Instructional Outreach Across the Curriculum: 
Enhancing the Liaison Role at a Research University

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Abstract

Over the past decade, there has been a steady rise in interest among academic librarians in the idea of outreach. Outreach from the academic library can take many forms, but it is often built around a commitment to instruction. At Washington State University, a commitment to information literacy instruction across the curriculum and an organizational structure that includes both an independent Library Instruction department and a network of subject specialists has facilitated the rise of a programmatic approach to instructional outreach that allows librarians and faculty to work together to develop creative approaches to the integration of information literacy instruction across the academic curriculum. This article identifies some of the characteristics of new models for instructional outreach in the academic library and describes two instructional outreach programs at Washington State.

Keywords

Information literacy, library instruction, outreach, academic libraries, Washington State University, teacher education, first-year experience, medical education.

About the Authors

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Introduction

Over the past decade, there has been a steady rise in interest among academic librarians in the idea of outreach. While there are many potential explanations for this new attention to a familiar subject, some of the most common include the increasing diversity of the student body (Westbrook and Waldman 1993), the rising importance of information technology and electronic information sources in higher education (Arant and Mosely 1999, Jacobson and Cohen 2000, Schillie et al. 2000), and the desire to provide specialized library services to target user groups, e.g., faculty, administrators, distance learners, international students, athletes, and transfer students (Cruickshank and Nowak 2001, Neely et al. 1999, Peyton 2000, Stebelman et al. 1999). Outreach from the academic library can take many forms, but it is often built around a commitment to instruction. At Washington State University, a commitment to information literacy instruction across the curriculum and an organizational structure that includes both an independent Library Instruction department and a network of subject specialists has facilitated the rise of a programmatic approach to instructional outreach. This approach allows librarians and faculty to work together to develop creative approaches to the integration of information literacy instruction across the academic curriculum.

Outreach in the Academic Library: Literature Review

The American Library Association defines “outreach” as any program of activities “initiated and designed to meet the information needs of an unserved or
inadequately served target group” (Young 1983, 160). While “outreach” is a term most
commonly associated with public libraries (Cruickshank and Nowak 2001), outreach
activities are not new to academic libraries. Academic library outreach activities have
expanded and evolved in recent years in response to changes both in the library
profession and in the broader environment of higher education.

In the academic context, outreach has focused on unserved or underserved groups
such as high school students and other community users, non-traditional students,
international students, and distance learners. There is a rich history of this sort of
outreach at the Washington State University Libraries (Gibson and Scales 2000,
Nofsinger 1989, Washington State University Libraries 2002a, 2002b), and recent studies
by Neely et al. (1999), and Cruickshank and Nowak (2001) demonstrate the ongoing
importance of this traditional sort of outreach in academic libraries. Another form of
traditional outreach activity can be found in the liaison relationships between librarians
and academic faculty through which librarians work with faculty and utilize subject
expertise to develop relevant library collections (Wu et al. 1994, Chu 1997). Recent
studies by Frank et al. (2001), and Lougee (2002), however, explore how librarian
expertise in a broad spectrum of concepts and skills associated with the location, use, and
management of information can reshape the meaning of outreach in the academic library
and redefine the academic librarian’s place on campus.

Frank et al. (2001), for example, explore the role that academic librarians can play
as “information consultants” on campus. The librarian-as-information-consultant
provides specialized information services to library users, but also “cultivates active
partnerships with students and scholars, collaborating on the design of learning
experiences for students and providing value-added information [to students, faculty, and campus administrators].” (90). While Frank et al. (2001), note the importance of traditional models of outreach such as the liaison relationship that has long served as a means of communication between the academic library and the academic departments, they argue that these models are too “passive” to be effective in the dynamic information environment of the 21st-century campus (90).

Lougee (2002) also identifies new roles that academic librarians can play on campus as a result of their expertise in information creation, dissemination, location, and management. She concludes that the rising interest in electronic information and the attendant transformation of scholarly communication provides an opportunity for academic librarians to take on new roles across the university. In describing these roles, she argues that academic librarians should focus less on the value of their collections and the traditional role of collection development at the center of liaison relationships, and focus more on the value of their expertise in handling information. New diffuse roles for librarians include creating educational opportunities with active learning elements and incorporation of the information literacy concepts of information analysis, inquiry, and use (18).

New models of outreach build on traditional models such as the liaison relationship, but there are several significant differences. Traditional outreach models focus on opening lines of communication with broad sets of underserved users, while new models center on enhancing existing relationships with users through programs with which they are associated. The primary aim of the traditional outreach models is to market the collection resources of the library and to entice more people to visit these
resources. New outreach models are characterized by the primary goals of marketing the expertise of librarians and utilizing librarian information skills to augment a program’s processes and products. Librarians are increasingly aiding university programs through the collaborative development of teaching curriculum and by facilitating instructional courses and class sessions.

**Instructional Outreach**

Information literacy instruction is one of the most important areas in which librarian expertise has provided increased opportunities for outreach over the past decade. The reasons for the rising interest in instructional outreach include student ability to think critically about information (Bodi 1988, Gibson 1995), and the rapid evolution of end-user information technology, such as the World Wide Web and its incorporation into student and faculty research (Jayne and Vander Meer 1997, Walter 2000, Jacobson and Cohen 2000). Concerning the traditional models of academic library outreach, instructional outreach has encompassed both the provision of services to underserved user groups, and the continued delivery of “course-related” instructional services traditionally provided by instruction librarians and subject specialists. Concerning the new outreach models described by Frank et al. (2001) and Lougee (2002), there are new ways for instructional outreach that call upon the academic librarian to play a more proactive role in collaborating both with individual faculty members and with other instructional support programs on campus (Dewey 2001, Haynes 1996, Raspa and Ward 2000).
These emergent models of instructional outreach are rooted in the idea that the librarian brings to the collaborative enterprise an expertise in the location, evaluation, management, and use of information resources that is of significance to faculty and students charged with teaching and learning in an increasingly complex information environment. Walter (2002) and Grafstein (2002), for example, have both described how a commitment to information literacy across campus requires instruction librarians to become more familiar with the ways in which instructional services can be tailored to the needs and curricular content of specific disciplines. As classroom faculty commit more to integrating information literacy across the curriculum, they will depend on librarians to collaborate, providing expertise and knowledge regarding the design of information literacy instruction and helping develop assessment tools for information literacy.

As with the electronic collections issues identified by Lougee (2002), instructional issues require academic librarians to play an increasingly “diffuse” role on campus – providing instructional support through traditional liaison relationships, through campus teaching and learning centers, through distance learning programs, and through campus committees charged with assessment of student learning. Instructional outreach of this sort – across the curriculum and across the campus – requires an approach to information literacy instruction that goes beyond partnerships between individual librarians and members of the teaching faculty and moves toward establishing ongoing collaboration between library-based instructional services and academic programs.
Information Literacy Instruction at Washington State University

Washington State University is one of two comprehensive research universities in the state of Washington. Established in 1890 as the state’s land-grant institution, the university maintains a flagship campus in Pullman, a city in the rural southeastern corner of the state, as well as three “newer campuses” in Spokane, Richland, and Vancouver. In addition to these academic campuses, the university supports ten learning centers located around the state, as well as cooperative extension offices in each of Washington’s thirty-nine counties. In 2002-2003, the Pullman campus enrolled approximately 19,000 students, while thousands more participated in undergraduate, graduate, and continuing education programs on the newer campuses, learning centers, and extension offices, or delivered through distance learning options such as teleconferencing and Web-based instruction.

The Washington State University Libraries provide a full range of collections, services, and electronic resources to the university community through a system of six libraries on the Pullman campus (Agricultural Sciences, Architecture, Education, Health Sciences, Humanities/Social Sciences, and Science & Engineering), as well as branch libraries on each of the newer campuses. Each Pullman library is supported by at least one subject specialist responsible for reference, collection development, and instruction in relevant disciplines. While these subject specialists are responsible for providing instructional services to liaison departments and programs, they are supported by an independent Library Instruction department, which includes 3 full-time librarians and 1
instruction coordinator in each of the largest public service units (Humanities/Social Sciences, and Science & Engineering).

In addition to providing instructional support for subject specialists, the Library Instruction department provides instructional services to a number of independent academic programs, such as World Civilizations, Freshman Seminar, English Composition, Distance Degree Programs, the Intensive American Language Center, and New Student Programs. The Library Instruction department also coordinates traditional instructional outreach services to groups such as K-12 students and members of Washington State University Athletic Programs. Each librarian in this department takes responsibility for coordinating instruction for one or more of these programs while developing instructional materials that can be used throughout the Libraries, including resource guides, activity sheets, assessment tools, and Web-based instructional materials. Information about these programs can be found on the Library Instruction home page at <http://www.wsulibs.wsu.edu/usered/home.htm>.

The Instruction Department is currently engaged in an effort to map all of its instructional efforts to the ACRL Information Literacy Standards (Association of College and Research Libraries 2002). These standards, drafted in 1989, define a comprehensive set of skills people need to effectively find, retrieve, analyze, and use information. Librarians at the six public baccalaureate institutions throughout the State of Washington are currently working under legislative mandate RCW 28B.10.125 (Washington 2000) to assess student mastery of information literacy skills. This law is serving as a catalyst for programmatic collaboration between the libraries and academic programs across campus.
Information literacy instruction at WSU is currently evolving to reflect new thinking about outreach from academic libraries. While continuing to support traditional outreach activities, the faculty are revising expectations for the program based on newer outreach models such as those articulated by Frank, et al. (2001) and Lougee (2002). This new way of thinking about outreach activities will be referred to as a “programmatic” approach to instructional outreach throughout the remainder of this article. This programmatic approach to instructional outreach builds on the strengths of traditional outreach while supplementing it with innovative components. Like traditional outreach, there is a defined user population. The targeted population is not unserved or underserved in the traditional sense that they lack adequate access or orientation to library services and resources. Instead, they are underserved because they have unmet curricular needs, namely, fully developed information literacy skills. The innovative characteristics of the programmatic approach include librarians working in teams and proactively collaborating with groups of faculty members to impact the main processes and products of educational programs. The programmatic approach features librarian subject expertise utilized in the instructional setting as opposed to the collection development environment. Finally, the programmatic approach to instructional outreach includes significant librarian contribution to course curriculum, and librarian involvement in student assessment. The following two case studies illustrate the programmatic approach to instructional outreach.

Instructional Outreach at Washington State University – Two Case Studies
Freshman Seminar is a first-year-experience program that has been offered at Washington State University since 1996. First-year students who join the program enroll in a section of Freshman Seminar (General Education 104) that is linked either to a section of World Civilizations (Gen Ed 110/111), or to a first-year course in disciplines such as Animal Sciences, Anthropology, Biology, Communications, and Sociology. Each student enrolled in Freshman Seminar becomes part of a learning community comprised of the students in his or her section of Gen Ed 104 and the staff of the Student Academic Learning Center (SALC) who coordinate the program and design each semester’s curriculum. In addition, there are students and staff trained in the Center for Teaching, Learning, & Technology (CTLT) who provide information technology support for student projects, the faculty teaching the linked courses drawn from the General Education curriculum, and the librarians who introduce the first-year students to library resources and to the research process.

The focal point of the Freshman Seminar experience is a research project that students design, conduct, and present under the guidance of the undergraduate Peer Facilitators (PFs) who lead the semiweekly meetings of each section. PFs are sophomores, juniors, and seniors drawn from Freshman Seminar alumni who prepare for their new role in the program by completing an upper-division course in “peer leadership” (ED AD 497). PFs are assisted in their instructional work by Graduate Facilitators (GFs) drawn from programs across the curriculum and employed by SALC, and by “Hypernauts,” a corps of undergraduate students trained in technology support by CTLT. The final results of this semester-long research process are presented at a “research symposium” for which student groups must prepare a Web-based multimedia
project, and answer questions about their research process and product posed by members of the classroom and library faculty. More information on Freshman Seminar, including links to student projects, can be found online at <http://salc.wsu.edu/Freshman/>.

Librarians have been involved with Freshman Seminar since the program was launched six years ago. Each semester, librarians work with Freshman Seminar sections to introduce students to library resources and to assist with the design and development of student research projects. Instruction librarians and subject specialists have worked together to provide instruction on subjects ranging from the use of the online catalog, to evaluating Web-based information resources for use in academic research, to appropriate forms of citation for print and electronic sources. In each case, the librarian’s overarching concern has always been to introduce students to resources and access tools that would help them move forward on their research project. Like other faculty involved in the program, librarians have had the opportunity to be involved in all phases of project development, from initial proposals to evaluation of the final product.

In the early years of the collaboration between Freshman Seminar and the Libraries, any successes were largely due to the efforts of individual librarians. Overall, the parameters of the relationship between the Library Instruction program and the Freshman Seminar program were loosely defined, and librarians and PFs determined the extent and nature of their instructional partnership on an individual basis. There was limited collaboration between the Freshman Seminar staff in SALC and the program liaison in the Library Instruction department, and there was little attempt to coordinate the work of the many librarians involved in the program each semester. Over time, the lack of coordination and clear expectations led to disenchantment between librarians and
PFs, and the quality of instruction provided in the library varied widely from section to section, and from semester to semester. Librarians were uncertain about how they could best provide instructional support to the Freshman Seminar program, and were unsure about when during each semester they might be expected to meet with their assigned sections.

This situation began to change in early 2002 when a more programmatic approach to the collaboration between the Library Instruction department and Freshman Seminar began to take form. The Head of the Instruction Department, the Director of the Freshman Seminar Program, along with representatives from both groups, devised a new collaborative model based on 1) the need to institutionalize an approach to information literacy instruction that could survive any change in program personnel, 2) the desire for librarians to have greater input into curriculum development, and 3) the interest in instruction librarians providing a greater range of instructional support services to PFs. This new approach to instructional collaboration had three main components: PF enrollment in “Accessing Information for Research” (Gen Ed 300), an improved communication structure between librarians and the Freshman Seminar officials, and design of curriculum for new instructional sessions.

First, the group of Freshman Seminar and Library Instruction leaders agreed that each new cohort of PFs would enroll in a specially designed section of the Libraries’ one-credit information literacy course (Gen Ed 300). While this section of the course would meet the same instructional objectives of other sections, it would focus on preparing students not only to be information literate themselves, but to be effective mentors for their future students in Freshman Seminar. Taught for the first time in Fall 2002, this new
section of the course incorporates specific instructional elements with which future PFs must be familiar if they are to assist first-year students in the research process (e.g., critical evaluation of Web-based information resources). It also introduces them to professional concepts such as process models of information literacy instruction and to resources they might use to develop their own information literacy instruction activities. Requiring participation in this course not only helps assure baseline information literacy skills among all PFs, but provides PFs with a better understanding of information literacy instruction (something that both parties agreed might translate into better working relationships between PFs and librarians).

Second, the group of Freshman Seminar and Library Instruction leaders created a structure for improved communication and feedback between the Freshman Seminar staff and students, and the Libraries. The commitment to improved communication began with meetings between the Freshman Seminar coordinator, other Freshman Seminar officials, and members of the Library Instruction department during Summer 2002. The goal of these meetings was to outline a framework for the instructional collaboration, and to develop a shared understanding of how librarians would contribute to the Freshman Seminar program. These meetings allowed representatives of each program to not only brainstorm new ideas for information literacy instruction, but also gain a greater understanding of the instructional objectives guiding the other’s work. Finally, long-standing miscommunications were addressed. An example was when it was determined that the centerpiece of the instruction that had been provided by librarians in previous semesters – evaluation of Web sites and Web-based information – was also being
addressed as part of the classroom curriculum in the semiweekly Freshman Seminar meetings outside the library.

Communication continued through the Fall 2002 semester as the Libraries’ liaison to Freshman Seminar scheduled meetings not only for all librarians involved in the program, but also attended several PF and GF training sessions to prepare Freshman Seminar instructors and mentors for the planned instruction sessions in the library. These unprecedented meetings provided regular opportunities to solicit feedback from each other, to identify problems, and to provide enough guidance and support to librarians participating in the program to assure a more uniform instructional experience across the 26 sections of the course during Fall 2002. The semester ended with a number of librarians collaborating with Freshman Seminar officials in the formal assessment of student projects, many librarians attending the “appreciation lunch” sponsored by Freshman Seminar, and the Freshman Seminar coordinator attending a meeting in the library to discuss changes to the collaborative program for the upcoming semester.

Third, the new approach to collaboration focused on the creation of a new curriculum for the instructional sessions provided in the library. In the past, as noted above, librarian involvement in the program had tended to be limited to a single instructional session in which students were introduced to Web site evaluation for academic research. It was determined, however, that this same content was being introduced by PFs as part of their classroom curriculum. After discussion, the group of Freshman Seminar and Library Instruction leaders decided that PFs would continue to provide instruction in Web site evaluation, but librarians would provide instructional support in the form of resource sheets and classroom activities that can be used to teach
evaluation skills for the electronic environment. This freed librarians to focus on the provision of instructional content with which PFs felt less confident, including the identification of library resources germane to specific research topics and issues related to copyright, plagiarism, and the correct citation of sources.

In addition to changes to the instructional content provided during visits to the library, there were changes to the pedagogical method. The group of Freshman Seminar and Library Instruction leaders determined that a key complaint students had regarding the information literacy instruction was that it often tended not to follow the model of discussion and active learning that Freshman Seminar students experienced throughout the rest of the program. Likewise, librarians were eager to provide active learning opportunities, but reported that they felt consistently pressed for time during the single instruction session scheduled each semester. Beginning in Fall 2002, each section of Freshman Seminar would meet formally with its librarian twice, rather than once, and opportunities for active learning would be incorporated into each lesson.

This new approach to library involvement with Freshman Seminar demonstrates several elements of a programmatic approach to instructional outreach. First, it represents a team-oriented and proactive approach to outreach as librarians identified problems with an existing instructional collaboration and approached their partners in the Freshman Seminar program to rethink how librarians could be more effectively involved both in curriculum design and in delivery of instruction. Second, it represents the development of a new version of a for-credit information literacy course aimed specifically at training the undergraduate Peer Facilitators, who are at the front lines of Freshman Seminar instructional efforts. Rather than an example of individual outreach from a librarian to a
faculty member, it represents an attempt to look at how two programs can work together, and a model for providing training and resources to help every individual involved address programmatic needs. Finally, it represents an opportunity taken for librarians to use their expertise in information literacy instruction to redefine the ways in which first-year students enrolled in Freshman Seminar are introduced to library resources and the research process. Because of their recognized expertise, the librarians contributed significantly to the program, training the Peer Facilitators, developing curricular resources and classroom activities, and collaborating in the assessment of student projects. The newly defined program is young, but initial feedback from students and instructors has been positive and points toward a bright future for instructional outreach from the Washington State University Libraries to the Freshman Seminar program.

Just as new models for instructional outreach are being embraced by the instruction librarians who serve as liaisons to the Freshman Seminar program, the programmatic approach is also evident in the work of subject specialists enhancing their traditional liaison relationships by engaging in new forms of collaborative instructional work. An exemplary model of the programmatic approach to instructional outreach by a subject specialist can be found in the Washington State University Health Sciences Library and its faculty partners in the College of Pharmacy.

As noted above, the Health Sciences Library (HSL) is one of six library facilities on the Pullman campus. It is also one of only nine federally designated Resource Libraries in the National Network of Libraries of Medicine/Pacific Northwest Region. The two HSL librarians serve as subject specialists for fields including Nursing, Veterinary Medicine, and Pharmacology, and as liaisons to the College of Veterinary
Medicine, the College of Pharmacy, and WWAMI, the cooperative medical education program serving the needs of medical students in eastern Washington, Wyoming, Alaska, Montana, and Idaho who complete their first year of medical school on their “home” campuses before moving to Seattle to continue their professional education at the University of Washington. HSL librarians provide information and instructional services not only to the students and faculty involved in these programs, but also to practicing pharmacists, clinical pharmacologists, veterinarians, and physicians throughout the region. More information on the collections and services provided through the Health Sciences Library can be found online at <http://www.wsulibs.wsu.edu/hsl/>.

The College of Pharmacy offers a variety of programs for graduate and professional students. Chief among these is the Doctor of Pharmacy degree (Pharm.D.), which requires two years of pre-pharmacy study at the undergraduate level, and four years of pharmacy study in the professional program. The first two years of the professional curriculum take place on the Pullman campus, while the final two years take place at the campus in Spokane. In addition to the Pharm.D., the College also provides opportunities to earn Master’s and Doctoral degrees in Pharmaceutical Sciences, as well as a Master’s degree in Health Policy and Administration.

Traditional liaison relationships between HSL and the College of Pharmacy have always been very strong, in part because information (specifically drug information) is a vital part of the Pharm.D. curriculum. The pharmacy subject specialist is introduced along with the College faculty at the formal matriculation ceremony that begins each academic year, and regularly attends departmental and College faculty meetings, as well as other College activities. The librarian also plays an important role in the accreditation
process for the College, which requires a detailed analysis of information resources available to students, faculty, and staff in the College. In addition to recruiting representatives from the College faculty and students to serve on the HSL Advisory Committee and providing library resource seminars at faculty meetings, this person also collaborates on research projects with College faculty, and serves as the primary liaison to instructional services, technical support, and administrative procedures. The librarian works with College information technology staff to coordinate the deployment of new or enhanced information resources, and provides direct information services (within the limits of licensing agreements) to College administrators such as the Director of Development. Improving the library experience for administrative staff has had many benefits, most of which relate to developing additional avenues of communication between the Washington State University Libraries and the College of Pharmacy. Activities such as these fall within the traditional approaches to outreach from the academic library, and their presence provides the foundation for enhanced liaison activity through a program of instructional outreach.

Instructional outreach to the College of Pharmacy began with the regular meetings between the subject specialist and faculty to discuss collection support for teaching and research activities. As a result of these meetings, information literacy instruction has been successfully integrated into a variety of classroom experiences, and (as noted above), information literacy instruction is provided to Pharmacy faculty, staff, and students, in a number of ways and in a number of venues. Over the past year, this already successful approach to information literacy instruction developed into a
programmatic program of instructional outreach focusing on the first two years of the professional education (Pharm.D.) program in the College of Pharmacy.

The first two years of the Pharm.D. curriculum are bracketed by library orientations – one during the second week of the first year, and one during the final month of the second year. Students also receive intensive instruction during the first semester of the second year when the librarian provides two instructional sessions and two graded assignments as part of the hands-on Pharmaceutical Care Laboratory (PCL), a program comprised of a one hour-long lecture section and four two-hour lab sections each week, which allows students to develop skills in areas such as patient counseling and practice guidelines for specific diseases and conditions. Information literacy instruction provided as part of the PCL curriculum focuses on building skills in database searching as well as developing the ability to critically analyze and review biomedical literature.

During their second week in the program, all first-year Pharm.D. students attend a mandatory two-hour orientation both to the physical and to the virtual library resources available to them while they are at WSU. The physical orientation consists of an HSL tour, explanations of library policies and procedures, and an introduction to the organization of the HSL stacks. The orientation to electronic library resources introduces students to the Washington State University Libraries Web site, online catalog, electronic journals, and to basic database searching in PubMed, the biomedical database produced by the National Library of Medicine (NLM). Student response to this initial orientation has been positive, and faculty support has been strong enough that a longer time period
will be allotted to the library orientation program beginning in Fall 2003 in order to accommodate instruction in the use of additional electronic databases.

The information literacy instruction provided during the PCL evolved through traditional liaison meetings and phone conversations with a number of College faculty. Pharm.D. students, for example, are required to take a Drug Information course during the first semester of their third year in the program, and the Spokane-based faculty member who teaches this course identified a number of gaps in his students’ ability to locate and evaluate drug information. Several Pullman-based faculty members also noted occasions during which students appeared unable to locate appropriate information effectively, or to evaluate information critically. Finally, a faculty commitment to introducing evidence-based practice earlier in the Pharm.D. curriculum provided an opportunity for the pharmacy librarian to contribute expertise based in her experience as an instructor in the WWAMI program (for which she team-teaches a class on the Critical Review and Analysis of Medical Literature). Evidence-based medicine, briefly defined, is “the process of systematically finding, appraising, and using contemporaneous research findings as the basis for clinical decisions.” (Rosenberg & Donald 1995, 1122). In collaboration with the faculty member responsible for the PCL, and using the ACRL Information Literacy Standards (ACRL 2002) as a guide, the pharmacy librarian developed the instructional sessions and graded assignments that could address the perceived lack of information literacy skills among Pharm.D. students. As was the case in the Freshman Seminar experience, there was little problem in convincing College faculty to incorporate an enhanced level of information literacy instruction into the Pharm.D.
curriculum, because they saw such instruction as a service that would help them meet instructional objectives already in place for the program.

The first PCL instructional session – “Database Search Skills” – systematically introduced (or re-introduced) students to coverage, applications, and search strategies in five biomedical and scientific databases: PubMed, Web of Science, Micromedex, Clinical Pharmacology, and the Natural Medicines Comprehensive Database. Both the instruction session and the related assignment used examples which could be directly tied to work being done in other Pharm.D. classes. Examples used to illustrate search skills during the class session, for instance, related to macrolide antibiotics, which were being discussed simultaneously in a course on Selective Toxicity, while all problems on the graded assignment related to drugs that act on the cholinergic system, which was a topic of discussion in the Pharmaceutics course. This level of integration was only possible because of the pharmacy librarian’s comprehensive knowledge of the coursework offered and issues under discussion in the Pharm.D. program.

The graded assignment attached to this first instructional session is completed by students working in small groups during one of their weekly two-hour laboratory sections. Because the purpose of the assignment is to build skills, the instructors devised a grading scale based on correct completion of all questions assigned. Students earn an “A” if the assignment is completed in the lab without significant errors. If there are significant errors, students are given the opportunity to correct their answers and re-submit the assignment. Assignments correctly completed after a single re-submission are awarded a grade of “B”, while assignments requiring two re-submissions earn a grade of “C”. Finally, students can negotiate with both the PCL instructor and the librarian for
partial credit on the assignment if additional submissions are required. This elaborate grading scheme proved unnecessary, as all students received top marks on the assignment (about which students were very enthusiastic as it provided them with an opportunity to study for an upcoming Pharmaceutics examination). Student evaluation of this first instructional session have been highly positive (drawing an average rating of 4.75 on a 5-point Likert Scale), and several students actually asked for “more homework,” i.e., a more extensive set of information skills exercises to complete in the lab.

The second PCL instructional session – “Preparation for Evidence-Based Practice” – takes place approximately one month after the first, allowing the librarian and the PCL instructor to introduce new concepts while determining what, if any, skills have been retained from the first session and assignment. This second session introduces students to the vocabulary of evidence-based practice, the distinctions between primary, secondary, and tertiary sources, the process of how to build a search strategy from the information needs presented in a clinical situation, and the criteria for the critical evaluation of an information source. As before, examples used during the lesson draw from content in other courses, but this time the emphasis was on using “the software between the ears” to determine the scope of the information need and to evaluate the information located using library resources.

The graded assignment attached to this second instructional session is based on a problem-based learning framework. Problem-based learning, which uses a case-based approach to engage students in the learning process, is not new to pharmacy education (Antepohl and Herzig 1999), and is increasingly being applied to information literacy instruction in higher education (Fosmire and Macklin 2002, Macklin 2001). For this
assignment, students are grouped into teams of three or four, and each team is given a sample case and an electronic copy of the Drug Information Request Response Form. Teams are asked to conduct a search in at least two different databases, cite at least one information source of each type (primary, secondary, tertiary), provide a typed response summarizing the data, and include a reference list with citations in correct NLM format within the two-hour time frame of their regular PCL lab section. Even though two hours is considered a very generous time frame in most clinical situations, students were encouraged to review their Database Search exercises before coming to lab.

As before, the sample cases that form the foundation of the assignment are based on coursework in other Pharm.D. classes (focusing this time on antiviral and antifungal medications). Both the written assignment and the verbal instructions provided to students stress that the response should provide an overview of the evidence found in current literature, but should not provide a clinical opinion. In other words, students are asked to locate and select high-quality information sources and create a summary of the current literature, but are not asked to make a recommendation on what medication should be given to the patient. Grading for this assignment was done jointly, with 20% of the grade based on the quality of the cited sources, 20% based on correct use of NLM citation style, and 60% based on the content of the written response (with the two former elements evaluated by the librarian, and the latter element by the PCL instructor).

The vast majority of students (96%) were able to locate high quality information sources relevant to their cases, and to correctly identify them as examples of either primary, secondary, or tertiary literature. Students had some difficulty citing journal articles and abstracts of journal articles located through an electronic database. A number
of students, for example, cited the PubMed database (and used the correct citation style for an electronic database), rather than citing the journal source in which the article first appeared. This problem was especially evident when students used the PubMed “LinkOut” feature to access an electronic copy of the article from within the database. This indicates an opportunity for future instruction to teach the difference between an index, which points to a source document, and the document itself.

The aspect of the second assignment that students found most challenging was the preparation of the written response. At the beginning of the lab section, the instructors suggested that students spend 45-60 minutes researching the case, and 60-75 minutes preparing the written response. Students were also told that the assignment was designed to be challenging, and that they were not expected to locate every piece of literature relevant to their case. Even with these warnings, however, some students did not begin to prepare their written responses until the lab section was nearly over. This was true even of students who reported locating a wide range of relevant information sources within the first 45 minutes of the class. Student feedback on this assignment was still positive, but many noted that their performance would have improved with additional time. Both the librarian and the PCL instructor are evaluating the results of this assignment to identify additional ways to facilitate student success in the writing portion of the assignment, including possible involvement with the campus Writing Program, and expansion of the Drug Information Request Response Form to include additional suggestions for appropriate content and format.

As students complete the second year of the Pharm.D. program, they must also be prepared to continue their professional education on the Spokane campus (located
approximately 75 miles from Pullman), where the final two years of instruction take place. Information literacy instruction provided at this juncture must help students make the transition from the information sources and services to which they had access during their first two years, and those to which they will have access in their final two years. With the rise of electronic resources in the biomedical field such as electronic books and journals, this transition is much easier than it once was, and the vast majority of resources are available across campuses. However, a one-hour lesson in how to access these resources from remote locations (such as hospitals and retail sites), as well as an orientation to differences in library policies and procedures between the Pullman and Spokane campuses remains a mandatory component of the second-year Pharm.D. curriculum. This session also introduces students to hospital-based library services that will be available to them during experiential rotations in the fourth year. This final instruction and orientation during the second year has traditionally been provided by the Pullman-based pharmacy librarian, but will be delivered beginning in Spring 2003 in collaboration with the director of the branch library on the Spokane campus.

As in the case of Freshman Seminar, the approach to instructional outreach embraced by the Health Sciences Library in its work with the College of Pharmacy builds upon and enhances the traditional outreach activities associated with the familiar liaison program. In this case, as with Freshman Seminar, instructional outreach is rooted in a proactive approach taken by the librarian. Again, the work with the College of Pharmacy demonstrates the significance of integrating information literacy instruction across a program, rather than attempting to piece together a successful approach from a series of individual relationships. Finally, and most significantly, as in the Freshman Seminar case,
the success of the instructional outreach is based not only on the mutually compatible instructional objectives of two programs, but on the combination of instructional and subject-specific expertise brought to the project by the participating librarian. In each case, librarians were involved in both the generation of curriculum and the assessment of student performance. This new approach to successful instructional outreach is rooted in the roles that academic librarians can play on a campus where their professional expertise in the location, evaluation, management, and use of information is seen as critical to meeting the instructional objectives of academic programs and departments across campus. Figure 1 below provides a summative comparison of the College of Pharmacy and Freshman Seminar outreach programs and illustrates specific elements librarians can focus on in developing a programmatic approach to instructional outreach.

<table>
<thead>
<tr>
<th>Concurrent Characteristics</th>
<th>College of Pharmacy</th>
<th>Freshman Seminar (FS)</th>
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<tbody>
<tr>
<td>Librarians recognize a program’s need for help, enhancement</td>
<td>Spokane and Pullman faculty, along with the librarian, see a &quot;skills gap&quot;</td>
<td>FS officials notice students need training about plagiarism</td>
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<tr>
<td>Programmatic approach bolstered through key meetings and other organized contacts</td>
<td>Library Advisory Board, librarian attendance at ceremonies and faculty meetings, liaison work</td>
<td>Ongoing planning sessions between FS officials and librarians, feedback sessions</td>
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<tr>
<td>Collaborative environment increases librarian involvement in the program</td>
<td>Librarian and faculty members agree to increases in the time allotted for the lab sessions</td>
<td>Growth from one to two library sessions, librarians providing Web evaluation curriculum</td>
</tr>
<tr>
<td>Librarian-generated curriculum/sessions correspond to students’ coursework, relevance increased</td>
<td>Drug types chosen for the library lab assignments tied to the drug family being studied and timing is critical to introduction to evidence based work</td>
<td>Library sessions and topics scheduled to correlate to course content and assignment due dates</td>
</tr>
<tr>
<td>Librarian involvement in the formal assessment process, help assign grades</td>
<td>Students receive letter grades for their written work from the library labs</td>
<td>FS librarians volunteer to be a part of the formal Web site evaluation process</td>
</tr>
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Figure 1: Programmatic Approach Analysis - Key Elements Across Examples
Active learning in the instructional sessions | Problem-based learning in the library labs | Librarians given interactive lessons to use in their instructional sessions

Conclusion

American higher education is changing in response to new trends in instruction, new calls for assessment of student learning, and new demands from local, state, and federal government, the business community, and others to assure that students educated in the 21st century are as well prepared as possible for employment, citizenship, and lifelong learning in the increasingly dynamic world of the Information Age. Academic libraries, along with every other organization on the college and university campus, are evolving to address these concerns. Library outreach has changed from a focus on bringing people into the library with the aim of resource discovery, to one of librarians bringing instructional and subject expertise to collaborative efforts with partners in academic departments and in other offices and programs across campus. Information literacy instruction is a key venue where this new paradigm is thriving.

The Washington State University Libraries are adopting the tenets of this new paradigm as instruction and subject-specialist librarians employ a programmatic approach to instructional outreach. The two representative examples described in this article illustrate librarians taking their collaborative work to new levels as they engage in the structural design and planning of courses, create active-learning curriculum, teach instructional sessions, and are intimately involved in coursework assessment. The two examples also exemplify how a proactive and programmatic approach to instructional
outreach can help librarians claim a new place in campus collaborations based on their expertise in the location, evaluation, management, and use of information.

Frank et al. (2001), and Lougee (2002) have articulated new roles that may become part of public services librarianship. Clearly these new roles will be shaped by the many traditional elements of academic library outreach that remain at the heart of a programmatic approach to instructional outreach, but the opportunities are there to build upon these existing relationships and activities, and to provide enhanced instructional collaboration and outreach on the contemporary academic campus.
References


