
Information Literacy and the Undergraduate Curriculum

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ABSTRACT

FOR MORE THAN FORTY YEARS, academic librarians have been concerned with integrating library instruction and information literacy into the undergraduate curriculum. Their efforts have brought some successes, but overall their struggle continues. Technological developments, educational reforms, and concern with preparation for success in the Information Age are beginning to enable academic librarians to once again integrate information and technological skills instruction into the undergraduate curriculum.

BACKGROUND

Almost forty years have passed since Knapp (1958) of the Monteith College at Wayne State University in Detroit, Michigan, stated: "If we wish the library to function more effectively in the college . . . we must direct our efforts toward the curriculum, working through the faculty" (p. 831). This sentiment has been echoed by numerous leaders in the library profession over the years and has surfaced to a much greater extent in the last few years as the information technology revolution has begun to manifest itself. Librarians have continually been concerned with students' library and information skills, with faculty attitudes toward the library, and with the importance of the library's involvement in curriculum development. For the purpose of this document, "curriculum" is defined as the structure of the educational process and the framework for planning educational experiences" (Regan, 1980). Educational processes and

experiences may be traditional; electronic, in an online environment; or remote, through distance education. Various studies during the past several decades have shown that the courses, not the students, are the determining factors in the degree to which a library contributes to the academic programs, specifically the curriculum. Students will obtain necessary library and information skills through appropriately planned coursework determined by faculty, their attitudes, and teaching methodology. Librarians' involvement in curriculum planning and cooperative teaching with faculty will help students develop important and vital information skills, and faculty will value such involvement (Pearson, 1978).

Missions of the College Curriculum (Carnegie Foundation for the Advancement of Teaching, 1977) gives definitions of general education and advocates teaching students necessary information-gathering skills. This report was used by many academic librarians in an attempt to integrate library instruction into the curriculum of their institutions. A good example of this at the time was Sangamon State University in Springfield, Illinois, an upper-level institution where librarians were equal partners with faculty in the instructional process.

Similar to other writers in the 1970s on librarians and the curriculum, Haeuser (1979) wrote about the opportunities for librarians to become involved in curriculum planning whenever revisions of the curriculum are being made. This opportunity has existed throughout the 1980s and the 1990s.

One of the more famous, and certainly the longest surviving, example of a successfully integrated library instruction program has been at Earlham College in Richmond, Indiana, under the guidance of Farber. Another good example has been the University of Wisconsin-Parkside, which features the "teaching library," where library instruction was a required part of the general curriculum for students, and a test had to be passed to assess library skills before students could graduate. Many more institutions could be named where library instruction has been, and still is, a requirement, and where librarians have worked with faculty to integrate library instruction into the curriculum.

Several library instruction surveys throughout the 1980s indicate that successful integration of library and research skills instruction into the academic curriculum was rare. Whenever it did occur—e.g., at Earlham College—several special factors were present:

- library administrators had long-term commitments to integrate library instruction into the curriculum;
- librarians and faculty worked together in curriculum development; and
- the institution had a strong commitment to excellent educational outcomes for the students in the areas of critical thinking, problem-solving, and information skills.

During the past two decades, librarians hoped that gaining faculty status would help them to be more successful in integrating library instruction into the curriculum while being viewed as partners in the educational and teaching process on campus. That hope was not fully realized in most academic institutions, although in some cases it did result in a much closer dynamic relationship between librarians and faculty in universities and community and private liberal arts colleges. The acquisition of faculty status certainly helped librarians attain membership on faculty committees, including, among others, curriculum-related committees. That accomplishment, combined with the continuous mandate to revise the general academic curriculum, enabled librarians to make some progress toward integrating library instruction modules into the curriculum in selected institutions.

In the 1980s, information technology began to have a major impact on libraries, librarians and, to some degree, higher education. Although libraries had begun to automate in the 1960s with the start of the Online Computer Library Center (OCLC), the second and third generation of library automation systems, combined with the beginnings of electronic information formats, resulted in an accelerated rate of change within academic libraries. The changes affected not only collection activities and library services but also how users access information and the type of skills needed to do it effectively and efficiently. As the availability of online databases grew and end-users needed special training, librarians became even more concerned about teaching students success in using libraries and information. An added wrinkle in this concern was the fact that many faculty also needed help and guidance in using electronic information formats but often did not want to admit it.

INFORMATION LITERACY

Librarians have become increasingly more concerned about the need for people to gain information skills so that they can be successful in the Information Society. A special committee within the American Library Association, The Presidential Committee on Information Literacy, was created, and their report defines information literacy (American Library Association, 1989). Based on the concept that all people have the right to information to help them to be successful in an Information Society, the report states that: "To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. . . . Ultimately, information literate people are those who have learned how to learn" (p. 1). The report reiterates the importance of information literate people for business, citizenship, and levels of education. Especially noteworthy is the fact that the report provides an excellent rationale for academic librarians to integrate information literacy programs into the curriculum. Several of the report's recommendations have already been implemented successfully:

- The National Forum on Information Literacy, a coalition of more than fifty national associations, has been formed under the guidance of ALA. It promotes information literacy through programs, publications, and advocacy.
- State Departments of Education are beginning to make information literacy a part of their overall curriculum guidelines.
- Several higher education accrediting agencies have incorporated information literacy outcomes as part of the accrediting criteria for higher education institutions.
- The last White House Conference on Library and Information Services included information literacy as a major concern.
- Several research and demonstration projects have been started to assess the role of information management skills on academic performance.

Other recommendations are just beginning to be implemented:

- ensure that colleges, schools, and businesses pay special attention to their libraries' potentially important role as information centers and teachers of information skills;
- modify teacher education and performance to include information literacy concerns;
- integrate information literacy programs into higher education curricula.

CURRICULUM

Brevik and Gee (1989) reiterate the important role of the library in higher education reform; how librarians can involve themselves in reforming instruction, improving research products, enhancing community service, and assisting administrators in student recruitment and retention. They offer valuable guidelines for librarians and higher education administrators to integrate the teaching of information skills into the curriculum.

Bjorner (1991) provides additional definitions of information literacy and a possible curriculum model. In her summary of information literacy, the following characteristics emerge:

- anyone can become information literate;
- information literacy is action-oriented, it helps solve problems and make decisions;
- information skills are transferable from one discipline to another, from one task to another;
- information skills are needed for lifelong learning; and
- information literacy helps people handle information and new technologies.

Bjorner discusses various philosophies of curriculum development—discipline-based (found mostly in higher education), student-based (found in elementary schools), social-utilitarian-based (found in vocational training), and social reconstruction (found in religious or other strong ideological focused institutions). A model consisting of various competency-based teaching modules in a vocational-technical education environment is discussed, and a list of information competencies is suggested.

The library instruction literature is numerous and includes many descriptions of information literature case studies in academic settings. However, unlike the K-12 situation where information skills instruction and measurable outcomes are generally mandated by states and local governmental authorities, higher education has not yet embraced the concept of integrating information literacy instruction into the curriculum. Reasons for this include such factors as the faculty's control of the curriculum, individuality and autonomy of each institution regarding curriculum and educational outcomes, and the status of librarians within higher education. For many years academic librarians have worked to integrate library and information skills into the curriculum, and in several institutions they have been successful. At this time there is an interest within the California State University System to bring information literacy into the curriculum, and this may eventually be one way to ensure information skills acquisition as an important learning outcome of higher education.

Unfortunately, earlier successes have not lasted; a change in the curriculum, the departure of a faculty member, or time constraints within a particular course have often eliminated the integrated information/research skills module taught by librarians. Librarians continue to search for better ways to ensure that students gain necessary information, research, and technology skills.

MacAdam (1990) suggests that academic librarians:

- do their instruction of information literacy within the framework of technology;
- use models based upon students' understanding of life in general;
- help students understand the role of the library in the information world;
- expand their collaboration with faculty in building the curriculum;
- cooperate with school and public librarians and campus administrators; and
- establish model information literacy programs.

In the 1990s, several developments in education and technology are beginning to help academic librarians achieve new breakthroughs in integrating information and technology skills into the curriculum of their colleges and universities. As libraries become true electronic informa-

tion centers featuring multitask workstations which provide immediate access to information and scholarly publications worldwide, students and faculty are experiencing the need for new technology and information-handling skills. Many librarians are addressing these needs by teaching workshops and seminars for faculty on the Internet, the World Wide Web, homepage construction, and the ever-growing array of national and international databases. Faculty are beginning to restructure their courses and teaching methods to utilize networking capabilities and are starting to cooperate with librarians to include instruction in information-handling skills for students into appropriate courses. This is taking place, particularly, in academic institutions affected by new accrediting criteria (the Middle States, the Southern States, and the Western States).

The Middle States Association of Colleges and Schools (1990) has prepared criteria for outcome assessment in higher education which includes a section on Information Literacy. They want to measure the extent to which students have mastered the ability to retrieve and use information, especially in the general education programs. The following questions are part of the program review:

1. How many syllabi include library-based assignments?
2. What is the nature of those assignments?
3. Are they appropriate for the program and its students?
4. Do they show evidence of thought and creativity?
5. Do they promote active learning?
6. Do they take advantage of primary sources when appropriate?
7. Do they display a knowledge of the range of resources available to students at the institution?
8. Is there a sense that, as students progress from the beginning of the degree program to its conclusion, they are required to use increasingly complex library research skills (Middle States Association of Colleges and Schools, 1990, p. 18)?

These criteria support strongly the integration of information literacy modules into the undergraduate curriculum and provide librarians with a powerful rationale in their quest to become involved in the teaching/learning process to participate in the education of students for success in the Information Society.

A PRACTICAL APPLICATION

It is particularly urgent to teach information and technology skills to students in urban universities since many of them usually work while going to school, in many cases, full-time. Their work environment is usually business and industry where technology and information skills are important for success as employees. Other students arrive on the campus underprepared for academic work, and basic information and technology

skills will help them succeed in their coursework. At Cleveland State University (CSU), the basic curriculum was revised during the late 1980s and a final report issued in 1990. This report includes the following statement regarding Information Literacy:

The CSU University Library has made the commitment to initiate an Information Literacy program as an expansion of the present bibliographic instruction programs in which librarians, in cooperation with faculty, have been instructing students in using library materials. Through the information literacy program, students will be able to locate, evaluate, and use information more effectively to satisfy their information requirements. Librarians will work with all faculty members to include information literacy modules into appropriate courses, and to monitor students' progress in becoming information literate.

Each professor who proposes a course for the various areas within the basic curriculum has to fill out a form which includes a question on how the course will deal with information literacy in the field. Implementation of the revised curriculum has been slow due to budget constraints, but, since the 1993-94 academic year, all students are required to comply with the new requirements.

In order to prepare for the new information literacy instruction, CSU librarians prepared a brochure explaining the concept of information literacy, goals and objectives for the information literacy program, and a basic checklist for evaluating information. Librarians have also begun to experiment with various faculty members to develop the most effective way to teach basic information skills to the lower level undergraduates. A major concern at this time is the assessment of outcomes for all academic programs, including the basic curriculum, and librarians are developing criteria to measure information literacy outcomes. At the same time, the university is involved in a technology review process and a possible outcome will be requiring all students to demonstrate, at the time of graduation, that they have acquired appropriate technology and information skills. If this becomes reality, librarians will become even more involved in the teaching/learning process.

Involvement in the curriculum development process during the last seven years has been an educational, and often frustrating, experience and has shown that only hard work and persistence can lead to success. Here are some insights gained from this lengthy experience:

- it helps that the library director is an ex-officio member of the curriculum committee;
- librarians must understand the curriculum and have effective liaison relationships in collection building with faculty;
- support from administrators and faculty leaders is crucial;
- librarians must be well prepared for teaching, understand different learning styles, and engage students actively in the teaching process;

- librarians must be flexible to accommodate the range of the curriculum and disciplines, as well as a diversity of faculty and students;
- librarians must use effective marketing techniques to demonstrate the importance of information and technology literacy and their crucial role in it; and
- librarians must stay somewhat ahead of the technology developments so they can be the first to teach new information formats and networks.

CONCLUSION

These are challenging and exciting times for academic librarians. New technologies appear on a regular basis in the library and on the campus and affect every program and process. Educational reforms are taking place in all states to improve educational outcomes and to contain costs on all levels including higher education. These developments are causing much upheaval in the campus community and will lead to major changes. Curriculum reform is in process throughout the country, and students and employers are demanding improved educational outcomes to ensure better individual and business productivity. It is up to librarians to maximize their potential and to be in position to assume their role in the teaching and learning process as reforms take place. These opportunities are best summarized in the Middle States Association of Colleges and Schools (1994) Standards for Accreditation:

Each institution should foster optimal use of its learning resources through strategies designed to help students develop information literacy....It should encourage the use of a wide range of non-classroom resources for teaching and learning. It is essential to have an active and continuing program of library orientation and instruction in accessing information, developed collaboratively and supported actively by faculty, librarians, academic deans, and other information providers.

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