Student Workers in Educational Technology Support

When linking service learning and university development, who benefits and in what ways?

By **Christoph Meier** and **Franziska Zellweger Moser**

A few years ago, an interesting debate on the employment of students in university IT departments appeared in this journal. In his article, John Mrazek spelled out the risks involved when tech departments addicted to using student workers treat students as a cheap alternative to permanent staff: reduced quality and reliability of services, and a threat to the reputation of service units.[1] Jason Brown, for his part, acknowledged the vital role students play in IT departments and pointed out some related problems.[2] He highlighted the need for thoughtful training programs and careful deployment of students. We want to enter this discussion, specifically by extending the idea of student employment in service units to a service learning approach.

We introduce our argument with two vignettes of student workers.

Paul: PC Lab Tutor

Computer labs for seminars and workshops occupy the basement of the main building at the University of St. Gallen. The labs are also frequented by students looking for a quiet place to work.

Paul sits at a desk in the anteroom. He has been working as a student assistant in the IT department for about a year as one of 12 tutors who support their fellow students with IT issues (for example, corrupted text documents, troublesome hard disks, driver issues relating to printing, or wireless access), either in person or by e-mail. Always interested in IT, he found it easy to learn university-specific IT issues. His main resource is a well-organized database. If he encounters a question he can't answer, one of the other IT tutors typically responds quickly. He has learned a lot by experimenting and through informal exchanges with his fellow tutors and IT support staff.

Paul likes this job, and he intends to keep it until he has finished his master's degree. It would be difficult to find a comparable job with such flexible scheduling.

Simone: StudyNet Consultant

Simone is on her way to a professor's office for a consultation. Before entering the Institute of Tourism and Services, she takes a seat and gets out a folder with guidelines for the upcoming meeting and recommendations based on her previous analysis. Simone is participating in a consulting program that supports faculty in upgrading course representations on the university's learning management system, StudyNet, and in better exploiting the LMS for technology-enhanced learning.

Simone's preparation included a job interview, a training workshop, systematic analysis of course representations based on a guideline, formulation of observations and first ideas, and a coaching meeting with a mentor from the service unit running the program.

Simone hopes the professor assigned to her will be open to and appreciative of her ideas. She does not really expect he will be willing to discuss major changes in the way he interacts with his students. In her opinion, the adoption of an improved course welcome page, a more clearly structured course representation, and perhaps the piloting of a short online self-test component in the middle of the semester would make her mission a success.

Student Employment and Service Learning

Most universities follow the traditional economic rationale for involving student workers in IT support. Service learning also follows a traditional pattern at most institutions, usually through assignments for local (nonprofit) organizations and institutions. We illustrate a new option for service learning involving student workers through a project currently implemented at the University of St. Gallen.

Economics of Employing Students

Student employment in the university typically falls into one of two categories: working as teaching or research assistants, and working within service units such as libraries or IT departments. Such employment may be considered from perspectives related to economics or to student involvement and success in academic programs.

With regard to economics, relevant issues have already been pointed out.[3] Student employment in support units, for example, provides benefits to students through

- employment on campus with minimal overhead in terms of commuting, and
- employment possibly related to each student's field of study and professional development, which helps students apply theoretical knowledge

to practical problems and might also open up opportunities for employment after degree attainment.

Student employment provides benefits to service departments and the university through

- cheap, flexible labor on short-term contracts, and
- firsthand experience with a pool of potential candidates for permanent positions.

Economics are increasingly important to universities, but so is student success. Low drop-out rates and high academic achievement are important factors for student recruitment and for the university's position in the market. Astin[4] pointed out that part-time student employment on campus is an important factor in involving and retaining students. Students relying on the institution not only as a source of education but also as a source of income are likely to develop a greater sense of attachment. Whether or not this translates into higher academic achievement is not clear, though.[5] We assume this depends largely on the hours per week worked and the proximity of work-related tasks and problems to the student's field of study.

Service Learning Benefits

While working as a teaching or research assistant potentially provides valuable learning experiences closely related to a student's field of professional development, the number of positions available is typically restricted—most students do not have access to such jobs. One promising route to providing practical experience related to a student's field of study is service learning.[6] Defined as "an academically rigorous and integrated real-world course project where students produce tangible, professional results for use," service learning provides benefits for the different stakeholders involved.[7] Typically, it encompasses consulting projects for a variety of clients, ranging from communities to civic bodies or industry partners.

For students, the benefits of service learning include:

- Experience in the role of consultant, particularly with regard to one's own communication and interpersonal competencies
- Deepened understanding of organizational realities
- Deepened understanding of human behavior in noneducational (occupational) settings

For the university, the benefits of service learning are:

- Highly valuable learning experiences for students
- Positive marketing of the university

Finally, for the clients and recipients of the services offered, the main benefit is:

- Inexpensive service complying with basic professional standards (enforced by instructors)

Students value the learning resulting from service-learning projects much more than learning deriving from traditional in-class course work.[8] A service-learning approach is not a guarantee of success, however. Petkus[9] stressed that learning environments are most effective when they allow for practical experience along with reflective observation, abstract conceptualization, and active experimenting.

Service Learning in Support Units

Service learning typically takes place outside the university. We argue that a service-learning approach can also work well in support units within the university. Consider an example from our own university.

The University of St. Gallen drastically changed its curricular structure and conception of teaching and learning in 2001, implementing the two-tiered bachelor's/master's system according to the Bologna Declaration, a pan-European reform project in higher education. In addition to structural reform, the idea of self-directed learning supported by educational media was promoted.[10]

In fall 2006, the University of St. Gallen initiated a round of initiatives tackling existing and known deficiencies in the implementation of self-directed learning.[11] As a first measure, the university launched a student competition on active learning with educational media. The competition's two major goals were to engage students and faculty in more discussion about self-directed learning, and to tap the creative potential of students for further improvements.

A core element of the competition was the announcement that the best proposal would be implemented—in the spirit of a service-learning project—by the students who submitted it. The 18 proposals submitted by student teams represented a wide range of approaches to the improvement of technology-supported, self-directed learning. They also demonstrated that the competition successfully engaged a sizeable part of the student body in actively thinking about self-directed learning.[12]

In what ways can the realization of the winning project proposal be considered a service-learning project? The following aspects are relevant:

- *Contract:* A contract was signed with the students covering time commitment, obligations in the course of the project, and pay.
- *Role of students*: Students took the lead throughout the project and defined their own roles to the extent that they were able and willing to do so. They chose to be involved in project management, conceptual development, and implementation. Other tasks, such as internal marketing and evaluation of the outcomes, were "assigned" to permanent staff members on the project team.
- *Reflection*: Students were provided with literature on key aspects of the project (for example, management of IT projects in a university context). In addition, project sessions devoted entirely to review of and reflection on their work experience were scheduled, and students kept a journal.

In one journal, a student raised an interesting point: she perceived the process of precisely defining all aspects of the project in an elaborate IT concept as inefficient. Other team members felt similarly about the process and wondered about the students' limited willingness to launch into the specification needed. The discussion of these perceptions during a review session helped everyone gain a better understanding of what would make a solid working process in a student-driven IT project

and facilitated the work climate within the team.

The competition and the service-learning project had a clear payoff for our support unit in a variety of ways. While the students' ideas were not always cutting-edge or practical, the competition helped us better understand student needs with regard to self-directed studies. What's more, our service team was temporarily augmented by two students contributing to the realization of their idea. The student workers not only benefited from a flexible job at the university, they also gained a deeper understanding of the complexity of managing an IT project. They systematically acquired relevant skills and learned from the reflective discussions held as the project proceeded. Finally, the project contributed to more holistic education, strengthened the close connection between students and our support unit, and helped better align the university's educational vision with the day-to-day practice of teaching.

The involvement of student workers in educational technology support through service-learning projects can be regarded as organizational development[13] in two respects: on the one hand, further development of technology-supported, self-directed learning is closely related to a university's mission (to educate); on the other hand, innovation in this area can be pursued as an exercise in organizational development. In our case, we employed a competition with a public final event and a service-learning approach to student employment.

Driven by an Educational Mission

Consider again Simone and Paul's work. No doubt their jobs are enriching and stimulating. We would argue, however, that a more conscious process of reflection on their activity could help them boost their educational experience. Would it not be a good idea to:

- More systematically disseminate knowledge and reflect consulting practice among PC tutors through regular meetings with a specialist from IT services?

- Explore opportunities to engage PC tutors in project work related to their services, for example, creating guidelines on IT issues or setting up Web pages on IT services?
- More systematically coach students (in the case of Simone and the consulting program, for example) and evaluate their consulting approach on the basis of theoretical knowledge relevant to their management studies?
- Go even further by organizing an in-house consulting program as part of a course on educational technology or consulting?

We admit that a range of factors can be invoked as to why this would not work: it does not fit well with faculty and support staff's existing responsibilities and job descriptions. It would be very time-consuming (and therefore impossible to manage) for busy support units and for faculty alike. And students' readiness to take up this additional challenge might be limited. Still, we argue that it would be in the interest of the university as an educational institution that students and support units go beyond the execution of clearly defined tasks and start exploring ways to integrate tangible business outcomes with valuable learning experiences.

For students, the key benefits are increasing their expertise in their fields of study, experiencing the linkage between their studies and professional life, gaining experience in the role of a consultant or service engineer, and encountering (sometimes messy) organizational realities. For the university, the benefits include flexible employment of cheap labor, increased retention of students, services developed and provided in the course of service-learning projects, and the ability to provide valuable learning experiences usually unavailable through class work. For support units, often sitting on the sidelines of the core business of educational institutions, the main benefit might be better integration into these processes by way of more intensified exchange with faculty and students.

Clearly, obtaining these advantages is not easy. An important prerequisite is to think in terms of didactic and personnel-development categories when it comes to student workers. Usually neither service units nor faculty are prepared for this. They need support to assist students in reflecting on job experiences. They need support in relating these job experiences to ongoing discussions or established bodies of knowledge in academic fields. The cooperation required from service units and faculty to bring this off needs to be fostered—a challenging change project in its own right.

This vision of enhanced student involvement through service learning within the university guides us as support workers trained in education. It is our conviction that this change will, through the provision of valuable service-learning experiences, benefit students, service units, and the university equally. To accomplish such change, however, requires developing the appropriate capacities—in service units, faculty, and the university as a whole. This in itself is a challenging, long-term organizational initiative. *e*

Endnotes

1. J. Mrazek, "Student Workers: The Narcotic Tech Departments Can't Live Without," *EDUCAUSE Quarterly*, Vol. 26, No. 3, 2003, pp. 5–8, <http://www.educause.edu/ir/library/pdf/eqm0330.pdf>.
2. J. Brown, "Student Workers: Can Campus IT Departments Live Without Them?" *EDUCAUSE Quarterly*, Vol. 26, No. 3, 2003, pp. 9–11, < http://www.educause.edu/ir/library/pdf/eqm0331.pdf>.
3. Ibid.; Mrazek, op. cit.
4. A. W. Astin, "Student Involvement: A Developmental Theory for Higher Edu-

cation," *Journal of College Student Development*, Vol. 40, No. 5, 1999, pp. 518–529; see p. 523.

5. There is evidence that employment exceeding 20 hours a week leads to a reduction of the time devoted to study. See G. Finocchietti, "Students and Universities in Italy in an Age of Reform," *European Journal of Education*, Vol. 39, No. 4, 2004, pp. 459–469; see p. 461.
6. A lack of practice orientation is common in research universities, at least in Switzerland and Germany.
7. A. L. Kenworthy-U'Ren, "Management Students as Consultants: An Alternative Perspective on Service Learning 'Call to Action'," *Journal on Management Inquiry*, Vol. 8, No. 4, 1999, pp. 379–387.
8. S. R. Madsen and O. Turnbull, "Academic Service Learning: Experiences of Compensation and Benefit Course Students," *Journal of Management Education*, Vol. 30, No. 5, 2006, pp. 724–742.
9. E. Petkus, Jr., "A Theoretical and Practical Framework for Service-Learning in Marketing: Kolb's Experiential Learning Cycles," *Journal of Marketing Education*, Vol. 22, No. 1, 2000, pp. 64–70, <http://jmd.sagepub.com/cgi/content/abstract/22/1/64>.
10. E. Mohr, "Incremental Innovations: Changing the Culture of Teaching and Learning," *EDUCAUSE Review*, Vol. 42, No. 5, 2007, pp. 6–7.
11. An important impulse for this initiative was the awarding of the Medida Prix 2006 to the University of St. Gallen in the category "Institutional Development" for its institution-wide implementation of technology-supported self-directed learning. The Medida Prix is the most prestigious e-learning award in German-speaking countries, sponsored by the ministries of education of Austria, Germany, and Switzerland. See C. Brake, M. Topper, and J. Wedekind, eds., *Der Medida Prix: Nachhaltigkeit durch Wettbewerb* (Münster: Waxmann, 2004).
12. A survey conducted among freshmen shortly after the competition indicated that more than 50 percent were aware of the competition. The 34 students who participated in the 18 submissions represent almost 1 percent of the entire student population. Proposals covered structured approaches to better moderation of discussion forums, the set-up of a university "Wikipedia," the routine creation of audiovisual recordings of student presentations for archiving, and various ideas for improving on the current learning management system, StudyNet. Subsequent to an evaluator workshop, a public event was organized during which the five finalist teams could present their ideas to an audience composed of students, some faculty, and a jury. The winning proposal focuses on the development of an add-on to the LMS that allows creating a detailed overview of course requirements, information on current status (including study time invested on each task, scores on tests, and memos accommodating reflection on the learning process and things to do), and peer comparison mechanisms.
13. We understand organizational development, in the context of the university, to refer to activities related to review and adaptation of institutional goals, structures, and activities—all of which are required to cope with a changing external environment.

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