DRAFT

Information Literacy Competency Standards for Higher Education

Introduction

Information Literacy Defined

Information literacy is 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." [1]   Information literacy is increasingly important in the contemporary environment of rapid technological change and proliferating information resources. Because of the escalating complexity of this environment, individuals are faced with diverse, abundant information choices--in their academic studies, in the workplace, and in their personal lives. Information is available through libraries, community resources, special interest organizations, media, and the Internet--and increasingly, information comes to individuals in unfiltered formats. The uncertain quality and expanding quantity of information pose large challenges for society; the sheer abundance of information will not in itself create a more informed citizenry without a complementary cluster of abilities necessary to use information effectively.

Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables students to master course content and extend their investigations, become more self-directed, and assume greater control over their own learning. An information literate individual is able to:

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

Information literacy is related to information technology skills, but has broader implications for the individual, the educational system, and for society. Information

---

[1] American Library Association. *Presidential Committee on Information Literacy. Final Report*. (Chicago: American Library Association, 1989.)

technology skills enable students to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals. Increasingly, information technology skills are interwoven with, and support, information literacy abilities; individuals who become adept with the information literacy will necessarily develop at least some competence with technology skills.

Information literacy, while showing significant overlap with information technology skills, is a distinct and broader area of competence. A recent report from the National Research Council promotes the concept of "fluency" with information technology and delineates several distinctions useful in understanding relationships among information literacy, computer literacy, and broader technological competence. The older concept of "computer literacy" is concerned with rote learning of specific hardware and software applications, while "fluency with technology" focuses on understanding the underlying concepts of technology and applying problem-solving and critical thinking to using technology.   The report also discusses differences between information technology fluency and information literacy as it is increasingly understood in K-12 and higher education. Among these are information literacy's focus on content, communication, analysis, information searching, and evaluation, whereas information technology "fluency" focuses on a deep understanding of technology and graduated, increasingly skilled use of it.

"Fluency" with information technology may require more intellectual abilities than the rote learning of software and hardware associated with "computer literacy," but the focus is still on the technology itself. Information literacy, on the other hand, is an intellectual framework for understanding, finding, evaluating, and using information—activities which may be accomplished in part by fluency with information technology, in part by sound investigative methods, but most important, through critical discernment and reasoning. Information literacy initiates, sustains, and extends lifelong learning through abilities which may use technologies but are ultimately independent of them.

Information Literacy and Higher Education

Developing students as lifelong learners is central to the mission of higher education institutions. By ensuring that students have the intellectual abilities of reasoning and critical thinking, and by helping them construct a framework for learning how to learn, college and universities provide them with the foundation for continued growth throughout their careers, as well as in their roles as informed citizens and members of communities. Information literacy is a key component of, and contributor to, life long learning; information literacy competency extends students' learning beyond formal classroom settings during their undergraduate years, and provides them the practice with self-directed investigations as they move into internships, first professional positions,

and increasing responsibilities in all arenas of life. Because information literacy augments students' competency with evaluating, managing, and using information (the essential abilities to become a professional and a citizen capable of continual growth), it is now considered by several regional and discipline-based accreditation associations as a key outcome for college students.

Examples of accreditation criteria including information literacy competencies are those of the Middle States Commission on Higher Education (MSCHE), the Western Association of Schools and Colleges (WASC), and the Southern Association of Schools and Colleges (SACS). In 1994, the Middle States Commission was the first regional accreditation association to include required criteria for information literacy. More recently, the Western Association of Schools and Colleges revised their criteria to include information literacy competencies as part of their general education requirements; WASC has also hired an information literacy staff member. Currently, the SACS criteria define information literacy as "the ability to locate, evaluate, and use information to become independent life-long learners," but the current language has not yet changed to require information literacy. Even so, SACs does require evidence of skills in "the basic use of computers" and these basic skills are incorporated in information literacy. Clearly, there is rising interest nationally in accrediting circles in information literacy as an essential competency.

Incorporating information literacy across curricula, in all programs and services, and throughout the administrative life of the university, requires the collaborative efforts of faculty, librarians, and administrators. Through lectures and by leading discussions, faculty establish the context for learning by frequently providing background information on specific topics. Equally as important, faculty inspire students to explore the unknown, offer initial guidance on how best to fulfill information needs, and monitor students' progress. Academic librarians coordinate the evaluation and selection of many intellectual resources for programs and services, develop, organize and maintain collections and many points of access to information; and are available to provide instruction to students and faculty who seek information. Administrators themselves also need greater expertise in information literacy, because they must continually seek new ways to collect information about the operations of their institution, to coordinate its evaluation in the institution's process of shared governance, and to use that information in planning and budgeting for programs and services.

The Boyer Commission Report, *Reinventing Undergraduate Education,* recommends strategies that require the student to actively engage in "framing of a significant question or set of questions, the research or creative exploration to find answers, and the

communications skills to convey the results…" [2] Courses structured in such a way create student-centered learning environments where inquiry is the norm, problem solving becomes the focus, and thinking critically is part of the process. Such learning environments require information literacy competencies to identify, locate, and evaluate information.

The successful implementation of information literacy standards provides opportunities for furthering the influence and impact of student-centered teaching methods such as problem-based learning, evidence-based learning, and inquiry learning. These pedagogical strategies have as their very essence active rather than passive learning; such strategies are based on the understanding that lectures and predigested textbook information alone do not prepare students to become independent learners or to meet the rising expectations of employers. These teaching methods create ample opportunities for students to use critical thinking and problem solving, which increase students' responsibility for their own learning. Guided by faculty and others in problem-based approaches, students reason about course content at a deeper level than is possible through the exclusive use of lectures and textbooks. Guiding students toward deeper understanding of concepts in any course often requires the use of information sources beyond the classroom; to understand course content more completely and expand the scope of their inquiries, students must solve problems related to the course, a mode of thinking often requiring them to become skilled users of information sources in many locations and formats.

This skilled use of information sources is central to information literacy. Gaining skills in information literacy multiplies the opportunities for students' self-directed learning, as they become engaged in using a wide variety of information sources to expand their knowledge, ask informed questions, and sharpen their critical thinking for still further self-directed learning. Achieving competency in information literacy requires an understanding that this cluster of abilities—so closely related to problem-based learning--is not extraneous to the curriculum, but is pervasively woven into the curriculum's content, structure, and sequence.

To obtain the information they seek for their investigations, students have many options. One is to utilize an information retrieval system, such as may be found in a library or in databases accessible by computer from any location. A second option is for the student to select an appropriate investigative method for observing phenomena directly. For example, physicians, archaeologists, and astronomers frequently depend upon physical examination to detect the presence of particular phenomena. In addition, mathematicians,

---

[2] Boyer Commission on Educating Undergraduates in the Research University. Reinventing Undergraduate Education: A Blueprint for America's Research Universities. **Error! Bookmark not defined.**

chemists, and physicists often utilize technologies such as statistical software or stimulators to create artificial conditions in which to observe and analyze the interaction of phenomena. As they progress through their undergraduate years and graduate programs, students need to have repeated opportunities for seeking, evaluating, and managing information gathered from multiple sources and discipline-specific research methods.

The evolution of higher education has been shaped most recently by the rapidly expanding use of distance learning, in which distributed learning technologies permit teaching and learning to occur when the teacher and the student are not in the same place at the same time. The various regional accrediting organizations have endorsed the *Principles of Good Practice for Electronically Offered Academic Degree and Certificate Programs,* which were developed in 1995 by the Western Cooperative for Educational Telecommunications Project of the Western Interstate Commission on Higher Education. [3] In addition, both regional accreditors and the Association of College and Research Libraries have indicated that institutions offering programs and services through distance learning must meet standards comparable to all other institutional offerings. Information literacy competencies for distance learning students should be the same as those for "on campus" students.

Use of the Standards

In the following competencies, there are five standards and twenty-two performance indicators. The standards focus upon the needs of students in higher education at all levels. The standards also list a range of measurable outcomes for assessing student progress toward information literacy. These outcomes serve as guidelines for faculty, librarians, and others in constructing local instruments to measure student learning in the context of an institution's unique mission.

Information Literacy Competency Standards for Higher Education provides a framework for assessing the information literate student. It also extends the work done by the American Association of School Librarians Task Force on Information Literacy Standards, thereby providing higher education an opportunity to articulate its information literacy competencies with those of K-12, so that a continuum of expectations develops for students at all levels. The competencies presented here outline the process by which faculty, librarians and others learn and pinpoint specific indicators that identify a student

---

[3] Western Interstate Commission on Higher Education. Western Cooperative for Educational Telecommunications Project. *Principles of Good Practice for Electronically Offered Academic Degree and Certificate Programs.* 1995 http://homepage.interaccess.com/~ghoyle/nca.html

CNI Fall 1999 Task Force Meeting [5]
December 13-14, 1999

Project Briefing Handout
<http://www.cni.org/>

as information literate. Students also will find the competencies useful, because it provides them with a framework for gaining control over how they interact with information in their environment. It will help to sensitize them to the need to develop a metacognitive approach to learning, making them conscious of the explicit actions required for gathering, analyzing, and using information.

It should be noted that all students are assumed to perform all of the steps outlined in these competencies. However, not all students will perform them in the exact sequence described, and not everyone will complete them to the same degree of excellence or at the same speed. Graduate students, for example, would be expected to start with higher ranking on each item than lower division students, and faculty would start even higher, but everyone would be able to improve over time.

Furthermore, some disciplines may place greater emphasis on the mastery of competencies at certain points in the process, and therefore certain steps would receive greater weight than others in any rubric for measurement. It is also anticipated that many of the steps are likely to be performed recursively, in that the reflective and evaluative aspects included within each standard will require the student to return to an earlier point in the process, revise the information-seeking approach, and repeat the same steps.

To implement the standards, an institution must first review its mission and goals to determine how an explicit focus on information literacy would improve learning and enhance the institution's effectiveness. To facilitate acceptance of the concept, faculty and staff development is also crucial. It will ensure that personnel understand the value of information literacy and some of the strategies that have been proven successful for emphasizing information literacy competencies. In this regard, it would be helpful to focus on student learning and institutional management in developing a rationale for any faculty and staff development program.