

## **2006-1005: INFORMATION TECHNOLOGY INTERNSHIPS IN NON-PROFITS**

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# Information Technology Internships in Non-Profits

## Abstract

Non-profits are faced with acute needs to maintain fiscal accountability, integrity and generosity. Not only are the current demands for assistance from non-profits in the United States of America at an all-time high, but they are under increased scrutiny from the media and the public. Students interning with non-profit organizations are learning the reality of these challenges as our country recovers from unprecedented natural disasters.

The new non-profit is quickly developing into a new organization. It no longer resembles municipal government or the for-profit organization, although it is rooted in both. The legal environment is also evolving for non-profits. The Internal Revenue Service is taking a hard look at many organizations in response to scrutiny in the media.

Many information technology majors have real-world work experience in manufacturing or for-profit services, but they've never faced the tough process of prioritizing projects for funding, choosing equipment or software on a minimal budget, or convincing donors to assist with on-going organizational expenses. Five computer information systems interns at non-profits found that they were constrained by unexpected budget, staffing and accountability issues. This paper shares some of their experiences and findings as their active learning process constantly tested their beliefs. The concrete consequences of their projects were motivators to be quick studies and sources of frustration as they struggled within the boundaries of limited resources.

## Learning to listen and respond

Purdue University advisory board members voiced concerns that computer and information technology majors didn't have the skills to communicate effectively with their teammates, customers and employers. A sister department agreed to change a sophomore-level course to meet this need. Although the intended outcomes weren't realized through the curriculum change, a productive dialogue between departments began.

This dialogue had a domino effect as computer and information technology majors began to take a presentation-based problem-solving course. Team teaching of project-based management courses with both information technology majors and organizational leadership majors occurred at the senior level. Some computer and information technology majors decided to add an organizational leadership minor or take an internship elective in the organizational leadership department.

This paper discusses the experiences of five students in a service learning course that was taken as an elective by information technology students. The organizational leadership department requires its graduates to participate in a semester-long internship. Student interns volunteered




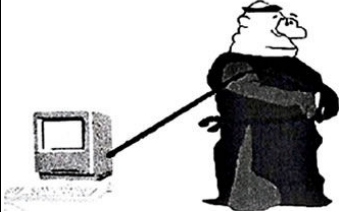
between 48 and 60 hours during the semester. They also wrote a thirty-page journal reflecting on their experiences and spent time in class talking about their experiences. Students were required to evaluate their experiences, and the non-profit organization was required to evaluate the student volunteers. They presented a slide show of their experiences at the end of class.

### Identifying Needs

Three individual student information technology projects involved work with a variety of non-profit organizations. One organization was an historical house museum, the second organization was a community arts council and the third was a computer recycling and training project. All of the organizations had advertised for volunteers with computing skills. Each of the information technology students' selected projects was chosen to use skills appropriate for their information technology course level.

The complexities of record keeping, budgeting, communication systems, and inventory management became a reality for the student volunteers. While information technology interns at for-profit companies normally worked in a specific department, these interns were able to work from the corporate vantage point. The experiences emphasized the importance of integrated systems and provided project planning experiences.

Historic House Museum	Arts Council	Computer Recycling Project
Team of three students	One IT and one OLS student	One student
Acquired as a public property museum in 1955	Consortium of member agencies providing a variety of performances and arts experiences	Project founded in 1997 by a person concerned about the environment and the poor
This house museum provides tours, historic programs, holiday events and rental for special occasions.	The arts council coordinates performances and arts events at several locations. They also disburse small grants to other arts agencies in the region.	Major donors to this project are local businesses. Organization is a computer training program as well as a reuse program.
Trained docents, community board members and other volunteers implement the programs of this museum.	Arts council relies on hundreds of volunteers to operate its events and programs.	The organization relies on volunteers to provide training to inner-city residents.
Support for the museum comes from grants, member fees, donations, and profits from rentals and events.	Support for the agency comes from arts grants, member fees, donations, and profits from ticketed events.	The organization is supported by its founder, his wife and brother who work to provide funds for the charity.
Marketing is primarily done through the local tourism council, travel magazines, direct mailings and a web site.	Marketing is done through a web site, direct mailings, tourism council and partnerships with other community groups.	Marketing is done through a web site, word-of-mouth and church bulletins.
Item values, date of purchase or gift are manual records. No	The wide variety of activities at several facilities dictates a	A major limitation for this organization is lack of storage

reappraisal of items is done on a regular basis; donor records are kept manually in a ledger book.	sophisticated, integrated computer software package to track schedules, participants and income.	space, struggles with cash flow, and no part or full-time employee.
	  <p><i>Polygraph Lounge</i></p>	<p>Hey buddy, can you spare a computer?</p> 

Orientation

Students met with their community agencies. There was considerable variation in orientation. The arts council had a good orientation program for volunteers, another had orientation for docents only and the third had virtually no training for volunteers. Fortunately, the student interning in the third organization was mature and held an information technology position in a major automotive company.

The arts council and historic museum saw computing needs as important, but their executives and volunteers participated in organizational activities because of a love of the arts or history. Computing needs took a backseat to capital improvements or presentations. Many essential records were being kept manually.

Training for volunteers varied widely. The historic home trained docents extensively. Other volunteers at the museum received a little on-the-job training. The arts council worked with the student volunteers at several meetings to help them understand the organization and the organization’s expectations of the volunteers. The student volunteer at the computer recycling program actually organized the first volunteer and worker training program.

Students self-selected their own host organization, but this may not have been the best approach to matching interns with non-profits. While almost all for-profit companies interview interns for skills, motivation, and aptitudes, our experience was that only one of the non-profits did so. The experience convinced the instructor to require students to interview the community agency in future classes.

Historic house museum

A team of three students made an initial visit to the museum to research possible volunteer jobs. Tasks that could be done at discretionary hours included organizing the gift shop and entering data in the computer. After a look at the database needs of the museum, a team of three students agreed to research possible solutions.

This particular museum is committed to obtaining as many of the original family pieces as possible. Descendants of the original owner and his brother have been very helpful with their donations to the museum. Original family pieces may not be sold or traded. While the museum takes pride in the family-owned items, they also strive to accommodate items that fit known descriptions of the home's prior furnishings and early Victorian lifestyles.

All acquisitions of the museum need to have provenance information. Pieces on loan or owned by the museum need to have documentation on the circumstances under which the item is offered to the museum. Documentation of the research on authenticity, value, condition, and relevance of benefit to the collection are extremely important. This museum rotates displays of smaller pieces for various events and during certain seasons, and a photo inventory would help in this task.

Records of donors, sellers and their representatives are important for legal purposes. The museum needs to be able to show records of acquisition decisions. Acquisitions are frequently traded with other museums if there is an opportunity to acquire a better period piece. Prioritization of new acquisitions is also a database and planning need for the museum.

It is important that ethical decisions are made in the acquisition of objects. The museum has limited funds for acquisitions, and it certainly wants to authenticate items' origins and values. Acquisition and disposal policies need to be part of the overall system planning. Typically the executive director makes recommendations to the board in collaboration with a collections committee or another professional's opinion. The museum's ability to conserve an item might also be part of this decision.

“Harried directors...who spend their time riding the rapids fed by funding problems, gregarious patrons, prickly professionals, and probing reporters usually have to make time to think about anything beyond survival.”<sup>1</sup> The museum board plans one year at a time, and has not considered a longer range for planning. A systems approach to planning is desperately needed for their acquisitions, long-term financial needs and database to help the organization meet its goals.

The student team found it impossible to consider improvements in one area without showing how they would affect other areas of the museum. The recommendations were combined into a master plan and presentation. Not only did the team recommend computer and software changes, but they tackled the lack of access for disabled persons. They recommended slide presentations featuring the home's rooms and furnishings for the physically challenged and the hearing impaired. They suggested having some gift shop items available at ground level.

The team made recommendations for basic accounting software, word processing and data base programs. They helped museum staff to see the advantage of viewing their organization as a system.

Arts council

Student interviews discovered several customer needs. The arts council administers small grants to other arts groups in several counties. They write grant proposals for their own funding and

review grants for other groups. Some grants require documentation of volunteer hours, gifts-in-kind, and individual donations.

Other information needs included accurate donors and volunteer lists. Notes on events had to provide detailed information for logistics, caterers, equipment, and expenses. Paid membership lists and addresses needed to be updated continually. Effective fund raising and ticket sales necessitated an integrated software package to support all of these functions.

Two students volunteered for this organization after the organization's director made a presentation in class. The organizational leadership intern worked to build volunteer networks, and the information technology intern helped the organization select a software package to manage their donor and volunteer information. The strong leadership of the organization made their experience a very positive one. Both of these students have continued to volunteer for the organization.

The information technology student intern made dozens of phone calls, tested software packages, talked to company representatives, and consulted with similar non-profits. Investigating the purchase of a software package became a major research project for her. At times, she was very frustrated by budget constraints because the organization had only enough money to purchase either the software or a new computer.

It was very difficult for the student volunteer to work in a consultant role. She had a professional opinion about which software option would be best for the organization. Her job was to present the facts in an unbiased manner to the organization's board. She needed to present information clearly to persons who weren't information technology professionals. The information needed to be accurate and reliable. Her presentation needed to assist the board members in making the best decision for their organization, based on her information and their budget.

### Computer recycling

This student internship was in non-commercial computer recycling project. The volume of computer waste has generated a new industry. While the profitability of recycling computers is questionable, environmental issues are driving control of the waste stream. Computer monitors generally contain lead, cadmium, mercury, barium and other heavy metals. Plastics don't decompose in landfills and computer plastics are treated with halogenated flame retardants (Lee et. al. 2000).<sup>2</sup>

California and Massachusetts now have electronic waste recycling laws. Perhaps other states will follow their lead. The computer recycling agency was organized to keep old computers from the landfill, reuse parts to build working computers, and train inner-city residents to use and repair computers. One student intern taught computer testing and repair skills in the program and developed learning modules for trainees.

This student chose his project because he didn't want a project that would be hard to leave at the end of the semester. He admitted that he would be uncomfortable making emotional ties to an organization. He was a straightforward problem-solver with good information technology skills.

Computer recycling seemed like a volunteer opportunity in a business-like atmosphere. The opportunity matched his career skills and comfort level.

The founder of the organization is a civic environmentalist. He aims to keep computers out of landfills. He also is passionate about environmental education, promoting awareness of the technology-landfill issue in schools and businesses. He has successfully tapped business sources that are replacing old hardware. The founder hopes to recycle 5,000 computers a year in the near future. At present, the organization operates on the weekends because they cannot afford a permanent operations director. The organization has trained 300 persons in computer repair to date.

The student volunteer at the computer recycling location took his son and neighborhood high school students with him on Saturdays. They were exposed to diversity, learned to give of their time, developed their own talents and helped transport loads of computer parts. Hopefully, their experiences will help them to develop some lifelong habits of giving to the community. The student made a strong emotional commitment to his project despite his reservations.

In reflection, the information technologist admitted that his was an emotionally challenging experience. He worked with disabled, unemployed, low-income, inner-city residents. These persons were likely to be ethnically or racially diverse. Some were newcomers to the United States of America.

None of the trainees had access to a computer at home, and all wanted to be part of an electronic society. There was some variation in what constitutes “fair trade” in work for a free computer. Today the program gives computers to persons who will work four Saturdays in the warehouse. Others stay longer to learn more skills.

Trainees in the recycling project were taught to sanitize hard drives and to inspect the computer for breakage of hazardous materials. The student volunteer standardized a process for assuring that hard drives were cleaned to meet government specifications. The student intern was able to help the organization obtain software to do this task.

The student intern developed a training manual for new participants at the recycling center. The manual provided a basic curriculum, a process, and a test for skills. Participants could not get a free computer without showing progress in these skills and attending a minimum number of sessions. Several of the “graduates” of the program have obtained employment because of the skills they developed in the program.

Most of the computers and monitors given to the recycling project came from local businesses. Workshop participants were taught to evaluate the donated computers for function and compatibility with current software. If a unit could not be refurbished, parts such as circuit boards were removed for reuse or sale. Most of the recycled computers are given to workshop participants, parochial schools and inner-city community centers.

One of the weaknesses identified was an absence of a database of potential donors for the project. Although many refurbished computers went to schools, the schools did not provide

volunteer labor. Teachers who might have donated volunteer time could have improved their understanding of technology and repair skills to share in the classroom.

The organization relies on volunteers and their website to locate computers. Classroom links would strengthen the word-of-mouth marketing of their programs. The charity needs to find ways to increase cash flow and strengthen partnerships with local universities. It also needs to locate an outlet for parts that cannot be used. Building links with business volunteers in the community might provide links with plastic and scrap metal recyclers.

### Complexity and frustration

Each of the student volunteers was appalled at the lack of capital resources available for computing needs in their community organizations. Their work experiences were for a Fortune-500 manufacturer, a city utility for a community of 38,000, and a government agency, an electronics store and a telecommunications company. They were used to spending \$30,000 or more on a piece of software. The service learning experience changed their perceptions and gave them experiences to become strong civic contributors.

None of the students understood the complexity of non-profit organizations before their volunteer experiences. The functions and responsibilities of various groups in the non-profits were not as clearly defined as they were in industry. This complexity and variety made it more difficult to manage an organization, especially one relying on volunteer labor.

The executive of the non-profit in two organizations is a full-time paid position, but the executive operates at the pleasure of the board. The executive director of the non-profit exerts less influence on decisions than an executive in industry would. Students made presentations to the full board to gain understanding and acceptance of their recommendations. The governance structure of the non-profit can be more stable in tenure than the executive position.

Not all recommendations were implemented immediately. In the case of the house museum, the board chose to implement the minimal-cost recommendations first. The students' recommendations competed with chimney and gutter repair priorities.

Leaders of non-profits are conductors of information, events, committees, and resources. Their communications skills are critical to the organization's success. Decision-making styles of these organizations are quite different from industrial organizations, since influence and consensus were needed to come to an agreement.

Each of the organization's public relations and marketing efforts focuses on changing public attitudes to support their causes. Outreach is constantly at the forefront to sustain membership, obtain donors, entice visitors, engage participants and maintain programming (Taliento & Silverman 2005).<sup>3</sup> There is a great reliance on the executive director to make all of these things happen, since board members sometimes see their appointments as social rewards.

“With money you're a dragon; without it you're a worm.”<sup>4</sup>



Unlike industries, non-profit organizations infrequently have compensation rewards. Paid staffs sometimes have to write their own raises into grants. Resource gaps are not uncommon, since income may revolve around events or funding cycles for grants. Boards attempt to keep overhead low since members and patrons are more interested in services, activities and events. Low overhead may have negative consequences for non-profits in the long run (Taliento & Silverman 2005). Organizations needs a strong financial leader who is not the executive director.

Operating an organization with fluctuating capital and a limited budget is difficult. Each of these organizations would be threatened with loss of reputation, membership and support if sound fiscal measures weren't in place. An education process with board members is needed to make them more aware of the costs of ignoring a solid financial system for the organization. Board members need to consider the intended and unintended costs of decisions that they make in the name of accountability (Taliento & Silverman 2005).

Financial clout is represented in the board structure of all three organizations. Each of these organizations needs to challenge others to help them with their computing needs. There are available information technology professionals who might help each of the non-profit organizations strengthen their abilities to access donor records, inventory and potential resources. There is strength in numbers, and an improvement project sponsored by a nearby industry could make a big difference for each of these non-profits.

Will students from this university pair with non-profits again? Absolutely! The lesson in civic responsibility was memorable. Hopefully interns will become board members of community organizations with a better understanding of financial, management and technology needs. "Effective philanthropy and nonprofit management are instrumental in creating and maintaining public confidence in the philanthropic traditions--voluntary association, voluntary giving, and voluntary action."<sup>5</sup>

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