

TechREACH Alliance Project

FINAL EVALUATION REPORT Executive Summary

PREPARED FOR
TechREACH
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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) was a two-year grant-funded 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 were 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-training and distribution evaluation forms. TAP partners received summaries of evaluation findings throughout the project and a Year 1 report summarized how the data at that time related to the project goals. This year two report covers club leader trainings, after school clubs, computer distributions, and follow-up with families receiving computers.

State Networking Meeting

A Statewide Networking Meeting was held at the beginning of the project in fall 2007, with 17 attendees, including staff from the Department of Social and Health 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 five-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 attendees 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 Trainings

Trainings were offered each year for teachers who were going to lead TAP clubs for student participants at their schools. 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. The training for second year activities was held earlier in the school year, on October 14, 2008. The day-long training was attended by thirteen club leaders, including many who attended the previous year. 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 both years, 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 highly, with all teachers indicating it was “Excellent” the first year, and 77% of teachers in the second year. Additionally, they rated the quality of the resources provided was high (mean = 3.91 in year one, and 4.00 in year two on a scale where 1 = Poor and 4 = Excellent), and they had a good understanding of project goals and purpose (mean = 3.90 in year one, and 3.62 in year two).

Teachers felt very comfortable being a club leader (mean = 3.55 in year one, and 3.23 in year two on a four-point 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). The lowest mean was in year two, for ratings of computer refurbishing skills. Still, nobody indicated they were “Not at all comfortable.” 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.”*

The most valuable part of the training was thought to be the provided curriculum and materials, networking with other club leaders, and learning more about the project. Hearing about other club leaders’ experiences was also worthwhile, *“Networking with other TAP club leaders and learning how they operate their club and how they distributed their computers to the DSHS families.”* In the spring surveys, club leaders indicated they felt they had been well prepared in the trainings to organize a TAP club and implement the curriculum.

After School Clubs

TAP after school clubs were offered in nine schools in year one of the project and ten schools in 2008-2009 across Washington State. Meetings were typically held for an hour, once a week, but the schedule differed at each site. The club that met the most frequently met twice a week for 90 minutes. Club leaders had some difficulties recruiting and more difficulty retaining participants due to sports and other after school activities and responsibilities. The participants attended an average of 75% of the meetings at their school in the first year. In the second year, clubs had an average of 9.8 students attend at least half of the meetings.

Club leaders 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. In the first year, seventy participants (75%) completed a pre-survey and sixty-two students (67%) submitted a post-survey. In the second year, 84 pre-surveys and 55 post-surveys were collected.

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 both years 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, except for using Microsoft Office in the second year of TAP, with the largest increases in the areas of computer rebuilding skills, identifying computer hardware, and installing software programs.

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) in the first year. Trends were not as positive in the second year, with equal means to career interest in a technology in the pre- and post- surveys, and a slight decrease in a career using a computer.

On the post-surveys, participants 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. The lowest mean was for the statement *“The activities were challenging.”* A number of participants 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. Many participants also mentioned the incentive of the free computers. A total of 60 of the students responding to the post-survey indicated they had received a computer through the TAP distribution. Club leaders observed students gaining technical skills, confidence and community building. They felt successful when they saw participants actively involved in tasks and working together.

Computer Distribution

TAP after school clubs distributed 56 refurbished computers in 2008 and 70 in 2009 to low-income students and families who did not have an Internet-ready computer at home. Low-income participants in the TAP after school clubs 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.

About half of recipients indicated they were Hispanic or Latino. A conservative estimate is that the computers from the TAP program reached 520 people, at least 222 adults and 298 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, and/or because they wanted to learn about computers and parts.

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. Responses to survey questions about the workshop were positive: almost every respondent agreed or strongly agreed that the information covered was helpful and useful. Recipients commented that the most valuable thing they learned was overall basic computer use, how to connect to the Internet, and specific skills about how to use the computer.

Prior to receiving a TAP computer, 83% of recipients in year one and 70% in year two did not have a computer in their home. The TAP computer was the first ever computer in their household for half of those responding. The majority of recipients accessed computers at a

workplace, school, library, community center or friend/family member's house, and about a third of recipients did not have any access to an Internet-ready computer. 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.

A follow-up survey was sent to all computer recipients in spring 2009, and ten responses were received. Incomplete, missing, and outdated addresses and contact information contributed to the low response rate. Sixty-percent were connected to the Internet. Those without an Internet connection indicated cost was a barrier, no high speed Internet was available in their area, and they had no phone line to use for Internet. Responses showed that they were using their computer most commonly for multi-media such as music or photos, and Word-processing. Mean ratings of skills in all areas but two (overall skills and locating resources on areas of interest) increased. The recipients commented on the usefulness of the computer for their children's homework, and one described how the self confidence of her daughter increased through her knowledge gains.

Club leaders mentioned some difficulties identifying computer recipients or organizing a distribution and workshop. 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."*

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."*

Sustainability

In interviews at the end of the two year project, representatives from the four partner organizations had positive remarks on the contributions of others, their complementary strengths, and the overall implementation of the project. They identified strengths such as the computer refurbishing curriculum and the distribution of computers to low-income families. Barriers included recruiting teachers to be club leaders, and issues related to serving rural areas, such as lack of Internet availability.

Project leadership considered strategies to make the project sustainable at the schools without this funding. The project manager mentioned how important the experience of TAP was in that it has impacted other work on a broader scale, *"There was a much larger impact than anticipated in terms of lessons learned and how people can benefit from other state*

initiatives.” Other partners noted skills and knowledge they had gained through their experience implementing TAP. Additionally, the positive relationship of project partners motivated them to find a way to continue working together to utilize their various skills.