

“Information Management Education—Beyond BI”

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Librarians occasionally ask themselves and others if bibliographic instruction is the appropriate term for the constellation of skills and concepts they teach. The term “bibliographic instruction” has some drawbacks: it is a phrase of librarianese which is meaningless to anyone outside the field, neither immediately comprehensible nor easily interpretable. It also suggests teaching people how to use the library to compile bibliographies. This article advocates use of the term “information management education,” which implies greater conceptual breadth and mental activities both before and after library use, and describes an ideal information management education (IME) program for a liberal arts college.

Five Elements of an IME Program

- **Driving force of all services**

First, IME should drive all other public services, and, because in a user-oriented library technical services departments exist to support services to clients, this is to say that the instructional mission should drive the entire library. The librarians should plan their services and draft their policies with education in mind. This includes reference, end-user search-

ing, term paper clinics, and applicable areas of archives and media services. Information delivery rather than instruction may be appropriate in special libraries, but in educational institutions, the library has a legitimate and important mandate to instruct.

- **Sensitivity to students**

Second, the IME program should take into account students' needs and feelings. Reference librarians know that many students are debilitated by their insecurity and fear when faced with library research. This is now being confirmed by studies such as Mellon's, in which she found that 75 to 85 percent of composition students suffered from “library anxiety.”¹ Dunn discovered six psychological needs that motivate students to seek information. In rank order from greatest need on down, they are: 1) need for other-approval; 2) need for success in the chosen profession; 3) need for self-extension; 4) need for self-approval; 5) need for intellectual stimulation; and 6) needs related to a successful college experience.² The ideal IME program would test for these attitudes and build on the knowledge provided by the test results. Too often librarians (and other faculty, too, for that matter) lament that students are not in

the desired frame of mind; educators must instead accept students where they are before attempting to take them where they need to be. Many need to be affirmed before they can be taught.

Mellon has also applied Perry's theory of intellectual and ethical development to library instruction. College freshmen can be expected to be at the "Dualism" stage, in which they "view the world in terms of right or wrong, and therefore expect that there is a 'right' answer to every question."³ From Dualism they progress to "Multiplicity," in which they are ready to accept several perspectives on some problems, although they still retain a sense of dualism about many issues. Many undergraduates are in this stage when they graduate, although some proceed to the "Relativism" stage and "become aware that there are few areas in which things can be known absolutely and thus recognize the necessity of supporting information to back up opinions."⁴ The proposed IME program would incorporate Perry's theory; students would be instructed at several points during their college careers, and instruction would be tailored not only to content but to the students' stage of intellectual development.

- **Conceptual breadth**

Third, the IME program, to earn the name "information management education," must have conceptual breadth. Merely teaching students how to use library reference sources is not adequate. The *Reader's Guide* may not always exist in its familiar green-covered paper format, but students will, throughout their lives, need to find reliable information on topics about which they know little, evaluate that information, and use it to make decisions and solve problems. On the job, they will have to do this

effectively and efficiently. In their personal lives, there may be less pressure to be speedy, but the tendency of people to pack as much into their lives as possible suggests that efficiency is desirable in this realm, also.

Jakobovits and Nahl-Jakobovits have created a taxonomy of user behavior which will be used as a conceptual framework for the IME program. It is reproduced on the next page.⁵ The goal of the IME program is to bring the students to Level 3 in all of the domains by the time they graduate.

Oberman and Mellon have each done a great deal of pioneering work in developing library instruction which incorporates abstract reasoning and problem solving. Mancall has urged the addition of critical thinking skills, which she summarized as the abilities of "distinguishing between verifiable facts and value claims; determining the reliability of a source; determining the factual accuracy of a statement; distinguishing relevant from irrelevant information, claims or reasons; detecting bias; identifying unstated assumptions; identifying ambiguous or equivocal claims or arguments; recognizing local inconsistencies or fallacies in a line (sic) of reasoning; distinguishing between warranted or unwarranted claims; and determining the strength of an argument."⁶

The ideal IME program goes far beyond teaching reference tools to include information for decision making, problem solving, critical thinking, and discipline structure. Keresztes's theory of discipline maturation, which he linked to the types of information sources one could expect to find, is an excellent, although complex and upper-level, concept to include in the IME program.⁷

• **Curriculum integration**

The fourth essential component of the IME program is integration into the curriculum. From a purely practical standpoint, students pay more attention to instruction when it is related to an actual assignment for a class they are taking, and most students will not be sufficiently interested in a library skills course to sign up on their own. But there are better reasons for curriculum-related instruction. As Renford and Hen-

drickson pointed out:

When librarians and instructors work together—and here we are entering the domain of course-integrated instruction—the nature of the courses themselves may change, with more emphasis placed on independent library investigation as an integral part of the course.⁸

The Monteith College experiment convinced Knap that, in order to be effective, “the library program must be not merely presented in the context of ‘content’ courses, but truly consistent

TABLE 1
TAXONOMY OF LIBRARY SKILLS AND ERRORS

	Affective Domain	Cognitive Domain	Psychomotor Domain
LEVEL 3 Internalizing the Library	A3 Affective Internalization Demonstrating support for the library perspective on society and self. (= library conscience and morality versus negligence)	C3 Cognitive Internalization Acquiring personal knowledge and subjective intuition of a scholarly discipline. (= disciplinary connection versus lacking connection)	P3 Psychomotor Internalization Performing cumulative searches in one's field and promoting the library in one's life. (= lifelong library use versus library disuse)
LEVEL 2 Interacting with the library	A2 Affective Interaction Demonstrating continuous striving and value preferences favorable to the library and its system. (= positive library attitudes versus library resistance)	C2 Cognitive Interaction Acquiring objective knowledge of search sequences, their analysis and synthesis. (= library search protocol versus idiosyncratic search protocol)	P2 Psychomotor Interaction Negotiating search queries and performing a single, one-time search that meets a current information need. (= library proficiency versus library ineptitude)
LEVEL 1 Orienting to the library	A1 Affective Orientation Demonstrating willingness to practice library tasks and maintaining selective attention. (= library adjustment versus library maladjustment)	C1 Cognitive Orientation Acquiring representative knowledge and comprehending library-relevant distinctions. (= library map and glossary versus library ignorance)	P1 Psychomotor Orientation Performing physical operations (hands-on experience, browsing and walking around). (= library exploration and efficiency versus library avoidance and inefficiency)

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in goals and methods, in tone and style, with the overall educational program in which it occurs."⁹ Course-integrated instruction gives students the benefit of the librarian's and the professor's knowledge and can make natural the presentation of discipline structure and communication patterns.

- **Unite information finding with information use**

Last, the IME program should remove the artificial division between information finding and information use. Too often, search strategy is presented as a self-contained, linear process. Librarians teach students how to find information, as a separate segment of research, and professors teach students how to apply the information (or, perhaps more frequently, students are expected to figure this out on their own). Experienced researchers know that the process is more cyclical: one prepares a strategy, finds some information, uses it, follows a chain to other information, revises some ideas, finds some more information, etc. For this reason, Mellon has encouraged librarians to build "feedback, or returning to preceding steps in the process as necessary" into the strategy they teach.¹⁰ But when librarians are permitted into a class only for a one-hour lecture and restricted to teaching just the use of reference sources, the division between finding and using information is perpetuated. Greater integration can break it down.

Outline for the Program

- **The freshman program**

My IME program for a liberal arts college is divided into three parts, incorporating Perry's theory and the Jakobovits taxonomy. The Orientation level of the taxonomy would be achieved during the freshman year by

means of a self-paced workbook which all students would complete. During the sophomore and junior years, selected librarian-professor integrated courses would take students to the Interaction level. Finally, students would internalize the library and learn about disciplines as seniors, when they would take a half-credit library course concurrently with their capstone courses or senior seminars.

A student's relationship with the library would begin with a pretest given during orientation week. Earlham has used such a test to evaluate incoming students' library skills and pinpoint areas in which some need special help.¹¹ The instrument would test these items from the cognitive domain but would also include questions from the affective and psychomotor domains of the Jakobovits taxonomy. The results of this test would allow the librarians not only to meet the needs of these particular students but also to compare groups of students over time and be aware of changes in the population.

Also during orientation week, or very early in the term, the students would attend a presentation by the librarians. The purpose of this presentation would be to welcome the students to the library, address the issue of library anxiety and communicate to students that their fears are common and normal, and explain the workbook assignment. The workbook would be due by midterm of the student's first term on campus and would be graded pass/fail by the librarians. Students who did not pass all or part of the workbook would be required to keep working at it until they completed it successfully.

Because freshmen are at the Dualistic stage of intellectual development, IME for this year is simplistic and focused on tasks which have clear

right and wrong answers. The goals for the freshman year are for the students to be able to find the library on the campus and locate important service points in the library; to follow library procedures for using materials in the library and checking books out; to recognize the public services librarians as the people to ask for help; to implement a basic, linear search strategy as presented in the workbook; to be able to use several basic tools (catalog, Wilson indexes, etc.); and to identify several distinctions between the college library and other libraries the students have used in the past.

- **Sophomore and junior years**

During their sophomore and junior years, the students would reach the Multiplistic stage of development. IME would be mainstreamed into as many 200- and 300-level courses as possible, and the professors would grade on research process as well as product. Search strategy with feedback loops would be introduced, as would some critical thinking and problem solving opportunities. Specific objectives would have to be worked out for each course, but the overall goal would be to bring students to the Interaction level of the taxonomy by the end of their junior year.

- **The senior year**

Seniors would enroll for a half-credit, librarian-taught course in conjunction with their capstone courses. By the end of their college careers, students should understand the "big picture" of the information world. They should understand how knowledge is created, stored, and accessed in the discipline of their major. The presence of students from many disciplines in the library course would make for interesting discussion and comparison. Students should, by this time, see information as something they will need throughout their

lives and plan to use libraries as information sources. They should also be aware of the value of other information providers such as the news media and consultants or experts. They should be competent in the full range of problems solving and critical thinking skills mentioned above. They should, in short, be at the Internalization stage of the taxonomy. For students to achieve all this, they would need to be at the Relativism/Commitment stage of intellectual development, which, according to Perry, some people do not attain until they are in graduate school. The post test, which would be administered at the end of the senior year, should be constructed to reveal this as well as to test for the upper-level IME skills.

Too Idealistic? Stumbling Blocks to the IME Program

This ideal IME program is an ambitious plan, and it could not be achieved without solving some problems. These problems would be present, in greater or lesser degrees, on any campus.

The first barrier is faculty attitudes and understanding, both of the value of IME and the abilities of librarians. Librarians are second-class citizens on many campuses, seen by their classroom colleagues as peripheral to the educational enterprise. This attitude is well-entrenched and extremely difficult to change. Some professors would be resistant to grading research papers on process as well as content. Further, many faculty are themselves not especially good information seekers, but they are generally unaware of their ignorance. People in this situation may not see a need for as much IME as this plan calls for, or indeed any at all. And because faculty control the curriculum committees at most colleges, incorporating tests, required workbooks, and

capstone co-courses may be difficult, if not impossible.

Solutions that seem to have worked, at least temporarily, in some places include a charismatic librarian and a supportive administration. Lynch and Seibert cited several institutions in which enthusiastic deans or presidents provided the impetus for BI.¹² At Earlham, the Quaker ethos and spirit of respect and cooperation between librarians and classroom faculty have helped greatly,¹³ as have the professionalism and personality of Evan Farber. The true test of Earlham's program will be in its continued presence as it is administered by others in the future. Librarians might also try to use solid IME programs, well-grounded in theory and backed by data, to persuade faculty members (another good reason for testing students).

The second problem to be faced is student attitudes. During their first year at college especially, students have many emotional and intellectual tasks, and their motivation for learning information management skills may be low. Students' lore generally does not value the library, so peer pressure works against the librarians. People who work at colleges that use self-paced packets report that the students hate the workbooks, although they eventually come to see their value.

The solution to this problem is first to change faculty attitudes. If the faculty support library instruction and communicate that to the students, student opposition will decrease. Librarians also need to be tougher. We are so service-oriented that it pains us when someone dislikes our assignments. If the workbook, etc., have made it through the curriculum channels, the librarians should stand firm and be confident of their ability to prescribe what's best for the students.

The third problem is with librarians, both in teaching ability and workload. Tuckett and Stoffle have advocated conceptual IME but have pointed out that:

this approach demands a very high level of teaching ability. Instruction librarians must possess a clear understanding of the theoretical principles underpinning this approach, both in order to design specific methodological applications and in order to judiciously apply those principles in the classroom to bring structure to an open-ended learning environment. This approach also requires that librarians be comfortable as teachers in such an open-ended classroom situation.¹⁴

More library school and continuing education courses should concentrate on teaching ability and educational theory. Libraries can also ask candidates for public services positions to teach a lesson during an interview, just as candidates for other faculty positions are often asked to do.

One solution to the work load problem is hiring more teaching librarians, but the financial condition of many colleges makes this impossible, regardless of good intentions or administrative support. Another possibility is rethinking the provision of all public services with the goal of freeing librarians from other duties to allow them to devote more time to teaching and preparation. Biggs suggested decreasing the hours of reference service in her controversial but provocative article, "Replacing the Fast Fact Drop-In with Gourmet Information Service."¹⁵ Ford recommended that librarians keep office hours, just like other faculty, and asked

Academic librarians must ask whether their clientele really need a reference desk or whether other services would meet their needs in a more effective manner. Without spending so much time and energy providing service from a reference desk, could we as librarians

devote our efforts more effectively to developing more appropriate and useful services for our primary clientele?⁶

Using reference statistics and a needs assessment, librarians could revamp their public services significantly.

Librarians have been pondering solutions to these problems for some time, and the above-mentioned barriers to wide implementation of IME programs do not lend themselves to quick remedies. Still, the goal is worth the effort, for librarians in the continuing struggle for academic equality, and for the most important people concerned—the students.

Notes

- ¹Constance A. Mellon, "Library Anxiety in College Students: A Grounded Theory and Its Development," *College and Research Libraries* 47 (March 1986): 162.
- ²Kathleen Dunn, "Psychological Needs and Source Linkages in Undergraduate Information-Seeking Behavior," *College and Research Libraries* 47 (September 1986): 477
- ³Constance A. Mellon, "Information Problem-Solving: A Developmental Approach to Library Instruction," in *Theories of Bibliographic Education*, ed. Cerise Oberman and Katina Strauch (New York: R. R. Bowker Co., 1982): 79.
- ⁴*Ibid.*, p. 80
- ⁵Leon A. Jakobovits and Diane Nahl-Jakobovits, "Learning the Library: Taxonomy of Skills and Errors," *College and Research Libraries* 48 (May 1987): p. 207.
- ⁶Jacqueline C. Mancall, Shirley L. Aaron, and Sue A. Walker, "Educating Students to Think: The Role of the School Library Media Program," *School Library Media Quarterly*, 15 (Fall 1986): 21.
- ⁷Michael Keresztesi, "The Science of Bibliography: Theoretical Implications for Bibliographic Instruction," in

Oberman and Strauch, pp. 1-26.

⁸Beverly Renford and Linnea Hendrickson, *Bibliographic Instruction: A Handbook* (New York: Neal-Schuman Publishers, Inc., 1980), p. 74

⁹Patricia B. Knapp, *The Monteith College Library Experiment* (New York: Scarecrow, 1966), p. 88.

¹⁰Mellon, "Information Problem-Solving," p. 79.

¹¹Evan Ira Farber, "Library Instruction Throughout the Curriculum: Earlham College Program," in *Educating the Library User* ed. John Lubans, Jr., (New York: R. R. Bowker Co., 1974), p. 249.

¹²Beverly P. Lynch and Karen S. Seibert, "The Involvement of the Librarian in the Total Education Process," *Library Trends* 29 (Summer 1980): 127-38.

¹³Farber, p. 147.

¹⁴Harold W. Tuckett and Carla J. Stoffle, "Learning Theory and the Self-Reliant Library User," *RQ* (Fall 1984) : 63.

¹⁵Mary Biggs, "Replacing the Fast Fact Drop-In with Gourmet Information Service," *Journal of Academic Librarianship* 11 (May 1985) :68-70.

¹⁶Barbara J. Ford, "Reference beyond (and without) the Reference Desk." *College and Research Libraries* 47 (September 1986) ; 492.

Other Suggested Reading

- Beaubien, Ann K., Sharon A. Hogan, and Mary W. George. *Learning the Library: Concepts and Methods for Effective bibliographic Instruction*. New York: R. R. Bowker Co., 1982.
- Kobelski, Pamela, and Mary Reichel. "Conceptual Frameworks for Bibliographic Instruction." *Journal of Academic Librarianship* 7 (May 1981): 73-77.
- Mellon, Constance A. *Bibliographic Instruction: The Second Generation*. Littleton, CO: Libraries Unlimited, 1987.
- Oberman, Cerise. *Petals Around a Rose: Abstract Reasoning and Bibliographic Instruction*. Chicago: ACRL, 1980.