literacy **–** the ability to use and interpret numbers.

- Computer literacy – the set of skills, attitudes and knowledge necessary to understand and operate the basic functions of information and communications technologies (ICT), and so forth (Horton, 2008).

- Alphabetic literacy – ability to read and write.

- Library instruction – includes instruction on both how to evaluate information resources and how to use library resources such as the library catalogue or other bibliographic databases.

New media and new technologies have caused a sea change in the way of information. Information is an important resource in the "Knowledge Society" and its management is very different from traditional Library management. Mostly, it involves management of change, time and electronic sources, along with traditional collection management aspects.

Modern libraries have to serve the needs of knowledge society where the organizational knowledge, individual knowledge and other resources of knowledge have to be managed and disseminated.. They are responsible for information resource management in effective and efficient way. Forest W. Horton (1979) one of the leading experts in the area of IRM, defines "Resource Management system includes all methods and procedures for collecting and processing information on a particular resource and formatting that data in a manner which is useful for management".

Information resources management includes the basic infrastructure management, underlying technology, standards and protocols, access models and finally the user management which is the ultimate purpose of any knowledge management process [6].

The exponential growth of information has put a demand before information professionals for a new evolutionary technology to support effective search and indexing functionalities.

Modern libraries should integrate a variety of information technologies and provide opportunities to organize and access large volumes of information from multiple repositories.

2.1. IL cycle and the need to evaluate the credibility of information; IL and information technology literacy

The beginning of the 21st century has been called the Information Age. This is due to the explosion of information output and the increase in available information sources.

Information literacy is critically important because we are surrounded by a growing ocean of information in all formats.

Before starting a research, it's good to know how information is produced, where it comes from, and how it changes over time. Knowing about the information cycle will help us to better know what information is available on a topic and better evaluate information sources covering that topic. The need to evaluate the credibility of information is nothing new. The increasing quantity of information from all sources and the pressure to remain in a constant state of conscious learning means that we must be dexterous in the use and in the evaluation of information. Information literacy is not only a technique who can help users in forming and asking focussed questions, is a type of learning, also. It is a necessary accomplishment enabling the identification and selection, from the millions of articles available, the information needed to make reliable decisions, to carry out research,or for study purposes.

The information literacy process suppose seven basic stages, in fact, the way to get the information you need [7]:
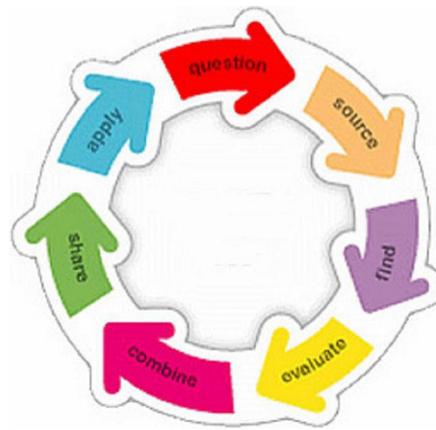
Fig.2.2 – IL cycle

1) Question: This is the first step in the information literacy cycle. What do you need to know? What is your question ?

Defining the question is vital to finding the right solution : you must ask the right question to get the right answer

2) Source: At this step, you need to identify possible sources of information to answer your question. Where can you look for the information you need?

You must determine possible sources, select sources and search strategy.

3) Find: find specific information in one or more sources Which words do you use in your search? At the question stage you will have identified the key words in your question and are now ready to use them to search the sources you have selected. Apply the question to the selected source(s) to find the needed information.

4) Evaluate: compare the information found with the information problem.Have you found 'good' information? Look closely at the information your search has recovered to check whether your question has been answered. Do you believe the information?

Assess the value and reliability of recovered information.

5) Combine : Add valid recovered information to the existing knowledge base.

Have you learned something new and useful from your search? Blend this with what you knew before searching.

6) Share: draw conclusions and communicate the information to others. Would other people in your work-group/family find your new information useful or interesting? How would you share it with them?

7) Apply: Use information in everyday work activities. How will you use the information? Will this help improve management or treatment of your condition? Improve your work practices? Help you write a new policy document?

Information literacy is a way of learning which provides skills and abilities to develop critical thinking and problem solving and encourages innovation and creativity. We know that good decisions depend on good information. Rapid developments in IT, together with the information-explosion related to the Internet, allow access to huge amounts of information. But, getting to the *right* information can be difficult. Faster access to more information can mean that recovered information includes a higher number of irrelevant items.

Information-users have to learn how to access information resources and how to assess, manage, and use them effectively. These abilities enable their to develop a flexible, self-directed lifelong

learner. The skills and abilities can be used in leisure activities as well as in keeping professional knowledge up-to-date and in using new information in the work situation.[8]

Information literacy includes a mixture of intellectual and technical processes and skills, which result in thoughts, feelings and actions.

Information literacy is related to information technology literacy; they are distinct but inter-related. Information Technology Literacy is the ability of an individual, working independently or with others, to use tools, resources, processes, and systems responsibly to access and evaluate information in any medium, and to use that information to solve problems, communicate clearly, make informed decisions, and construct new knowledge, products, or systems. On the other hand, information literacy deal with content and communication: it encompasses authoring, information finding and organization, the research process, and information analysis, assessment and evaluation. [9]

 "Information literacy occurs at the intersection of teaching, thinking and learning, within the broader environment of technology." (Patricia Iannuzzi, "Faculty Development and Information Literacy: Establishing Campus Partnerships," Reference Services Review. 26 (1998): 101.) Both forms of literacy are essential: today more than ever information technology and supporting infrastructure is intended to enable communication, information finding, information access and information delivery.

2.2. The goal of Information Resource Management (IRM) from a library perspective

Information is regarded as a valuable resource which should be managed like other resources, and should contribute directly to accomplishing organizational goals and objectives. IRM provides an integrated view for managing the entire life-cycle of information, from generation, to dissemination, to archiving and/or destruction, for maximizing the overall usefulness of information, and improving service delivery and program management.

IRM includes the management of the broad range of information resources e.g., printed materials, electronic information, and microforms, the various technologies and equipment that manipulate these resources, and the people who generate, organize, and disseminate those resources. [10] Fundamental to the library perspective is the view and treatment of information as a strategic resource/asset—one that needs to be managed likes any other critical organizational resource, such as people, equipment, and capital. The underlying philosophy behind information resource management (IRM) is to design, inventory and control all of the resources required to produce information.

Often the term of information resource management (IRM) is used interchangeably with others. For instance, information resource management is often equated with the information management (IM), the management of information technology (IT) , electronic resource management (EM), a.o.

Information management (IM) is the management of the processes and systems that create, acquire, organize, store, distribute, and use information.

From a library perspective, information management concerns the management of information collections, such as books and journals. The goal of information management from a library perspective is to help library patrons access and use efficiently and effectively information items held in the collection. A variety of activities surround the management of a library collection, including the development of collection policies and materials budgets, the selection of collection items, the analysis of collection usage and end-user collection needs, training of collection staff, preservation of collection items, and the development of cooperative collections with other institutions (11).

Information technology (IT) plays a critical role in the management of information resources in library and is an integral part of information resources management strategy.

Also, information technology facilitates the ability to support information creation, acquisition, organization, storage, distribution, and use in both efficient and effective manners.

Librarians who have been the traditional information resource managers have a vital role to play in this context. They are responsible for information resource management in effective and efficient way, are required to provide the user support using the information technology developments, and need to face many challenges that gives attributes of information literate person.

3. Redefining Role: from Traditional Librarian to Information Literate Person

Traditionally, librarians were the gate keepers of information; today, they are the gateways to information and active participants and leader to educational process.

The profession of librarianship is facing a future of change due to the explosion of information (Information Age) and to developments in information technology .

How to make information available? How to make information systems easy to use? These are challenges for information professionals. "Librarians play an important role in the education process by making people aware of a need and motivating the use of information, a new knowledge and a new ability. " [12]

Librarians have a particularly important role in fostering information literacy. Librarians, are in fact, the symbol of information literacy. Their career focuses on identifying information problems, finding information, analyzing, synthesizing and evaluating the information, and then ensuring that the library's users has access to informations. "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" .[13]

Being information literate involves a deeper understanding of how and where to find information, the ability to judge whether that information is meaningful, and ultimately, how best that information can be incorporated to address the problem or issue at hand.

The diagram Big Blue - Model of the information literate person [14], illustrates the skills of information literate person:
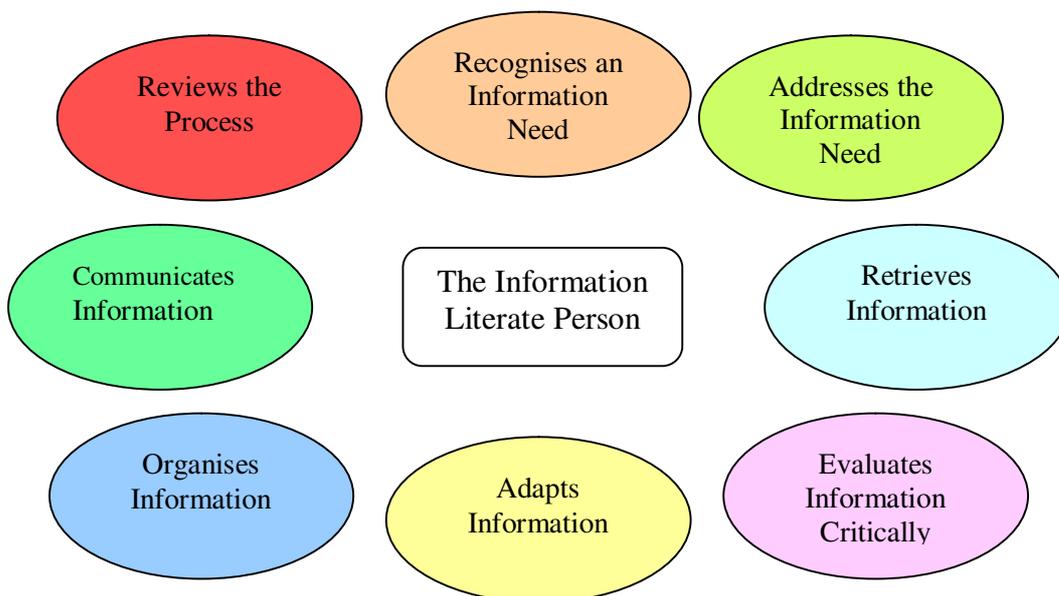

Fig.3.1 - Model of the information literate person

The information literate person is one who:

➢ Recognises an information need
   - determines the nature and extent of the need
   - confers with others e.g.peers
   - aware of range of info resources
➢ Addresses the information need
   - determines how to address the information need
   - formulates keywords and search strategies
   - selects and evaluates information surces
➢ Retrieve information
   - interrogates a range of sources
   - selects, reviews, refains and discards results as necessary
➢ Evaluates information critically
   - assesses quality, quantity and relevance
     of retrieved information
   - revises search strategy and repeats as necessary
   - assesses quality of information retrieved
➢ Adapts information
   - interprets information found to match information need
   - creats newknowledge for self and others
   - recognizes accumulation of new knowledge
➢ Organises information
   - keeps accurate records of sources and references
   - cites references using appropriate method
➢ Communicates Information
   - disseminates information effectively to others
   - uses appropriate methods
➢ Review the process
   - reflects whether the original information need has been met
   - repeats process if necessary
   - understands process and reuses in other context (lifelong learning)

Information skills have become increasingly important due to the sheer volume of information which is now produced and disseminated every day. The information literate person needs to be equipped with the skills to locate, access, evaluate and act on all the information received. In the mean time he needs to be able to effectively and efficiently use these skills.

4.   CONCLUSIONS

Information literacy is an important and challenging concept in addressing a changing and varied library clientele with differing preparations for library use. The revisioning of information literacy would give birth to the future academic library—a place thoroughly integrated into the flow of learning where librarians, possessing diverse knowledge and expertise, would assist users in a multiplicity of information-related processes.

Modern libraries have to serve the needs of users and have to manage and disseminate information and other resources of information. In the Knowledge Society the information is an important resource and its management involves many aspects such as management of change, time and electronic sources along with traditional collection management aspects.

Information Resource Management affects both the librarians and library users. Evaluation of information demands taking into consideration how the needs of people are changing: from viewing

libraries as rooms full of books into a complex dialectical system of viewpoints and actions providing a linking of knowledge of others with the user's knowledge in a learning-by- doing manner.

"Information literacy occurs at the intersection of teaching, thinking and learning, within the broader environment of technology."[15]

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From Mundaneum to Wikipedia.
Brief History of Knowledge Organization Systems (KOSs)

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Abstract

The paper will comprise the eventful history of the project of Mundaneum as a new type of museum, and of *The Encyclopedia Universalis Mundaneum*, or *L'atlas Universel*, conceived by Paul Otlet and Henry La Fontaine, as one of the first attempts of world knowledge organization at the end of 19th and the beginning of the 20th Century. A comparison will then be made between Mundaneum and Wikipedia as a Wikimedia Project, started in 2001, to build free encyclopedias in all languages of the world, thus creating a parallel between the one and the other. A special attention will be paid to the role UDC played in Otlet's utopian ideas of the world knowledge organization, and I will finally present the Wikimedia most recent project of using UDC as a notational or conceptual hub within the contents of Wikipedia, by linking the Wikipedia articles to these codes. The paper will show how Mundaneum foreshadowed the Wikipedia, as the Repertoire Bibliographique Universel prefigured on paper support the much later Internet on electronic support.

> Motto: *'L'Humanité est à un tournant de son histoire. La masse de données acquises est formidable. Il faut de nouveaux instruments pour les simplifier, les condeser ou jamais l'intelligence ne saura ni surmonter les difficultés qui l'accablent, ni réaliser les progrès qu'elle entrevoit et auxquels elle aspire.'*
> (Paul Otlet, 1934)

1. Introduction

As the prevalence of features and applications that support user-generated content is increasing, the World Wide Web is more and more becoming the repository of all human knowledge. Wikipedia is a more and more important resource for news and information. It is an online information source that is increasingly used as the first, and sometimes only, online encyclopedic information point.[1]

It may be hard to believe, but the knowledge organization as a system of networks was also the dream of two Belgians who leaved at the end of the 19th Century and the first half of the 20th , Henri-Marie La Fontaine and Paul Otlet. Otlet himself imagined that one day, somehow, all the information he collected could be accessed by people from the comfort of their own homes.[2]

2. The Life and Work of Henri La Fontaine (1854-1943) and Paul Otlet (1868-1944)

Henri was the oldest son of Alfred La Fontaine, Commissary of the Government, and of Marie Louise, born Philips, a notorious feministe. As well as his younger sister, Léonie, he received an education influenced by Auguste Comte, and by pacifist and feminist values. These values deeply affected the personalities of the two children. Henri later specialized in the International Law. Confident in the progress of the pacifism and law, he chose to change the society he was living in by promoting global peace. At the beginning of the 20th Century, he was an active member of many International associations, such as the Union interparlamentaire and Bureau International de la Paix

(BIP). He took an active part in the feminist debates, and embraced socialism. During First World War, he made an appeal to the creation of the United States of Europe, with *La Magnissima* Charta, his major issue concerning peace. After the war he took an active part in the League of Nations. In 1913 he won the Noble Prize for Peace.[3]

At the end of the 19th Century, he was contributing to *Pandectes belges*, together with Edmond Picard, whose secretary he was. Due to this encyclopaedic work he first made acquaintance with the domain of bibliography. There he met a young deb, Paul Otlet. Paul's father, Edouard Otlet, a businessman and a political figure, made his fortune in the streetcar industry. The vast society he was running, L'Entreprise, developed all around the world. With such a family background, the future for the young Paul was already pinned down: he would study Law to be able to defend the patrimonial interests of L'Entreprise. But he had other interests... Otlet graduated the University of Louvain and the Free University of Brussels. Having earned a degree in Law in 1890, he made his debut in the office of the renowned Edmond Picard, who was the publisher of the *Pandectes belges*. Otlet joned the pluridisciplinary team concerned with this encyclopedia of legislation.[4]

From the secretary of Edmond Picard, Henri La Fontaine, he would learn about bibliography, a field which they both would try to change into science. Together, they created the Office International de Bibliographie (The International Office for Bibliography), his most lasting heritage, in 1895. Together they were instrumental in forming the first International bibliographic conference. Both Otlet and LaFontaine saw the need for an International index for documentation, and they adapted the Dewey's Decimal Classification, thus developing the Universal Decimal Classification (UDC). The base of their huge archive was a bibliography of publications from all times and all parts of the globe, including a library and a universal documentation centre.[5]

The encyclopedia envisaged by Otlet and La Fontaine took its sources from all types of knowledge supports, without any restraint. In his book, *Le Traité de documentation, le livre sur livre* [The Treaty on Documentation. The Book of Books] Otlet said that: 'Film, phonography, radio and telephone, all these instruments, substitutes of books, have actually become the new kind of book, the most powerful means of spreading the human thoughts.'[6]

They also redefined the museum concept, which, during their days was still widely understood as a cabinet full of oddities from the 17th and 18th Centuries. Whence they ended up envisaging a new type of museum, the *Palais Mondial-Mundaneum* (1920), an International museum of human knowledge.[7]

3. Mundaneum, a World Museum of Knowledge, and an Encyclopedia Universalis or Universal Atlas

Otlet regarded this project as the centerpiece of a new 'world city' - a centerpiece which eventually became an archive with more than 12 million index cards and documents.[8] The idea of such a museum arose during the Universal Exhibition (1910) that took place in Brussels. Among many International Congresses that surrounded the main event, there was also the World Congress of the International Associations during May 9th-11th. Along with it, a Museum Exhibition was organized at Palais de Cinquantenaire in Brussels. At the end of the Congress, the organizers proposed to maintain that exhibition on a permanent basis and alter it into an International museum. The idea was well received. Two Committees were constituted. The Belgian Committee was charged to find a place for the International Museum. The other Committee, an International one, formed by different attendants to the World Congress of the International Associations, would invite the various countries to hand over those items and documents they presented during that Universal Exhibition.[9]

First, the proposal was put forward to preserve one of the Palaces built on Solbosch and destined to be demolished at the end of the Universal Exhibition. But after the violent fire that devastated the Park of the Exhibition at Solbosch, on the night of August 14th 1910, the location for the museum

was eventually chosen in the Cinquantenaire. The Central Office of the International Associations was to run the museum, and its collections were put in connection to the services of the International Institute of Bibliography. [10]

The Museum would gather the International collections of items that illustrated the world knowledge. It was divided in three parts: the International Organization, The National Sections that constituted a Geography museum, concerned with the great countries (territory, business, history, etc.) and the Comparative Sections dedicated to each of the knowledge fields. In 1912, not yet finalized, the International Museum already filled 16 halls of Cinquantenaire and exhibited no less than 3, 000 items and paintings. The information was presented in a synthetic form by means of diagrams, models, photographs and drawings. It had two aims: to serve as a shopwindow for the International bodies who wanted to make themselves known, and to support education with an approach of the whole knowledge from an International perspective.[11]

In 1920, the government decided to grant the museum with dozens of halls. The Union des Associations Internationales (The Union of International Associations), the International Institute for Bibliography, the facilities designed for the International Congresses, the International Library and the documentary Encyclopedia were lodged in Cinquantenaire, to form, together with the International Museum, le „Palais Mondial." There were organized additional activities: the Quinzaine Internationale, the International University, but also guided tours and conferences.[12]

But, since the locations of the Palais Mondial continued to be the property of state, in 1924, the government reclaimed some of the halls of it to organize a rubber fair within. As Paul Otlet refused to give in, the gardeners were charged to evacuate the collections. A real catastrophe resulted. It took two years to put everything again in its place. Faced with such impediments, Otlet thought of the possibility to move the Palais Mondial abroad. [13]

But in June 1934, after repeated warnings, the Palais Mondial was finally closed by government order, with the pretext of extension works to the Musée du Cinquantenaire. Paul Otlet and his collaborators protested against that measure, official announcements were sent to Press, the National and International members of the Union des Associations Internationales stood up but for nothing. They had to leave the place and to continue their work at the very home of Paul Otlet, in Rue Fetis. The collections were closed and were available only by request of the National Authorities. Under such difficult circtumstances they continued their work, and in 1937, a new edition of UDC was issued. The conferences, the documentary training courses and the exhibitions were set in other places.[14]

In 1941, the Germans demanded the collections to be removed. Therefore they were moved to the Leopold Park, in a wing of the Pasteur Institute. For many of the items the new location didn't provide any depository, due to the lack of space, but also because of their own fragility, some couldn't survive. The furniture of the Repertoire Bibliographic Universel was dispersed to different locations.

After the death of Paul Otlet and Henri La Fontaine, the collections were again mishandled when they were moved out in 1972, and some years later, on their installation to Rogier Avenue. With each move out, thousands of documents got lost, destroyed or stolen.

Today there is not even a single item left from the halls of Cinquauntenaire, not even a model, a telegraph or a flag. Nonetheless, the Repertoire Bibliographic Universel, the International Library, the archives, the icon collections and the media collection are still preserved. An important collection of photographs and glass plates allow us to envisage the tremendous scope of the International Museum Mundaneum. Some UBR cards, recently discovered, reveal the sources and the richness of the exhibited items.[15]

One of the achievements of the institutes that belonged to the Palais Mondial was the Universal Atlas, an illustrated encyclopedia, comprising images on mobile plates. Each of them was dedicated

to a specific topic. Each image synthesized different sources of information: bibliographic descriptions, books, serials, and documentary files.

The plates of the Atlas had a standardized format: all of them were 64x67 cm in size. Each of the plates presents a defined frame, and each of its datum finds its own place in a cell: the title, the caption, the data, the documentary sources, and the signature of the bibliographer. The central cell, the most important of all, displayed the subject as black-and-white or colored drawings. They could be considered real works of art. The plates were then regrouped according to the UDC, in particular, in series of files. These files were reunited to form four general series or the Atlas: the Sciences and the various activities, History, Geography and the International Life. These plates had a triple destination. First and foremost, together they would form the Universal Encyclopedia. Then, separating them from each the other, the plates could constitute a documentary counterpart to the museums and exhibitions. And finally, they could also be used as means of education. To ease the spread of knowledge, the plates of the Atlas were reproduced in more than one form.[16]

Otlet integrated new media as well, as they were invented, into his vision of the networked knowledge-base of the future. By the late 1920s, along with other colleagues, he attempted to create a new kind of encyclopedia printed entirely on microfilm, under the title: *Encyclopedia Microphotica Mundaneum*, which was housed in the Mundaneum.[17]

All in all, there were more than 8, 000 different panels and many hundreds of films made within the *Encyclopedia Universalis Mundaneum*.[18]

4. Towards a World City?

The project of Mundaneum as International Museum of Human Knowledge was an integral part of the new world city which Paul Otlet envisaged before 1910. Along the bibliographic index cards, the Universal Decimal Classification, the Palais Mondial, he imagined an architectural project that would have encompassed all the other projects. Around Mundaneum, there would be political institutions, International associations and universities, libraries. The main purpose of this world city was to be a practical instrument for the settlement of a universal harmony dedicated to the promotion of progress.[19]

At the beginning, the project took form of a grand city in the neoclassical style around a World Centre of Communications, all sketched by the sculptor Hendrik Andersen and the architect Ernest Hébrard. Together with Paul Otlet, with whom Andersen was in much correspondance, they imagined to plant the World City on different points on the earth, from Paris to Rome via Constantinople or Cairo. In 1913, a luxurious scale model was elaborated and presented to the political authorities to acquire space that was to become stateless. Destined for at most a million inhabitants, the city would be organized around the Scientific Centre that would comprise the „ knowledge architectures." In front of its harbor, two colossi opened the gates of a fabulous city, the Art Centre would be linked to the Olympic Centre via a main axe, thee „Nation Avenue" that would cross the Scientific Centre. The pedestrian circulation around the city was to be ensured by large avenues and an underground railway. The „Tower of Progress," symbol of Love and Fraternity, a Nation merger, lodged the International Media and the Central Office of Information. Each decision taken in the city for the good of all was to be transmitted toward all the cities in the world.[20]

After First World War, the plans of Andersen and Hébrard seemed out-of-date. The distressed atmosphere in International politics led to a revisal of the pacifist ideal. The general fit of awareness that peace had to be treated in an International manner seemed to advantage the concept of a World City. Paul Otlet reviewed his project and began to seek out an architect who could meet his new vision on it. So he found Le Corbusier, who agreed to work with Otlet on his project of the World City in the late 1920s and brought radical changes to it. Right in the middle of the city, surmounting it, a monumental pyramid gathered the collection of the Palais Mondial-Mundaneum. Placed at a height of 85 m, the entrance would confine the visitor to take the sacred roads of knowledge. In

accordance with the halls of the Palais Mondial, Otlet would suggest the visitor starting his tour from the history of the humanity.[21]

Around the pyramid, all the world's intellectual, economic and political institutions were to be gathered. There would also be an airport and a world bank. The city was planned to be built on the side of the Geneva's Leman Lake, but the Swiss authorities never saw with good eyes what they qualified as the „cité vaticane." Paul Otlet tried again in Belgium. Between 1930 and 1944, the architects Victor Bourgeois, Huib Hoste, Maurice Heymans and Stanislas Jasinski tried to plant it on the left bank of Anvers river. In vain Otlet appealed for his project to his contemporary authorities' support and continued to dream on it until his death, 1944.[22]

From all their many dreams, some never came true and the utopia of a world city was one of the most spectacular among the failed ones. [23]

5. A parallel between Wikipedia and the Repertoire Bibliographic Universel

Otlet published his major work, *Le Traité de documentation, le livre sur livre* in 1934, where he rigorously defined all kinds of knowledge supports. At the end of his treaty he imagined the future of the books. He predicted that media which would convey feel, taste and smell would also eventually be invented, and that an ideal information-conveyance system should be able to handle all of what he called 'sense-perception documents'. Moreover, he developed a theory on the knowledge networks, prefiguring the Internet of nowadays.[24]

In his book he used to wonder: 'How could we condense, shorten, simplify and express the essence of the science of our days?' because 'it has become so vast that menaces to master the brains, instead of the brains mastering it.'[25]

Trying to answer this question, he sought out new instruments to simplify and condense the huge amount of knowledge in his days, a higher principle of knowledge organization, considering that his era was in a tremendous need of synthesis: 'The current moment is characterized by the simultaneous existence of all the elements succeedingly achieved. It is also marked by the need of one dominant idea or formula of higher level. If there is no such intervention, the risk is high to see all these elements dispersed, opposed, contradicting one another...'[26]

Therefore the major work of the International Institute of Bibliography is the Repertoire Bibliographique Universel. This is an instrument aimed to give account of all the published documents from all the times, all the countries and on all the subjects, as well as the very space of their conservation, whence its universal character. As Otlet put it in his major work: 'A well-made science is a system, and a system is a classification.'[27] Therefore, the Universal Decimal Classification, „the keystone of human thinking and document,"[28] was aimed to meet the needs of a thematic organization of the bibliographic cards, which were ranged according to the succeeding order of the numerical codes on the UDC tables.[29]

Altogether, the Repertoire Bibliographique Universel is not at all a single repertory but many specific repertories that each answer to a particular matter. Hence this is a repertory of many repertories, within which there are the Series Title Repertoire, the Book Title Repertoire, the administrative repertoire and many others. Among them there was the Repertoire Universel de Documentation, a form of encyclopedia with a strikingly uncommon mobility. It is comparable to the mulivolume encyclopedias, having the additional advantage of the rapid diffusion of its content. This Repertoire was divided in three sections: the biographical files, tackling the personalities, the subject files arranged according to UDC and, finally, the geographical files organized on countries divided in regions and cities.[30]

Otlet's writings have sometimes been called prophetic of the current World Wide Web. His vision of a great network of knowledge was centered on documents and included the notions of hyperlinks, search engines, remote access, and social networks — although these notions were described by

different names.[31] All these repertories heralded on paper format the virtual Internet and the online encyclopedias, such as Wikipedia, born in January 2001 as a complementary project of Nupedia.com, which was aiming to create a freely available online encyclopedia. Wikipedia was started by Jimmy Wales, formerly a Chicago futures trader, as an open information source, allowing anyone with access to the Internet to post or edit content on the site.[32]

This open-source project operates under the assumption that more writers and editors are better than fewer and that the community will develop and monitor content in a more effective manner than that of traditional information publishing. At this point, the idea of Wikipedia emerged as a laboratory, a space where one could explore and exploit the advantages of massive collaboration, with the intention of choosing the best and most accurate of all the articles. Wikipedia has currently an unknown number of anonymous contributors and 29,853 registered users of which 143 are administrators, among which seven have developer rights.[33]

Six months after the birth of Wikipedia, 6.000 articles were written. According to Wikipedia.org, in 2007, this online encyclopedia contained more than 7 million articles in more than 200 languages, making it one of the largest encyclopedic databases in the world.[34] Consequently, it is a multilingual encyclopedia that encompasses many encyclopedias in various languages. But now the Wikipedia faces as well the need of organizing its huge amount of information, just as La Fontaine and Otlet, in their days. This online encyclopedia has already its own category system of knowledge organization, which means that each of its articles can be sorted in multiple categories arranged in a conceptual plurihierarchy. The system is partly faceted and precoordinated. Therefore, Wikipedia can be seen also as a controlled vocabulary, a dynamic thesaurus. But unlike UDC, the information retrieval is far more complicated in Wikipedia because of the heterogenous structure of its knowledge organization system.[35] That is why the vast amount of information in it needs simplification, condensation and essentialization, in the very words of Paul Otlet.

As a matter of fact, you can locate the UDC classes in the heterogeneous Wikipedia categories, so there must be compatibility between the two. Surprisingly, there is more than one commonality between UDC and Wikipedia, such as: a monographic principle of information organization, multilingualism, or better to say in the case of the UDC, the linguistic independence, and the possibility to bring perpetual modifications, Wikipedia having a vast repository of revision data. The great revision potential is also afeature of the UDC today. Due to their similarities and compatibility, the UDC and Wikipedia can be linked together, so a mapping can be created between the two, as one of the founders and members of the executive board of Wikimedia Germany, Jakob Voss, suggested within the UDC International Seminar in 2009, in Hague.[36] The articles of Wikipedia are linked not only between them, but also to other language editions of the encyclopedia and to external resources. One of these can be the UDC as well, but also other knowledge organization systems like the DDC or the LCC. As Mundaneum started around the Repertoire Bibliographique Universel, the Wikipedia started, in fact, from specific articles on different facts and phenomena, but in the last years its need for bibliographic references has increased.[37]

The idea of encyclopedias and the desire for knowledge organization systems stem from the utopias of the Enlightenment. When the Sisyphean task of collecting the entire world's book production in one place proved impossible, the idea of bibliographies of various kinds began to take shape. Universal bibliographies and catalogues are most of the times used only as pointers to the actual document. These have developed and expanded over the centuries and also found their expression in the online world. It could be argued that contemporary (Web) search engines are further developments of the bibliography, in the sense that each search returns a collection of pointers to the *actual* objects of interest.

There is a difference, of course, between collecting physical items, such as books, or even collecting just pointers to them, and the wish to collect and represent all human knowledge in an encyclopedia. Yet, bibliographies and encyclopedias appeared to be solutions to the same problem. In the past, many regarded as a serious matter the continuous growth of books and other written

documents. The bibliography seemed to be one solution. The other, enabling a form of continued control, came in the shape of encyclopedias. These offered a way of organizing knowledge as well as controlling the content. [38]

Both projects of Wikipedia, as an online participatory encyclopedia, and Mundaneum in both its forms, as museum, and as world atlas, belong to the legacy of the Eighteenth Century Enlightenment.

6. … and a last word about Mundaneum

From the 1980s on, and especially after the advent of the World Wide Web in the early 1990s, new interest arose in Otlet's speculations and theories about the organization of knowledge, the use of information technologies, and globalization. His 1934 masterpiece was reprinted in 1989 by the Centre de Lecture Publique de la Communauté Française in Belgium.[39]

In 1985, the Belgian academic André Canonne raised the possibility of recreating the Mundaneum as an archive and museum devoted to Otlet and others associated with them; his initial idea was to house it in the Belgian city of Liège. Cannone, with substantial help from others, eventually managed to open the new Mundaneum in Mons, Belgium in 1998. Today this museum contains the personal papers of Otlet and La Fontaine and the archives of the various organizations they created along with other important collections for the modern history of Belgium.[40] Situated in the historical centre of Mons, between Rue de Nimy and Rue de Passages, the Mundaneum occupies the Art Deco compound, renovated in 1998, which is composed by three buildings. It is organized around a vast rectangular hall surrounded by two levells of galleries. In the middle of the hall there is a huge terrestrial globe slowly spinning around. On the walls one can see the original furniture of the Universal Bibliographical Repertoire and on the vaulted ceiling, the futurist vision of the informational highways.[41]

More than a classical archivel centre, the Mundaneum is the heir of a double heritage, a material one, comprising the collections and the archives, and the spiritual one, encompassing the ideas of world peace, of knowledge democratization, of justice, and of social engineering. This spiritual descent, in the light of the digital revolution reshaping the human society all over the world, enhances the vitality of a project that endlessly reinvents its own actuality.[42]

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Re-inventing Culture in the Information Society.
A Sustainable Approach

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Abstract

The aim of the present paper is to perform a critical survey of the ongoing transformation, evolution and challenges of culture as it is modeled by the global information society. There is a paradigm shift, from the traditional concept of culture to the adaptation of culture production and consumption in keeping with technological progress - from the printed age to the digital age, from Guttenberg to Google. Thus, the paper also examines the new set of concepts and catchphrases that has emerged as a response to the pressing need of creating a new vocabulary appropriate for the novel and rapid changes.

Keywords culture: opportunities and challenges; information vs. knowledge; information society; learning economy; digital age

> **Motto:** "Our emergent world society, with its particular qualities of speed, mobility, mass production and consumption, rapidity of change and innovation, is the latest phase of an ongoing cultural and social revolution. It has few historical precedents as a cultural context." (Alvin Toffler ed. *The Futurists*, p.51)

I. Prolegomenon

Any approach to the hard-to-define and complex notion of culture in the context of the current information age, requires a sine-qua-non clarification of terminology meant to shed light on one of the most dynamic contemporary phenomena. The aim of the present paper is not to dwell on the various definitions of "culture" – either in relation or in opposition to "civilization" – but rather an attempt to survey the ongoing transformation, evolution and challenges of culture as it is modeled by the global information society.

Thus, a new set of concepts and catchphrases has emerged as a response to the pressing need of creating a new vocabulary – whose aim is that the language of science and the language of humanities interact more visibly in order to bridge a gap in effective communication and holistic understanding - appropriate for the novel and rapid changes.

This specialized language has a twofold purpose: it is both *anticipatory* – as it envisage new trends and introduces an upcoming world context, e.g. "future shock", "information explosion", "information society/literacy" – and *explanatory* – as it informs about present and future, real and potential outcomes of phenomena with deleterious effects on individuals unless accurately understood, e.g. "digitization", "digital age", "broadband society".

II. Opportunities and Challenges of "Sustainable" Cultural Development in the Digital Age

The second half of the twentieth century was marked by the writings of some visionary thinkers who launched new concepts and ideas which are still being instrumental in understanding contemporary trends and phenomena.

The phrase <u>future shock</u> was coined by Alvin Toffler who first used it in 1965 in an article in „Horizon" in order to define the "shattering stress and disorientation" felt by individuals subject to too much change in too short a time; in other words, this is a „disease of change"; whereas culture shock is a much more familiar term, the implications of future shock are more profound and wide-ranging, with long-lasting conseqences. Preparing for the future represents one of the most demanding tasks of humankind at the beginning the 21st century. The choice we make, both personally and nationally, i.e. resistance or adaptation to change, will define the response both at a personal and social level, and it will definitely affect the quality of life. [1] The concept of quality of life has been recently included in the social sciences vocabulary and it can be defined by its relation to sustainable development, thus ensuring the meeting of current needs and requirements without compromising the possibility of future generations to meet their own needs society. Lester Brown pointed out the fact that: "we need a new moral „compass" to guide us through the 21st century, a compass based on the principle of sustainable meeting of human needs." [2]

Understanding and awareness are prerequisites of the preparation for the future, a task and a challenge alike assumed by "a growing school of social critics, scientists, philosophers, planners, and other who concern themselves with the alternatives facing man as the human race collides with on onrushing future." [3] The term futurology or future studies appeared for the first time in 1943 in the articles of the German scientist Ossip K. Flechtheim; later, in the 1970s others like Alvin Toffler, Daniel Bell and John Naisbitt have approached theories of postindustrial societies, warning that we are currently witnessing the third revolutionary wave (subsequent to the agricultural an industrial ones) mainly triggered by an <u>accelerating change</u> of technology and information.

There is a growing awareness nowadays of the need for sustainability given the unprecedented rhythm of changes and the wealth of information, that are impossible to prevent, hard to control but potentially manageable.

Let us thus embark on a more detailed approach to the role and impact of <u>information</u> at individual, organization and society levels, as well as its relation to the kindred notions of <u>data and knowledge</u>. The terms information and knowledge may not be used interchangeably. According to Peter Drucker, information is defined as "data endowed with relevance and purpose, while the conversion of data into information requires knowledge" [4]. Hayes, furthermore, asserts that "knowledge is the result of the understanding of information that has been communicated and from the integration of it with prior information" [5]

information	knowledge
Tangible – informs humans	Human process – thinking/awareness
Processing changes representation	Processing changes consciousness
Physical objects	Mental objects
Context independent	Contexts affect meaning
Entity	Awareness and intuition
Easily transferable	Transfer requires learning
Reproducible at low costs	Not identically reproducible

Table 1. A comparative approach to information vs. knowledge [6] according to David J. Skyrme

The proliferation and integration of these terms in both everyday vocabulary and specialized debates has entailed an enhanced awareness that:

- the individual is both subject to the information bomb and ceaselessly in search of knowledge acquisition, given the fact that knowledge and innovation serve as the strategic and transforming resources of society;
- access to information is both facilitated and mediated by <u>technology</u> which thus becomes a social process, no longer a tool; hence the need to master technological devices in order to unlock the gates to knowledge;
- information and knowledge are tangible and intangible <u>assets</u>; therefore the economic dimension has justified the emergence of a number of related concepts: information management; business intelligence; learning economy; knowledge-based organization.

Likewise, knowledge is an essential currency in the <u>knowledge society</u> or, as Jose Manuel Barroso called it, the "the community of knowledge and innovation", requires a simultaneous development of the three dimensions of the knowledge triad: i.e. universities, research institutes and industry with the aim of training future specialists endowed with international professional competencies, e.g. "brainworkers" – individuals with well defined affective and cognitive competencies designed to meet the requirements of a continuous changing environment.

The <u>learning economy</u> is a relatively new concept whose core idea is knowledge as an essential element for the development of both society and economy, accompanied by innovation as the motor for economic change, thus entailing a more dynamic vision of society evolution. Therefore the knowledge revolution means that wealth is based upon the ownership of knowledge and the ability to use that knowledge to create or improve goods and service.

<u>Knowledge worker</u> is a modern concept triggered by businesses dependence on information technology and it further laid the foundation of Knowledge Management (KM). The term was first coined by Peter Drucker (1959) and later developed by Toffler (1990) and Nonaka (1991) focusing on knowledge creation and innovation fuelled by knowledge within industrial and non-industrial organizations. Furthermore, organizations have resorted to the resources provided by Business Intelligence – particularly data mining as a significant tool for transforming data into information - and/or the creation of a Business Intelligence Department in view of capitalizing technology for an effective processing of the increasing the volume of data.

The economic dimension of technology information is also evinced by the fact that socioeconomic class is an accurate indicator of access to communication technology; since access to culture is mediated by technology, the exclusion or resistance to high technology is mainly financially grounded and imposed by the disadvantages of low social class, cultural values or ways of life; "… information technology remains largely a white-collar phenomenon. Technological development cannot simply be mandated in situations where people`s basic needs are unfulfilled, where their opportunities are greatly limited, or where their cultural values do not match up well with the razor-sharp rationality of high technology and the competitive demands of global capitalism." [7]

In this context, adaptivity - as a remedy to accelerating change – requires continuous keeping abreast of the most recent technological developments, since education – both teaching and research - are supported and mediated by Information and Communication Technologies. In an age overloaded and overwhelmed by information, easily and quickly accessed from almost anywhere in the world, there is still the acute need of discrimination from the wealth of available online data.
<u>Information literacy</u> is a new concept designed and defined as "the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand." [8] In other words, Information and Communication Technology Literacy is using digital technology, communication tools, and/or networks to access, manage, integrate evaluate and create information in order to function in a knowledge society." [9]

The Alexandria Proclamation on Information Literacy and Lifelong Learning, adopted on 5 November 2005, set forth the following:

- Information Literacy les at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations.

- Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment for shared benefits. It assists them and their institutions, to meet technological, economic and social challenges, to redress disadvantage and to advance the well being of all. [10]

A preliminary conclusion is that acquisition of the competencies of information literacy leads to empowerment and capacity building, at individual and organization levels alike. Both the technological and economic dimensions of information/knowledge can be applied to industrial and non-industrial organizations, since the nature and mission of universities is to foster and disseminate knowledge to community and society at large. Knowledge is an asset that can add value to an organization in the attempt to gain competitive edge; therefore, adaptivity - defined as the ability to respond promptly and unreluctantly to various stimuli and be open to upcoming changes that further lead to progress – is an essential characteristic for survival on a hypercompetitive market.

III. The Law of Accelerating Change vs. The Law of Diminishing Returns

The transition and adaptation of culture production and consumption from the printed age to the digital age, from Guttenberg to Google, has triggered ample and heated debate about: the recent challenges addressed to the book industry – which has turned into a business, especially in terms of marketing and promotion; the traditional concept of the book which is undergoing essential reshaping (e-books); the encouragement and dissemination of cultural interaction (cultural blogs); the accessibility and appeal of new forms of communication nowadays (blogs as an alternative and/or substitute for direct communication); as well as the emergence of technological novelty (i.e. new reading supports, IPAD tablet computer, IMAX Digital Theatre System).

Since access to information, irrespective of the method or channel of dissemination, can define and transform society, we need to consider the various arenas for ideas, the generators of ideas (i.e. intellectuals, academics, journalists, scientists, artists, etc.) as well as the audience for their ideas.

In a period when Big Brother refers not to George Orwell but to a reality TV show, and when bright young things are developing gameshows formats rather than scribbling essays; when thinkers join thinktanks to design short-term government policy rather than reflecting on and challenging the status quo, and when the ever growing number of graduates seem more interested in job prospects than academic endeavour, is intellectual life in terminal decline? [11]

In an age when "the distinction between knowledge and information has become blurred" – with the rise of the new media as alternative outlets for thinkers to disseminate their ideas and sources of information for the public – we need a critical mass to act as a beacon light and gatekeepers to the wealth of raw information and data. To a certain extent, things have progressed but they have not advanced.

We are told that knowledge is the key to the future, but what is our approach to towards knowledge? Russel Jacoby`s *The Last Intellectuals* initiated a debate about the declining influence of public intellectuals. Their tendency of overspecialization has greatly increased, they appear to hesitate to make themselves heard on the public arena, therefore one may wonder - what is the fate of knowledge today? Scientific advancement has made way to a larger market for ideas than ever before.

And yet, contemporary society seems deeply hostile to claims of excellence, a canonical body of knowledge or high culture. High art, from opera to museums, and academic excellence, from A Levels to Oxbridge, are regarded as elitist, and deemed to exclude mass audiences. We seem to doubt people`s ability to cope with difficult ideas. Frequently broadcasters sideline documentaries, current affairs and 'ideas programming' to make way for TV shows more 'accessible' to viewers. [12]

Are we trying to make ideas more available to the public or are we witnessing an expansion of mass education and popular culture? Recently there has been a discrepancy between elitist and mass audience, in terms of culture, on the account that it is inherent to human nature to be reluctant to challenge or to new ideas that probe into the future and shake us out of our comfortable complacency.

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4. Martin, William J, *The Global Information Society,* Hampshire: Aslib Gower, 1995 p. 24
5. ibidem, p.25
6. **http://www.km-forum.org/t000008.htm**
   also consider the differences in French between *savoir* and *connaitre*
7. Lull, James, *Media, Communication, Culture. A Global Approach,* Cambridge: Polity Press, 2000, p.7
8. http://www.infolit.org/
9. http://www.ets.org/Media/Research/pdf/ICTREPORT.pdf
slide the five components of ICT Literacy:

   Access - knowing about and knowing how to collect and/or retrieve information.
   • **Manage** - applying an existing organizational or classification scheme.
   • **Integrate** - interpreting and representing information. It involves summarizing, comparing and contrasting.
   • **Evaluate** - making judgments about the quality, relevance, usefulness, or efficiency of information.
   • **Create** - generating information by adapting, applying, designing, inventing, or authoring information.

10. http://portal.unesco.org/ci/en/files/20891/11364818989Beacons_of_the_Information_Society___The_Al exandria_Proclamation_on_Information_Literacy_and_Lifelong_Learning.doc/Beacons%2Bof%2Bthe% 2BInformation%2BSociety_%2B%2BThe%2BAlexandria%2BProclamation%2Bon%2BInformation%2 BLiteracy%2Band%2BLifelong%2BLearning.doc
11. www.instituteofideas.com
12. ibidem

Information Literacy and Old Romanian Culture

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Abstract

The information literacy may be defined as "the ability to recognize an informational need, to locate, evaluate, effectively use and communicate the information in various forms". From this point of view, the concept may be applied in the area of the old Romanian culture, being known that the man of the Middle Ages, as the modern man, wrote books, read, borrowed or lent them or exchanged reading information with other amateurs. In time, the human being also develops his abilities to assess the informational contents of the books, one of the manifestations of the assessment being represented by the annotations made on their margins.

The concept of information literacy was defined by the specialists as: "the ability to recognize an informational need, to locate, evaluate, effectively use and communicate the information in various forms"; "the ability to find, evaluate, use and communicate the information in all its manifestation forms"[1]. From another perspective, the information literacy refers to a person's skills to use various informational resources. This implies the accomplishment of several conditions, of which we are interested in the need of a person to know, to have and to use informational resources, as well as in his ability to ask questions and to evaluate results[2].

Of the multitude of definitions that were given to the concept of information literacy, some of them may be applied in the field of the old Romanian culture. Despite the fact that for the old Romanian culture, the only resource able to satisfy the informational need was the book, in its two forms: manuscript and printing, this is possible, because the medieval man wrote, read, borrowed or lent books, as does the modern man. Starting from this premise, the history of the Romanian book proves without any doubt that both the writers (copyists) and the readers of the XVth-XIXth centuries had a great part of the abilities described as necessary when we define the information literacy.

In what follows, we shall highlight the way in which the person of the Romanian Middle Ages appreciated the teaching contents of the book as the means of solving its informational needs, how he strove to get it as well as to pass it on and, as the modern age came, to evaluate the informational contents of the books. To this aim, we shall chronologically define the phenomenon of the manual writing of the books, the borrowings and their exchange as means to satisfy the informational needs and to spread the information during the above-mentioned period, and the use of the manuscripts and of the printed books for instruction. Moreover, we shall outline the manner of informational assessment by means of some individual reflections of the readers formulated on the margins of the books they had read.

The main documentary reason is represented by the book itself, whose title, preface, postface and, obviously, contents, allow to find out the ideas, the context that generated its appearance or the

problem that its copying or printing solved. Besides the book as a documentary support, there is another valuable informational source, represented by the annotations written in time by their successive possessors and readers. The old annotations on the books reveal essential aspects about the knowledge of the Romanian history until the half of the XIXth century. The collective mental, the mass and the individual psychology, the human behaviour, being strongly connected with the socio-economic system and with the level of cultural development, also find their reflection in the annotations made on the old books. Coming from thousands of persons from all over the country, the annotations possess a deeper emotional value than many other categories of sources. The authors of the annotations become observers that signal facts and record data that perhaps do not describe the whole historical phenomenon, but rather intermediate what other historical sources parsimoniously and indirectly offer, the contact with the daily life, with the reception of different events by the contemporaries. If put together, the old book annotations constitute a huge collective diary of the history, a history written by "the little ones", as Nicolae Iorga used to say[3]. For our research we shall use annotations made on the books present in the County of Moldavia until 1859, that is, as long as there has been the historical state with this name. For the sake of completeness of the approached theme, we shall also use works about the history of the book, of the printing press and of the Church, which we shall mention at the right moment.

First of all, we should recall that during the researched period, books had a great pecuniary value and enjoyed a peculiar moral appreciation; they were transmitted from one generation to the other and formed a real connection bridge among people in space and especially in time. There was the conviction that the news present in the books, transformed in marriage records, sale-purchase agreements (property documents, in modern terms), in places to record extraordinary natural phenomena, historical or social events or the daily notes of the person who was the owner, resembling the nowadays minutes, will travel in time and will be preserved. This is also the reason for the omnipresent formula at the beginning of the annotations on the books: "it shall be known…" This certainty, that might be considered the consequence of a literacy of the *sui generis* information, nurtured the writing phenomenon on the books and not a supposed lack of paper.

The concern to leave the posterity testimonies about what happened in the days of the "writer" proves exactly the ability of the medieval man to recognize and satisfy the informational need of his descendants. We come thus to the accomplishment of the condition mentioned in the beginning of our paper, which is the desire of the person who lived in the past to know, to have or to build if he did not have, the informational resources he needed. Until the appearance of the printing press, the only means to get informational resources was the manual writing of the books. In an age when time had a different value than it has today and the counting of the calendar days mattered less and for different terms the reference was represented by the big religious holidays[4], the copying of a manuscript involved a long time and an adequate intellectual effort. Moreover, the existence of the strict interdiction to add or remove words from the Bible (*Apocalypse* 22.19) implied an additional intellectual effort of correctness when multiplying such a text. In spite of this, for the end of the XVth century, a competent modern reader may believe that the proximity – according to the traditional chronology since the world genesis – of the year 7000, produced an increase in the number of copies of the biblical texts and he deciphers "without doubt", in some annotations a reaction "to the millenary's crises (that also crossed the Western Europe around 1000 BC) as well as in other periods"[5]. And under this drive that might be related to the "ability to recognize an informational need" [6], from the year 6995 <1487> until 6999 <1491>, in Moldavia the famous miniat manuscripts were written or locked: *Tetraevanghelul from Humor* (1473), *Tetraevanghelul from the Putna monastery* (1488), un *Minei for the month of October, Tetraevanghelul of the Voroneţ monastery* (1490), *Tetraevanghelul of Alexandru,* the son of Steven the Great (1491), and in the year 7000 <1492> there were written Teofil the Metropolit's *Liturghierul* (1492), Logofat Tăutu's *Mineiul* (1492), a *Tetraevanghel* (1492) today at BAR Bucharest, the *Tetraevanghel* given by Steven the Great to the Zografu monastery from Mount Athos[7].

Once the psychological threshold of the year 7000 was reached, there are still numerous rhetoric-persuasive notes of copyists, translators and correctors, who utter their labour, present the book summary and tell the reader the difficulties of their undertaking, simultaneously with its educational value. In this respect, Rafail the monk from the Secu monastery explained to Efrem Siriul on March 20th, 1761 how hard it was for him to write his *Cuvintele şi învăţăturile/The words and the lessons:* "**Glory, honour and praying to the One in the Trinity, to God Almighty who helped us since the beginning to find the end, that as the deer wishes to drink, thirsty for the spring water and as those who travel on water wish to get to the seashore and to a shelter, the same way I wished to see this book end for it should be a document of record. For this, dear readers, who might happen to read this holy book, be joyful** in God and for love of Christ **you shall pray for me, the sinner, and every mistake you might find in words or letters, correct it gently, without resentment or denigration, because we all bear the burden of the weak human nature.** It is thus right that, as it is not possible that the man born in this world should not also taste from the glass of death or the man living on this earth not sin, it is impossible for the writer not to make mistakes. For these, **I also pray for your forgiveness** as you will also find forgiveness on the Judgment Day from Christ, the emperor of the living and of the dead, **because you will find many mistakes**, but **in letters for slipping and the impossibility of passage of the hand and eyes and in words for the translation from Greek into Romanian, as much as it was possible to form and to find the right word, that at least I had a Romanian source (as I was saying in the beginning), but from the book of the pious Efrem written with a Greek printing I have not estranged**, following each of them <…> and this book was written in seven months". In his turn, the teacher Ioan Peştişan of Slatina wrote on January 28th, 1778 on a *Octoih şi Sinaxar*, ms.: "Glory, honour, gratitude and worship to God in the trinity, to the Father and Son and to the Holy Spirit, who helped me since the beginning to see the end. And those who will happen to read this book that is made of eight voices and 11 chants and the Virgin Mary's chants of the year and the Sinaxariu, that is the number of the 12 months, be joyful in the name of God and more fiercely pray to the Saints to forgive your sins because in your praying you will also mention the name of his Holy Christ's slave, that is Ioann. And try to read as by reading you will wonder at the needs and patience (*sic*!) of the holy men and women, who having a body, fought the hostile bodiless enemies. And reading in detail you will find out when each saint ended his life and to what tyrant emperor they served and by how many years each patriarch lived before Christ's birth and who their kinsmen were and how many years they foretold. **And whatever mistake you may find in words or letters or years, correct it with a kind and gentle spirit, without resentment, because it wasn't an angel who wrote it but a dark, sinful mind, surrounded by all worldly dangers**, as the ship is surrounded by the sparkle of the sea. **And there were many times when I wrote at light candle during the night and my eyes were burdened by the sleep of my sin or body and my sight was changed by the ray of light and my eyes were drowsy and my mind astray, it may be I did mistakes**. You know that at many times, walking on the right track without thorns or mud, the feet slip and the man falls. **The same with me, I might have done it wrong, I didn't print, I wrote with my clay hand, with an old goose feather, that both slip towards mistake, as the blind when hampering" [8].** Finally, the following annotation could be the *motto* of any pedagogical paper: "my son, when learning, learn well, do not be reluctant, saying it does not matter how you learn, so that you can get enriched. If you think so, your mind will be lost. The book is not an earthly thing that you can carve with an axe, it is Holy Spirit given by God to be worked with your mind. And if your mind is clean, you can learn from the book in the right way; and if your mind is astray, instead of learning you mock at yourself. My son, when you write something on an honest book, do not write anything, do not scribble, you should write what it's appropriate. For as long as that book lives, your letter will be there, praising or blasting you"[9].

The importance of copying the books as an act of public utility was stated by Vartholomei Măzăreanu, the archimandrit of the Putna monastery on September 1st 1761. The hierarch informed his contemporaries, but more important his posterity, that he copied a *Prologue* and offered it to the Putna monastery „to be read by the brethren in the kitchen and in their cells <...> and the paper was

bought by the most honest hieromonach Methodii, the administrator of the above-mentioned monastery. In the same way, it was binded on his expenses, to be as alms for his soul". The same great scholar noted in 1766: „ I translated and wrote from Slavonic into Romanian this holy book of *Our Most Pious priest father of Dorothei* to the use of all the clergy people and of all Christian Orthodox believers". In his turn, Simion Popovici of Borca wrote on *Archirie and Anadan*, ms. (around 1830-1835): „ As a toil-lover bee/ wandering in summer amidst garden flowers/Likewise I, the humble man, endeavoured/to finish this little book/with the help of God/easily to write/ And easily to be read/ For the use of oneself and of the others" [10].

Although the printing press facilitated the multiplication and spread of information, in time the printed book often became insufficient, reason for those interested in its informational contents (teachers, priests, scribes) to copy it. Referring only to the products of the printing presses from the Country of Moldavia, it is known that the representative printings for the Romanian culture were copied in Transylvania in the XVIIth century in the year of their appearance. Being greatly appreciated, *Cartea românească de învăţătură (n.t. The Romanian Instruction Book)* (Iaşi, 1643) had a lot of copies, Florian Dudaş identifying only in Transylvania 42 manuscripts. The oldest copy of the *Cartea românească de învăţătură* printed in Iaşi was made in the village Geaca (CJ), in 1643, while the manuscript of Dubeşti (TM) was copied by the priest Constantin between 1643 and 1649. The second book printed in the County of Moldavia, *Şapte taine/Seven Sacraments* (Iaşi, 1644) was much copied in Transylvania. We mention here the manuscripts of the scribe Ioan of Nancova (MM), of the Logofat Eustratie, that written before 1694, that of Cristur (SJ) of the priest Ioan Lengher (of the Polish Country) and the seven copies made between 1694 and 1717 in the counties of Alba, Sălaj, Bihor and in Banat by Vasile Sturze Moldoveanul. *Liturghierul* printed in Iasi in 1679, was copied the same year by the priest Pătru of Tinăud (Bihor). In 1777, the priest Teodor of Vişeu (MM) was bringing from the County of Moldavia a manuscript of the *Life of the Saints* (Iaşi, 1682-1686), hiding it in a fish carriage, but the turnpike men had found and confiscated it. Being by chance there, the bishop of Muncaciu Andrei Bacinski bought it back for 6 golden coins, as much as it cost in the County of Moldavia. 17 copies are known for the *Divanul sau gîlceava înţeleptului cu lumea/The coach or the haggle of the wise man with the world* (Iaşi, 1698), the first one being made at Ocna Sibiului in 1703. Of the books printed in the Moldavian workshops during the XVIIIth-XIXth centuries, at the State Archives of Iasi there are two copies in manuscript after *Tîrnosania* printed by Duca Sotiriovici in 1752 and one made after *Sobornicescul hrisov The Ecumenical Charter*(Iaşi, 1785), *Înfruntarea jidovilor/The Jews Defiance* (Iaşi, 1803), *Tipiconul* (Neamţ monastery, 1816) and *Rînduiala sfinţirii bisericii/The custom of church consecration (Iaşi, 1826).* *The 112 year calendar* of Mihail Strelbiţchi in 1785 was copied by the Logofat Teodorache, Vasiliu Ioan (1819), the Logofat Mihail (April 25th 1829) and Mihalache Vasiliu Lupoianu (around 1829-1831). The teacher Matei Marcovici of Mihalcea (1798) and Gheorghe Vlădescu the second treasurer (1820) [11] were also the owners of several copies.

Having the ability to provide information to those who needed it but could not get it in its primary form of circulation, some of the scribes of the period under analysis were also possessing the tools necessary for the multiplication of the information, that is they had their own copies of some printings: Vasile Sturze Moldoveanul owned *Cartea românească de învăţătură* (Iaşi, 1643), that he used in 1697 to write the copy of Peţelca (AB) and *Tîlcuirea liturghiei /The understanding of the liturgy* (Iaşi, 1697) on which he wrote comments in two places. In 1731, Ioan Muncăceanul was copying the same work in the village Cefa (BH) also after his own copy, while Ioan Lengher had *Viaţa şi petrecerea sfinţilor /The Life and the passage of Saints* (Iasi, 1682-1686). By the end of the XVIIIth century, some even announced in the pages of the manuscripts they were copying by order, their future availability to write for a fee. It was the case of the diligent scribe Andriotaxitul from the Neamt monastery who, after 1782, informed his contemporaries by means of the pages of an *Iliodor*, today Rom. Ms. No. 3531 from BAR Bucharest, that he had just finished writing: "those of you who would like to get mellow from these words <...> I apprise you that this beautiful and lovely book called the book of Ion Neagoe the Prince is among my manuscripts and this great book

is written on 6 pieces of paper and whoever will pay me with his love and money, I will write to this one with my humble love because this book comprises in its beautiful teachings all the other books. I apprise you of this and I remain your humble slave in Christ, Andriotaxi(da) scribe at Neamţu"[12].

As a reflection of a cultural model, copying the books coexisted with the printing press until late, the middle of the XIXth century. A big copying centre was the Neamt monastery, despite the fact that here there was a strong functional printing press. In 1801, Gherasim, the printer of the monastery, copied and translated a *Miscelaneu religios/ A religious Collection,* Vasile Lupu's *Pravila* was copied in 1804 and *Tîrnosirea bisericii/The Church Consecration* in 1752 was copied in the Secu monastery in 1814 „by the sinner Chiril the schimonarch". By the middle of the century there were copied some of the Metropolit Dosoftei's books: *Psaltirea în versuri/The Psaltery in verses* (Uniev, 1673) "were written through the labour and on the expenses of the pious archimandrite and prior of the holy monasteries Neamt and Secu, Sir Neonil for the library of the holy monastery of Neamt <in> 1853 January 24th". The *Psaltirea slavo-română/Slavonic-Romanian Psaltery* was also copied (Iaşi, 1680): "this *Psaltery* in two languages, Slavonic and Moldo-Romanian is printed in the year since the world genesis 7188, and since the birth of our Lord, Jesus Christ, in 1680, which in the year 1850 will be 170 years. It was written to the eternal memory in the holy monastery of Sucevita, May 29th 1849. Ghenadie Scarba hieromonarch" From an archive document we find out women also were dealing with the book writing. In the list of books that Neculai Holban left as heritage to his son Vasile on 9th of July 1793, there are a " *Triod tvetn(ic)* written **by the mother's hand** in the year 7231 <1723> November 20th; <...> In the *Triod posna* were written **by the mother's hand,** some covers". Besides these two manuscripts there was also a „Russian *Obştiei* hand-written in the year 7251 <1743> October 4th,[13].

Apart from copying, another practice that proves the "ability to find, evaluate, use and communicate the information in all its manifestation forms"[14], obviously in a much smaller proportion, was the lending of the books. The most frequent form of lending was between the individual amateurs of reading. *Cartea românească de învăţătură* (Iaşi, 1643) of Berivoii Mici "is mine, belongs to the priest Ion of Berivoiul cel mic and I have it from Recea, namely from the priest Rad and priest Lucă and it shall be known that I have not sold it as they did not have money, and when I need it they shouldn't keep it as it is mine", August 15th 1730. An annotation in 1812 on another copy tells that "this book was given by Ludoşan Ion in Budiu to the priest Gligor to keep it until he does not need it anymore". Lupu, the diplomat of the princes from the County of Moldavia around the Turkish army commanders of the Tighina and Hotin fortresses, the son of Vasile the scribe, carried with him in Iasi, Tighina and Hotin, Dimitrie Cantemir's book, *Divanul sau gîlceava înţeleptului cu lumea* (1698), between 1708 and 1730 and lent it to the reading amateurs in the places where he had to accomplish his prince's orders. At the end of the XVIIIth century, Iordăchiţă Cazul wrote to a boyar woman: "bowing and praying to you, I kiss your honest hand madam Bălaşa, here you have two lei and fifteen coins that I gave to the late sir, of whom Dumitrăchiţă and others have knowledge of. <…> And he also has a book of ours, *Divanul lumii*, please be kind and give it back to us". After 1813, Gheorghi mitoşerul wrote with sheer honesty on the *Life of the Saints in October* (Neamt monastery, 1813): "this book belongs to father Lazur and I had it in my possession". In 1816, "sir Alecu Bran gave to me, Ion Chiscăluţă from the Treasury <an *Alcătuire înaurită/a Golden Collection* (Iaşi, 1771) by Samuil Ravvi the Jew> to read it all <...>. And I looked for the book to send it for fear he might get upset". A teacher who failed to say his name, noted on *Verşul întăi a lui Adam/First Verse of Adam,* ms. (end of XVIIIth century): "I also read this book, the humble teacher in Christ. I took it from Sir Costin, in 1840 May 14th, [15].

At other times, the reading amateurs borrowed books from the libraries of the big monasteries. *Tomul împăcării/The Book of Reconciliation* (Iaşi, 1692-1694) "was taken from the library of the bishopry of Chidonia by myself, Ioasaf hierodeacon, when I left Crete for which I pray to be sent back to this library after my death"[16].

The study of old annotations and the tracking of a book show that the borrowing, as a way to replace the information void, was also made in an institutionalised manner, aiming to fulfil some collective informational needs. Two close churches or monasteries proceeded this way, lending one to another the books they needed in order to do the church services. In these cases, most of the times it was a circulation in a limited geographical space, and finally the book was coming back to its original owner. A *Penticostar* (Iaşi, 1753) "was borrowed from other churches", exactly in the year of its appearance: "year 7262 <1753>November 14th", while *Molitvenicul* (Iaşi, 1764) is in the right possession of Anania Iacubovici, priest. It was given to the church from the village Clit only for use"[17]. The richer monasteries or churches lent books to their poorer sister-churches. *Îndreptarea legii/The Law making* (Tîrgovişte, 1652) "belongs to the holy monastery of Putna and wishing his Holiness Iroftei the bishop of Husi, it was given to him to use it until he will buy another one and then he will send it back to the holy monastery". The annotation made by the bishop of Rădăuţi is incomplete, the signature being deleted, but the date being 3rd of June 1749, it belongs to Iacob I Putneanul. An *Apostol/Apostle* (Rîmnic, 1794) and an *Antologhion/Anthology* (Neamţ monastery, 1825) from the Slatina monastery "was lent to the Preoteşti church for a while until the priory would buy it and then to be given back. 1852, May 21st"[18].

Another method to accomplish the information literacy of this period was represented by the book exchanges. The principles underlying the exchange were obviously the contents and the utility of the book but also its pecuniary, valuable equivalence, because, as it was shown before, books were expensive. Before beginning to give examples of book exchanges, we consider appropriate to make a semantic specification suggested by the study of annotations made on them: for the beginning period of the Romanian book history, until the middle of the XVIIth century, the term exchange had the meaning of changing the place of donation, not that of exchange of a copy with another one. More than that, for the studied period, of the whole edited annotations, those regarding the theft of books do not have the largest weight, which might be surprising at first sight. Still, there was a semantic difference between **possession of the book for oneself**, with the meaning probably of taking into possession for one's use, or, anyway, an action without explicit commercial aim, and theft. In order to be classified as theft, the action should have been done by force or stealthily, by someone without any kinship relation with the donor's family and should aim at selling the precious object in order to gain some illicit income. Adding to this the significance of stealing the religious objects, the theft of books was a very serious sin from the point of view of the Christian mentality. That is why the annotations on the books suggest that this practice appeared later regarding the transaction with these objects and it was rather rare, which also proves that it was hardly accepted by the people living in those times. The semantic difference was made by numerous donors. Here are some examples: in 1550, the monk Ioan, when writing a book of Efrem Siriul, *Cuvîntări/Speeches*, donated it to the Voroneţ monastery, the place where he took his orders. In the end of his annotation, the monk warned: "if someone dared to **move my donation or to take it and sell it from the holy monastery** and the holy church, he shall be damned and banished from the holy law and from the dogmas of the 318 Saint Fathers of Nicaea <…>". On 3rd of October 1575, Ion Golia great Logofat and his wife, Ana, donated a *Tetraevanghel* to a church, warning "that who will be tempted **to take it and give it to someone else**, <that> he will answer to the awful and righteous judgment of Christ". The monk Misail when donating a *Psaltery* (1579) to the Neamt monastery specified: "and after my death whoever be tempted to take it from this monastery or to sell it elsewhere or **to be its owner**, he shall be damned by the 318 Saint Fathers of Nicaea and shall be like Judas <…>". In his turn, the former bishop of Roman, Eustratie, gave to be written the so-called *Pravila of the rhetor Lucaci* (1581), that "after my death, I leave this book to the holy Putna monastery <…>. And **whoever might attempt to take it and to estrange it from the holy monastery**, he will be estranged by God's anger as Judas the traitor was estranged"[19].

Coming back to the honest exchange of a book with another one for the sake of information literacy, here are some examples: *Cartea românească de învăţătură* (Iaşi, 1643) "belonging to the

church of Tigmanar, it was traded for a *Mărgărit* to Popovici Mihai, that for eternity it cannot be changed and for ever the *Mărgărit* should belong to the church replacing the *Cazania* <...>. The year 1814 January 29th". Another book "is given to the church of Beşimbac because Stan Prăvariul of Făgăraş gave a *Testament* to the church. We, the inhabitants of Beşimbac, exchanged the *Testament* for this *Păucenie* because we already had another *Testament*. <...> Year 1732 May 7th". *Psaltirea în versuri* (Uniev, 1673) was also a traded object: Nechita the deacon traded it to the priest Arsene of Rădăuţi an "*Otecinicu* written by priest Misail also from Rădăuţi"; another one was taken "from priest Tanasie and now exchanged for a new *Lovsoic* that I had bought from Iasi and I haven't seen it since, in the year 7273<1765>June 17th". A *Molitvenic* (Iaşi, 1754) "belongs to Gaezus Siliman, exchanging it for something else, from the Hungarian Ion Keleman of Ungureni". *Liturghia (*Iaşi, 1759) „I have bought it <myself>, the priest Ionaş Balţanu, the parisher of the village <Joseni> and to the monks of the holy Bîrsana monastery giving another Russian big *Liturghie*", on 25th July 1786. Another example "it was mine, Ghedeon hierodeacon, and I inherited it from my parents and now I made a deal with father Pavel first protopope to trade it for another holy *Liturghie* of Bucharest and I gave this big *Liturghie*, printed in Iasi and since now it will belong forever to his holiness, because it was my wish to exchange it, in the year 1805 March 15th". *The New Testament* (Neamţ monastery, 1818) "was given to his holiness father Ilarion, prior of the holy priory of Breazăi, trading it for a *Psaltire*"[20].

If the necessary equivalence was not reached, the participants to the deal added various amounts of money. On 22nd November 1747, an *Apostol* (Buzău, 1743) was exchanged for another older *Apostol* and "I also gave <…> a coin, the new *Apostol* being better for the printing press". Father Toader Pară from Crucea de Sus told the story of the purchase of an Evanghelie/*The Evangile* (Iaşi, 1762): "this holy *Evanghelie* was given to us by his holiness father metropolit sir Gavriil of Iaşi, for the price of eight lei, 10 parale. And I, father Toader Pară, together with my son's godfather, priest Alisandru, son of priest Ion, also from Crucea de Sus, and gave this money. And priest Alicsandru having another holy *Evanghelie* of the holy church, bought from priest Ion, father of his holiness, he said to give his money back and this *Evanghelie* should be only mine; I gave it for 5 lei and father Alicsandru gave me two lei, and we made the deal for four lei and the holy Evangile was only mine, to the priest Toader Pară, to be my cherished object, and to my wife Nastasia, to my children and my grandchildren, for ever, without any reason". *Psaltirea* (Iaşi, 1766) was sold "for 4 lei to Costantin Braşovanu, because I was given another *Psaltire* for 5 lei, I sold this one for 4 lei and I added 2 lei and took in its place another one for the church for 6 lei". In 1822, Nicolae Cărpinişanu also bought a *Psaltire (*Neamţ monastery, 1817) and "I gave for <it> 5 zloţi and a *Ceaslov*". Parthenie Manolachi, a parish clerk, bought another copy of the book from father Marco and "I gave him another *Psaltire* for 20 lei and I also gave him 20 lei, as money. 1834, March 10th"[21].

After the access to the information source was ensured, namely to the book, manuscript or in printed form and following the concept of information literacy mentioned in the beginning of the paper, there was the stage of proper use of the information. We shall refer here only to the use of books for instruction. The feature of book for instruction is outlined in various cases for the *Cazania lui Varlaam*. In 1648, Toader Onaş with his wife Ana Iştu donated the printed book in the village Baica being aware that it is "instruction for all Christians and light of all books". In 1701, the merchant Filip Scrob donated one in Gura Negrii from the Apuseni mountains, considering it was "full of spiritual sweetness", and asking the priests and teachers "to read it with love and to preach it as it should be, the talent you've got to multiply it, the seed of word to increase on Sundays and on other religious events, when the people are gathering", otherwise "what is the use of a locked garden or a sealed fountain, that this is the garden with spiritual flowers, pleasant smell, the fountain with the water of life from where the souls of the believers are drinking"[22].

Other annotations testify its possession by teachers and deacons who used it as a school manual. Possessors of the printing were: "the children's teacher" Toader Gherman, who lived in 1648 in Mlenăuţi (BT), the deacon Avram from the printing press in Alba Iulia, the teachers Cândea of Racoviţa (SB), Andronic from the Prince's school of Iaşi, Vasile of Tătăraşi (IS) and Vasile of

Arada (AB), in 1763. In 1652, father Efrem of Iaşi wanted that the printing "should be of instruction to all those who will read" and first of all, to his sons, Neagoe and Ignatie. The great equerry Vasile Sepoteanul donated the writing in Peresecina, in 1654, to be used for instruction, alongside the *Pravila of Vasile Lupu*. The same did the boyar Coman, who in 1716 donated the printing in Ucea de Sus (BV). The protopope Lupu of Bozieş also bought it in 1656 for his son and his grandchildren "who will get an education"[23].

As a result of the interaction with the book and of the development of social life, the reader starts to abandon the passive state of receiver; he makes his own opinions and expresses them in writing on the margins of the book. In a chronological order, the first were the annotations that marked the knowledge acquisition of the reader or how the reader tried to orientate and facilitate the effort of the next reader[24]. For instance, the reader of a Pateric ms. (XVIth century) wrote on the margins of the pages: "the Italians are named frînci", but also "learn by heart and you will be a wise man. If you want, my brother, to know how to write, take the feather in your hand, look carefully at the letter, do not spare the paper and in time don't be ashamed to write". A *Istorie a lui Skinder/A History of Skinder* ms. (cca 1812) "was written by me, Mihălache Bălan in the county of Fălciiu, in the year 1812, during the riot and I read it all in order to learn", while Iordachi Şăndre wrote on 13rd of November 1804 on a *Geografie* ms. (middle of the XVIIIth century), found today in the Library of the Bishopry of Roman: "the name *Gheografie* means here general things, the search in detail of all the land and water together, that could be righteously called a collection of the new science Gheografie, that is shown and proved with real evidence. I have read it myself this *Gheografie* and it has wonderful stories ...>, but when it was written I really can't say, though it seems to be old"[25].

The reading notes were obviously made on the book that came to contain the text of the "critical analysis" of the reader. Miron Toacă wrote on some Istorii *persăşti/Persian stories*, ms. (1779): "and I, the undersigned, have read this story. The stories are wonderful but they are not real". Sofronie the monk wrote on the *Vieţile Sfinţilor pe luna Septembrie/The Lives of the Saints from October* (Neamţ monastery, 1807), exactly in the year of its publishing "I have read it myself, me the sinful monk; I was so amazed of those I've read". Father Neculai Alicsandru was even more downright on 12nd February 1819, regarding *Gramatica românească/Romanian Grammar* of Radu Tempea, printed in (Sibiu, 1797): "I have read this book from cover to cover and nothing did I understand". In exchange, on 26th of February 1820, *Istoria lui Tarlo/Tarlo's History*, ms. (1787) seemed to another reader "worth reading <…> and well-organised". Living already in mid XIXth century, the governer Ion Cărji undertakes a much more complex analysis of an *Alexandrie*, ms. (1790): "in the year 1825 December 31st, I have finished reading this booklet of the great emperor Alexandru Machedon and if everything that I've read is real, it is great wonder and it's worth something. And the writer's description seems to have been adequate but the letters are incomplete and with many mistakes when reading"[26].

Even if the habit of book annotations was widely spread in that period, it was not always appreciated by the contemporaries. For example, a witty man wrote at some point in a church from Vatra Dornei: "these letters need a saddle, as they are too big: they could carry the maize from the countryside! Isn't it easier to make them smaller, not to stain the book, as it is a bad thing?" The annotation also punished the destruction of a book: on 15th of December 1752, a certain Lupul R. wrote on the *Cartea românească de învăţătură* (Iaşi, 1643): "who tore apart the pages, will see his days torn apart, but not the one who did it by mistake, but the one who did it on purpose"[27].

Conclusion

As a conclusion, we undoubtedly notice that the medieval man valued the book much more than the modern man. This is also due to the fact that it was his only written information source. As a consequence, the term information literacy may be also applied in the field of the old Romanian culture, because the man of the Middle Ages like the modern one, wrote, read, lent or borrowed books or exchanged readings with other amateurs. As he advances on the path of reading books, the

individual also develops his skills to assess the informational content of the books. The forms of manifestation of his assessment are the annotations on their margins. The study of the book annotations shows a complex process of development of the individual and community's mentality that is constituted by means of the coagulation of thoughts and personal feelings. No matter what the nature of the text on whose margins there are annotations, these testify personal ideas, thoughts, the person expresses and corrects himself, begins to pass its existence into what he writes as he is very much aware that the letter is eternal, and the individuals – more or less ordinary – want to live differently, aspiring to become eternal.

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Informational Culture, a Paradigm of the Society of Knowledge

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Abstract

Permanently marked, inevitably, by the spatiality of conceptual developments, but also by the passage of time, we attend sometimes confused, sometimes powerless to "logical" phenomena, but where our professional possibilities or human limits are in a perpetual state of unstable equilibrium.

Information sources, especially the primary ones, have become very variable in this age to a high degree of information. The most modern sources, such as the Internet, used properly and after a filtration of the insignificant and redundant information can have a real utility. Perceived as being "traditionalist" and sometimes out of date, the specialty reading should have a particular place in professional training, if we are really wish performance for our specialists, remaining, however, the most widespread and frequently used information source.

Key words: library, information, informational culture, society of knowledge, bibliography,

tradition, modernity

Currently, a huge quantity of information, regarded primarily as an accumulation of data, does not seem to worry humanity as much as the quick access to the already produced information, its easy retrieval as a consequence of systematization. It is the natural result of a development, if not completely predictable, framed however in normality.

The overwhelming number of the sources of information, the users' s interest in certain topics, the need for obtaining information in a short time, on the one hand, and the emerging electronic information systems, on the other hand - meant to expand considerably the possibilities of a rapid retrieval or for obtaining the necessary information or even integral texts from many libraries - confirm the idea that the future of the libraries does no longer consist solely in accumulating funds, but also in ensuring the access to more and more information, following the virtual library model.

Even if the informational supports - both for primary documents and for secondary ones, particularly bibliographies – can be both traditional and modern and the information, if provided in time and valued accordingly, may prove extremely efficient.

Once the exponential development of informatics as well as of technologies of information and communication, the classical method of transmitting information has been added a new, modern one. The main means of communication in the traditional system have been largely influenced by the development of networks and especially by the Internet, at its various levels, according to the field of interest.

Libraries, as main depositories and suppliers of information for the society, storing and disseminating information to micro and macrolevel, cannot master this whole informational assembly and meet, at the same time, real and potential requests effectively.

Confronted with the actual explosions of information, libraries are obliged to confirm the worsening of their budget situation caused by the discrepancy between the exponential growth of the number of documents which would be desirable and necessary to purchase and the funds allocated for this purpose.

Specifically, university libraries have a role in guiding the studies, researches and reference needs, besides that of documentary and bibliographic signaling. Users are students, teachers, researchers who request information of various degrees of specialization. University students in the first cycle require works of reference mainly: encyclopedias, dictionaries, guides for bibliographic initiation, reference works for their study, such as: important treaties, collective syntheses, textbooks, literary texts, specialized and general serials and, definitely, specific documentation.

Of utmost importance are the research plans, compulsory and optional bibliographies for each discipline. To have an objective look over the requests, regular statistics should be elaborated regarding the document circulation and the trends in the current readings.

The information requirement is multiple and libraries must be able to provide information for users in the form needed.

Specialized libraries meet the acute and permanent solicitation of reference information as well. This means that this type of library is a structured collection of documents serving directly and effectively a certain segment of readers who should be provided with bibliographic information in terms of their research interests. Beneficiaries trust being guided in their investigations and have the initiative in their undertaking. Therefore, the information must be relevant and competitive within a framework compatible with the new requirements of the today informational world.

An important fact is the right to information, one of the most discussed liberties in the present society. Whether it be used for positive purposes or for negative ones, this right is defended and guaranteed by various international laws related to the fundamental rights and freedom, such as: the Universal Declaration of Human Rights (Article 19) [1]: "any person has the right to freedom and expression of opinions; this right includes freedom of opinions without interference from the outside, and freedom to seek, receive and spread information and ideas through any means, regardless of state borders". The International Pact on Civil and Political Rights (Article 19) [2]: "any person is entitled to freedom of expression; this right includes freedom to seek, receive and spread information and ideas of any kind, regardless of frontiers, in the oral, written, printed or artistic form or by any means chosen" and the Convention on Children's Rights, adopted by the General Assembly of the United Nations on November 20, 1989 (Article 13) [3].

They stipulate some of the main rules on freedom of information of the individual. But solving the problem of the need and right to information consists not only in respecting these liberties. The impossibility of having access to information can be caused by the lack of means, time, capacity to select or financial resources sufficient for a complete information.

Since times immemorial, the first writings on various supports (wood, stone, hides and skins of animals, clay), men felt a special urge to communicate in various forms. Writing transmitted inestimable values, it meant perpetuation of traditions and habits in the consciousness of the generations.

The book appeared as a normal phenomenon in people's lives. Many people started to write from the desire to leave something behind them, to share with others their own experience. Therefore, the book

reflects its own author, even the whole world, the Universe. It is the creation of an individual, and, at the same time, of the society in the center of which he lives and gets inspiration.

A theory relevant in this respect is presented by Albert Flocon, in his work *The Universe of Books,* in which he says about the book that it is: „.....a mirror, an engine and a judge of the history. Friend or foe, the book has all the qualities of a moral person. Created by man, it reflects the Universe and runs the world" [4]**.**

Therefore, we can speak of a sort of "complicity" that exists between the book and its author: the book hosts in its pages products of the human mind and offers the guarantee of a human transiting time and space.

After the invention of print, the book has no longer been regarded as an object of luxury only a few people could afford. It has eversince become accessible to everybody with the passage of time.

Permanently marked, inevitably, by the spatiality of conceptual developments, but also by the passage of time, we attend sometimes confused, sometimes powerless to "logical" phenomena, but where our professional possibilities or human limits are in a perpetual state of unstable equilibrium.

Information sources, especially the primary ones, have become very variable in this age to a high degree of information. The most modern sources, such as the Internet, used properly and after a filtration of the insignificant and redundant information can have a real utility. Perceived as being "traditionalist" and sometimes out of date, the specialty reading should have a particular place in professional training, if we are really wish performance for our specialists, remaining, however, the most widespread and frequently used information source.

Recipients of information and documents must be aware, however, of what they have to keep or to eliminate as, in many instances, the great amount of answers to an enquiry opposes quality. But, in the end, it is necessary that they should already possess some knowledge in the field in order to eliminate the insignificant or redundant information.

Aluna Bejan [5] mentioned that some sociological enquiries unfortunately demonstrated a tolerance for the lack of information, particularly in ordinary environments. This fact can be justified by the impossibilities of some of us to guide themselves, to select the necessary sources of information, the ignorance of the offer or the informational techniques. These are the causes, many consumers - readers do not manage to reach the information they wish, the information market displaying an upside image of its real utility.

Difficulties on the path of the reader which can be solved by the bibliography are not at all minor. And it is normal that now, when the number of those who can write is so hard to estimate, the possibility of knowing "who", "where", "when", and "how" has written on a certain subject is almost impossible by a person for whom the sources of bibliographical investigation and method of access are not available.

These sources are in a continuous and effervescent evolution, both from a quantitative and a qualitative point of view, dictated by the informational technologies and by the telecommunication networks, Internet type. At the moment, these documents can be accessed and produced on the internet with an impressive diversity, of a real or doubtful value, without volume limits or unbearable technical or financial constraints.

This very fact presupposes a few imminent risks: the saturation of the informational market which hinders the rapid access to valuable knowledge.

Libraries shall be confronted with the situation of initiating ample programs in order to screen and revaluate the documentary resources on the internet.

Multimedia document acquisition by the libraries facilitates their creation and production. Thus, long term projects of the libraries should consider not only the necessity of a common development with the internet but also the obvious evolution towards the digitized documentation.

Irrespective of the informational carrier "...the information is the basis of the progress of the society. More information means more knowledge, more knowledge means more participation and more participation means more power and capacity of prospection", as the American sociologist, Daniel Bell, asserted. [6]

Coming to the users' support, the working tools such as: dictionaries, encyclopedias, indices, repertories, catalogues, guides, and biobibliographies and bibliographies, be they traditional or on modern supports, shall never be enough.

In fact, reference works are still viable being the only way of satisfying the needs of information of the society without spending much time. From this perspective, bibliographic contributions to accelerate progress of culture and civilization are urgently needed. [7]

It is obvious, however, that it shall never be admitted the importance of the universal character of the necessity of bibliographies, which have become a requirement indispensable to a good development of any society founding its progress on the production, exchange and consumption of information.

And, nonetheless, as a result of a natural informative approach, the bibliographic instrument should actually be taken into consideration in the process of man's culturalization and professionalization. It allows each individual to tackle that part of a cultural-scientific treasure created by his predecessors and fellow beings.

It can hardly be overlooked the exceptional role, as an auxiliary instrument in the process of assessing, of the bibliographic processing in human sciences and, generally, in the spiritual creation. It is a faithful ally of the value and a merciless witness to imposture, a steady friend of truth and an enemy of lies.

In fact, the act of carrying out a bibliography in the sphere of culture involves desire of restitution. To elaborate a bibliography means to wish to return to your contemporaries and to posterity a certain part of written culture, it means to rescue from oblivion some spiritual creations. An auxiliary irreplaceable for man, for any scientific or professional community and also for the society as a whole, the bibliography has been playing the role of a vital service for the community, insufficiently known and financed by governments everywhere in the world.

Regarded as an edifice of the human spirit and pragmatism, the bibliography is "the evidence of the maturity of the written culture and it attests, according to its development, the stages of intellectual expertise, the degree of specialization, the way in which it is actually taken over and regained our spiritual heritage."[8]

The lack of bibliography, when a piece of work requires "a profound study gives the sensation of a real jump in the air"[9].

What should be noted is that men create books and become at the same time their subject and bibliography supports the investigations of a man of culture or a mere student, making easy for them all the search in various fields of knowledge.

Speaking of culture means implying bibliography, although both of them are in a relationship of interdependence. Culture cannot survive time without bibliography, which gives a sense and a practical utility for all those who are interested in finding information about the discoveries and knowledge of mankind, regardless of time and space when they were created. The role of bibliography, which is

undeniable, would be lost in case culture disappeared. But as this is impossible, we can say that *bibliography* and *culture* experience a strong symbiosis.

The selection of the best book and its recommendation is one fundamental task of the bibliography, which interfere with all sciences, in particular with the history of the various branches of science, criticism and literary history.

The close relationship between the terms bibliography and culture, before even being analyzed, seem to open gates widely and make us feel that, through the present report, it regains its right position in the hierarchy of values. Joining both terms creates an interdependence between concepts, because culture is, in fact, the "assembly of the artistic and intellectual activities specifically human"[10], and bibliography represents the instrument to assess these values.

Members of the society should be educated to appeal to such sources of information able to organize fields and levels of interest, but also to present documents in an objective manner without eluding cultural values or other categories of values. Otherwise, the information will be achieved in a fragmentary way, because: "when a society or an individual cultivates only one kind of values, we can talk of a partial culture. What is called a professional culture is, in terms of the philosophy of culture, a partial culture [...]. Hence, we can distinguish an individual culture, partial or total, and a societal culture, partial or total, (belonging to social groups, from the smallest up to the whole system, which is humanity)." [11]

It is of an extreme importance for the individual, and through him, for the whole society to be structured culturally, it is needed, first, a general bibliography, as it broadens the horizon in understanding our fellows and all the phenomena.

It is often said that bibliography has a social role. This explains the fact that it consists of cultural elements, of a social character, and that bibliography itself is a cultural product, developing in and for the society.

It is true that the results of the research activity have always been and will always be determined, in a large measure, by the methods applied. In the contemporary context, methods of research have been added a new value. Used in the research system, these methods provide the necessary unit to reach the purpose, i.e. minimizing the uncertainty of results and reducing the possibilities of failure.

Therefore, it is necessary for the users to be able to get information quickly and accurately on the resources of all types as they represent the literary and scientific heritage of mankind. The solution of the problem lies clearly in the use of specific instruments for intellectual work called bibliographies or bibliographic repertories.[12]

Elaborating some bibliographic instruments means essentially to apply certain bibliographic schemes. That explains the fact that the information stored on a support does not constitute, in fact, an instrument, if the information is not retrieved quickly and without difficulty.

For instance, in a university, encyclopedic library, the initiation in the bibliography methodology research is more necessary than ensuring adequate assistance by the reference librarian - bibliographer.

"To inform the reader means to focus him on the tool suitable, making him understand that there is no research built on a single source, even if its aim is a communication or a seminar paper." [13]

Moreover: "The way libraries classify and organize documents, bibliographic research or documentary research, be it hand-operated or computerized, or both - case frequent today -, it classifies and organizes instruments it uses. The organization and the logical progression offer time saving and getting the most appropriate answers to questions." [14]

The adoption of automated means in research and data processing constitutes a natural evolution and becomes a necessity of the modern world, with obvious advantages. Using the present methods, bibliographies shall be drawn up quickly and more precisely, with updated means of investigation. However, machines are not able to make new associations of ideas and shall never be able to penetrate the deep human thinking.

The relationship between literature and culture shall no longer be achieved at the same extent as before, because there is no direct link between passion for research and the values created in older or contemporary times. Bibliographies shall miss most likely the vigour characteristic to man's personal participation.

But, as culture remains a concept permanently open, without limits in the high sphere of ideas, phenomena, processes, manifestations and works appropriated, examined and classified as defining and conferring importance to a society or community, so the bibliography is characterized by openness to innovation and dynamism of conception, the purpose of its drawing up being to fulfill steadily the task of spreading the information fast and efficiently.

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