

Teaching about teaching and instruction on instruction: a challenge for health sciences library education

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Objective: This is a review of the master's-level curricula of the fifty-eight American Library Association–accredited library and information science programs and iSchools for evidence of coursework and content related to library instruction. Special emphasis is placed on the schools and programs that also offer coursework in medical or health sciences librarianship.

Methods: Fifty-eight school and program websites were reviewed. Course titles and course descriptions for seventy-three separate classes were analyzed. Twenty-three syllabi were examined.

Results: All North American library education programs offer at least one course in the general area of library instruction; some programs offer multiple courses. No courses on instruction, however, are focused directly on the specialized area of health sciences librarianship.

Conclusions: Master's degree students can take appropriate classes on library instruction, but the medical library profession needs to offer continuing education opportunities for practitioners who want to have specific instruction for the specialized world of the health sciences.

Any discussion of library instruction programs needs to be grounded in an understanding of where and how medical library professionals are exposed to training for instruction. A review of the master's-level curricula of the American Library Association (ALA)–accredited library and information science (LIS) programs and iSchools for coursework and content related to library instruction offers evidence about the pervasive nature of such classes. While every program in North America has at least one class with content that included library instruction themes, and some schools and programs offered several classes with such an emphasis, none were focused on the special needs of those who teach health sciences clientele.

METHOD

The evidence was gathered in a March 2012 review of the websites for the fifty-eight North American LIS programs whose master's degrees were sanctioned by the ALA's Committee on Accreditation [1]. The individual school and program websites were scanned for lists of courses and/or course descriptions. Evidence of words associated with library instruction that appeared in the course titles was the key indicator of course content. It must be noted, however, that these findings are only as good and as current as the information provided on the school and program websites. The programs from the Universities of Montreal and Puerto Rico were excluded from the review because their course offerings are available only in French and Spanish.

Seventy-three separate courses were identified from fifty-eight schools and programs. Terminology in this area has been fluid. In an informal review of the

Highlights

- While it is clear that “instruction on instruction” or “teaching about teaching” is an important feature of contemporary library and information science (LIS) education, it is important to know that the need for instruction on specialized strategies that target health professionals is unfilled.

Implications

- Health sciences librarians and LIS faculty must take up the challenge of educating peers and students about ways in which to tailor library instruction to the medical environment and clientele, especially in professional development courses, workshops, and experiences.

literature indexed in MEDLINE on the topic, there were early examples from fifty years ago in which the activity was described as “library orientation.” In the 1970s, when libraries and students were grappling with increasing automation of bibliographic tools, academic libraries began using the term “bibliographic instruction,” and bibliographic instruction classes were popular. With the recognition that instruction in topics well beyond the typical introduction to MEDLINE or an online public access catalog (OPAC) was necessary, library terminology often changed to use the term “library instruction.” By the 1990s, as instruction in the use of applications and specialized software tools was added to the instructional fare, an umbrella term such as “information management education” (IME), or variants that used the IME construct to create acronyms like PRIME and TIME, emerged. By the end of the first decade of the twenty-first century, “information literacy” was rapidly becoming the term of choice for these activities. This



A supplemental appendix is available with the online version of this journal.

Table 1
Unique course titles

1. Bibliographic Instruction
2. Collaborative Instructional Design and Evaluation
3. Design and Evaluation of Information Literacy Programs
4. Design and Implementation of Instructional Strategies for Information Professionals
5. Designing and Implementing Online Courses
6. Education of Information Users
7. Educational Services in Library and Information Organizations
8. Information Literacy
9. Information Literacy & Instruction
10. Information Literacy and Instructional Design
11. Information Literacy & Learning Resources
12. Information Literacy for Teaching and Learning
13. Information Literacy Initiatives and Instruction
14. Information Literacy Instruction
15. Information Literacy Instruction: Theory and Technique
16. Information Literacy Instruction: Theory and Techniques
17. Information Literacy, Learning, and Teaching
18. Information Literacy Pedagogy
19. Information Seeking Behaviors
20. Instruction and Assessment in Media Programs
21. Instruction and Assistance Systems
22. Instructional and Training Strategies for Information Professionals
23. Instructional Design
24. Instructional Design and Development
25. Instructional Design and Leadership
26. Instructional Design and Library Media Production
27. Instructional Design Principles
28. Instructional Materials Production and Use
29. Instructional Methods for Librarians
30. Instructional Role of the Information Specialist
31. Instructional Role of the Librarian
32. Instructional Services
33. Instructional Strategies for Information Professionals
34. Instructional Strategies for Library & Information Professionals
35. Instructional Technologies
36. Instructional Technologies for K-12 Information Literacy
37. Interpersonal Communication Skills for Librarians
38. Learning and Knowledge Transfer
39. Librarians as Instructional Partners
40. Library Instruction
41. Library Instruction and Information Literacy
42. Library Use Instruction
43. Library User Instruction
44. The Library's Role in Teaching and Learning (Library Instruction)
45. Literacy and Learning
46. Literacy and Library Involvement
47. Literacy Programs in Libraries
48. Methods of Teaching Computer Literacy and Computer Programming
49. Planning and Delivering Information Literacy Programs
50. Principles of Software Design for Learning
51. Skills Approach to Information, Communications, and Technology (ICT) Literacy
52. Teaching about Information: Philosophy and Methodology
53. Teaching & Learning with Technology
54. Teaching in the Information Professions
55. Teaching Information Literacy
56. Teaching Information Technology Literacy
57. Transformative Learning and Teaching with Technology
58. Understanding the Information User
59. User Education
60. User Education: Multimedia
61. User Instruction
62. Utilizing Instructional Media

evolution in professional practice was also noticeable in the titles of present-day courses in the master's curricula from LIS programs and iSchools. While seventy-two separate courses were identified, sixty-two different ways of expressing the idea of library instruction were found. Table 1 contains an alphabetical list of the unique titles for these classes. The complete list of course titles and descriptions is available as supplemental material in the online only appendix.

Seventeen of the courses specifically used the word "instruction" (or "instructional") in the course title, and seventeen of the courses specifically used the word "literacy" in the course title. The words "design," "teaching," and "user" were found in smaller clusters of course titles, and a single course with the unique title of "Learning and Knowledge Transfer" was identified. The course description for the latter class straddled the terminology timeline, indicating that students would be "Employing a variety of learning theory perspectives, models and promotional strategies for information literacy and bibliographic instruction programs are critiqued."

RESULTS

The typical course description (and actual syllabi when available) indicated that none of the courses specifically targeted health sciences or medical libraries as the venues for library instruction. Several course descriptions did indicate that the course content would cover the world of "special" libraries. Most of the courses, however, were framed in terms of academic and school library settings. Typical examples of these course descriptions included the following:

■ *This course is an introduction to information literacy instruction in a variety of types of libraries and other information-related organizations. The history of library instruction, theoretical issues in the field, instructional program development, and teaching techniques will all be included. Students will develop and present an instructional session designed for a specific library or other user group.*

■ *Theories, techniques, strategies, and current practice for teaching the effective and efficient use of academic, school, public, and special library resources.*

■ *Introduces theories and practices of educating clients in information research skills. Concepts covered relate to the design, implementation, and evaluation of instructional programmes for a wide array of clients/patrons. Includes theories of learning and how these can be utilized for effective client instruction and education.*

■ *Examines instructional services that libraries and other information-related organizations offer their clients to provide them with the knowledge and skills they need to effectively use information resources. Attention is given to the nature of instructional services, the instructional needs of clients, information literacy, methods of instruction, teaching and learning styles, instructional design, and the evaluation of students and instruction.*

■ *Introduction to the concept of information literacy and its significance for the practice of librarianship in school, public, and academic library settings. Students gain expertise and practice in conducting research and in teaching information literacy competencies.*

The majority of the graduate programs offered only a single course. Ten programs offered two courses, and two schools, the Universities of Denver and Michigan, offered three separate courses on aspects of library instruction, while the University of Washington offered a full four courses covering information literacy and library instruction:

Table 2

The U.S. News & World Report ranked list

University	Course titles
University of Pittsburgh	The Library's Role in Teaching and Learning
University of North Carolina–Chapel Hill	User Education
University of North Texas	Instructional Materials Production and Use
University of Washington	Skills Approach to Information, Communications, and Technology (ICT) Literacy; Instructional and Training Strategies for Information Professionals; Information Literacy for Teaching and Learning; Special Topics in Instructional & Training Strategies for Information Professionals
Drexel University	Instructional Role of the Information Specialist

■ *LIS 462 Skills Approach to Information, Communications, and Technology (ICT) Literacy*: Introduction to the Big6 TM Skills approach to information, communications, and technology (ICT) literacy for personal, school, district, or higher education settings. Includes technology within the Big6 framework, connection to standards, instructional design, assessment, curriculum mapping, peer collaboration, the parent connection, program planning, and implementation.

■ *LIS 560 Instructional and Training Strategies for Information Professionals*: Develops knowledge and skills in instruction and training functions for library and information settings. Issues and strategies for learning and teaching. Design, development, and evaluation of information and technology literacy programs. Addresses the needs of users when designing and delivering instruction.

■ *LIS 568 Information Literacy for Teaching and Learning*: Explores theories, process, and practical applications of information literacy. Examines the development of information literacy programs for libraries, community agencies, business, education, or other information settings. Explores integral relationship between technology and information literacy, and continual evaluation.

■ *LIS 569 Special Topics in Instructional and Training Strategies for Information Professionals*: Introduction to

innovative and specialized topics in instructional and training strategies for information professionals.

A number of schools or programs had classes clearly identified as having their focus in the school library media environment, with course descriptions such as these:

■ *Librarians as Instructional Partners*: Learning and libraries; the role of the librarian and resource-based learning within the curriculum; the librarian as a teaching partner, team member, and instructional consultant. Learning theory and educational issues as they apply to cooperative planning, and implementation projects designed to improve information literacy and scholastic achievement.

■ *Instructional Technologies for K–12 Information Literacy*: Evaluation, selection, and utilization of appropriate instructional technologies to serve the needs of all members of the kindergarten to twelfth grade (K–12) school community. Emphasis is on teaching information literacy skills to K–12 children and youth as well as methods and formats supportive of diverse learners.

Other courses were clearly targeting the public library world:

■ *Literacy and Library Involvement*: An overview of library involvement in literacy programming in local communities. Emphasis is placed on examining community needs for literacy services, developing

Table 3

From the MLA News list (alphabetical order)

University	Course titles
Florida State University	Instructional Role of the Information Specialist
Indiana University–Indianapolis	Education of Information Users
Long Island University	Instructional Design and Leadership
Louisiana State University–Baton Rouge	Information Literacy Instruction
McGill University	Information Literacy
Texas Woman's University	Librarians as Instructional Partners, Literacy Programs in Libraries
University of Alabama	Library User Instruction, Instructional Design and Development
University of Arizona	Information Literacy Instruction, Information Seeking Behaviors
University of Illinois–Urbana-Champaign	Instruction and Assistance Systems
University of Kentucky	Instructional Services
University of Maryland	Collaborative Instructional Design and Evaluation
University of Michigan	Principles of Software Design for Transformative Learning, Learning and Teaching with Technology, Information Literacy for Teaching & Learning
University of South Carolina	Educational Services in Library and Information Organizations
University of South Florida	Teaching Information Literacy
University of Texas	Library Instruction and Information Literacy
University of Toronto	Design and Evaluation of Information Literacy Programs
University of Western Ontario	Instructional Strategies for Information Professionals
University of Wisconsin–Madison	Information Literacy Pedagogy
University of Wisconsin–Milwaukee	Instructional Technologies
Wayne State University	Instructional Methods for Librarians

Figure 1
Information Literacy Instruction (from Louisiana State University)

Theories, techniques, strategies, and current practice for teaching the effective and efficient use of academic, school, public, and special library resources.

General course objectives:

1. To explore the major literature, organizations, standards, and resources for information literacy instruction
2. To articulate basic concepts, principles, and standards of information literacy instruction
3. To explain the various theories related to learning and teaching that support exemplary practice in information literacy instruction
4. To select from among a variety of instructional methodologies and design, implement, and evaluate appropriate instruction to meet an information need
5. To review challenges, strategies, and approaches to planning information literacy programs
6. To apply the appropriate standards and guidelines for information literacy instruction to selected settings (school, academic, public, special, others)
7. To explore (as time allows) in-service and staff development models appropriate to the learning needs of library staff (professional and support)

Topics covered:

Background for information instruction, including:

- What is information literacy instruction?
- The historical evolution of instruction
- The role of instruction organizations, publications, and other groups
- Competencies of instruction librarians
- What is included in a program of instruction?
- Trends and issues in information literacy
- Digital divide
- Social networking
- Diverse users
- Others through class readings

The psychology of learning: learning theories

The psychology of learning: theory into practice

- Learning styles, teaching styles, others

Library anxiety, mental models, conceptual change, etc.

Critical thinking and active learning, etc.

Cooperative learning, motivation, others

Planning and developing information literacy instruction

- The planning process
- Needs assessment
- Which delivery method (face-to-face, online, blended, other)

Content of the lesson/course?

- Copyright and design issues
- Which instruction methods?

Delivering information literacy instruction

- Instructional design: the lesson plan, course syllabus

One-shot lectures, credit course, the online course, imbedded librarian, other examples

- Evaluation/assessment of instruction
- Library assignments

Presentation skills

Collaboration with faculty

Classroom management

Others

- Technology to support pedagogy

Instructional program: setting up, managing, public relations, maintenance, growth

- Strategic plan, marketing plan [5]

and implementing library literacy services to meet those needs, and building partnerships and networks with literacy providers and other community groups.

■ *Literacy Programs in Libraries:* Role of libraries in promoting literacy. Particular emphasis upon public library family literacy programs, the emergent literacy process, government programs, workplace literacy, [English as a second language (ESL)] literacy programs, and cultural literacy. Planning and proposal development for literacy programs, including needs assessment, goal setting, and evaluative methods.

All seventy-three of the classes were elective courses; most had prerequisites of core or foundational courses [2]. The courses typically were semester or term-length courses, with twelve to sixteen class sessions in a term, semester, or quarter. Some were offered as face-to-face (on campus) classes, while others were available in an online or distance education format. It is notable that the Web-based Information Science Education (WISE) consortium's array of available classes for graduate students in member schools has classes in information literacy and in instructional technologies as online options, and that the instructor for the "Information

Literacy" class is a repeat winner of the WISE Online Educator of the Year award for excellence in online instruction [3].

Most programs offered their library instruction or information literacy classes only once a year, meaning those students had to "catch" the class whenever it was available. While not every program or school website identified the individual instructors for these courses, when the information was available, it was clear that both full-time and adjunct faculty were teaching these courses.

Given the fact that none of the identified courses is specifically focused on library instruction in health libraries, it is important to see what content is available in the LIS programs and iSchools that do offer specialized coursework in medical or health librarianship. Two lists can be used to identify these specific schools: the 2009 *U.S. News & World Report* ranking of library science programs with "Health Librarianship" specialization [4] and a 2010 article from the *MLA News* with a "snapshot" of the current state of medical library education in North America [5]. These two groups are listed in Tables 2 and 3,

Figure 2
Education of Information Users (from Indiana University–Indianapolis)

Course goals and objectives:

By the end of this semester, participants will have:

- Explored historical and current trends and topics in adult educational programming in library and information-based organizations.
- Explored, discussed, and described library instruction theories and how these are exemplified in practice.
- Investigated and considered the efficacy of various approaches to planning, preparing, managing, and evaluating library-based educational programs for adults in public or academic environments.
- Received multiple opportunities to become more comfortable with public presentations. Class participants will have improved your public speaking skills through planning, practice, and evaluation. By the end of the course, each student will have taught a workshop, facilitated discussion groups, and made several public presentations.
- Identified, examined, and critiqued a variety of educational handouts, help guides, and print and electronic learning tools and products.
- Planned one brief training session and one longer, more involved educational program using outcomes based planning and evaluation (OBPE).
- Reviewed computing tools, educational media, and telecommunications technologies commonly or potentially used in library-based educational programming.
- Defined information literacy concepts and terminology, and considered their application and relevance in library and information science (LIS) environments.
- Explored the information literacy materials, tools, and resources of professional organizations and associations.
- Learned and applied the basics of administering, planning, and evaluating educational workshops, courses, and programs.
- Explored and applied information literacy professional standards.

Participants will be able to:

- Confidently take-on public speaking, presentations, and teaching opportunities armed with myriad tools and sources for achieving excellence.
- Discuss and describe educational theories and a variety of approaches to teaching and learning.
- Recognize teaching and learning opportunities; initiate a learning session; organize and present an appropriate lesson; and refer users to relevant, quality-filtered information resources.
- Assess and apply appropriate approaches to planning, managing, and evaluating training or educational programs in a variety of settings.

Week 1: Welcome and Introductions

Week 2: Introduction to Information Literacy

Week 3: Critical Thinking and Active Learning

Week 4: Learning Styles and Teaching Styles

Week 5: Learning Goals and Objectives/Outcomes

Week 6: Teaching and Learning with Technology, I - New Educational Media Demonstrations

Week 7: Teaching and Learning with Technology, II

Week 8: Presentations and Discussion; Misc. Topics

Week 9: Promoting Diversity, Multiculturalism, and Inclusion

Week 10: Outcomes Based Planning and Evaluation I

Week 11: Outcomes Based Planning and Evaluation (OBPE) II

Week 12: Turning Research into Practice: The Evidence-Based Librarian

Week 13: Presentations and Discussion; Miscellaneous Topics

Week 14: Miscellaneous Topics, Course Wrap-Up, Course and Peer Evaluations

with the course titles of their classes in the area of library instruction.

Some, but by no means all, of the programs and schools included links to the syllabi for their library instruction courses. Figures 1, 2, 3, and 4 show the course objectives and content areas for courses at four of the universities that do offer health sciences options

for their library and information science students, although these courses are clearly designed for master's degree students with many different specializations. There is no evidence of specific coverage of medical libraries, but these courses often make it possible for students to do their assignments for a student-specified type of library [6–9].

Figure 3
Instructional Role of the Information Specialist (from Drexel University)

Examines the instructional role of the information professional. Emphasizes the planning, implementation, and evaluation of instruction for the purpose of information education.

Course rationale:

Instruction in information literacy is increasingly important in all library settings—especially school libraries. This course is designed to help students develop the skills they will need to be effective information-literacy instructors. It focuses on information literacy, instructional design, and the collaborative instructional role of the information specialist.

Course outcomes:

Upon successful completion of this course, the student will be able to:

- Define information literacy and identify the knowledge and skills that should be included in information-literacy instruction.
- Explain the purpose of information-literacy instruction in general and in particular contexts.
- Explain the instructional role of the information specialist and argue for its importance.
- Delineate the steps for establishing information-literacy instruction in a particular context.
- In collaboration with others, apply the basic elements of instructional design to create information-literacy instruction for a particular context.

Course content:

Principal topics and the approximate number of weeks devoted to each:

- Information literacy and information-literacy instruction (1)
- Learning theory and learner characteristics (1)
- Collaboration and the instructional role of the information professional (1)
- Designing information-literacy instruction for particular contexts (1)
- Instructional design: planning (1)
- Instructional design: designing strategies and activities (1)
- Instructional design: assessment and evaluation (2)
- Collaborative application of the concepts and skills of instructional design to the creation of information-literacy instruction for a particular context (2)

Figure 4
Instructional Services (from the University of Kentucky)

LIS625 examines instructional services that libraries and other information-related organizations offer their clients to provide them with the knowledge and skills they need to effectively use information resources. Attention is given to the nature of instructional services, the instructional needs of clients, information literacy, methods of instruction, teaching and learning styles, instructional design, and the evaluation of students and instruction.

Instructional objectives:

1. To provide information professionals with the basic knowledge and skills they need to develop effective instructional services in libraries and other information agencies.
2. To relate the different learning styles of library clients or patrons, and their information needs, to a range of instructional methods available to the information professional.
3. To understand the role of evaluation in the development and delivery of effective information services in libraries.
4. To understand the environmental circumstances that have contributed to the development of instructional services in libraries over the last 30 years.

Topics

- Introduction to course
- Educational philosophy; Dewey, Hansen, Palmer
- Information literacy
- Educational theory
- Learning styles
- Instructional design
- Active learning
- Critical
- Preparing for teaching
- Managing your class
- Instructional materials
- Technology & online instruction
- Camtasia
- Assessment
- Web 2.0
- Diversity
- Diverse environments
- Program management
- Classroom facilities design
- Best practices and guidelines documents
- Program management
- The future

DISCUSSION

Based on this review of websites, course titles, course descriptions, and syllabi when available, it seems likely that master's degree students intending careers in medical settings—academic health sciences centers, hospitals, research settings, and consumer health services—can find an appropriate general introduction to the art of library instruction if they are fortunate enough to be enrolled in a term or semester when the elective course is offered at their institutions. Putting the medical spin on the courses will be the task of the student, however.

At the present time, with many LIS programs and iSchools programs facing financial pressures and unpredictable enrollments and placements, it would seem unlikely that LIS graduate programs and schools will be able to add specialized courses on library instruction solely for the health sciences library or the medical environment on a regular basis. Thus, the world of medical librarianship must still be prepared to offer continuing education opportunities for practitioners who want to hone specific skills related to library instruction or learn new techniques appropriate for their clients, users, and patrons. The opportunity to take courses, advanced certificates, and workshops [10–15] that promote good teaching skills and explore the information behaviors of health professionals will be the challenge for the future.

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