INTRODUCTION

The University of Washington (UW) Office of Educational Partnerships and Learning Technologies placed University students in the Seattle School District (SSD) to provide K-12 schools with network support and computer consulting at an affordable cost; create opportunities for undergraduates to develop computing, networking, and consulting skills through practical experience; and help teachers incorporate technology into curricula for all K-12 students. During the 2002-2003 academic year of the UWired Community Technology Partnership with the SSD, 43 UW students were assigned to 46 schools in the Seattle School District, including elementary, middle, and high schools.

METHOD

In May 2003, SSD school representatives whose schools had participated in the Partnership were asked to complete a survey. The survey consisted of three fixed response questions, 16 Likert-scale items, and six open-ended questions that addressed program outcomes, goals for participation, and recommendations for program improvements. Forty-six school representatives were faxed a request letter and survey. Follow up email reminders were sent shortly thereafter to insure that the faxes were received and to ask representatives to return them.

UW students who had participated in the program were asked to complete an online survey. The survey consisted of seven open-ended questions designed to obtain their perspectives on the outcomes of the program, goals for participation, and recommendations to improve the program. At the end of May 2003, all 43 UW students were emailed and asked to complete the online survey. Students were sent a reminder and second request for their participation 2 weeks after the initial request.

FINDINGS

School Representatives

Twenty-five of the 46 school representatives who received the request to complete the faxed survey did so, a 54% response rate. A variety of school personnel responded: 8 technology resource persons (33%), 7 principals (29%), 4 teachers (17%), 3 librarians (13%), and 2 (8%) selected the "other" category, a building substitute and TC Center Coordinator. One respondent did not indicate his/her position. The majority of respondents were from elementary schools (n=17, 74%), with the remainder being from high schools (n=3, 13%), middle schools (n=2, 9%), and one (4%) K-8 school. Two respondents did not provide an answer. The largest proportion of respondents (n=12, 55%) reported that all their school's staff
used the services of the UWired student. The remainder indicated that the UWired student's services were utilized by more than half of their staff (n=7, 32%), about half (n=2, 9%), and less than half (n=1, 5%). Only 22 of the 25 respondents provided an answer to this question.

The responses for each survey question have been summarized on a modified version of the questionnaire in the following chart. Frequencies, means, and standard deviations were tabulated for each item, and responses to open-ended questions were grouped according to useful categories of response. The open-ended response format allowed school representatives to indicate multiple preferences. Therefore, totals may not sum to 25.

**Needs**
- Participants agreed most strongly with the statement about the need for network and desktop support (M=4.96)

**Performance**
- Respondents agreed most strongly with the ideas that the UWired student made a positive contribution to their school (M=4.75) and that the UWired student's skills were exceptional (M=4.71)
- The statements that the UWired program administration was available when necessary (M=4.00) and that the administration was outstanding (M=3.95) were agreed to least strongly

**Outcomes**
- Respondents agreed most strongly with the statement that support like the UWired program is exactly what their schools need (M=4.46)
- The statement that UWired students integrated technology into the curriculum received the least support (M=3.63)

**Open-ended responses**

The emergent themes from the responses to open-ended questions are presented for each question below.

**What was the most critical technology need for which you requested a UWired student?**
- Networking (14)
- Troubleshooting (12)
- Staffing/maintaining the lab (7)
- Assisting students/staff (4)
- Multimedia support (2)
- Upgrading systems (2)
- Other (2): website development (1), portfolio set-up (1)
**How well was this need met by having the UWired student in your school?**
- Need well met (21)
- Not well met (5): SSD training needed (2), UW student schedule problems (1), poor attendance (1), not enough time spent loading software (1)

**What additional training would you like to see UWired students receive?**
- Training specific to school district (9)
- Training is okay (6)
- MAC OS (2)
- Other (2): curriculum integration instruction (1), training in classroom/teacher needs (1)

**What recommendations for program improvement would you make to the UWired administration?**
- Have more UWired students/replacements/substitutes (5)
- Implement the program in all schools (2)
- Update new school administrators on program requirements and administration (2)
- Other (3): provide information on SSD school processes (1), have all hours completed onsite and accounted for (1), check-in with schools at the start to see if program is going okay (1) district (9)

**Other comments:**
- Great program (12)
- Other (5): student professionalism is a problem (1), school needs cannot be met by one student (1), sysop training and account should be a prerequisite to the placement (1), scheduling conflicts creates attendance problems (1), leaving students should train incoming replacements (1)

**Students**
Eighteen of the 43 students who received the request to participate in the online survey responded, a 42% response rate. Responses to open-ended questions were grouped according to useful categories of response. The open-ended response format allowed students to indicate multiple preferences. Therefore, totals may not add up to 18.

**Personal and professional goals**
Fifteen (83%) respondents felt that the program met their goals. Students expressed a variety of personal and professional goals for participating in the program:
- Gaining work experience/enhancing a resume (11)
- Using/improving technical skills (10)
- Community service/helping others (5)
- Using/improving people and communication skills (3)
• Pragmatic reasons (2): earn money (1), for CCNA (1)

Several themes emerged on how the program met, or did not meet, students' personal and professional goals:
• Technology skills were used/developed (7)
• Communication skills were used/developed (3)
• Enhanced employability/ability to qualify for desired major (3)
• Felt appreciated (3)
• Gained insight into career decision (2)
• Position had limited responsibilities/grunt labor (2)

**Program strengths and weaknesses**

A number of factors worked well for students in the program:
• Flexible/convenient schedule/location (9)
• Available support (4)
• Good work environment (4): nice people (1), good communication (3)
• Financial rewards/led to employment (3)
• Other (3): good equipment (1), creating a message system to stay organized (1), fulfilling responsibilities (1)

Students reported several factors that did not work well:
• People/political issues (4) (e.g., difficult people, lack of respect, school politics)
• Inconvenient school hours/location (4)
• Everything worked well (3)
• Lack of challenge (2)
• Too few hours (2)
• Other (4): insufficient support (1), administrative hoops to access machines (1), not being able to train the replacement student (1), taking nonsensical surveys (1)

**Additional technology needs and assistance**

Among the additional technology needs were:
• More/better funding, equipment, software, general supplies (10)
• No additional needs (5)
• More teacher training/enthusiasm (4)
• Faster adaptation to Win2K (3)
Maintaining program enthusiasm

Students made several suggestions to keep the program exciting:

- More/updated training and computer courses (4)
- Improve communication (4): between the program and schools (3) between teachers and UW students (1)
- Maintain good pay (3)
- Improve surveys (2): make text boxes bigger (1), delete nonsensical questions (1)
- Other (1): expand into a summer program

CONCLUSIONS

The Partnership received positive feedback from both school representatives and UW student participants. Most school representatives responded that the UWired student was meeting the school's goals and expectations for the program. School representatives felt that this program is exactly the kind of support their schools need, but that the integration of technology into the curriculum was not well addressed by this program. Although school representatives were pleased with UWired students' skills and contributions to their schools, they felt training specific to the SSD would be beneficial in helping the students better meet their school's needs. School representatives indicated a measure of dissatisfaction with the UWired program administration and the availability of the administration when needed. This may point to the need for increased communication between the UWired program administration and school representatives. In general, the school representatives responded more positively about the UWired program than previous year's respondents.

Most of the students who responded indicated that the UWired program was meeting their personal and professional goals. Students were gaining valuable work experience while developing technical and communication skills. In meeting UWired students' needs, it is apparent that flexible school schedules, convenient locations, and having available support are important to a positive experience. Students also expressed a desire for better communication between UWired administration and the schools, better equipment in the schools, and access to more training opportunities.

Overall, the UWired Community Technology Partnership appears to be a mutually beneficial experience for SSD schools and UWired students. The program is encouraged to expand on its strengths by providing flexible and meaningful technical work experiences to more University of Washington students, and by providing more Seattle area schools with expert and professional technical support. The UWired program may also want to consider facilitating its program evaluation by employing a web-based survey for the school representatives next year. A web-based survey would increase the ease of the survey administration and increase the ease of school representatives' response.