

Information competency instruction in a two-year college: one size does not fit all

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Abstract

This paper discusses the information competency (information literacy) program at the Glendale Community College (California) Library, and the findings of a longitudinal study which indicate that information competency instruction has significant impact on student success (defined as retention and grades). The Glendale Community College Library's information competency program consists of on-demand instruction sessions, a series of standardized workshops repeated weekly, two transferable credit courses (one of which is being experimentally paired with English composition), and infusion of discipline-related research skills into major courses. Quantitative data from the research study are included, as are anecdotal data regarding the paired Library-English courses and the infusion into the nursing curriculum.

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In many academic libraries, a much discussed topic is how best to provide information competency[1] instruction to the entire campus student body. As many point out, there is a need to sample various instruction models because one model does not fit all needs. Some libraries depend on the on-demand instruction session (also called one-shot instruction) for various reasons: comfort, staffing, space issues, or faculty preference. Prior to 1997, the on-demand session was the only information competency instruction model in use at the Glendale Community College (GCC), a two-year college in Southern California.

Because of the growth and increasing complexity of online resources, on-demand sessions were clearly inadequate to give students the research skills they needed. In 1997, an instruction librarian was hired to develop a new two-unit library course. In addition, the library faculty saw a need to experiment with various instruction methods, and this was accomplished through two grants from 1999 to the present: a three-year Fund for Student Success (FSS) grant and a two-year Fund for Instructional Improvement (FII) grant. This article will focus on the two most recent information competency models employed at GCC, research gathered from these various models, and the recommendations of a campus-wide task force regarding the future of information competency instruction at GCC.

Background

GCC currently has approximately 25,000 students, 17,000 of whom are credit students. Of those credit students, 7,000+ are enrolled full-time. There are four full-time library faculty, one temporary full-time library faculty member made possible through the FII grant, and 2.35 full-time equivalent in part-time library faculty. Of these, two of the full-time librarians regularly teach information competency classes, two more full-time librarians teach occasionally, and six of the part-time librarians teach in the workshop program. In 1997, the GCC library began to look for ways to expand the information competency



program beyond on-demand, one-time sessions.

Through classroom and reference desk instruction interactions, library faculty had become aware that many students were completely unfamiliar with using library resources to effectively conduct research. In some cases, students were even unfamiliar with libraries in general. At the same time, online resources were becoming more ubiquitous and more complex, and one-time sessions were insufficient to meet the need. In 1998, credit courses were added to GCC's information competency program: Library 191 – Introduction to Information Competency (one unit) and Library 101 – Intermediate Information Competency (two units; currently not taught while under revision). Both courses were articulated with the University of California and California State University systems. However, enrollment in these elective credit courses was low; thus it was difficult to assess their effect on student learning.

In 1999, using FSS grant funds, standardized workshops were added as the third component of the GCC library information competency program. Six workshops were created covering the following topics: searching the online catalog, locating journal and newspaper articles, research strategies, the Internet, government and statistical resources, and MLA sites for cites. These workshops were taught on a weekly basis (nine sessions per week) by full-time and part-time library faculty. Each topic was rotated through the schedule so students could take a variety of workshops. The library faculty actively sought collaboration from discipline faculty, primarily English faculty, to recommend or even require that their students attend the workshops. This third information competency component proved successful and has continued to grow and evolve (MLA style is no longer taught; instead there are two Internet workshops – the basics, and searching/evaluating).

Both the library classes and workshops incorporate active learning exercises and both are taught in the library's 27-computer instruction room. The lecture/lab style of Library 191 allows for active learning exercises that make use of not only the computers in the instruction room, but the entire library itself. Each workshop has two active learning

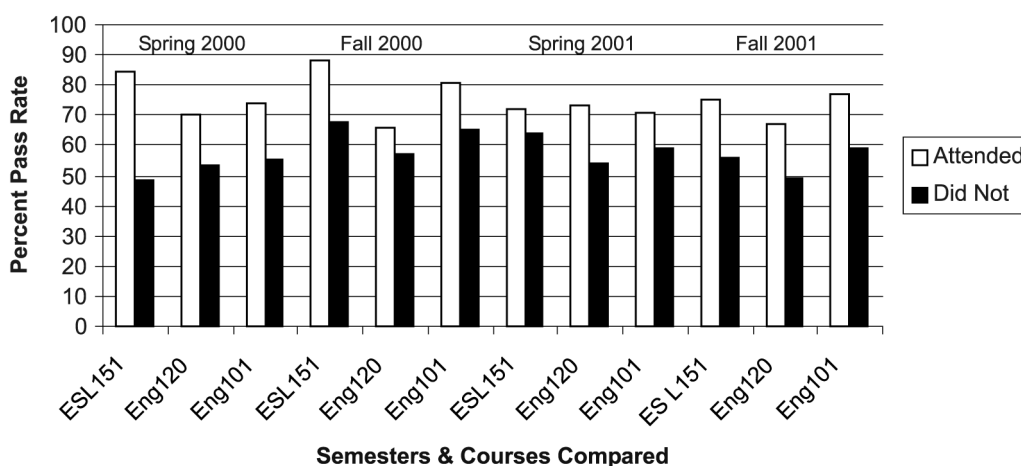
exercises built in so students gain immediate exposure to the concepts being taught. Both the library classes and the workshop exercises address selected outcomes from the Association of College and Research Libraries' (ACRL's) *Objectives for Information Literacy Instruction* (ACRL, 2001).

In 2001, an FII grant enabled GCC library faculty to try out two additional models of information competency instruction. These two models were pairing Library 191 with English 101 (college-level English composition), and infusing information competency instruction into the nursing curriculum. One goal of the Library 191 and English 101 pairing was to get larger enrollment numbers in Library 191 to assess the impact of this type of information competency instruction on student learning. Infusing information competency instruction into existing nursing courses was intended to create a working model from which to expand to other majors programs which could benefit from this type of specialized instruction in these disciplines. The key reasons, however, for experimenting with these new curricula were, first, to expand a research study which has shown that information competency instruction improves student learning; and, second, to prepare for the imminent adoption of a statewide information competency requirement for all California community colleges.

Research report findings

The FII grant, which allowed the GCC library to add two more information competency components and assess their impact, was based on research already being conducted on the library's classes and workshops by GCC's Institutional Research Unit. The research project, begun in 1999, studied the impact of library classes and workshops on student success in other classes. For the library classes, student success was defined as GPA in the following semester, as compared with that of a matched group of students. While the data did show a positive correlation between the library course and grade point averages of the students, the data were too small to be significant (see Figure 1). For the library workshops, student success was defined as a passing grade in the

Figure 1 Student course success as impacted by library workshop attendance



English or English as a Second Language (ESL) course from which they had been assigned to take the library workshops, as compared with the performance of all students who did not take the workshops. Here the study showed statistically significant findings of up to a 35 per cent higher pass rate in English and ESL composition classes for students who took the workshops.

Based on these findings, we had strong reason to believe that information competency did improve student learning. However, we wanted a larger sample group for our credit courses and we wanted to assess an infusion model in addition to our existing information competency models.

The pairing model: Library 191 and English 101

The first pairing of Library 191 (one-unit course) and English 101 (three-unit course) took place during spring semester 2002. Students were required to enroll in both courses (maximum enrollment is 27). At the beginning of the semester, there were 22 students concurrently enrolled; at the end, there were 13 enrolled. The Library 191 section met two hours a week (Monday and Wednesday) in a lecture/lab style and was held the hour before the English 101 section. The courses were taught separately; however, the instructors shared their syllabi and met several times during the semester. English 101 requires students to

write eight essays and one research paper during the course of the semester. The Library 191 course schedule was modified so that certain skills were taught before a corresponding assignment was due in the English 101 course; for example, using the *MLA Handbook for Writers of Research Papers* was taught in Library 191 before students turned in a rough draft of their works cited list in English 101. Research paper topics were chosen within the first few weeks in the English 101 course, enabling students to use those topics in Library 191 exercises. Early in Library 191, students began learning how to locate books using the online library catalog. They used their research paper topics from this point until the last section of the course discussing advanced searching and evaluating of World Wide Web sites.

Quantitative data from this pairing was unfortunately not statistically significant. However, the number of students enrolling in Library 191 is increasing each semester, so we hope soon to have large enough numbers to get statistically significant results. The study will be replicated in fall 2002 and spring 2003. Qualitative feedback from the English 101 instructor indicates that students in this English 101 course performed better than previous classes. The English 101 instructor provided the following comments:

In the past, I spent classroom hours in the library showing students how to find and evaluate both print and electronic sources. It frustrated me that I was teaching technical data, not the English reading and writing I needed to teach. As a result

of my English 101 students' concurrent enrollment in Library 191, I do little of the above and more instruction in reading and writing, as I am meant to do. Students get immediate and continuing practice in organizing the research paper and searching for materials with the benefit of [the Library 191 instructor] at their side for interactive learning. This semester, for the first time ever, the students completed the assignments on time and competently. I was amazed at the degree of confidence they showed in their work.

Data were also collected from the students through an essay they wrote in the English 101 course. Some sample student comments are:

Although at the beginning of the semester I did not like the idea or see the point of taking these two classes, now I am thankful that I did. I believe that without Library 191 I would not have been able to write the research paper I am writing now (Student 1).

This class has made a tremendous change in the methods that I now use when I search for information in the library, and in the satisfaction that I have felt on those occasions that I have been successful in my search for books and information. Now that I know the correct usage of the library, I search for books by their classification . . . and I am always satisfied with the results of my search (Student 2).

Taking Library 191 concurrently with English 101 should be offered to more students because it really makes a positive impact on us and on the grades we receive. Library 191 helps us better understand the library and its organization, teaches us different ways to do research and gather information, and helps us to do the homework correctly for English 101 (Student 3).

Besides this formal pairing of Library 191 and English 101, two other discipline instructors (English and political science) informally paired their courses with another section of Library 191 by recommending concurrent enrollment to their students. The English instructor involved in this informal pairing wrote the following report:

Both informal and formal pairing of English composition and introduction to information competency classes have demonstrably increased student success rates in producing research papers. Such pairings allow instructors in the two disciplines to concentrate on their areas of expertise – for English instructors, teaching writing and the forging of research into well-crafted papers; for library instructors, providing students the tools for locating and evaluating information – to prepare students to succeed in academic work.

One of the greatest needs perceived by English teachers is for instilling in students the critical apparatus to evaluate information and judge its appropriateness for academic discourse. Students know how to search the Internet, but many don't know how to narrow their searches to find the most relevant information, nor do they know what sources are available in standard library collections. The information universe has grown in complexity beyond the scope of liberal arts instructors to adequately prepare students to locate and evaluate all the resources available. This can better be facilitated by pairing academic courses, such as English composition, with information competency courses taught by trained librarians.

Students who have participated in such pairings invariably perform better in classes such as English composition, which require research projects. They know how to ask the right questions to find the information they need, and they also know how to determine whether the information is reliable and relevant to their subject. One student who excelled in both the library's information competency course and English composition, which she took concurrently, said: "the world of information truly opened for me. I learned to discern what information was factual or slanted no matter how 'official' the data looked. My critical thinking skills were sharpened along with my research skills" (Student 4).

Although the paired models and infusion models have proven to be most effective, students also benefit from specialized workshops. By attending the workshops students have improved grades in ESL and English classes [see Figure 1].

Students who perform poorly in English composition usually fail on two counts: they have inadequate writing skills and they don't know how to do research. English instructors can help them become better writers and to skillfully incorporate their research into their writing. Library instructors are best able to lead them to the research materials they need to succeed in English and other academic courses.

The information model: nursing curriculum

In addition to this pairing of Library 191 with English 101, another advance in GCC's information competency efforts has been infusing information competency instruction into the existing registered nursing curriculum. The infusion component started in the fall of 2001. For over a year prior to this infusion experiment, nursing faculty had been examining their curriculum to determine the

best way to integrate information competency skills into the curriculum, but found this task very difficult to accomplish. Therefore, the timing of the FII grant, which allowed for collaboration between the nursing and library faculty, was perfect.

From the GCC Library's viewpoint, this collaboration is a particularly advantageous one because the GCC Nursing Department has been exceptionally enthusiastic about the infusion approach, confident in the library faculty's abilities to provide a meaningful learning experience for their already busy students, and confident about desired outcomes.

The nursing instructor who has been involved in the infusion experiment wrote the following report:

The dynamic nature of nursing education at the community college has been impacted both by changes in information and changes in nursing students themselves. As with all programs, the explosion of knowledge and the rapidity of change have led to the need for new competencies and skills among students, and for lifelong learning for teacher and student alike. Student nurses must gain competencies in information seeking which can be taken out into practice with them.

The second factor impacting this changing picture is the changing face of the nursing student. Gone are the days of the "traditional" student who was a single, young female with no other life responsibilities – literally sequestered into a program where her entire life revolved around her "training". In many programs, GCC's included, the non-traditional student is now the norm. They are employed (often underemployed seeking to move up the ladder), parents – even single parents, caring for elderly family members, married, divorced, and some are managing a current career while seeking nursing as a second career. At the same time that the nursing students are attempting a rigorous and challenging curriculum, they are juggling many other life commitments. Recognizing the need for information competencies was easy; figuring out how to fit these needed skills into the program without requiring busy, often overwhelmed students to take yet another class was harder.

The infusion model has been the answer to the needs of the nursing students and faculty at GCC. To integrate, and actually apply the knowledge, skills, and activities of information competence into the nursing content has been a successful process towards achieving the desired outcome of, at a minimum, baseline level of information competence. Focus has been on integrating information competency components into the

courses and then actually utilizing and modeling the process of information competency as a means of covering nursing content. It is hoped that what was developed with the Nursing Department can serve as a model for reaching out to other departments.

In winter session 2002, the FII Grant Librarian provided three 30-minute information competency sessions "infused" into two entry-level nursing courses: Nursing Perspectives (NS200) and the LVN/RN Bridge course (NS 217). These three sessions provided a brief introduction to information competency and its importance to nursing professionals and taught students how to search for books, articles, and Web sites. A brief outline of activities and objectives were incorporated into the existing syllabus in order for the students to make a seamless connection. Assessment in both courses included a pre-course assessment surveying students about their understanding of an "information need", how they found the information they needed, and how they used it; and a post-course assessment surveying students regarding their comfort levels in finding information.

In spring semester 2002, The FII Grant Librarian intensified information competency sessions for the Nursing Seminar I course (NS201). These three 30-minute sessions focused on finding nursing journal articles using two GCC library online resources, and learning how to search the Web to find sites about the American Psychological Association (APA) format for citing nursing journal articles. These sessions were pointed specifically to NS201 assignments to encourage high interest and attention from the students. Moreover, these spring semester sessions were conducted in the library's computer-equipped instruction room to maximize active learning. Assessment for students in both sections of NS201 included pre-course and post-course assessments surveying students about their understanding of topics covered in the infusion sessions. Results were very positive.

Task force recommendations

During fall semester 2001, a Research Across the Curriculum (RAC) Task Force was

convened by the GCC Academic Senate to study models of information competency instruction and how they might be implemented on campus. Several factors contributed to the forming of this task force. Among these factors were:

- an impending information competency requirement mandate for all California community colleges; and
- the current GCC Academic Senate president's positive impression of the library's model information competency program.

With the knowledge that each community college will soon have an information competency requirement (implementation of which will be decided by the individual campuses themselves), the GCC Academic Senate saw a need to begin discussing the best way for the campus to fulfill such a requirement. The RAC Task Force was chaired by an English faculty member and comprised discipline, library, and counseling faculty from various areas of campus.

In May 2002, the recommendations of this task force were presented to the GCC Academic Senate. After many iterations, the recommendations that emerged were based on a flexible, three-tiered approach to information competency instruction at GCC to best meet the needs of students and faculty. The recommendations were to continue funding workshops for ESL and lower-level English students, to pair Library 191 and English 101 for all degree students, and to infuse information competency into core major courses where appropriate. The task force also recommended that divisions include information competency skills in their recommended qualifications for hiring new faculty members where appropriate. This recommendation is particularly apt since not all of ACRL's information literacy competency standards, outcomes, and objectives are primarily the library's responsibility. Information competency must be genuinely infused throughout the curriculum, requiring a high level of information competency on the part of discipline faculty. The GCC Academic Senate approved the task force's recommendations and is funding a project to

develop a second tier of six library workshops that focus on research resources in specific disciplines.

In their recommendations, the task force members recognized that one size does not fit all. For example, although it may be desirable and feasible to require many students to take a paired Library 191 and English 101 course, requiring more credits of students in the nursing program is not feasible. Therefore, while the task force felt the pairing model was the best method to cover the basic, generic information competency skills, it also recommended that individual disciplines be encouraged to infuse information competency into the core courses for students planning to major in that discipline. (For example, an information competency component would be added to History 110, the foundation American history course for history majors). Given these recommendations, the research currently being conducted will be an important resource when final decisions are made.

Conclusions and recommendations

These two experimental information competency models have proved successful enough for us to continue and expand our efforts along these lines. One of the biggest successes we have seen from the Library 191 and English 101 pairing is the "word of mouth" dissemination of information and support. During fall 2002, we will be pairing another section of Library 191 with an English 101 section. However, we have at least five other instructors who have expressed an interest in such a pairing, some from English and others from such departments as business, speech, and health.

The infusion model used with the Nursing Department has the support of the department and the students. The key to continuing this infusion is to develop print and online materials and exercises which can be used by nursing faculty themselves without direct instruction from a librarian. In addition, nursing and library faculty will continue to identify and develop information competency instruction components for the remaining courses for the cohort of nursing students who started in winter

session 2002, and will develop additional assessment instruments. The library will also expand the infusion model to the history department during the next academic year, providing specialized instruction sessions, print and online materials, and exercises as appropriate. The infusion model can be used with various departments ranging from journalism to machine technology.

The recommendations of the RAC Task Force are also positive; however, there are many stumbling blocks on the way to actual implementation. Of these possible stumbling blocks, the most damaging would appear to be lack of:

- consensus among faculty from all departments on the need for institutionalized information competency instruction involving library faculty;
- instructional librarians to teach all the on-demand sessions, standardized workshops, credit courses, and infusion sessions; and
- computer-equipped instruction space to allow for hands-on instruction for all these models concurrently.

At this time, the GCC information competency program is aimed at students who plan to transfer to a university, which constitute a high percentage of the GCC student body. But an information competency program for vocational students also needs to be developed, as well as a

program for basic skills and community learners. These curricula, instructional methodologies, and expected outcomes will be very different.

When an information competency requirement is mandated for the California community colleges, the GCC faculty community will have the necessary documentation and well thought out recommendations for implementation, as provided by the RAC Task Force. They will also have the research report documenting the various information competency models and their degrees of success. Most importantly, they will have the experience and whole-hearted support of the library faculty and the discipline faculty with whom collaboration is already underway.

Note

- 1 The term information competency is used in place of information literacy in the California community college system.

Reference

- Association of College and Research Libraries (ACRL) (2001), *Objectives for Information Literacy Instruction*, available at: www.ala.org/acrl/guides/objinfoit.html