INFORMATION LITERACY: ESSENTIAL SKILL FOR HIGHER EDUCATION

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ABSTRACT

Information literacy really a revolutionary approach in higher education that is being felt at the general education curriculum level or simply an important outgrowth of traditional library instruction and resource-based learning that has achieved sporadic successes due to better marketing, technological prevalence, and acceptance by certain accreditation agencies and campus administrators.

KEYWORDS: Information Literacy, Information Age, Libraries, Teaching, Learning and Higher Education

INTRODUCTION

In this century, an "educated" graduate will no longer be defined as one who has absorbed a certain body of factual information, but as one who knows how to find, evaluate, and apply needed information". Our ability to be information literate depends on our willingness to be lifelong learners as we are challenged to master new technologies that will forever alter the landscape of information. National awareness of problems associated with limited literacy skills has led to legislation, beginning at the federal level, to fund new literacy programs and expand existing programs. Libraries and information centers are viewed as an important component of this massive educational effort.

Critical thinking skills," "problem solving," "decision making": both the popular and professional literature use these phrases in reporting on skills that the curriculum must provide to equip students for the 21st century. All three of these phrases refer to cognitive skills that are necessary to create new knowledge and to learn how to learn This ability to learn how to learn is a key characteristic of those who are information literate; i.e., those who "know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them" If teachers are to use information so that others can learn from them, then teachers must be information literate.

What is Information Literacy?

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. 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.

According to the Association of College and Research Libraries, "information literacy" refers to the ability to

access, evaluate, and use information effectively. It calls for a wide range of skills, including the ability to:

- Use information to solve problems and make decisions.

- Share knowledge using appropriate formats for intended audiences.

- Use a variety of information resources, including professional associations or organizations (such as information clearinghouses), books, newspapers and journals (often stored on microfilm or microfiche in libraries), and computer-based resources (such as software, CD-ROMs, e-mail, and the Internet).

- Adapt to new technology.

- Learn independently throughout life.

Challenges

Incorporating information literacy into the undergraduate curriculum is not an easy task; naturally, there are challenges to such an undertaking. These challenges predominantly take the form of faculty resistance; however, there are additional challenges related to other personnel, as well as to students and the institution as a whole. Resistance from faculty is based on a number of reasons, including fear of loss of control over subject matter and lack of time to incorporate information literacy objectives into class lectures; however, the most compelling reason may be that the viewpoints of librarians and faculty differ, due to "distinct pedagogical discourses". Faculties are very concerned with the discipline and the core of concepts they feel students need to learn to receive their degree. In order to preserve the integrity of their discipline, faculty may be against incorporating any material that they consider non-essential, such as information literacy skills. Faculty possesses expertise in their field and feels they should decide what is important enough to cover in class; they may also discourage the involvement of other sources of expertise, such as librarians. Academic freedom may be the most powerful discourse that prevents faculty from seeing eye-to-eye with librarians. Faculty feels that their classroom is their domain and may resent interference from outside their discipline. Faculty members may feel that students should learn library skills on their own and teaching such skills falls outside their domain. All of these discourses could fall under the key issue, which is power. Faculties have the authority and control over their classrooms and its activities; librarians, on the other hand, are outsiders. Although many faculties may hold such beliefs, some faculty may have more student-centered discourses. Such faculty may believe in the joy of discovery and of research, and inspire their students to learn through techniques other than traditional lecture. These faculty members may be open to integrating library research skills into their curricula. Another student-centered discourse is that of integrated learning, the idea that there are areas of knowledge beyond their own discipline which are important to the future success of their students, i.e., critical thinking and research skills.

Resources for Information Literacy

Information literacy thrives in a resource-based learning environment. In such an environment, students and teachers make decisions about appropriate sources of information and how to access them. Aside from more traditional print resources--textbooks, encyclopedias, newspapers, and magazines--they use technological resources such as videotape and videodisc, CD-ROM, software tools, and simulation/modeling tools. They use computer networking and telecommunications for both data access and participation in learning communities. They use multimedia technologies as materials for gathering data and as production tools. They use their school library media centers to locate and use many of

these resources.

In addition to using technological resources, learners also reach beyond classroom walls into their local communities for the rich supply of materials and authoritative information provided by businesses, social services agencies, citizens' groups, and public and university libraries. The mass media--cable and network television, radio broadcasts, and other national and international print and electronic services--provide yet another rich source for information.

Information Literacy and Higher Education

Information literacy is important to higher education, as it is a part of, and contributor to, lifelong learning. Inherent in the mission of higher education institutions is the development of lifelong learners, who continue to learn beyond their formal education. If individuals are able to reason and think critically, and learn how to learn, they will be able to continue to grow intellectually throughout their careers, and contribute to society as informed citizens. Information literacy provides these individuals with the tools to do so. Due to information literacy's importance in the higher education curriculum, certain regional and discipline-based accreditation associations now consider it as a significant outcome for college students. As I will discuss in more detail later, the incorporation of information literacy across curricula requires collaboration between all members of the higher education community, particularly faculty, librarians and administrators.

Implications for Librarians and Libraries

Librarians led the way in the early 1970s in conceptualizing the idea of information literacy and its relationship to lifelong learning. Early development of the concept of information literacy frequently focused on the future role of libraries and librarians in helping with the use and application of information.

The impact of moving from text-based learning to resource-based learning will involve heavier use of library materials and a demand for more and varied media resources, including print and non print. Consequently, school administrators will need to re-evaluate how funds are distributed between the textbook budget and the budget for their library media resources. Public libraries will have to coordinate more closely with schools and other learning sites to ensure sufficient access to information resources and technology for all ages and abilities and to remain a strong community resource for lifelong learning.

As information specialists, librarians will be called upon more frequently to consult with teachers and learners, and to provide training and guidance toward the sharpening of information literacy skills not only in school and academic libraries but in public and special libraries as well.

These are important considerations for all types of libraries given the range of patrons who use these libraries and given that the linking of library holdings and the stepped up demand for resource sharing among libraries escalates the importance (and costs) of interlibrary loans.

Implications for Teaching

Because becoming information literate is an active process, requiring the seeking out of knowledge from multiple sources rather than passively receiving and repeating back facts, the teacher's role must evolve from the giver of knowledge into being more of a coach or guide. Teachers, professors, teaching assistants, librarians, administrators, and the community must collaborate to develop ways to involve the students not only in using classroom materials but also in

using resources from the broader community and the mass media.

Teachers must be prepared to "teach students to become critical thinkers, intellectually curious observers, creators, and users of information" (Lenox 1993). The goal is to prepare students early on to "learn how to learn" and carry these skills into other areas of their lives so that they can be independent seekers and consumers of information throughout their lives. Teachers of all subjects must blend their traditional fact-based approach with an emphasis on learner-based inquiry and the scientific inquiry process. This means shifting some of the responsibility of gaining knowledge from the teacher to the student and allowing students to develop questions, strategies to search for answers, and formulate conclusions. It also means having fewer lectures and replacing them with applied strategies for information literacy.

Concurrently, educators and researchers must grapple with defining the standards and competencies associated with information literacy; develop effective new ways to engage learners and measure the outcome and impact of such learning.

Implications for Learning

Some of our learning occurs in formal settings where what we learn is packaged and prepared for us. But much learning also occurs in non formal settings, and, informally as well. Information literacy is crucial in all three types of learning situations.

Becoming information literate will involve a drastic change from the way many students are accustomed to learning. First of all, it requires students to be more self-directed in their learning. This kind of independent, active learning prepares students for real-life problem solving. Also, in becoming information literate, students will assume more responsibility for their own learning either individually or in work groups. As students become more competent with their use of information resource options, they become aware of their individual styles of learning and preferred ways of assimilating knowledge.

One successful method for developing information literacy skills is through resource-based learning which involves having students assume more responsibility for locating the very materials from which to learn. This approach develops lifelong learning skills because students are learning from the same sources which they will come to use in their daily lives such as books, newspapers, televisions, databases, government documents, subject matter experts, and others. Moreover, resource-based learning provides an added advantage.

Technology Impact

To process of information literacy requires not only the learning of a constellation of skills, but also a new way of thinking in order to derive meaning from learning. Technological storage and sharing of information has increased the availability of data tremendously. Much of this information is available only through telecommunications. Information literacy in telecommunications is achieved when learners know when to use online resources, know how to access information competently, know how to evaluate information as to accuracy and pertinence for each need, and know how to use this information to communicate effectively. Learners who are able to do this will have lifelong skills they will need in the Information Age.

Shifts in Teaching and Learning

In an information literate environment, students engage in active, self-directed learning activities, and teachers

facilitate students' engagement through a more adventurous style of instructional delivery. Students involved in information literate activities:

- seek a rich range of information sources;

- communicate an understanding of content;

- pose questions about the content being learned;

- use the environment, people, and tools for learning;

- reflect on their own learning;

- assess their own learning; and

- Take responsibility for their own learning.

These students feel good about themselves as learners, and they leave school feeling passionate about some content.

Teachers trying to create an information literate environment for their students have given up the view that teaching is telling, that learning is absorbing, and that knowledge is static. They constantly make difficult choices about old curriculums, examining subject-area requirements closely, setting priorities, and considering process as well as content. They look beyond their classrooms for resources that will enrich the learning environment. They engage in collaborative activities which enrich their own professional development and their students' learning experiences. They seek the expertise of their school library media specialists as partners in the curriculum planning process.

Teachers involve students in complex tasks that have purposes beyond the limits of the classroom and the teacher's critical evaluation. They also create collaborative situations to develop students' social skills and problem-solving skills. They are familiar with a variety of learning tools, both print-based and electronic, and they encourage their students to move beyond the textbook when seeking information and solving problems.

Information Literacy for Students

The following are the uses of information literacy for students:

- Information literacy and the resource-based learning programs that foster it--counteracts the information dependency created by traditional schooling, where students must rely on the teacher to dispense information.

- Students take more control of their learning, and the teacher is freed from the role of omniscient expert. Yet the teacher becomes more important in the role of facilitator of interaction at the small-group or individual level.

- The final product of resource-based learning is usually a paper, presentation or exit performance. Regardless of where and how information literacy skills are acquired, they are applicable in any school, play, or work situation.

- Resource-based learning accommodates varied interests and ability levels. Students don't need to read exactly the same materials on the same topic when they are identifying their own approaches to a theme or topic of

study.

- Teachers encourage students to do their own research.

- Students take responsibility for their learning, and they retain more of the information they have gathered for themselves.

- Information literate students are more effective consumers of information resources.

- They learn to recognize that information is packaged in a variety of ways, that it is packaged using a variety of techniques, that it serves a variety of interests, and that it contains a variety of value messages. Information literate students are more critical when they make decisions about the resources they use.

CONCLUSIONS

There is a clear need for discussion of information literacy instruction outside of the library field. A more multi-disciplinary approach to information literacy research and instruction will create opportunities for more substantial, curriculum-integrated and long-lasting instructional experiences that will benefit students throughout and beyond their academic careers. Information literacy skills are crucial for students to succeed in their careers and communities of the Information Age. Librarians are well equipped to teach such skills, but need the support of the entire university community, especially that of faculty. Integration of information literacy skills into subject areas, and collaboration with faculty, appear to be key factors in the success of an information literacy program.

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