

TechREACH Alliance Project

ANNUAL EVALUATION REPORT

PREPARED FOR

TechREACH

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PUGETSOUNDCENTER
for teaching, learning and technology

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Executive Summary

“There is a great need for our students at our school for computer technology. Within in my own district I can see great disparity between students with computer capacity at home and those without. Students with computers at home can be far more productive than those without. Computers at home extend the learning time of students. As more and more students have the capacity to research and produce quality product at home, more time can be spent in the classroom introducing new concepts that otherwise is skipped in order to give working time in class. The margin between the "haves" and "have-nots" in quality of work is remarkably profound.” TAP Club Leader

Project Background

The TechREACH Alliance Project (TAP) is a partnership between the Puget Sound Center for Teaching, Learning and Technology (PSCTLT), Wilderness Technology Alliance and the TEConnections program to increase technology access and literacy in underserved communities located in Washington State. The goals of TAP are to:

1) Improve access to technology and information services for low-income families with special emphasis on rural communities, ethnic minorities, and middle and high school students.

- Develop a detailed state-wide program model for providing technology and technology literacy skills to low income families and rural communities.
- Provide a train the trainer workshop for participating teachers to learn computer refurbishing skills.
- Provide real-world work experience through after school clubs for middle and high school students building technical, team and leadership skills.
- Provide refurbished Internet-ready computers to low-income students and families.

2) Increase low-income families’ and students’ technology literacy levels with special emphasis on rural communities, ethnic minorities, and middle and high school students.

- Provide training for low-income families to use computer technology to build self-sufficiency and workplace skills.
- Provide telephone and technical support to families who have received a computer so as to maintain a functioning computer system.

Project Evaluation

The program evaluation of TAP was conducted by Evaluation & Research Associates, and included both quantitative and qualitative data collection related to the project's primary goals of improved technology access and literacy for low-income households, ethnic minorities, and students.

The goals of the evaluation are to:

- Measure progress toward program goals and objectives
- Track program metrics (such as who is participating in clubs, who receives computers, number of trainings offered, etc.)
- Provide evidence of program outcomes
- Inform program activities and focus on an ongoing basis
- Inform program sustainability efforts and future program implementation
- Share program outcomes with grant funders, program partners and participants, and others

Quantitative and qualitative data was collected through pre- and post-survey instruments administered to TAP student participants, surveys of club leaders and recipients of refurbished computers, and post-activity evaluation forms. Throughout the year, TAP staff received summaries of evaluation findings. This Year 1 report summarized all data collected thus far and discusses how the findings relate to the project goals. The Year 2 report will also report on club leader trainings, after school club data, computer distributions, and will include more data on Technical Assistance Workshops.

State Networking Meeting

A Statewide Networking Meeting was held in October 2007, with 17 attendees, including staff from Department of Social and Human Services (DSHS), Wilderness Technology Alliance, TechREACH, TEConnections, and other community partners to develop a detailed program model based on best-practices for state-wide implementation.

Meeting components, such as quality of discussion, familiarity with project goals, and overall meeting, were rated highly with means of 4.27 on a 5-point scale where 1 = Poor and 5 = Excellent. Participants stated that potential benefits of TAP were increased technology literacy among rural or low-income families, parent empowerment and workforce skills, and an increase in technology skills of students participating in technology clubs. Challenges identified included concerns such as finding teachers willing to do the project, recruiting students, securing affordable Internet services, and getting families to workshops. Solutions to address challenges were discussed, and participants focused on ways in which they and their organizations could aid the project.

Meeting attendees left with an understanding of the project goals and components, and knowledge of how they could contribute to help the project be successful. One attendee commented on the potential impact of TAP, *“Technology awareness/literacy will be an incredible change in areas of rural poor.”*

Club Leader Training

A two-day workshop in January 2008 was held for seven teachers from six schools. An additional workshop for four more teachers, representing two schools, was held in February. Training components included an introduction to the TAP project, goals and partners, hands-on experiences taking a computer apart, installing hardware and software, troubleshooting, and activities and discussion on how to lead students in club activities.

The workshop components were ranked very positively, and teachers indicated they had fairly high levels of comfort with the skills they planned to utilize when leading club activities. Overall, the training as preparation to refurbish computers was rated very high, with all teachers indicating it was “Excellent.” Additionally, they indicated the quality of the resources provided was high (mean = 3.91 on a scale where 1 = Poor and 4 = Excellent), and they had a good understanding of project goals and purpose (mean = 3.90). Teachers felt very comfortable being a club leader (mean = 3.55 on a scale where 1 = Not at all comfortable and 4 = Very comfortable), and fairly comfortable with hardware and software installation (mean = 3.18, 3.36, respectively). One teacher wrote, *“This is an astounding program and opportunity. I am excited to be getting in on the ground-level of what I hope becomes a “sky rise” building of providing technology to the masses.”*

After leading TAP clubs for a school year, club leaders indicated they felt they had been well prepared in the trainings to organize a TAP club and implement the curriculum (means of 3.9 and 3.8 on a 5-point scale). Recommendations for future training were made by club leaders, including how to recruit and retain participants and plan for technical workshops.

After School Clubs

TAP after school clubs were offered in nine schools across Washington State and attended by more than 93 participants (attendees at two schools did not report attendance data). Meetings were typically for an hour, once a week, but the schedule differed at each site. The participants attended an average of 75% of the meetings at their school.

Club leaders had some difficulties recruiting and retaining participants, and finding time to plan for the activities. They administered pre-surveys to

student participants at the beginning of the year, or when a new participant joined the club, and post-surveys to the participants at the end of the year or when they left the club. Seventy participants (75%) completed a pre-survey and sixty-two students (67%) submitted a post-survey.

Students signed up for TAP because they were interested in technology and wanted to learn more about computers, including how to troubleshoot problems, and how to take them apart and rebuild them. One student wrote, *“I wanted to learn about computers so I would be able to use a computer without having problems with it.”* They were also curious to find out more about technology-related careers, *“I hope to learn more about jobs and my future, because I’m unsure of what to do and I would like some help.”*

A comparison of pre- and post- survey responses showed students were more confident working with computers after participating in TAP clubs. They also rated their technical skills by indicating how much help they needed on various computer tasks before and after participating in TAP. The scale was from 1 = “I can do this without help”, to 5 = “I can help others do this”. Increases were present on all items and statistically significant in 9 of 10 skills areas. The largest increases were seen in the areas of computer rebuilding skills, identifying computer hardware, and installing software programs. The highest rated skills on the post-survey were for overall use of the Internet and using Microsoft Office.

After participating in TAP students were significantly more likely to be interested in a career using computers (mean increase from 3.59 to 4.00 on a scale where 1 = Not at all interested and 5 = Very interested), and slightly more interested in a technology career (mean increase from 3.36 to 3.60).

On the post-survey students responded to statements about their TAP experience using a scale from Strongly Disagree = 1 to Strongly Agree = 5. On average, student responses to the statements were in the 4 to 5 range. They assigned the highest ratings to overall enjoyment of TAP and learning a lot about computers. A number of students thought TAP could be improved by having more frequent or longer TAP meetings. If they were trying to convince a friend to join TAP, participants would stress that it was fun, you learn a lot about computers, you could get a free computer, and it could help prepare you for a career in technology, *“You can learn more about computers and you can learn parts and pieces, and if something is wrong with your computer you will find out what’s wrong if you know the pieces.”*

Participants identified TAP benefits as the opportunity to take apart or build a computer, learning how to identify computer parts, learning more general use of computers including cleaning and repair, and spending time with friends who had similar interests. Club leaders observed students gaining technical skills, confidence and community building.

Computer Distribution and Technical Assistance

TAP after school clubs distributed 56 refurbished computers to low-income students and families who did not have an Internet-ready computer at home. Low-income students participating in TAP were often the first identified to receive a computer. Additionally, TAP staff, club leaders and local DSHS offices helped to identify other students at the school or families in the community to receive computers.

Sixty-three percent of recipients lived in rural areas, 20% lived in suburban areas, and 17% were from urban areas. More than half of recipients indicated they were Hispanic or Latino. Almost 40% marked they were Caucasian/European American, and the remaining 9% were multi-racial. A conservative estimate is that the computers from the TAP program reached 164 people, at least 76 adults and 90 children (estimate calculated using the number “6” when “More than 5” was selected). Parents were motivated to apply for a computer for their children to use for their homework, because it was free, or because they wanted to learn about computers and parts.

Prior to receiving a TAP computer, 83% of recipients did not have a computer in their home. The majority of recipients accessed computers at a workplace, school, library, community center or friend/family member’s house, and 28% of recipients did not have any access to an Internet-ready computer. About 40% indicated they did not use a computer for word processing or the Internet. On a five-point scale where 1= Poor and 5 = Excellent, recipients rated their level of computer skills prior to receiving a computer, including overall skills, ability to locate resources related to careers, health, finances and other areas of interest, below 2.69. Two club leaders commented on the value of TAP in distributing computers, *“I was surprised at how many families did not have computers at home. Some of our recipients indicated that they wanted to have a computer so their child could do their homework. Computers have become a basic tool for education and I am glad me and my students were part of making this tool accessible to low income families.”* Computer recipients will be surveyed again by the evaluation team after participating in more technical assistance workshops, currently being organized by TAP staff, to measure changes in their computer use and skills.

Each TAP club site held a computer distribution workshop where families learned how to use their computer, including set-up, troubleshooting and using software applications. At a few sites TAP student participants led the adults in activities, and at most sites, the students were present to assist in the workshop activities. Responses to survey questions about the workshop were positive: every respondent agreed or strongly agreed that the information covered was helpful and 98% agreed or strongly agreed the information covered was useful.

Recipients commented that the most valuable thing they learned was overall basic computer use, Internet safety, how to connect to the Internet, and specific skills about how to use the computer. In future workshops, they hope to learn more about using the Internet to research for school assignments, Internet safety, and computer maintenance.

Club leaders mentioned some difficulties identifying computer recipients or organizing a distribution and workshop. Two schools plan to have their distributions in fall 2008 due to lack of time during the past school year. For club leaders, the best aspect of distributing computers to low-income families was seeing the excitement and enthusiasm of the students who were involved in this community service opportunity, and the appreciativeness of families receiving the computers, *“The students really enjoyed the process of having something tangible to distribute in their community. The recipients were very grateful and extremely happy.”*