

Information Literacy and Technology Across the Curriculum

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Abstract

Responding to an initiative in the university's revised core curriculum to address life-long learning skills, a collaborative effort involving parties from the Library and Information Technologies was formed resulting in a program for faculty entitled *Information Literacy and Technology Across the Curriculum*. The purpose of the program, which consists of a semester-long series of workshops, is to assist faculty in the development of class assignments and projects for their students that utilize both information literacy and technology skills. After a successful pilot run involving volunteer faculty members, the program is now designed to accommodate approximately fifteen faculty members for the semester sessions. This paper will describe the format of the program, the resources made available, the exercises employed and some surprising results!

Background – Information Technologies

For several years, faculty met on a regular basis to discuss, review and recommend technologies to enhance the learning experience. A special group named the Faculty Advisory Committee on Technology Services (FACTS) was formally acknowledged by the Vice President of Academic Affairs with a volunteer membership of about twelve persons. This group prototyped teacher station configurations and their use, analyzed remedial and reinforcing software for students, and drafted, discussed and recommended computer use policies, among other items. In fact, as a result of the FACTS group prototype session with teacher station configurations, which consists of a cabinet, a computer, a video cassette recorder, a document camera, an Internet connection, a projection unit, a projection screen and a cable television feed, the university was awarded a \$100,000 grant to install five teacher station configuration classrooms for educational use.

Although great strides were made in the adaptation of technology by certain faculty for their courses, the faculty at large and thus, the majority of students in their courses, were not engaged in using technology as part of their learning experience. When faculty members were provided surveys to express their reaction to presentations by their peers in the use of technology in their classes, only one-third of the faculty even submitted their responses. Even incentive programs met with modest success. When the undergraduate dean offered the use of laptop computers for faculty who participated in a workshop on *WebCT*, the course management system selected by

the university, fewer than a dozen faculty members attended the training sessions and utilized the course software. The feeling was that perhaps there was only a certain subset of faculty members who were ever going to be willing to incorporate some measure of technology in either their teaching or in their assignments for students.

Background - Library

The library staff was also experiencing a frustration with their outreach efforts to faculty. Newsletters were published to promote materials and services. Each semester the reference staff would offer informational workshops for faculty on topics such as Internet searching and evaluation, highlights of the new, shared consortium catalog and interlibrary loan, demonstrations of a specific database, e-reserves and a number of others. There was limited attendance. The staff was coming to the same conclusion as the IT office that perhaps there *was* only a certain subset of faculty members that could be reached.

A Change in Direction

More vigorous steps were needed to overcome this inertia. In the summer of 2002, a new graduate dean was chosen and one of her first steps was to revamp many of the graduate courses, particular the courses offered for distance learning, so that they utilized the *WebCT* course management system. An intense effort began with a core set of faculty members and staff to revise the course delivery system from a correspondence format to a self-paced or interactive model, with *WebCT* as the central technical component. Within a semester's time, the first courses using *WebCT* were being offered to students in the graduate extension studies program.

To penetrate the core structure of the learning environment, an even stronger action would be required from the faculty regarding the use of technology and information literacy in the academic program. The University announcement of the creation of a new core curriculum was greeted in the library with optimism. During the core development process the Reference department librarians submitted a proposal that an information literacy component based on national standards be integrated into the curriculum. The Association of College and Research Libraries (ACRL) had developed nationally recognized standards for information literacy. (<http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>)

Information literacy is defined as a set of information and knowledge age skills that enable an individual to recognize when information is needed and then to have the ability to locate, evaluate, utilize and effectively communicate that information.

The standards define the information literate student as one who:

1. Determines the nature and extent of the information needed;
2. Accesses needed information effectively and efficiently;
3. Evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system;
4. Individually or as a member of a group, uses information effectively to accomplish a specific purpose;
5. Understands many of the economic, legal, social issues surrounding the use of information and accesses and uses information ethically and legally.

As mentioned above, these information literacy skills are key components of life-long learning. The goal of graduating students who have information literacy competencies is reflected in the **mission** of our university which includes the following component.

*The university, through teaching and research, prepares men and women for responsible lives by imparting and expanding knowledge, **developing skills** and cultivating enduring values. Through liberal arts and professional programs, students develop their abilities for thinking clearly and creatively, enhance their capability for sound judgment, and prepare for the challenge of **learning throughout their lives**.*

These skills are critical in dealing with an increasingly broad array of information technologies, tools, and resources. An information literate graduate will utilize these skills in their professional, civic and personal lives as they provide a framework for life-long learning.

One result of the library proposal to the core curriculum committee involved opportunities to integrate information literacy concepts into the New Student Seminar classes that every freshman is required to take. Another was the opportunity to work collaboratively with the IT office to create the professional development workshop for faculty that is the subject of this paper.

The faculty issued the following important statement in the fall of 2002.

“We, the faculty and administration of Salve Regina University, are committed to preparing our students for the future; that is, for a world that will continually change and yet remain constant in many ways. A crucially important way to prepare students for this changing world is by helping them discover that they can overcome these future challenges with a lifetime of learning and curiosity about the world.”

- Faculty Memo, September, 2002

In their efforts to revise the core curriculum of our university so that they are aligned with the education needs of the new millennium, the faculty embraced the concept of teaching life-long learning skills to our students. One of the key components in life-long learning was the use of writing, information literacy and technology skills, not just by a few interested parties, but by parties across the curriculum.

“To help students utilize skills that are essential for lifelong learning by giving them opportunities to practice these skills across the curriculum.”

- Faculty Memo, September, 2002

Formulation of the ILTAC Program

The mandate had been stated. It now was a matter of developing the proper facility to operationalize the stated directive. Early on, the emphasis by Library and IT staff was to develop a program that we thought was appropriate for the faculty. In other words, we (the Library and IT staff) would teach the faculty what we thought was important for them to know with regard to

information literacy and technology skills. We soon realized, however, that this would be a fruitless venture.

After several weeks of effort conducting research and reading articles on similar programs at other institutions, we finally realized that rather than tell the faculty what they should know regarding information literacy and technology skills, we should ask them what they thought their colleagues should know and, therefore, what their students should know.

Two steps were taken to solicit faculty input on the Information Literacy and Technology Across the Curriculum (ILTAC) program. The first step was to distribute a survey soliciting faculty response to questions addressing:

- the faculty's input on what relevant skills they thought were important for their students to know.
- the faculty's use of information literacy and technology skills in their courses
- the faculty's expectations of their students in these skill areas, and
- the faculty's satisfaction with the level of competence their students demonstrated in these skills, for example: formulating a manageable topic, finding appropriate materials for research assignments and student use of technology.

The survey served to actually introduce the idea of information literacy to some faculty who may not have been familiar with the term. It also generated information on the current level of integration of these concepts and the perceived need for them. After these results were compiled and summarized, they were shared with the Faculty Development Committee. It was mentioned that there was a noticeable difference between what ILTAC skills faculty require from students for their courses and what skills the students actually practice; further, those teachers who did incorporate ILTAC skills in their assignments were willing to share their 'best practices' with their colleagues, given the appropriate forum.

The second step was to invite members of the FACTS committee and the Faculty Development Committee to participate in the first workshop series on Information Literacy and Technology Across the Curriculum (ILTAC). This action would provide valuable information and feedback from key faculty representatives if our efforts were to take root with the faculty at large. Our hope was that the participating faculty in this pilot workshop and each subsequent one would be contributing to the content of the course as much as possible.

Format of the Pilot Program

The pilot program participants met six times over the course of the Spring Semester 2003. These were very much developmental sessions and notes were taken on a flip chart to focus the discussion and capture the feedback.

Dr. Scott Kennedy, Head of Research and Information Services at the University of Connecticut, was invited to speak to the group on the progress his institution had made in incorporating information literacy and technology across the curriculum. Dr. Kennedy gave specific suggestions on:

- Developing learning outcomes
- Articulating the program and objectives in common language
- Keeping the program focused and finite (and being satisfied with progress in small increments)
- Determining how the learning outcomes will be assessed

There was a lively exchange with the ILTAC participants who came away from the session with a new appreciation that academic institutions large and small, were grappling with the challenges of preparing their students for the information age. Several highlights pertaining to information literacy and technology across the curriculum (ILTAC) from the pilot program were noted.

- ILTAC should take the form of awareness and topic review rather than significant “hands on” activity.
- Each participant would be expected to create an assignment, syllabus, website, and other materials which included information literacy and technology concepts and skills.
- Each participant would be expected to share what she created with the group in some form of presentation.
- These assignments would be collected and made available to all participants of the program, past, current and future.
- A *WebCT* course would be developed that would contain these assignments as well as other content relevant to the workshops.
- Individual knowledge and skills enhancement would be supported by offering a subscription to the *ElementK* portfolio of online tutorials to each of the participants.
- Each workshop would incorporate one aspect of information literacy or technology as a focus. A member of the faculty with an expertise in the focus area would be invited to lead the discussion during the second meeting. The questions for online discussion would also be related to that topic. (Plagiarism and accrediting standards have been the topics so far.)
- An assessment survey would be taken at the end of each semester.

In summary, based on the results of the faculty survey and the pilot run of the ILTAC workshop, the Library and IT staff learned from the faculty several essential lessons. It is important to have an understanding of an ‘information literate’ person and an appreciation of information literacy and technology skills across the curriculum, as opposed to a singular separate course. To adapt techniques to one’s course, an accessible supply of ‘best practices’ would be of value. Finally, to put closure on the overall effort, it was critical to have available guidelines for creating student assignments, and just as importantly, for evaluating and assessing student work.

WebCT Entry for the ILTAC Program

Below is a view of the ILTAC *WebCT* main page with content listed for each segment; this entry is accessible by any person who has participated in the ILTAC program.

Best Practices

Assignments and Course syllabi from a variety of disciplines including Chemistry, Management, Politics, Psychology, English, Philosophy, Math, Information Systems, and International Relations

Readings

The ILTAC course syllabus and various readings concerning information literacy and technology concepts (see bibliography)

ILTAC Resources

Links to ILTAC examples from other universities with similar projects, plagiarism resources, New England Association of Schools and Colleges links and the TILT tutorial.

Faculty Web pages

Chemistry, Psychology and Politics

Minutes

From all sessions

Discussions

This semester participants were required to respond to a posted topic.

Surprising Results

The dynamics generated in having a small group of faculty from different disciplines participating in a new learning environment cannot be understated. This effect is evident in many ways. Faculty members who have not recently assigned research papers to their students were very interested in new methods and facilities in conducting research; they did not hesitate to express their openness to learning the newest techniques. In some instances when the faculty member was doing his or her doctoral research several years prior, the use of the Internet and modern word processing tools was not as prevalent as today. These professors were very appreciative in learning about the use of web-based search techniques to obtain numerous references that might satisfy their interest. From a different perspective, they were surprised by the tempting ease in copying written material off a web site and passing it along as one's own work.

The use of web-based discussion groups by faculty in their courses was of value to a variety of teachers. For example, when the professor of International Relations demonstrated his use of *WebCT* discussion groups for his graduate-level course, the professor from Philosophy thought that this technique would be adaptable to her classes; she noted that when providing a statement or question pertinent to the philosophy topic at hand, her students would be able to ponder a response in a quiet setting rather than try to compete for an opportunity to voice a quick response in the classroom setting. When the class actually met, she intended to briefly review the various responses already posted in the discussion group site and thus enable her students to delve into more serious discussion while in the class.

Several faculty freely shared their use of other ILTAC techniques. For example, the Political Science professor shared the methodology that she provides her students in obtaining information on a chosen topic. She outlined in detail the instructions that she provides her students in following the navigational path through numerous web links until arriving at the desired target site; these instructions provided a basis for future assignments in which the professor could provide less and less instruction while expecting the student to pick up more and more of the research work. On a different note, the History professor shared his example of using word processing for students to submit milestone drafts of their work so that he could better guide their thought processes and writing styles in subsequent drafts. Finally, the Chemistry professor shared his use of *WebCT* for assigning quizzes for his students to take before coming to class; he noted that the level of expectation in being prepared for class was raised to such a degree that when he occasionally would have technical difficulty or not enough time to post a quiz on the *WebCT* site, his students were disappointed that they were not able to take the quiz before class!!

The atmosphere in the class encouraged faculty to share their ideas regardless of their level of using the ILTAC skills. In the first meetings of the workshops, faculty less inclined to utilize ILTAC techniques in their assignments seemed somewhat intimidated in participating in the discussions. As time went on, however, they realized that the important step is to start somewhere and then build on that experience. By noticing several of their colleagues in a similar position, it shored up their own courage to demonstrate their ideas without the fear of being embarrassed. They seemed to understand that modest attempts in incorporating ILTAC skills in their work and assignments were better than no attempts at all; further, they realized that with the help of supportive colleagues and available resources, their progress proceeded at a faster pace than they thought possible.

During the workshops, the faculty participants were made aware of resources pertaining to ILTAC skills that were available on campus. The university's *WebCT* administrator addressed the group during one of the sessions to describe the features of *WebCT* and the procedures for creating a course site using *WebCT*. The university's IT director described the use of a web-based skills training facility, *ElementK*, for which each faculty member was subscribed; *ElementK* provides self-paced and instructor-led programs in a variety of technical applications, particularly the Microsoft *Office* applications. A sheet of available staff in the Library and the University Computer Lab was also provided; this information included names, areas of expertise, telephone extension and email addresses. Some faculty noted that they were unaware that such a wealth of resources was available for them to utilize.

Opportunities for Improvement

Each iteration of the ILTAC workshop program provides opportunities for improvement in the operation of the series. Because of the supportive technology made available in a personal way to faculty, certain authentication (username and password) procedures were not always successful; this result caused various degrees of frustration for participants in trying to do their assignments for the workshop using *WebCT* or *Element K*. The lesson learned by this experience is to establish and simulate access provisions for each participant well before the item is utilized in the workshop. It was also noted that due to the schedule of the workshop which paralleled the

semester schedule, faculty were not always able to complete their assignments because of commitments to students in the classes they were teaching. The lesson learned by this experience is to have the faculty start their assignments earlier in the workshop schedule. Finally, because of the embryonic nature of the program, there is only limited information obtained regarding the effect of the program on the actual work that the students are completing. The full cycle of the process consists of faculty incorporating ILTAC skills into assignments that the students complete and for which they will be assessed according to predefined rubrics. The longevity of the program needs to be further extended for the fruits of the faculty efforts to be fairly evaluated.

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