GUIDELINES ON INFORMATION LITERACY FOR LIFELONG LEARNING*

Final draft

By

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Abstract

The International Guidelines on Information Literacy have been compiled by the Information Literacy Section (InfoLit) of the International Federation of Library Associations and Institutions (IFLA) with the aim of providing a pragmatic framework for those professionals who need or are interested in starting an information literacy program. The guidelines will aid information professionals engaged in educational programs, i.e., basic and higher education, in their efforts to meet their current information needs. However, most of the concepts, principles and procedures can be applied with minimal adaptation to any library setting. Information professionals working in all types of libraries should have as one of their main institutional goals the facilitation of users' efforts to acquire information competencies. Information skills are vital to the success of lifelong learning, employment, and daily interpersonal communication of any citizen, such as when a person needs information about health services for someone in his/her care, or a student requires specific information to complete an assessment.

*Please see the acknowledgements section.
Carol Elliott (USA) contributed the editing of the document

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Acknowledgments

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Dibble, M. (2004, July). *Directory of Online Resources for Information Literacy: Definitions of Information Literacy and Related Terms.* Retrieved July 27, 2004, from University of South Florida. Web site: http://www.lib.usf.edu/ref/doril/definitions.html

Horton, Jr. F. (2004, December). *Comments on International Guidelines on Information Literacy*. (E-Mail), Washington, DC. 4p.

Humes, B. (2004, July). *Understanding Information Literacy*. Retrieved July 26, 2004, from http://www.ed.gov/pubs/UnderLit/index.html

Information Literacy: Definitions and Models. (2004). Retrieved September 21, 2004, from The Information Literacy Place Web site: http://dis.shef.ac.uk/literacy/definitions.htm

Kuhlthau, C. (1999). Literacy and Learning for the Information Age. In *Stripling, B., Learning and Libraries in an Information Age.* Principles and Practice. Littleton: Libraries Unlimited. p. 59.

McKenzie, Jamie. (1997). *Filling the Tool Box: Classroom Strategies to Engender Student Questioning.* Retrieved November 5, 1998. Web site: http://fromnowon.org/toolbox.html#Class

Owusu-Ansah, E. (2003). Information Literacy and the Academic Library: a Critical Look at a Concept and the Controversies Surrounding It. *The Journal of Academic Librarianship*, Vol.29, pp. 219-230.

Peterson, P. L. and Clark, C. M. (1978). Teachers´ reports of their cognitive processes during Teaching, *American Educational Research Journal*, Vol. 15, No. 4, pp. 555-565.

Rader, H. (2002) Information Literacy 1973-2002: A Selected Literature Review. *Library Trends*, Vol.51, No. 1, pp. 242-259.

Siitonen, L. (2004, July). *Information Literacy: Gaps Between Concepts and Applications*. Retrieved July 26, 2004, from the IFLA web site: http://www.ifla.org/IV/ifla62/62-siil.htm

Walton, G. (November, 2004). *Comments on the draft International guidelines on Information Literacy produced for IFLA*. (E-Mail), Stoke-on-Trent, England, 5p.

Chapter 2

Information Literacy and Lifelong Learning

With contributions by
Forest Woody Horton, Jr.

Information literacy and lifelong learning have a strategic, mutually reinforcing relationship with each other that is critical to the success of every individual, organization, institution, and nation-state in the global information society. These two modern paradigms should ideally be harnessed to work symbiotically and synergistically with one another if people and institutions are to successfully survive and compete in the 21st century and beyond.

Inter-relations of the two concepts. Both of these concepts:

- Are largely self-motivated and self-directed. They do not require the mediation of an outside individual, an organization, or a system beyond the individual himself or herself, although advice and assistance from a respected friend such as a mentor or coach can be helpful.
- Are self-empowering. They are aimed at helping individuals of all age groups to help themselves, regardless of their social or economic status, role or place in society, gender, race, religion or ethnic background.
- Are self-actuating. The more information literate an individual becomes, and the longer the individual sustains good information literacy learning and practices those habits, the greater the self-enlightenment that will occur, especially if practiced over an entire lifetime.

Theoretically one could pursue the goal of becoming more information literate but not continuously over one's lifetime. Conversely, one could pursue the goal of lifelong learning but without having first become information literate. Taken alone, neither path maximizes the potential of the individual to "learn to learn."

Information literacy and lifelong learning. Harnessed together, information literacy and lifelong learning substantially improve the:

- Set of personal choices and options opened up for, and offered to, an individual in the context of personal, family and societal matters.
- Quality and utility of education and training in both formal school settings preceding entry into the workforce, and later in informal vocational or on-the-job training settings.
- Prospects of finding and keeping a satisfying job and moving up the career ladder rapidly and with appropriate rewards, and making cost-effective and wise economic and business decisions.

References

Bundy, A. (2002). Essential Connections: School and Public Libraries for Lifelong Learning. *Australian Library Journal*, Vol. 51, pp.47-70.

Candy, P. (2002). *Lifelong Learning and Information Literacy*. Retrieved October 20, 2004 from web site: http://www.nclis.gov/libinter/infolitconf&meet/papers/candy-fullpaper.pdf

Case, D. (2002). *Looking for Information: A Survey of Research on Information Seeking, Needs and Behavior*. New York: Academic Press.

Ford, N. (2003, April). Towards a Model of Learning for Educational Informatics. *Journal of Documentation*, Vol. 60, pp.183-225.

Hancock, V. E. (2004). *Information Literacy for Lifelong Learning*. Retrieved October 21, 2004 from Web site: http://www.libraryinstruction.com/information-literacy.html

Hepworth, M. (2004, March). A Framework for Understanding User Requirements for an Information Service: Defining the Needs of Informal Careers. *Journal of the American Society of Information Science and Technology*, Vol. 55, pp. 695-708.

Hiscock, J and Marriott, P. (2003, March). *A Happy Partnership Using an Information Portal to Integrate Information Literacy Skills into an Undergraduate Foundation Course*. Australian Academic and Research Libraries, Vol. 34, pp. 32-41.

Kapitzke, C. (2003). *Information Literacy: A Positivist Epistemology and a Politics of Outformation. Educational Theory*, Vol. 53, No. 1 pp. 37-53.

Langford, L. (2001, June). *Critical Literacy: A Building Block Towards the Information Literate School Community*. Teacher Librarian, Vol. 28, pp. 18-21.

Mednick, M. (2002*). Information Literacy: The New Challenge*. California. 17 p.

Nimon, M. (2002, March 24). *Developing Lifelong Learners: Controversy and the Educative Role of the Academic Librarian*. Australian Academic and Research Libraries, Vol. 33, pp. 14-24.

Pappas, M and Tepe, A. (2002). *Pathways to Knowledge and Inquiry Learning.* United States of America, Colorado. (Information Literacy Series). 149 p.

SCONUL. (2001). *The Seven Pillars of Higher Education.* London: SCONUL.

Walton, G. (November, 2004). *Comments on the Draft International Guidelines on Information Literacy Produced for IFLA*. (E-Mail), Stoke-on-Trent, England, 5p.

Chapter 4

Institutional Commitment

The complete success of an information literacy program depends on the commitment at the institutional level. However, a commitment is not always present or clear at top management levels. Therefore, information professionals must devote time to create the relevant strategies to convince and sell the benefits of information literacy to institutional leaders to get their support. The basic steps to market an information literacy program, among those recommended by ACRL (2004), and by Byerly and Brodie (1999), are:

General actions.

- Adapt or adopt international information literacy standards and practices
- Identify the information literacy program that works best for you and your institution
- Adopt or design a program based on national and international experiences
- Identify what is required to implement the program
- Regard the information literacy process as non-linear, you may skip steps and change their order
- Work on a strategic plan to chart the course of your goals and actions –See Chapter 5 for specifics
- Involve all relevant parties in the planning process: your library team, faculty/teachers, administrators, and the final decision-maker for the project

Change strategies. Resistance to change is basic to human nature; information professionals should understand the obstacles so that they can overcome them. According to Walton (personal communication, November, 2004), the major problem faced as information professionals is that we are all too often resource-based rather than curriculum-based with a strong emphasis on student-centered learning. In addition, as information professionals we need to sufficiently understand what information literacy- (not necessarily called that by students or tutors) related activities are already taking place between tutors and students. Peterson (1978) has the following recommendations for librarians:

- Changes in methods of instruction are more difficult than changes in curriculum or administration
- When a change requires teachers to abandon an existing instructional practice, it is not likely to succeed
- If retraining is required, success is threatened unless strong incentives are provided
- Efforts to change curriculum by integrating or correlating the content are resisted and are especially at risk
- The cost of change is a significant factor in determining the permanence of the change
- When a change puts a strain on school personnel or requires a substantial investment in learning new facts and procedures, it is not likely to succeed
- Minimal new behavior has more possibility of being accepted

- Librarians need to take a larger share of the work to make things happen until faculty/teachers see the benefits of collaboration
- Collaboration efforts should not be seen as difficult to achieve
- Library collaboration should be viewed by teachers/faculty as essential to their success
- The gains from change should be seen clearly by participants
- Information professionals should be strong advocates for their programs

Share leadership.

- Identify, assign, and share top leadership with the rest of the library team
- Ask to include the information literacy philosophy in the core institutional documents, such as the mission, strategic plan, and relevant policies
- Convince authorities to get the proper financial support for hiring librarians, library staff, building/adopting facilities, training personnel, and developing procedures
- Acknowledge collaboration among your partners, authorities, and different parties involved
- Communicate and promote recognition of the IL support you receive

Institutional culture.

- Analyze the dynamics of politics, personnel, and budget at your institution and its learning communities
- Identify your institution's own organization style of working
- Take the role of building learning partnerships
- Start a collaborative academic scheme with teachers/faculty, other librarians, technology coordinators, administrators, curriculum planners and learning facilitators

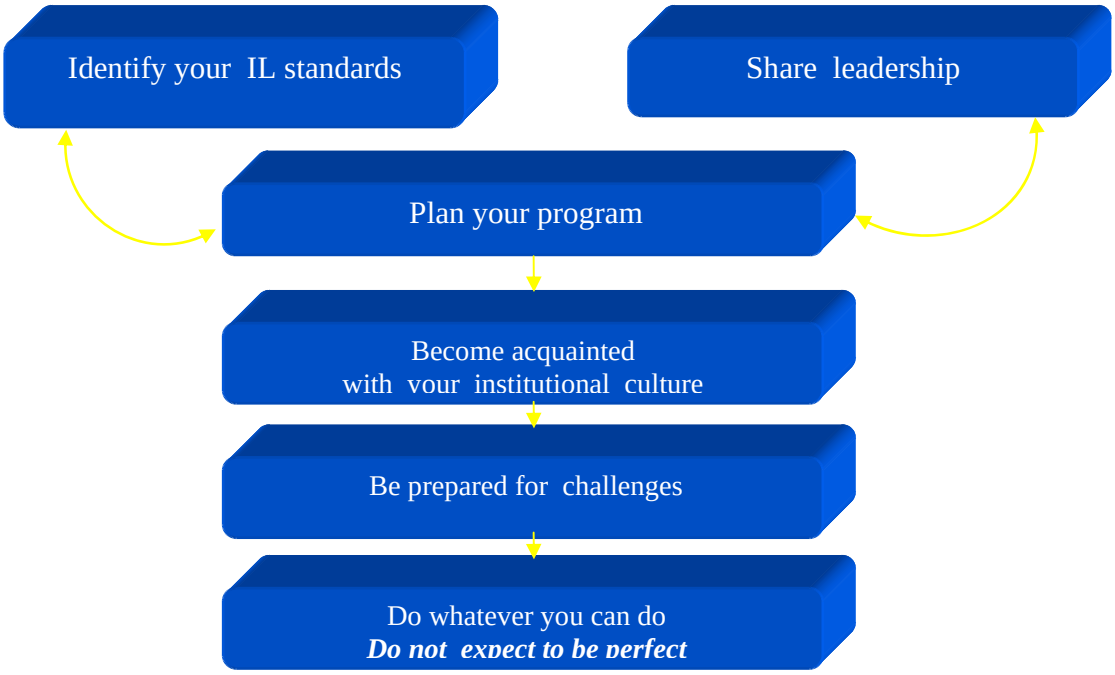
Potential challenges.

- Be prepared for obstacles such as limited facilities and scarce or no economic or human resources
- Accept that some administrators may reject or ignore the information literacy benefits
- Know and act upon positive, negative, or lack of interest reactions of teachers/faculty
- Rely on technology to lead your institutional learning collaboration
- Look for support from your lifelong learning community, it may come from students, teachers/faculty, administrators, members from other institutions

Be assertive.

- Recognize that something has to be done and be aware that nothing will be perfect
- Make it a goal to ensure information literacy is incorporated into the curriculum
- Be positive and persuasive about what needs to be done
- Remember, the library should be at the center of information literacy actions

Figure 4. Getting Institutional Commitment



References

ACRL. (2004, July). *Information Literacy in Action*. Retrieved July 26, 2004, from the American Library Association web site: http://www.ala.org/ala/acrl/acrlissues/acrlinfolit/infolitresources/infolitinaction/infolitaction.htm

Byerly, G. and Brodie, C. (1999). Information Literacy Skills Models: Defining the Choices. In Stripling, Barbara K., *Learning and Libraries in an Information Age*. Principles and Practice. Littleton: Libraries Unlimited.

Peterson, P. L. and Clark, C. M. (1978). Teachers reports of their cognitive processes during teaching, *American Educational Research Journal*, Vol. 15, No. 4, pp. 555-565.

Walton, G. (November, 2004). *Comments on the Draft International Guidelines on Information Literacy Produced for IFLA*. (E-Mail), Stoke-on-Trent, England.

Chapter 5

Action Plan

To create an information literacy program you need to follow a plan with steps that will help you develop clear ideas about what you want to achieve and how you intend to carry out your goals. The methodology for conducting strategic planning exercises varies from person to person and from one institution to another. Find out what the planning standards are in your parent institution. Remember to work with a plan that responds to your planning needs. In other words, you can create a plan just following some simple and essential steps: objectives, goals, justification, requirements, and budget. However, you may need to work on an orthodox or more complete strategic plan, such as the one that is discussed in the following sections. Remember to do whatever planning is relevant to create the appropriate program for your needs.

Planning: An IL first step. A strategic plan is an excellent tool to sell and get support from your learning community and your institutional authorities for your library information literacy goals. The planning steps can be adjusted or adapted from a management textbook depending on the time you have to craft your action. The recommended strategic planning practice is to involve library staff and representatives from the user communities, such as faculty, students and relevant school or university authorities. Ideally, the plan should be created with consensus and input from all the relevant parties. The common elements included in a strategic plan are:

Mission. This should be a paragraph stating the goals and essential roles of the IL plan. Avoid explaining how you plan to accomplish your mission. A mission statement:

- Includes your institutional definition of information literacy
- Complies with a standard or information literacy policies that the library uses
- Relates to the library and institutional missions
- Emphasizes the what rather than the how or the why
- States the participation of the different members of the community: librarians, faculty, staff and administration

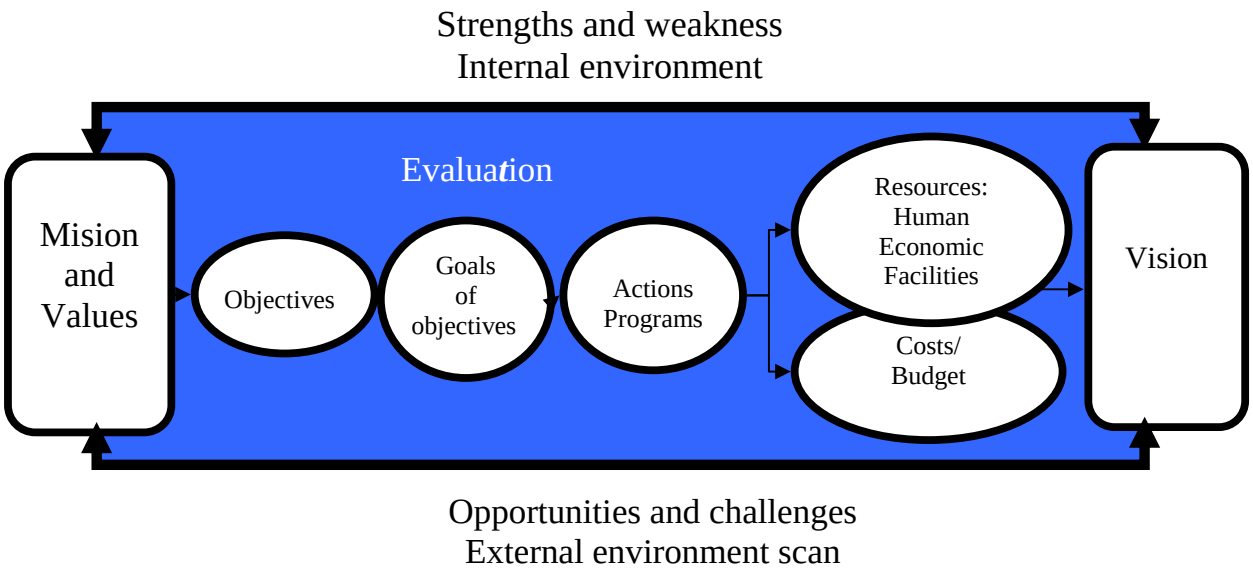
Vision. The vision should be encapsulated in a statement defining what the program expects to achieve in the future, whether it be short, mid- or long-term planning: 1, 3, or 5 years. The vision should:

- Include expected long-term outcomes of the information literacy program
- Be written in simple and concise language
- Emphasize results rather than how or why to achieve them

Justification. The justification for the program describes the reasons, needs and benefits of creating an information literacy program. The length of this section can be a page or more. It is crucial to convince potential parties to create the IL program. The justification section normally includes:

- Users' information literacy challenges, i.e., what IL do they need to master?
- Qualitative use of information by potential and real users
- Stated benefits of the learning processes for individuals and the institution Statistics to back up your arguments

Figure 5. Strategic Plan



Strengths and weaknesses. In this section briefly analyze the capability of the library to carry out the information literacy plan. You should:

- List all the library's positive factors to ensure the program's success
- Analyze the human, economic and physical resources that are available in the library
- Include the challenges that the library has or may face in IL pursuits on a separate list
- Evaluate your weaknesses in terms of human, economic and physical resources available in the library for the IL program
- Write with positive statements, assuming that problems are opportunities for growth

Environmental scan. Analyze the internal and the external factors that contribute or limit the success of your information literacy plan. The environmental scan should:

- List the institutional factors that can help or limit the program

- Evaluate the external factors to your parent organization that, can contribute or reduce the possibilities of a successful information literacy program
- Be written using positive language

Strategies. Think about the general management approach or principles that you will use to conduct your program. Include:

- Budgetary strategies that you will use to fund the program.
- Descriptions of the efficient and effective strategies that you will apply to achieve the IL plan
- Relevant management principles that you have for the administration of the library

Objectives and goals. Here, describe your general goals. They could be categorized in different ways: an example is grouping them by type of users such as students, faculty and staff, or by disciplines and course grade levels. You can also group objectives by processes such as staff development, creation of IL courses, and infrastructure (adapting/creating an electronic classroom). In this section:

- Each goal could be divided into general and specific goals depending on the details that you may need or want to specify
- Under each objective you should state the goal or goals that you will achieve
- Goals should be specific, on the other hand, keeping in mind and focused on the learning outcomes that you feel should be achieved by all the students, thereby maintaining a student-centered approach.

Actions. These are the main tasks to be completed to achieve each objective. In this section:

- State the different actions required to achieve each goal
- List one action or several, but try to be brief
- Write actions in the order they need to be completed

Resources / Requirements. To achieve your objectives and goals you need to specify the type of resources that you will need under each of your actions. In this section:

- Make a separate list of titles of actions, without any details
- Quantify under each action the number and type of human resources required
- Describe your physical requirements, such as a classroom, office space, furniture, equipment, etc.
- Describe the methodologies, training and management that you need to carry out your actions

Budget. Estimate the cost of each of the resources that you need to perform your actions. In this section:

- Estimate your costs
- Be flexible in estimating costs
- Figures determine how much funding the IL program needs
- Budget information determines the feasibility of the IL objectives and goals

Timetable. Create a table to summarize the deadlines to achieve the goals. This will be a tool for evaluating your IL program's progress. In this section:

- Create a matrix listing objectives subdivided by goals followed by the specific actions necessary to complete each goal
- Create columns for time units (days, weeks, months, years)
- Mark the date cell that corresponds to the expected start and/or finish date for each action
- Different colors could be used to mark beginning and ending dates

References

ACRL. (2003). *Characteristics of Programs of Information Literacy that Illustrate Best Practices: A Guideline.* Retrieved July 26, 2004, from the American Library Association Web site: http://www.ala.org/ala/acrl/acrlstandards/characteristics.htm

ACRL. (2003*). Guidelines for Instruction Programs in Academic Libraries Approved*. Retrieved July 26, 2004, from the American Library Association web site: http://www.ala.org/ala/acrl/acrlstandards/guidelinesinstruction.htm

Spaeth, C. and Walter, L. (1999). *Implement a Literacy Program.* Retrieved July 26, 2004, from the web site: http://www.sil.org/lingualinks/literacy/ImplementALiteracyProgram/contents.htm

WLMA and OSPI Essential Skills for Information Literacy. (2004) Retrieved July 26, 2004, from the Washington Library Media Association from the web site:http://www.wlma.org/Instruction/wlmaospibenchmarks.htm

- Base the course on constructivist pedagogy—incentive is on students to practice concepts
- Make the course interesting and appealing to students according to the subject
- Exercises should focus on something that will benefit students in their regular classes
- When possible, partner with a professor's course, so that your exercises are on the same subject
- Adjust course length according to the available time
- Courses should not be too long—four to ten hours is ideal
- Divide topics and distribute present them in more than one course if necessary

Extra-curricular courses. An extra curricular course is easier to plan, because it is independent from faculty/school curricula. However, your long-term goal is to have IL courses as part of the curricula. The following are suggestions for extra-curricular courses:

- Follow the format and procedures for any regular school course
- Choose course dates when students may have less academic work
- Students have less time to take this type of course at the beginning and end of terms
- Provide some recognition to those who take the course, such as a certificate
- The library can have its own information certificate program
- Take this independent road only if it is necessary, remember that embedded programs are more successful

Independent short courses. They are the means for training specific IL objectives and for updating skills of the different members of your learning community. Because they need to be linked in a deliberate way to the curriculum, these courses should only be taught as a last resort. Effective learning only takes place when it is contextualized and embedded (the very core of constructivist theory (Walton, personal communication, November, 2004). If you do offer them, a series of short courses can be integrated into a full course. The following steps can be equally applied to embedded as well as independent generic courses/modules:

- Plan information literacy workshops to enhance specific skills
- Workshops should be focused
- Time length should be short and scheduled when students have a study break, i.e., lunch periods or evenings
- Create a program for the whole term with different workshops options
- Workshop facilitation can be shared among other information specialist, if they are available
- Keep the sessions lively
- Name the workshop with catchy words focused on the actual content

Courses for faculty/teachers. They are the key actors for any information literacy program success. Lecturers, professors and teachers need to learn new information competencies, although sometimes, they may not recognize it. Therefore, offer them a diverse and flexible IL training. Keep the following in mind when training educators:

- Faculty/teachers are the most important member of any education institution to convince of IL benefits
- Create a course or courses tailored to the needs of professors/teachers
- With each course you facilitate for this learning community, you will gain IL advocates
- Design a hands-on experiential course where you can facilitate the IL learning that professors/teachers can adapt for use in their classrooms
- Offer the course before or after the term ends
- Make the course part of institutional faculty training program
- Promote the course among those faculty members who are library advocates
- Offer the course at a special time and include a coffee break
- Prepare learning activities that participants can reflect upon, taking into consideration their own teaching needs
- Remember that participants who are faculty members can be more demanding, so prepare you course content and materials well

Other activities.They can include demonstrations, lectures, library visits, and training sessions. A good information literacy program should include a broad menu of regular and complementary IL options to support learning that include:

- Offering faculty/teachers on-request information literacy training sessions
- Creating a menu of options with ready-to-go to teaching sessions
- Providing information about objectives and benefits for participants
- Preparing and distributing handouts for each type of activity
- Providing sessions in classrooms or other venues that may not be as well-suited as the library
- Recognizing academics who offer library IL opportunities
- If your time is limited, reserve dates and times *to* do this IL work

References

Adams, L. (2004). *Designing the Electronic Classroom*. Retrieved July 28, 2004, from the web site: http://www.checs.net/95conf/PROCEEDINGS/adams.html

Assessment in Library and Information Literacy Instruction. (2004). Retrieved July 26, 2004, from the University of Nevada, Reno, from the web site: http://www2.library.unr.edu/ragains/assess.html

Biggs, J. and Moore, P. (1993). *Process of Learning*. New York: Prentice Hall.

Bundy, A. (2004). *Australian and New Zealand Information Literacy Framework: Principles, Standards and Practice*. Retrieved July 26, 2004, from the Australian and New Zealand Institute for Information Literacy, from the web site: http://www.caul.edu.au/info-literacy/InfoLiteracyFramework.pdf

Cortes J. (2002). *Diseño y Equipamiento de Salones Electrónicos para Programas de DHI*. Retrieved July 28, 2004, from the web site: http://www.infoconsultores.com.mx/RevInfo52/20_22_ART_Cortes.pdf

Gratch-Lindauer, B. (2000). *Assessing Community Colleges: Information Literacy Competencies and Other Library Services and Resources*. Retrieved July 26, 2004, from the web site: http://fog.ccsf.cc.ca.us/~bgratch/assess.html

Information Literacy Instruction: a Selection of Tools for Instructors (2004). Retrieved July 26, 2004, from the University of Montreal web site: http://mapageweb.umontreal.ca/deschatg/AAFD_index_en.html

Information Literacy Program (2003). Retrieved July 26, 2004, from the Weber State University web site: http://faculty.weber.edu/chansen/libinstruct/ILProgram/goals/programgoals03.htm

Stripling, B. (1999). *Learning and Libraries in an Information Age: Principles and Practice.* Littleton: Libraries Unlimited.

Teaching Library Projects (2004). Retrieved July 26, 2004, The Teaching Library web site http://www.lib.berkeley.edu/TeachingLib/Projects.html

Chapter 7

Personnel Development

Librarians can best use their time to teach students and faculty how to locate, evaluate, and use information. They should refocus their work to train individuals in information searching and use, rather than on just source location and retrieval. However, the instructional role imposes a challenge: librarians need to train themselves to look for opportunities to learn or enhance their learning facilitation skills.

Need for instructional librarian role (Goldfarb, E. K., as cited in Stripling, 1999). New pedagogical methods used at schools and universities require librarians to play an active part in the learning processes. Therefore librarians ought to:

- Take the new roles as knowledge and instructional facilitators
- Provide essential expertise on a) accessing information, b) selecting information resources, and c) facilitating the use of information in the learning process (Kuhltahu, as cited in Stripling, 1999)
- Learn and teach new information formats (linear and non-linear)
- Facilitate non-traditional or constantly changing points of access as information media and resources evolve

Librarians´ self-growth (Goldfarb, E. K., as cited in Stripling, 1999). Professional growth of librarians depends on self-learning processes and actions. They need to:

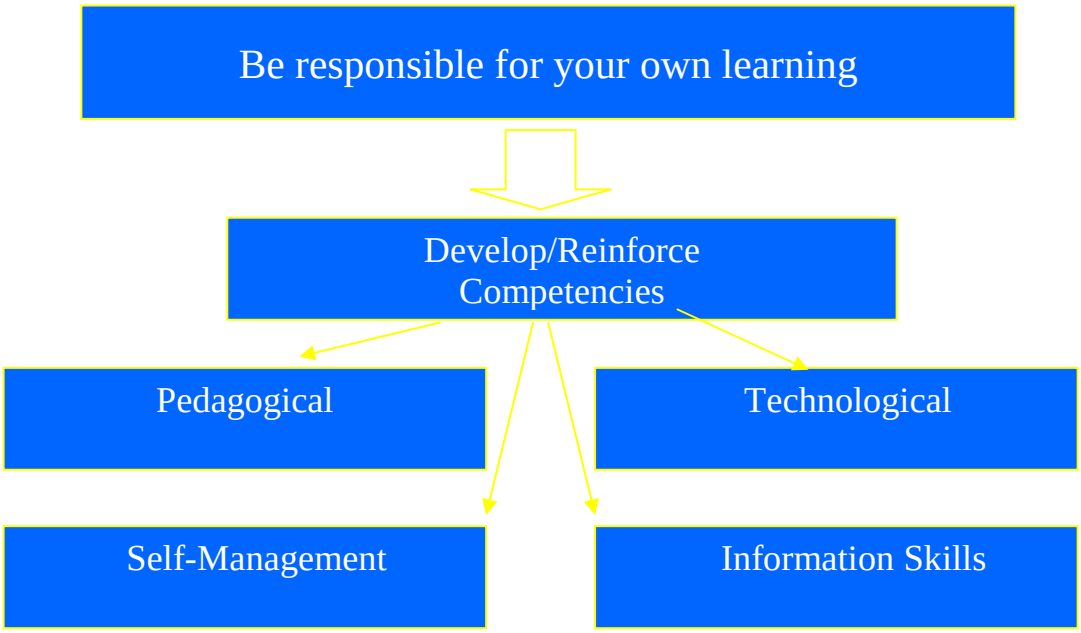
- Develop their own information literacy skill
- Develop the ability to facilitate learning and to teach critical thinking and inquiry
- Be responsible for their own learning, and their own technological skills
- Receive constant library training, a crucial form of learning new skills and concepts
- Participate in professional organizations, attend conferences, and purchase technical literature
- Allow adequate time for opportunities to collaborate with peers, have/give ongoing support, and offer/receive task-related curriculum advice

Institutional training. The library needs to provide the proper training according to its means. A program to enhance or develop teaching skills can include the following:

- *C*omprehensive training program for whole library team, including the staff
- The program can be divided into separate sessions for basic, medium and advanced training
- Suggested timeframe for workshops and courses that take place over more than one year

- Include at least four types of courses: pedagogical, technological, self-management, and information-related competencies:
    - The pedagogical component of the program should include topics on how to create a course, instructional design, assessment and evaluation, class communication, conflict and group management, among other basic teaching skills
    - The technological training should include courses on office software, course management, web software design, and equipment management
    - Under self-management, the program must include time management, planning, motivational workshops, and general management
    - The information-related training should make librarians proficient in the tools and information resources available in the library as well as on the Internet, including search engines, databases, and electronic publications, among other information content available within or outside of the library.

Figure 7. Personnel Development



Distance learning and e-learning. The task of facilitating IL to several groups of learners *is* more easily attained when distance and e-learning are used. This could be a solution to the limited number of librarians or information professionals in the library. IL professionals need to master new education and training modalities that employ networks, and especially the Internet, as virtual classrooms, instead of traditional physical classrooms. Librarians can interact with their students online, such that the student may complete his/her research and assignments from home, the office, or anywhere there is access to a computer and telecommunications networks, and similarly the librarian may undertake his/her tutorial work wherever there is access to a computer.

References

Biggs, J.B. and Moore, P.J. (1993). *Process of Learning*. New York: Prentice Hall.

Goldfarb, E. K. (1999).Learning in a Technological Context. In B. K. Stripling, *Learning and Libraries in an Information Age*. Principles and Practice. Littleton: Libraries Unlimited.

Kuhlthau, C. C. Literacy and Learning for the Information Age. In B K. Stripling, Learning and Libraries in an Information Age: Principles and Practice. Littleton: Libraries Unlimited.

Marton, F. and Saljo, R. (1997). Approaches to Learning. In F. Marton, et al (Eds), The Experience of Learning. Edinburgh: Scottish University Press.

Oellers, B. and Monfasani, R. (2001, April). Capacitación del Personal y Formación de Usuarios. Retrieved July 26, 2004, from the Asociación de Bibliotecarios Graduados de la República de Argentina, Web site: http://www.abgra.org.ar/

Saavedra Fernández, O. (2003, May). El bibliotecario del siglo XXI. *ACIMED. 11* Retrieved July 26, 2004, from the Web site: http://bvs.sld.cu/revistas/aci/vol11_5_03/aci10503.htm

Squires, G. (1994). *A New Model of Teaching and Training*. Hull: University of Hull.

Chapter 8

Learning Theories

Current learning theories are based on cognitive psychology and constructivist education research. Familiarity with these theories is essential if librarians are to develop effective teaching techniques to guide learning (McGregor, as cited in Stripling, 1999). A librarian not only needs to be familiar with the information literacy components to facilitate, but must also demonstrate competence in facilitating knowledge (pedagogy) and be aware of students' individual learning differences.

There are many different theories on learning and within each one there are variations. There is no right or wrong theory, as not all education practices are based on a specific school of thought (Grassian and Kaplowitz, 2001). Librarians need to choose the theory and its variations that is compatible with their teaching style as well as the subject or topic to be taught. Keep in mind that:

- Learning involves change
- This change is fairly permanent
- Learning may involve a change in consciousness (how we think) or behaviour (what we do) or both
- Learning comes about through interaction with elements in our environment, such as, information, events and experiences (including but not limited to teaching and training) (Squires, 1994).

Here is a summary of the main learning theories, learning models and factors that influence learning in individuals and thinking and learning concepts (McGregor, as cited in Stripling, 1999). It needs to be emphasized that they are only a few of the many that exist.

Behaviorist view. Reality is external and absolute. It is measurable, and cause and effect can be determined and standardized; an application example is standardized testing. Some of the main concepts are:

- Conditioning (Pavlov, 2005) – Learning is interpreted according to observable behavior. What people do is what matters rather than what they think.

- Reinforcement (Skinner, 1986) – Stimulus is provided after an act is performed as a way to encourage or discourage repetition of a particular behavior.

- Observation learning (Bandura, 2004) – Learning occurs through watching and then imitating behavior.

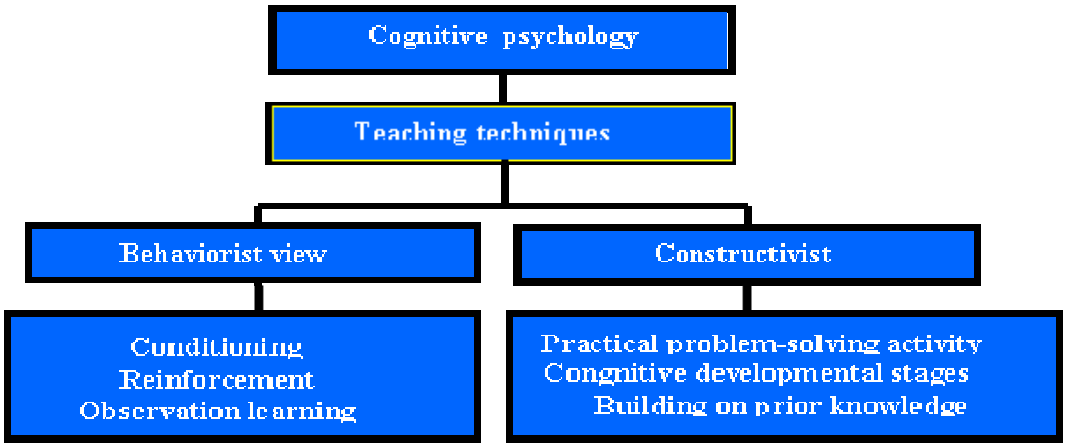
Constructivist approach. Reality is something that is socially constructed by individuals who determine their reality based on their unique prior knowledge and experiences. The theory differs from the behaviorist view in assuming that it is possible to examine what is not observable, attempting to understand what happens in the mind when we learn. Current thinking about learning is strongly influenced by constructivist theory and research. Some of the main constructivist education models are:

- Practical problem-solving activity (Dewey, 1967) – Learning can be achieved by reflective thinking to solve problems through analysis of lifelike problems and potential alternative solutions, i.e., teachers acting as guides rather than dispensers of information.

- Cognitive developmental stages (Piaget, 2005) – Children's learning development increases through previous understanding, even though the previous ideas might be inaccurate. He describes the four development stages children must move through. They cannot progress from one stage to the next until certain criteria have been met; recognize*s* what children can do, rather that what they cannot do.

- Building on prior knowledge (Bruner, 1962) – Learners build on their prior knowledge to reach more advanced levels of understanding. Learning is an active process of discovery and categorization.

Figure 8. Learning Theories



Learning models (McGregor, 1999). In constructivist education models, the pedagogy of both learning and cognitive psychology rely on different learning models that are not necessarily exclusive of one another.