

My Experience as a Mentor Teacher in the Alliance+ Project

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Introduction

The Alliance+ Project¹ is a U.S. Department of Education program that enables K-12 teachers to integrate the Internet into their standards-based curriculum with emphasis on Science and Math. Through the Alliance+ Project, the Think Tank (as a part of Maricopa County Community Colleges²) collaborates with other local partners to provide the *Savvy Cyber Teacherä* workshop in Phoenix and surrounding areas. Mentor Teachers (Teacher Trainers) are trained to teach the course to teachers in their own districts. Support for the Mentor Teachers is provided by the Think Tank core trainers, national e-mail support from Alliance+, a network of neighboring K-12 school districts, and partnerships among three local community colleges.

The Savvy Cyber Teacherä workshop is designed for teachers who are already comfortable with computers and have some experience navigating the Internet. However, the basics of Internet navigation are covered in the workshop. The workshop is a 30-hour intensive course in which teams of teachers are trained to effectively integrate the Internet into their curriculum while promoting state standards. Teachers learn compelling educational uses of Internet technology in the classroom that are not available in the library or other existing sources of media. Some of the compelling uses include: collaborative projects, communication with others, student publishing, and real time data. Teachers are given a rubric for evaluating sites for educational value. Other vital subjects covered in the workshop are Internet safety, classroom management techniques, and web page design.

This workshop has been the primary source of Internet integration training for the Nadaburg District's teachers. Additionally, the Mentor Teachers from our district have conducted training for teachers from outside the Nadaburg district. The Alliance+ Project is one that every district administrator should embrace and provide incentives to their certified staff to participate in as part of the districts' professional development requirements.

This paper will discuss my experience as a Mentor Teacher and the outstanding contributions of the *Savvy Cyber Teacherä* workshop to the technological advancement of our district.

¹ For additional information about Alliance+, see Friedman, E.A. (2000). *Conceptual framework and organizational structure of Alliance+: A national model for Internet-in-education professional development*. Hoboken, NJ: Center for Improved Engineering and Science Education, Stevens Institute for Technology.

² Information about the Maricopa County Community Colleges Think Tank can be found on line at: <http://phoenix.ncup.org/>

Teaching and Training³

I wear many hats for Nadaburg Elementary School District. I am the computer literacy teacher for approximately 500 pre-K-8 students. The district technology plan and monthly technology committee meetings are my charge. My job includes tech support for the entire district. I initiate acquisitions of new equipment and I provide professional development to over 50 certified and classified staff members. I have successfully taught two *Savvy Cyber Teacher* workshops in my school lab. Among the 42 successful trainees (mentees) were teachers and classified staff from three school districts. The large majority of these mentees are maintaining their Web sites, integrating the Internet into their curriculum, and collaborating with other teachers as well.

Nadaburg pre-K-8 students come into the computer lab on a rotating schedule. Each class visits on an average of 55 minutes per day, one day per week. During this time they learn about hardware, software, the Internet, keyboarding, word processing, and presentation programs. We have participated in several collaborative projects since I first took the Alliance+ workshop in the fall of 1998.

I must say that the *Savvy Cyber Teacher* training has proven to be an excellent experience for me. I have benefited greatly from the experience as have my students and fellow staff members. The most valuable thing I learned from the training is that educators are no longer limited to the traditional forms of media and resources. The unlimited educational resources and collaboration opportunities for teachers are absolutely astonishing. Real-time data is available to our children and it gives them a "real" look at the world, allowing them to actually become active participants in it. For instance, when charting a ship on the Internet, a student can see the ship actually moving across the ocean during the charting process. Estimating the time of arrival is especially enlightening for children and it gives them a sense of being the ship's captain.

Another wonderful thing about the Internet as a tool in the classroom is that students are able to collaborate with students in other schools around the world. Students working with students using e-mail and the Internet to learn. Examples of collaborative projects are given during the *Savvy Cyber Teacher* training. Students are also able to publish their work on the Internet for a wider audience.

Internet Connectivity and Access

Our district has reached one hundred percent connectivity of the entire school. The computer lab has 31 Internet-connected computers, one Proxima, two scanners, one digital camera, one laser printer and three color printers. Also located in the computer lab is the satellite T.V. connection and video equipment. Each teacher has an Internet-connected

³ The sections in this paper correspond to the main components of the Alliance+ project's evaluation framework. For additional information about the project's evaluation, see Yepes-Baraya, M. (2000). *Lessons learned from the evaluation of Alliance+: An Internet-in-education professional development program*. Princeton, NJ: Educational Testing Service.

computer on his or her desk and each classroom has three connected student computers. Each classroom has video capabilities and telephone access. The student-to-computer ratio in the classroom is 7:1. The student-to-computer ratio districtwide is 5:1.

In large part, the Technology Literacy Grant (TLC) has made connectivity possible for Nadaburg District. In writing the 2000-2001 TLC grant, we have requested funding for Deskmate personal computers for 30 students in grades 6-8 and for 35 students in grades 4-6. This will greatly improve our student-to-computer ratio. These units are wireless and rechargeable. They are on a recharging cart that will enable teachers to move them from classroom to classroom. Each unit allows Internet connectivity to users with up to 20 login names and teacher access to all. In addition to the Deskmate, we have requested funding for additional computers and projection equipment for each classroom.

We have acquired funding through the E-Rate for our connectivity wiring and ISP. Our current Internet access is through two 56K lines. A T-1 connection is not currently available to us due to old equipment in the local telephone transfer station. This is probably the biggest obstacle the Nadaburg School District has to overcome. My research concludes we have few options. It appears our biggest problem is cost.

The upcoming mode of connectivity for rural areas is through a wireless satellite connection. This would allow access to users in a wide area network that could include entire communities as well as schools. We do have a satellite dish and the equipment required is relatively inexpensive. The drawback is that the service is very costly. Internet service through satellite can cost as much as \$15,000 per month. Even with E-Rate, the cost makes this an untouchable option for small school districts and communities. We have applied for funding to add data jacks in each room, increasing the number of connected computers from five to eight, improving our student-to-computer ratio.

The Nadaburg School computer lab is available to the community two evenings a week in order to provide community members with the opportunity to experience current technology and participate in various training programs. It is also open for after school activities every weekday until 4:00 p.m.

Currently, there are five members of the technology staff at Nadaburg School. There are three technology associates (teachers participating in Project Venture through Maricopa County Small Schools), a technology aide, and myself. The teachers participating in Project Venture are proficient in their use of the Internet, are currently developing lesson plans that include the integration of the Internet, and can perform some hardware troubleshooting. The technology aide assists me in the computer lab while teaching classes of 25 or more students at one time. The technology aide has intermediate abilities, with about two years of experience on computers and the Internet. She has completed the *Savvy Cyber Teacher* workshop and is currently maintaining a Web site with teaching materials for children about health⁴.

We have a wonderful relationship with the Sun City West Computer Club of the nearby retirement community of Sun City West, Arizona. Their assistance has enabled Nadaburg to collect, upgrade, and repair donated computers. Several computers have been given to students for home use. This is part of our effort to introduce parents to the computer skills their

⁴ Health4kidz by Andrea Harman URL: <http://www.geocities.com/EnchantedForest/Pond/9664>

children are learning. We are hoping to eliminate a huge obstacle, the so-called "digital divide,"⁵ to full implementation of technology in our community of Wittmann.

Integrating Technology in the Classroom

Although still in the process of integrating technology into the classroom, teachers in grades 3-7, and Special Education teachers have participated in collaborative projects and accessed real-time data during instruction in the classroom as well. One of the projects we participated in was the "Minds Eye Monster" project. This is a project that requires Internet access, e-mail capabilities, scanning equipment and presentation equipment. "Students try to communicate an original monster image into another child's mind using writing skills and technology."⁶ The integration into the curriculum included geography, science, math, history, writing processes, computer skills, and reading comprehension. This project realistically took about three weeks to complete. I am very satisfied with the outcome of this project. Our students were gratified to see their work published on line and are encouraged to participate in other projects. The participating teachers in this project enjoyed the exciting result of this compelling use of the Internet. Students work can be viewed on the Minds Eye Monster site⁷.

Another collaborative project that we participated in was the 100 E-mails Around the World project. This project requires Internet access, e-mail capabilities, large world maps, and translation software. Students in grades 3 through 8 each selected a school in another state or country and exchanged e-mail containing demographic information about our country, state, school, and population. Our students also received over 150 e-mails containing the same information from all over the world. Some of the e-mail had to be translated from another language for our students to be able to read them. We used a site on the World Wide Web to do this. The students charted on a world map, located in the computer lab and in their classrooms, where the e-mail originated. This was also integrated into the curriculum including geography, writing processes, computer skills, and reading comprehension standards. This project started in September 1999 and was completed in November 1999. We are still receiving e-mails from several different schools throughout the world. I am amazed at the participation in this project. Our students really enjoyed knowing there were other students in other countries that share the same interests as they do such as a love of Pokemon.

I am currently developing an eight-week Weather Camp Project⁸ to be implemented during our summer school program. The students will eventually be able to post their work on the Web site. This will be for grades 2-8. Students will learn how to acquire real-time data and apply it to their own real life experiences. Students will learn how to chart and graph the data using Microsoft Excel. Integration into the curriculum includes geography, math, writing, history, language arts, reading, science, and technology. Nadaburg School has recently acquired the Airwatch Weather Station⁹ software and weather measuring equipment. One of the outstanding benefits of this weather station is that Nadaburg School will be an official reporting weather station for our community. Not only will the students of Nadaburg be collecting data for the

⁵ The phrase "digital divide" was used our President Clinton during a speech as recent as February 2, 2000 in a speech to High School Students in Washington DC

⁶ Quoted from the Minds Eye Monster Web site: <http://www.win4edu.com/minds-eye/monster/>

⁷Minds Eye Monster Web site: <http://www.win4edu.com/minds-eye/monster/>

⁸ This project can be found on the World Wide Web at URL: <http://www.im4kidz.com/weathercamp.html>

⁹ Information about the Airwatch Weather Station can be found at: <http://www.aws.com>

AWS located on our campus; they will be part of a Worldwide School Weather Network reporting our local weather to the World Wide Web. Our students will be able to compare real-time weather data from schools located all over the world using this new resource. Students will be accessing and recording sunrise times, high and low temperatures, wind direction, precipitation and cloud cover. They will be graphing and charting the data found using Microsoft Excel. They will learn about GMT (Greenwich Mean Time), and the other time zones as well. They will be compiling and analyzing the weather data collected over the first six weeks to aide them in predicting weather events in our local area. Students will use weeks seven and eight to create their Powerpoint presentation and share their information with the school and community. Finally, all participants will complete a small survey asking for their likes and dislikes regarding the project. This will help me in evaluating needed changes. I am hoping to include as many teachers, students, and parents as possible in this project.

Mentoring and Support

During the creation of our technology plan, the Nadaburg District Technology Committee worked very hard charting the future of technology for our district. The technology committee included administrative staff, certified and classified staff, students, and community members. The committee meets every month, or as required, to discuss updates and implementation of our four-year plan.

The three Project Venture teachers who are technology associates are helping other teachers to use the Internet in their classroom and integrate technology into their curriculum by creating projects and finding related sites on the Internet.

Ikon Networking Solutions and Comlink assisted me in the planning and building of our school WAN (Wide Area Network) by providing input, plans, and equipment requirements. I have consulted them for additional wiring to be done this year.

Maricopa County Small Schools Consortium (MCSSC) aided in the preparation of the TLC application and ultimate funding for year 1998-1999. The Internet service we access is provided to eleven other schools and is located in the MCSSC office where it is maintained by the staff of MCSSC.

I have been assisted by, Patty Finch, Paul Dewey, and Bob Campbell, the Alliance+ team from Think Tank at Maricopa Community College during the integration of technology into our school. They have been very instrumental in the success of the *Savvy Cyber Teacher* training taught by my partner teacher Sonya Lilly and myself. Without their assistance and Sonya's dedication, it would have been much more difficult.

Upon completing my training, I continued to revamp and create a useful Web page for parents and educators. I went on to create a web page¹⁰ for the Nadaburg School. The enthusiasm has continued with the teachers and staff since they participated in our workshop. The majority of our teachers maintain their own Web sites. All Nadaburg staff members have an email account and correspond with each other. I have been researching collaborative projects and enrolling our teachers in projects compatible with their needs in the interest of

¹⁰ Nadaburg School District URL: http://www.geocities.com/nadaburg_school

better utilizing their very limited time. I have been on the Classroom Connect listserve since I completed the *Savvy Cyber Teacher* workshop in the fall of 1998. This has been a great resource for all kinds of information. Classroom Connect has been helpful in keeping me notified of projects and Web sites. I have an opportunity to collaborate with teachers in any subject, and offer my resources and information to listserve participants as well. This resource has greatly surpassed my expectations.

Summary and Conclusions

During the past three years, as District Technology Coordinator, I have had the overwhelming cooperation and support of the Nadaburg School staff, school board, and the superintendent for technology growth on campus. This has been the key to technology growth at Nadaburg. Prior to the Alliance+ project, our teachers had completed a Basic Computer Skills workshop and a Windows Operating System workshop. In providing this prior training, we gave the teachers the preparation they required to successfully complete and take advantage of the *Savvy Cyber Teacher* workshop.

Since the teachers and classified staff completed this workshop, there has been much more Internet activity in the classroom. Once the fear of technology and the Internet was dispelled so was the hesitation to utilize technology in the classroom.

If we are to prepare our children for a technologically advanced future, we must first prepare our teachers to embrace the latest technology with excitement and enthusiasm. In order to accomplish this we must promote technology for all teachers by giving them the means to learn how to use technology in their classrooms. Teachers should be shown there is a meaningful purpose for use of the Internet in the classroom by providing them with the infinite possibilities of the Internet.

The Alliance+ project through the *Savvy Cyber Teacher* workshop has proven to be a wonderful professional development course for our teachers and staff. This workshop or one like it would also greatly benefit the parents and community members of any community in bridging the "digital divide".