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Chapter 12

Collaboration to Ensure Mastery of Information Competence Skills

by Rie Rogers Mitchell, Merril A. Simon, and Gregory C. Jackson

To introduce our involvement with information competence, we begin with a vignette that represents the value our graduates now place on becoming an information competent professional.

> Molly checked her departmental brochure against the sign announcing the department's orientation, and walked towards the beckoning door. Just inside she gathered the sheaf of informational papers, moved towards the middle of the room, and took a seat.
>
> Glancing at the papers, she noticed one entitled, "Information Competencies Necessary for Degree Candidates" and another "Information Competency Assessment." Molly thought to herself, "Got that done. I know the Internet and I've got my word processing skills down pat." She then placed her papers aside in order to concentrate on the program information that was being presented.
>
> Later, when potential students were given the opportunity to talk in small groups with current students and graduates of the counseling program, Molly spoke up and shared, "I'm very comfortable with the Internet and word processing, so can I 'test out' of the information competency requirement?"
>
> A current student in the group, Crystal, responded, "I said the same thing when I entered the program. I felt I knew both the Internet and what I thought was necessary about word processing. But in my first class, I found that I had no clear understanding of how to use the Internet to find quality material. Honestly, I didn't know what my instructor was even

talking about when he said he wanted refereed sources, and I certainly didn't know how to find them. I knew nothing about the critical issues involved in identifying and obtaining true professional materials."

Juan, a recent graduate of the program, added, "Second to learning counseling skills, learning information competency skills in the program truly helped me in both my fieldwork and research classes, and certainly in writing my thesis. In fact, I highlighted the certificate I earned in information competence on my résume. I was often asked about that by prospective employers."

"Oh, really?" queried Molly, with some interest.

"Yes," Juan continued, "during interviews I was asked if I could possibly train and update some of their employees. I felt confident enough to say, 'yes.'"

Molly seemed deep in thought when Juan added, "In my current job, I have to give presentations to groups of administrators, parents, and students. I've found that the quality of information makes a big difference in whether or not the audience takes my opinions, observations, and suggestions more seriously. It's not just having information, and it's not just the breadth and depth of the information that's important; it's also the accuracy and currency of the information that is important!"

Juan saw Molly's reflective look and said finally, "Trust me, it's worth the effort."

In 1995, the California State University system made an explicit commitment to develop a program of information competence (www.calstate.edu/ls/Aboutinfocomp.shtml) to ensure that all students (of the 405,000 in 23 universities) graduate with a mastery of this vital skill. In January 2001, CSU offered grants to departments committed to include information competence in their educational outcomes.

Of those grants awarded, the Department of Educational Psychology and Counseling (EPC) at CSU, Northridge, was the only graduate department to receive this grant. In 2004, our department was awarded a second IC grant to develop instruments to assess IC at various stages. Taken together, these grants provided the opportunity to work with campus and CSU librarians to provide graduate students with skills in information competence within the existing curriculum, as well as develop criteria and assess student learning of IC skills as a prerequisite to receiving a master's degree. This chapter will describe our experience with information literacy at the department level, as well as our collaboration with the university and CSU librarians.

DESCRIPTION OF MILIEU

California State University, Northridge, a learning-centered university and one of the largest of the 23 campuses in the California State University system, is

located approximately 25 miles northwest of central Los Angeles in the northern San Fernando Valley, a suburb with a multiethnic population of over 1.8 million people. In fall 2004, the university enrolled over 31,000 students (23,200 FTEs), of which approximately two-thirds are ethnic minorities, immigrants, and/or international students. Over 1,800 faculty members serve in nine colleges that offer baccalaureate degrees in 59 disciplines and master's degrees in 41 fields.

The Department of Educational Psychology and Counseling (EPC), one of six departments in the Michael D. Eisner College of Education, has one of the largest graduate enrollments and is one of the largest academic departments on campus. The nearly 400 graduate students in the department's degree programs (Master of Science in Counseling and Master of Arts in Education) comprise about 9 percent of the total graduate population at CSUN. Within the two master's degrees are seven options: career counseling, college counseling and student services, early childhood education, educational psychology (development, learning, and instruction), marriage and family therapy, school counseling, and school psychology. The department also offers courses towards five post-master's certificates (one of these is online), two state credentials, and two state licenses.

The department is student-centered, and faculty is highly engaged in the development of students as professionals and leaders in the field. Programs and coursework reflect both a developmental life-span approach and an ecological perspective to theory, research, and practice. Our department programs and faculty of 22 full-time and 50 part-time members have achieved national recognition for program design, scholarship, professional leadership, and teaching excellence.

Our graduate programs strive to prepare students for highly effective, ethical, and satisfying professional careers as educators, counselors, psychotherapists, and psychologists, while instilling in our graduates a sense of civic engagement—a commitment to serve all people regardless of economic status or ethnicity and to influence the way in which these services are delivered to ensure access and equity. Therefore, we seek to provide students with a wide range of service-learning opportunities, so they learn to work effectively with diverse individuals, groups, and/or families with a range of issues at varying locations. Our overarching goal is to produce graduates who think critically and engage in reflective, ethical, and legal practice throughout their educational and professional lives.

CSUN's Oviatt Library is a teaching library whose mission includes partnering with faculty in the education of students and in developing the information competence skills of students. To this end, the librarians sustain and develop a very active instructional program to teach students how to use and locate the best resources in their field of study and also to increase their information research

skills. Nearly 22,000 students each year go through a library instruction session. The faculty librarians of the library are very student-centered and are very focused on sustaining a positive library experience for students. The librarians maintain close ties with the faculty in the academic departments as well as participating in university-wide academic initiatives. There are 22 full-time and seven part-time faculty in the library.

NEED FOR INFORMATION AND TECHNOLOGY SKILLS

Because of the wide range of students' information and technology skills due to generational and experiential differences, it was seen as necessary and valuable to design an information competence program that could respond to both remediation and professional skill development, while offering an organized, hierarchical program infused throughout the curriculum, supported by collaborative alliances of both discipline and library faculty.

The need to possess IC skills has been recommended by our national accrediting bodies, the Council for the Accreditation of Counseling and Related Education Programs (CACREP), National Council for Accreditation of Teacher Education (NCATE), and National Association of School Psychology (NASP), and professional associations, including the Association for Counselor Educators and Supervisors (ACES) and the National Career Development Association (NCDA). In 1999, ACES developed and endorsed technology competencies (CACREP, 2001) and the NCDA has subsequently developed and adopted the use of career counseling using electronic means of communication.

Accreditation requirements and initiatives by professional groups provided one of the motivators for our department to move toward providing concerted training and education in this area. Also, we believe that, whether students continue their education into doctoral programs or careers in public or private service as educators, counselors, marriage and family therapists, school counselor or school psychologists, information literacy skills are critical in this technological age. On a practical level, we knew that possession of information competency skills would also enable our students to conduct the type of research necessary for the required culminating activity (i.e., thesis, project, or comprehensive exam) for it to be of master's degree quality and be able to use these skills in their future careers, while fostering the lifelong professional skills of reasoning and critical thinking.

DEFINITION OF INFORMATION COMPETENCE

Near the beginning of our journey to infuse information competence throughout our curriculum, the faculty agreed to the following working definition of

information competence. An information-competent individual has the ability to locate, evaluate, and use information effectively for a range of purposes (see Figure 12-1). Information competence (or information literacy) is a gestalt, in which becoming competent in the use of each of its parts—tools (e.g., computers), resources, social-structure (e.g., knowledge in differences between refereed journals and Internet information), research, publishing, and professional competencies—results in a whole larger than the sum of its parts. The "whole" in this case represents professional and lifelong learning skills (see Figure 12-2).

IDENTIFYING IC NEEDS OF EPC STUDENTS

In order to prepare EPC students as information competent professionals, it was first necessary to identify the specific needs of this population. Some of the key areas include the need for current and accurate information, ability to use ever-developing technology to access information, skills to conduct research and differentiate between types of information, and the capability to conceptualize and identify important connections among collected information.

Current and Accurate Information

Educational psychology and counseling students have unique needs related to the changing nature of their profession. At one time, the primary focus of counseling

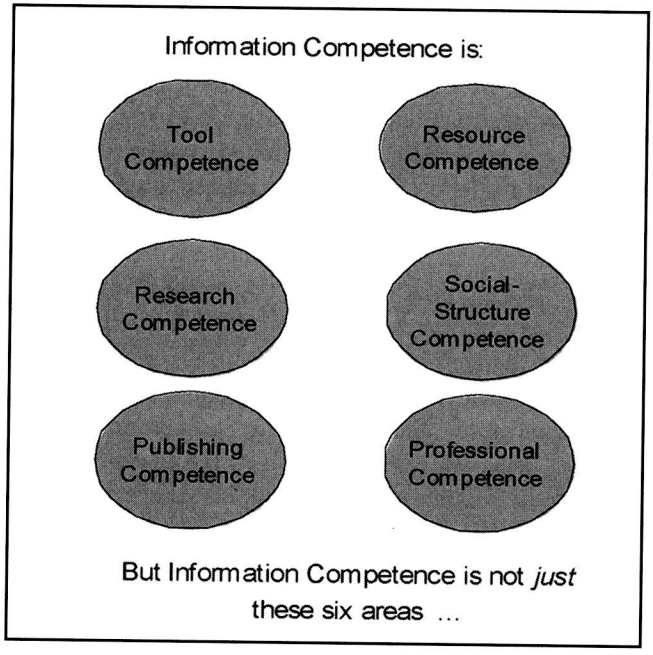

Figure 12-1: Information Competence Is...

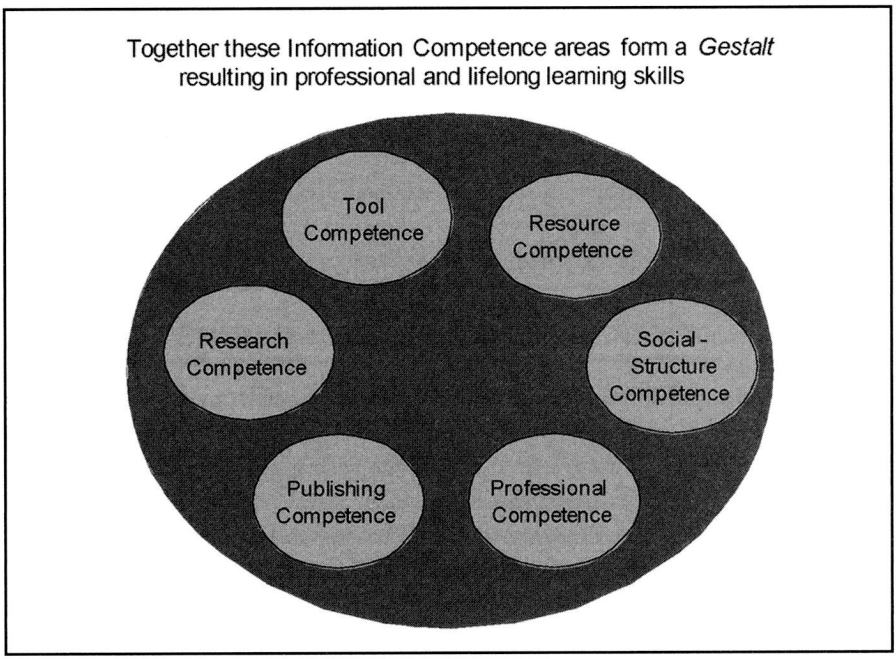

Figure 12-2: Information Competence Gestalt

professionals centered on developing listening and facilitation skills, and peripherally, on research and informational literacy. Until the past decade, other professionals' perspectives, commentaries, experiments, and studies were obtained from library books and journal stacks, and most counselors only needed to be consumers of research. Now there is a greater need for assessment and research skills to provide support for the value of counselors and psychologists, particularly in the schools, and to help teachers and clients find resources that are meaningful and accurate.

With the establishment and availability of the Internet and other electronic communication, a new dynamic has appeared. Now, the turn-around time for publication on the Web can be as short as the time it takes for a Web page author to post a page to his or her Web site. The lengthy editorial and peer review is severely shortened, if it occurs at all.

Unfortunately, students are not necessarily careful consumers of information. They have not learned to be discerning between the value of the results of a *Google* search and a peer-reviewed "A-level" journal in the field. To many students, "in print" or "online" means it is acceptable whether or not the source is relevant, appropriate, or accurate.

Knowledge of Technology

In the late 1990s, students in our programs seemed to fall into a bimodal distribution. The younger students were generally proficient in using basic technology,

and were unafraid and even welcoming of new technological advances. Nevertheless, they sometimes over-assumed that they knew how to accomplish a technological task and were impatient when it was a struggle. In addition, many of these students lacked ability in typing or word processing, and often did not own or use printers.

Many older students returning for a graduate degree lacked not only technological knowledge, but were also unwilling to learn or use technology. Plus, they had difficulty in finding appropriate technology courses, where the instructor "spoke their language."

However, by 2001, this was beginning to change. Most of our students owned computers, possessed basic keyboarding skills, and used e-mail fairly regularly. Very few, however, had used a statistical package, taken an online course, or used presentation software, such as PowerPoint.

Now, in 2006, it is rare to find a graduate student who is not fairly proficient in keyboarding, surfing the Internet, instant messaging and downloading MP3 music files. In addition, most students register, receive class syllabi and other materials from faculty, and/or take classes via the computer. Faculty no longer even think to ask if special arrangements need to be made for those without access to a computer as most students have easy access to multiple computer laboratories in the college or own computers. In fact, e-mail has been designated by the university as the primary correspondence medium for all university-student communications.

Basic Research and Library Skills

Instructors across campus in various departments report that many students lack research and library skills. Professors in the EPC department have experienced similar voids.

Recently, one of the authors spoke of sharing his love of visiting the library stacks. During an assessment class, he began to talk about the importance of including library texts in their research papers, and shared the feeling he had of perusing the books on the library bookshelves. He spoke of the awe and respect he had for the library and the time he spent there. Pausing a moment, a student called his name and asked, "Professor ____, where is the library?"—followed by a short buzz from a few others in the class, "Yes, where is it? Do you know?" A brief class conversation ensued regarding students' preference for "better utilizing" their time by walking their way through information via their computer. Many students reported that they had relied on Internet searches for articles and sources for papers since middle school without ever entering a library!

Conceptualize and Synthesize

It is no longer sufficient to teach students how to write at a professional level. Our students need to know much more than APA-style formatting, how to

conduct literature searches, and how to read and understand peer-reviewed research. Information literacy encompasses those skills and more. As one counselor educator Darcy Haag Granello (2001: 293) said, "What seems to be missing in counselor education literature is a formalized, intentional, and well grounded mechanism designed to teach students how to critically evaluate and synthesize the material they have collected into cognitively advanced reviews of the literature." Our department is addressing those very concerns.

With the department's emphasis on information competence, students see the value of the acquisition of those skills and why they are important for their future as professionals. However, students still struggle to learn conceptualization and critical evaluation and develop synthesis skills. Many are unfamiliar with research methods and basic research tools. When they are asked to survey professional literature and critically evaluate it, they indicate that they feel anxious and lack confidence in their own abilities.

Our goal is not just one-time mastery of IC skills, but to learn transferable skills that can expand with the onset of new technology. To this end, we found the expertise of university librarians critical. Through a collaborative process between department and library faculty, we developed a model that has promoted the integration of information competence, positively impacted student skills, and maximized the potential for lifelong learning.

IMPLEMENTATION OF IC SKILLS

When we received the first IC grant in 2001, we were delighted and almost immediately began to design steps to integrate IC skills into the department's curriculum. At that time, it did not occur to us to collaborate with the library faculty at our university. Now, in hindsight, we know that if we had asked for help, it would have saved us much time and energy. Later, when we began to run into trouble, we did reach out and immediately received the valuable assistance we badly needed.

Planning for the Department Faculty Retreat, August

Our first step was to form a departmental *ad hoc* Information Competence Committee (ICC) of four faculty members. Synchronistically, the committee was comprised of an assistant professor, associate professor, "full" professor, and FERP faculty member (i.e., a tenured professor on an early retirement program). Three of these members demonstrated previous significant commitment to utilizing technology skills and techniques. One member authored the first departmental Web page. The second supervised and coordinated an extensive upgrade of the same Web page, which included the posting of all information and materials for application and program advisement for students.

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Retreat, August

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The third introduced the basic competency of Web page authoring and multimedia skills in his fieldwork classes, and first attended and then later coordinated a national conference on technology skills training for school counselors.

We knew that we also had to gain the support of department faculty in order to accomplish our goal of integrating IC skills in the curriculum. We felt that the most appropriate venue for introducing the subject would be at a two day, off-campus faculty retreat before the academic year began. In preparation for the retreat, the committee members researched and drafted information competence criteria in the areas of technology, research, and professional skills. Our plan was to propose a model to the faculty that infused IC skills into the curriculum paired with three draft lists of competencies: Basic IC Skills, Research Skills, and Professional Skills.

We also identified goals for the retreat, drafted an agenda, carefully scripted our presentations and interactive activities, surveyed the faculty regarding their technological skills, and prepared a packet of materials: agenda, fact sheet on information literacy, departmental IC grant proposal, IC assessment methods by learning domains with examples, faculty technology survey, and draft documents of criteria for basic, research, and professional IC skills.

Although we felt prepared for the retreat, we did not know what to expect. How many faculty members, if any, would be interested in and supportive of this initiative? Would faculty members object? If so, how many and how strongly? We did know that all full-time faculty members (including five FERP faculty) were planning to attend the retreat, except for two faculty members who were out of the country (one was on a Fulbright scholarship in Africa; the other had not as yet returned from a trip abroad). In addition five part-time faculty members were included who were scheduled to teach the research methods course (EPC 602) in the fall 2001. A few faculty members had completed and returned the survey before the retreat (18 out of a potential of about 26), so we also knew that all of the responders regularly used technology; about half of these reportedly had advanced technology skills.

Department Faculty Retreat, August

On the first day of the retreat, we began by asking each faculty member to share a summer experience. We followed this with an ice-breaker about IC that engendered smiles and laughter. Then we launched into the core of the agenda, and talked about goals for the retreat:

1. To feel stimulated and excited about starting the new school year.
2. To come together as colleagues and friends.
3. To identify information competence (IC) skills for master's students.
4. To plan how IC skills can be infused throughout the curriculum.

5. To discuss what types of assignments might be incorporated to increase IC.
6. To discuss how our students' IC skills can be assessed.
7. To examine how we can further develop our own IC skills.

Presentations followed covering topics such as: What is information competence? Why is IC important for our students? Why is it important for the faculty? Why are we discussing IC now? What are its implications for our department? What have various universities and departments done to promote information competence?

We felt relieved when faculty members seemed to be enthusiastic about IC. Lively discussions ensued throughout the day regarding: 1. what skills best fit under the categories of basic, research, or professional competencies; 2. how IC should be infused in the curriculum; 3. what types of assignments would increase IC; 4. how IC could be assessed, and 5. how faculty members could improve their own skills.

At the end of the retreat, we reviewed the goals and were surprised and pleased that all goals had been met:

1. Competency lists of basic, research, and professional IC skills were refined and approved (Goal 3).
2. Faculty members agreed that they would support EPC students in becoming information competent learners before receiving the master's degree (Goal 2).
3. A process model proposed by the Information Competence Committee to infuse IC skills in the curriculum was tentatively adopted with identified modifications to be discussed at the September faculty meeting (Goal 4).
   The model recommended that:
   a. new students be expected to master basic skill competencies before admission
   b. a research skills "strand" be identified for each program option, starting with the statistics course and the introductory class in research methods, followed by courses that require research papers and hands-on research, and culminating with a thesis or project, or comprehensive examination
   c. professional skills be infused throughout the program.
4. Ideas were discussed regarding types of assignments that might be incorporated into the curriculum (Goal 5):
   a. the course mentor for the research methods course volunteered to design a course prototype that included model assignments
   b. further discussion of IC assignments will continue at future faculty meetings.

5. It was also decided to assess basic skills by surveying students registered in a prerequisite class (EPC 451). It was recognized that a sophisticated assessment method would have to be developed in order to assess if, in fact, applicants had mastered basic skills. The faculty agreed that, until this instrument was developed, mastery of basic skills could not be used as a criterion for admission. However, faculty agreed that students admitted next year, fall 2002, would be given a resource list and asked to master basic IC skills before beginning classes (Goal 6).
6. Faculty identified their desired areas of growth, and tentative plans were made for future workshops (Goal 7).

First Faculty Meeting of the Year, September

At the August department retreat, a process model for integrating IC skills in the curriculum had been tentatively approved. This model was again examined and small revisions were made. In addition, faculty voted to include information competence in the department's learning outcomes.

Assessment of Self-Reported Basic Skills, Fall Semester

The directive of the faculty to survey students registered in the prerequisite course, EPC 451 (Fundamentals of Counseling), as to their reported level of competence in basic information skills was carried out during the fall semester. Using a 3-point Likert Scale (1= little or no skill; 2 = some skill; 3= good or strong skills), 56 students registered in two sections of the course were asked to rate their skill level for each of the 61 skills on the department's list of basic IC skills. The skills were distributed into three areas: 1) technology with 32 skills in five categories (i.e., use of: keyboard and mouse, word processing, Windows, e-mail, and Web browser); 2) information resource awareness with ten skills; and 3) accessing research information with 19 skills in six categories (i.e., understanding and using information knowledge, the CSUN Library, online catalog, periodical index, abstract databases, and database searches. Access to technology and use of e-mail were also surveyed.

It was found that:

1. Overall, the mean of the 32 skills in five technology categories was higher (M = 2.6) than the mean of ten skills in awareness of information resource (M = 2.46) and 19 skills in six research information categories (M = 2.13).
2. In the technology category, items receiving the lowest mean scores (suggesting that students on the average knew the least about these skills)

were: 1) subscribing and unsubscribing to list serves; 2) searching archives of listserves; and 3) establishing a group list.

3. Regarding information resource awareness, items receiving the lowest mean scores were: 1) resources not owned by CSUN can usually be obtained through inter-library loan; 2) CSU does not own all the periodicals covered by all the listed databases; 3) when library resources are needed, the library catalog should be used to identify the availability of items within the CSUN Library; and 4) the length of time it takes to receive an item through inter-library loan.
4. With regard to research information, items that received the lowest mean scores were: 1) identifying a specific online database that may include information on a specific research topic; 2) accessing the holdings record to identify specific dates owned, plus various format locations of periodicals within the CSUN Library; 3) recognizing that index/abstract databases may be accessed by an individual through the CSUN Library home page or via a service provider or aggregator; 4) determining availability of resources not owned by CSUN; and 5) locating an inter-library loan form while online or in print form.
5. Regarding access to technology, 52 of the 56 surveyed students (93 percent) stated that they had access to a computer in their home, and 49 (88 percent) also had use of a home printer.
6. Forty-nine of the 56 students (88 percent) used e-mail often or very often; three rarely; and four did not respond.

The results of this survey suggest that the surveyed students viewed themselves as more proficient in using technology than in knowing how to access research using library resources. Also, a large majority of these students have access to a computer and printer and use e-mail on a regular basis.

At the completion of the study, the results of the study were shared with the surveyed students, and appropriate resource referrals were provided for those who wanted to further increase their skills.

Submission of IC Paper to Professional Conference

In October 2001, three members of the departmental ICC submitted a proposal to present a paper on information competence in counselor education at the national conference of the Association of Counselor Educators and Supervisors in Park City, Utah, a year later. Essentially, the paper covered the work we had done in information competence up to this point (e.g., the process we had developed to integrate IC in the curriculum, the basic, research, and professional competencies, survey results, and future plans). In May 2002, the proposal was accepted and was presented on October 17, 2002.

Departmental Web Pages

Information about IC skills and activities was first added to the department's Web site in January, 2002 (www.csun.edu/edpsy/ic/index.html). Among other IC documents, the Web site contains our grant proposals, activities, and deliverables.

Faculty Workshop, February 2002

Based on the results of the faculty needs survey conducted at the fall retreat, a department faculty member delivered a workshop on use of the Statistical Package for the Social Sciences (SPSS) for those who wanted to review the major revisions in this program. Most department faculty attended, as well as faculty from other departments in the college.

Initial Collaboration with Library Faculty, February 2002

Although it seemed that the graduate research methods course (EPC 602) had helped students to improve their research competencies, a formal assessment had not been conducted. Further, the content of the course differed across the six sections offered that semester, even though a prototype syllabus had been developed.

At this point, we felt at a loss and did not know how to proceed. We contacted Susan C. Curzon, Dean of the Oviatt Library, who referred us to a newly hired librarian, Lynn Lampert, who had been recently hired to help develop the university's program in information competence. In a seminal meeting, Lampert suggested that the CSUN librarians develop two to three hour modules for each of the six sections of EPC 602, research methods, offered fall semester, 2002. These modules would: 1) help students acquire both basic and research competencies, and 2) provide a post-test assessment to determine if students had attained the required basic and research skills.

Over the next few months, Lampert, with a team of four instruction librarians, developed outlines and educational materials that were aligned with the learning objectives of the *Library and Information Resource Instruction for Psychology—Guidelines*, the course prototype, the department's research competencies, and assignments developed by the faculty scheduled to teach the research course (Lampert, 2005).

All stakeholders then met to discuss the class, the delivery process, and possible assessment. It was decided to survey the students before the first library session to determine their awareness, comfort, and reported skill level with resources, such as ERIC, PsycInfo, the library catalog, and interlibrary loan. From the results of this survey, content and pace of instruction were determined. By the end of the third library session, most students had developed a literature review that adhered to APA publication guidelines (American Psychological

Association, 2001). When surveyed at the end of the course, students indicated that their comfort level using library resources and knowledge of research skills had increased greatly.

Recent Innovations That Support Information Competence

Seven semesters have now elapsed since the first modules were developed. A number of changes have taken place. Starting in fall of 2003, the department hired a new faculty member coordinator, Reagan Curtis, who fine-tuned the EPC 602 course and developed a common syllabus. Course meetings for the cadre of faculty teaching this course were held on a regular basis, sometimes with library faculty in attendance.

The library also hired an educational psychology and counseling librarian, Stephanie Ballard, to specialize in information competence and resources used by faculty and students in educational psychology/counseling and psychology content areas. Each semester she works closely with library faculty teaching the modules, and also teaches a number of them herself.

The faculty in each of the master's options has identified courses that follow EPC 602. In these courses, students are required to complete research-based assignments in order to practice the research competencies learned in EPC 602. This has further readied students for their culminating experience (i.e., thesis, project, or comprehensive examinations).

Guidelines for the Culminating Experience

One of the challenges we identified through this process was a lack of congruence among the faculty regarding expectations and requirements for students' theses, projects, and comprehensive examinations. Therefore, the department curriculum committee worked for over a year, in consultation with department faculty, to develop a written document for students, "Guidelines for the Culminating Experience" (www.csun.edu/edpsy/resources.html). Faculty members have agreed to adhere to these guidelines.

Writing Assistance

A special course has been developed for students needing to improve their writing skills. Students can either go to the instructor of this special course on an "as needed" basis or enroll in the class to receive on-going help. As we worked with these students to improve their writing, we became increasingly aware that, although all of our students had passed the CSUN writing proficiency examination or the equivalent examination before acceptance to our master's programs, some still needed basic writing support. Therefore, the department curriculum committee has recently designed a plan to identify these students early in the

master's program and give them the support they need from the beginning of their program.

Professional Skills

With regard to our third information competence category, professional skills, students complete this category by demonstrating competence in these skills within the context of their regular courses. Faculty has agreed that, when a student demonstrates competency in one of the professional skills, the skill is then "signed off" by the faculty member teaching the class. Some faculty members even require mastery of specific professional skills in order to complete specific classes.

Certificate of Completion

In spring 2003, a Certificate of Mastery in Information Competence Skills was designed for students who evidenced mastery in all three levels of information competence skills (i.e., basic, research, and professional). If desired, the student can cite this accomplishment on his/her professional résumé. Our goal is to help every student qualify for this certificate of completion.

Sharing with Colleagues

A highlight for us occurred when Ilene Rockman, who headed the information competence initiative for the CSU system, asked us to share our IC work with other CSU faculty in our field. Supported by the CSU, a conference was held at Northridge to give faculty members an opportunity to plan their own IC programs and to hear about other programs. In our presentation, we had the opportunity to share our experience of infusing IC into our curriculum. Expansion of knowledge and ability in technology and research skills has been a positive experience, not only by our students, but by our faculty. We also opened ourselves to new ways and systems to conduct research and stay current in our academic fields.

ASSESSMENT OF IC COMPETENCIES

Assessment of Basic Skills

Our original plan called for assessment of basic skills before acceptance to the master's program. However, we were unable to find a suitable instrument for our purposes. We considered creating an online assessment instrument, but this proved costly and would have involved a fee to take the examination.

In 2004, the Basic Information Competence Skills Assessment (BICSA) was developed by an EPC faculty member to assess basic skills of first semester students in use of: keyboard/mouse, word processing software, windows, e-mail, Web browsers, and CSUN library resources. Essentially, students were asked to complete four steps that required technology and library resource knowledge,

ending with a short paper in APA format. Using a five-point rubric, the paper was scored based on: 1) how closely the steps were followed; 2) appropriateness of the paper's topic; 3) English usage and clarity of the description of the library sources; and 4) adherence to APA format. However, this proved to be unwieldy for some faculty to administer and did not fit easily into the curriculum of first semester students.

Now, in 2006, we have found that essentially all admitted students have fulfilled our basic technology skill competencies upon arrival. Therefore, we no longer feel the need to assess basic technology skills. However, most new students still do not possess basic research skills. To solve this problem, we have moved the basic research competencies into the research methods course, along with the advanced research skills.

Assessment of Research Skills

With the continuing involvement of library faculty, most of the research skills are acquired in the research class, EPC 602. A rubric has been developed for the assessment of research information competence skills (www.csun.edu/edpsy/ic/). A companion piece, the Research Information Competence Skills Assessment (RICSA), describes the research competencies being assessed by the rubric. This rubric can also be used to evaluate research papers in courses that follow the research course.

Assessment of Professional Skills

The completion of each professional skill is verified by the signature of a faculty member who has observed the student using the skill.

Assessment of IC at the Conclusion of the Culminating Experience

Starting with the Fall 2006 semester, IC skills will be assessed at the completion of the culminating experience, along with the quality of the product (based on the department's guidelines), ethical standards, and department dispositions. Using a common rubric developed by an ad hoc committee of the department curriculum committee, faculty members will complete an online assessment of each thesis, project, or comprehensive examination he or she chairs. This data will then be aggregated for accreditation purposes.

CHALLENGES AHEAD

We are hopeful that our department will become a model for other large and complex departments in how to institutionalize information competence skills throughout a department's programs. Although we have come a long way in our journey, challenges still remain that need to be resolved.

Maintaining Information Competence Standards Across Courses and Sections

In a large department, some courses have multiple sections taught by both full and part-time instructors with varying degrees of interest and knowledge about information competence.

For EPC 602 (research methods), we have partially solved the reliability problem by requiring a common syllabus (with common goals and assignments), using research modules developed for our students and taught by library faculty, and employing the RICSA description and rubric for assessing research skills. Two other key ingredients that have maximized mastery of information competence skills are: 1) regular course meetings led by a faculty member committed to information competence; and 2) maintaining good communication between department and library faculty.

For courses following the research course, we have encouraged faculty to use the RICSA description and rubric. However, this has been only partially successful. The rubric needs to be expanded to not only evaluate research skills, but also to reflect the goals of each of the follow-up courses. In addition, all sections of a follow-up course need to identify common goals, assignments, assessment methods, and rubrics. In the EPC department, this involves approximately ten courses with multiple sections.

Individualizing Professional Skills

The professional competencies need to be reexamined and modified in light of each program's needs. The faculty in that option should then identify a course(s) in which an identified professional skill or skills would be taught, demonstrated by the student, and then evaluated using agreed upon rubrics across sections.

Agenda for a Future Retreat

It has been almost five years since we first introduced the concept of "information competence" at the faculty retreat. IC has now become a "household word" within the department. Nevertheless, there is still much to develop, maintain, and institutionalize. Perhaps it is time to have another retreat with this same theme. This time we would invite our friends and colleagues from the library faculty as participants and consultants.

Goals for the retreat might be to:

- create a pre-test and post-test that can be used in the research class to determine its effectiveness
- develop common information competence goals, assignments, and assessment methods/rubrics for each section of the follow-up courses (to the research course)

- reexamine the professional competencies list in light of the needs of each option
- identify courses in each option where specific professional skill(s) can be taught and evaluated
- create a rubric to assess professional skills
- develop a plan to institutionalize or further embed IC in the fabric of the department

CONCLUSION

We have made strides in moving toward meeting our long-range goal of every student becoming an information competent scholar. The largest pay-off has been the responses we have already received from supervisors and employers in the field. They greatly value the skills our students have acquired. However, we know that our work is not yet complete. And, the largest challenge is still ahead—how to institutionalize the IC process, so that it is fully embedded in the everyday running of the department.

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