

# Service Learning in Information Technology Leadership: A Natural Connection

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**R**ecent surveys document the growth of service learning on American campuses, whether through college-wide initiatives that encourage or require student involvement in community projects or through faculty-initiated, course-based academic structures.<sup>1</sup> But there is little data on the number of academic majors that include service learning as a graduation requirement.<sup>2</sup> The information technology leadership (ITL) major at Washington and Jefferson College (W&J), created in spring 2002, incorporates service learning in its required capstone course, ITL 400. Requiring service as part of our major enhances the benefits to the department and the community that usually accompany service courses.

## **Building Community Relationships through Information Technology**

The service-learning foundation of ITL 400 creates continuity for the community organizations we work with and for the students in our program. The community organizations can think strategically about how to integrate the service of ITL students for both immediate and long-term projects, and our students can see themselves building upon the work of previous graduates of the program. For both groups, the horizon of the relationship between community and college becomes expansive, built upon shared goals and long-term commitments.

For the ITL department, these long-term relationships, and the variety of service projects they produce,

help communicate to students, the community, and even our academic and administrative colleagues the liberal arts philosophy behind our program. When we created the ITL major, we sought to define the emerging field of information technology as a liberal arts discipline. Seeking to distinguish ourselves from traditional computer science programs, we emphasize the inherently interdisciplinary nature of information technologies. While we do require courses in programming and databases, we also require more interdisciplinary courses that draw upon traditional liberal arts disciplines such as psychology (in our human-computer interaction course), history (in our IT and society course), and art (in several of our new media courses). Moreover, the three emphases available to our majors—information systems, data discovery, and new media technologies—naturally connect to the different divisions of the college and provide attractive courses for students in other departments who wish to minor or double-major in ITL. The project-based service-learning capstone helps us communicate the interdisciplinary nature of our program, and our contribution to fulfilling the liberal arts mission of our college, to multiple audiences.

ITL 400 students have worked with the Washington Community Arts and Cultural Center (Wash Arts) for each of the past three years. Wash Arts was established in 2001 to bring cultural programming and arts instruction to southwestern Pennsylvania children at low cost—free for children on free or reduced lunch programs. In the

first year of our relationship with the center, one of our students facilitated the center's first offering of a digital music class. The class met once a week in W&J's technology center, and the student's duties included installing and maintaining the class's specialized software on the lab's computers; meeting with students before and after the class to provide tutorial assistance; and helping other students create CDs of electronic music they created in the class. In our second year working with Wash Arts, two ITL students taught Wash Arts' first class in digital art. Meeting at the arts center two nights per week, the students planned the entire curriculum for the course, and even brought department laptops and digital cameras to the class when necessary. Most recently, two ITL students made a twenty-minute documentary film about a neighborhood arts program run by Wash Arts, assuming all responsibility for filming, editing, and writing the narration for the film. These progressively more complex projects reflect the growing trust between the center and the college. Most importantly, they demonstrate the variety of skills—in oral and written communication and in project management as well as in information technologies—that we want to see in liberally educated ITL students.

### **Community-Based Projects**

In many cases our service projects benefit from existing intersections between community organizations; sometimes we create new ones. For example, one student in the digital art class was also a member of an after-school Youth Engaged with Technology (YET) club at the local Washington High

School. YET is funded through a five-year grant from the federal government's Children, Youth, and Families at Risk program. Students in this club learn a technology-rich curriculum and interact with the community through such activities as workshops for senior citizens and technology consultations. Students enrolled in ITL 400 have been working with the YET club for the past three years on increasingly complex projects.

In the first year, three ITL students attended the twice-weekly meetings and assisted in teaching the robotics, Web development, and Geographic Information Systems (GIS) elements of the YET curriculum. For the GIS segment, they organized a treasure hunt in which YET students used global positioning systems to find a variety of items. In the second year, two other ITL students supplied similar instructional assistance during club meetings and arranged a visit to the Washington County, Pennsylvania, 911/Emergency Response office, where YET students learned about how the county was incorporating GIS technologies to improve emergency response. In the most recent year, ITL students provided instruction in LEGO robotics to YET club members interested in serving as robotics camp counselors over the subsequent summer.

Through these community-based projects, our students learn how they can help improve the quality of life in communities surrounding the college. In the past three years a palpable synergy has developed between Wash Arts' digital art classes and the YET club's high school students, who have developed increasingly sophisticated technology-related skills. In the first year of

their collaborations, YET students developed the Web site for Wash Arts; most recently, they worked together to open the Inspiration Store, where Wash Arts artists sell their work and YET club members operate a Web development and computer assistance office. These kinds of community collaborations take years to develop; the annual involvement of ITL 400 students has allowed them to become partners in the community and to witness firsthand the benefits of long-term community involvement.

One final example will demonstrate the ways in which the service of ITL students reinforces and sometimes creates collaborations between community organizations. Two years ago, an ITL student worked with Science Matters, a partnership between W&J and local schools and businesses, to integrate the LEGO robotics curriculum into local schools. The student handled software and hardware issues, facilitated

### **AAC&U Work on Service Learning**

The Center for Liberal Education and Civic Engagement brings together the resources of the Association of American Colleges and Universities and Campus Compact. Campus Compact is a national coalition dedicated to promoting community service, civic engagement, and service-learning in higher education. This partnership enhances the powerful possibilities of campus work on civic engagement and illuminates how higher education's societal obligations can be integrated into the academy's core educational mission. For information about the center, see [www.aacu.org/issues/civicingagement](http://www.aacu.org/issues/civicingagement).

communication between Science Matters and local schools, and organized a training camp for interested science teachers. In the following year, two other ITL students organized a robotics competition for students in these schools who had become involved in the robotics curriculum; they also helped plan the robotics summer camp and trained counselors from the YET club to assist during the camp. At the same time, several of the YET club students were assisting with the Wash Arts neighborhood arts program that ITL students were filming. Because of the interconnections between all of these projects, ITL students found themselves working with some of the same area children, who independently have become active in various Wash Arts, YET, and Science Matters projects.

Other ITL 400 students have worked with the local county information technology office to implement the Health Insurance Portability and Accountability Act (HIPPA) requirements, with the local hospital to research and recommend an e-mail encryption program, with a local health partnership to create a client database and to upgrade its internal network and information manage-

ment system, and with the county's literacy council to create a new Web site. None of these projects was strictly technical; rather, students combined their technical skills with their ability to research and collaboratively implement solutions to information-related problems. In doing so they came to understand the obligation to community that is inherent in liberal education.

### **Service Learning, Leadership, and Liberal Education**

In addition to their service commitment, which typically requires six to eight hours of work each week, ITL 400 students meet weekly as a class to discuss their service work and the weekly reading assignments. The earliest of these readings are in the field of project management; students learn principles of project management, and write a first essay about how they intend to apply these principles to their projects. They also learn to use Microsoft Project to map out a preliminary plan for their work. At the same time, students are assigned readings on the topic of service learning itself; we find that instructing students in the goals and purposes of service learning helps us convey the

philosophy of the department and of liberal education in general. These readings segue well into others from the field of servant leadership, the academic domain that informs the "leadership" portion of the information technology leadership curriculum. Perhaps more important than any of these assigned readings is the requirement that the students identify a text that supplements their service work and write a second essay about the connection between the text and their experience. In some cases these connections are direct: the two ITL students who shot the documentary about the neighborhood program run by Wash Arts selected books on the art of documentary filmmaking. But in other cases the connection is more tangential and, in some ways, more rewarding: many students use this assignment as an opportunity to explore such issues as community engagement, educational theory, and the management of non-profit organizations.

Students in ITL 400 receive grades based on their essays, weekly participation in class, final presentation, and reflection in the



course blog—not on the success or failure of their projects. In fact, while the students' work on these projects has always been excellent, the experience has helped us understand why 70 percent of IT projects fail. This failure rate is less the result of inadequate technology or poor work than of changing requirements and uncontrollable external factors. The digital music and art classes, for instance, rarely attracted the same students two weeks in a row, so it was difficult for the instructors to follow planned curricula. One week before the announcement of the robotics competition, a similar competition for the same weekend was announced by Carnegie Mellon University, which affected our level of participation. Additionally, most of the Web development projects have to be modified midstream due to our clients' inability to deliver content according to the planned schedule. Unsurprisingly, our Microsoft Project planning charts are rarely followed past midterm.

The long-term relationships with community organizations established by our requirement of service learning in the ITL capstone reinforces this sense of obligation in our students and helps us communicate to them, and to our campus colleagues, the program's grounding in the liberal arts. This has proven a surprisingly difficult effort, largely because of the common assumption that technology-related majors are necessarily preprofessional. Our department seeks to define information technology as a liberal arts discipline by stressing the interdisciplinary uses of information technologies as well as their social and historical contexts. Rather than preparing students for the IT profes-

sion specifically, we (like other liberal arts faculty) counsel students to pursue their passions in life; we hope they will consider ITL as a major that will prepare them to address needs related to information, whether they are directing an art museum, serving in the Peace Corps, or working in some other occupation that brings meaning to their lives.

As a result, our graduates pursue the same mix of professional and graduate school opportunities as other liberal arts majors. They do so prepared to address the challenges of information in an increasingly diverse and interconnected global environment. We hope that their experience with service learning also empowers them with a lifelong habit of giving back to their communities. ■

### Reference

Campus Compact. 2005. *Campus Compact annual membership survey—2005*. [www.compact.org/about/statistics/2005/](http://www.compact.org/about/statistics/2005/).

### Notes

<sup>1</sup>The best source for these statistics is the Campus Compact annual membership survey.

<sup>2</sup>According to the 2005 Campus Compact survey, 29 percent of courses that contain a service component “require” it, while 58 percent “could be described as having a combination of both optional and required service components.” Throughout the survey, however, questions are asked about “service, service-learning, and/or civic engagement activities and programs,” making it difficult to draw conclusions about academic majors requiring a specific course that incorporates service-learning pedagogy.

In addition to its annual meeting, AAC&U offers a series of working conferences and institutes each year. Additional information about the upcoming meetings listed below is available online at [www.aacu.org/meetings](http://www.aacu.org/meetings).

### AAC&U's Annual Meeting

January 17–20, 2007

#### The Real Test:

Liberal Education and  
Democracy's Big Questions  
New Orleans, Louisiana

### Network for Academic Renewal Meetings

March 1–3, 2007

General Education and  
Assessment  
Miami, Florida

April 19–21, 2007

The Student as Scholar:  
Undergraduate Research and  
Creative Practice  
Long Beach, California

### Summer Institutes

May 18–23, 2007

Institute on General  
Education  
Newport, Rhode Island

June 20–24, 2007

The Greater Expectations  
Institute  
Burlington, Vermont