

THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY



LOCATION:
*Clovis, California,
United States*

YEAR:
2006

STATUS:
Laureate

CATEGORY:
Education and Academia

NOMINATING COMPANY:
IBM Corporation

ORGANIZATION:

Clovis Unified School District

PROJECT NAME:

Anytime, Anywhere, Anyone Learning (AAAL)

Summary

The Anytime, Anywhere, Anyone Learning (AAAL) program is a pioneering partnership effort between parents, the District and quality technology partners. The primary goal is to increase student achievement by putting technology into the hands of the students. Core subject areas of History/Social Science, Language Arts, Science and math were identified as the target curricula; the laptop computers were the tools to enhance that learning. The program began in the Fall of 1996 with 94 7th graders and has now grown to impact more than 10,000 grade 6-12 students since the program's inception. The AAAL program was introduced to enhance the learning and increase access to technology in a rural/urban school district that had long emphasized student achievement and accountability. The District ranks well below both State and County averages in funding. In fact, if the District were to receive just the average amount per student as the rest of our County, there would be \$26M more each year in the budget for providing educational services to about 36,000 students. Hence the need for the partnership as the District could never have been able to fund the program alone over this past decade.

Introductory Overview

Our AAAL program was introduced as a pilot program in the Fall of 1996. It was modeled after an emerging program which had its origins in a few private schools in Australia during 1994. Our belief was that technology was a tool, which when personalized would help a student amplify his/her knowledge, increase student achievement and make school more fun! Given the fact that the District's revenues are well below the average for both the State and County, the option for the District to purchase enough computers to create a 1:1 personal computer to student ratio was out of the question. To determine a strategy and develop goals, a task force comprised of teachers, administrators, parents, students, business owners and members from the District's Governing Board was formed. This task force established three goals regarding technology use that are still guiding the District today: 1) technology should be used to support the core curriculum; 2) technology use should take place Anytime, Anyplace and should be available to Anyone; and 3) students should use real world technology tools to solve real world problems. The task force recommended a partnership approach to achieve these three goals-



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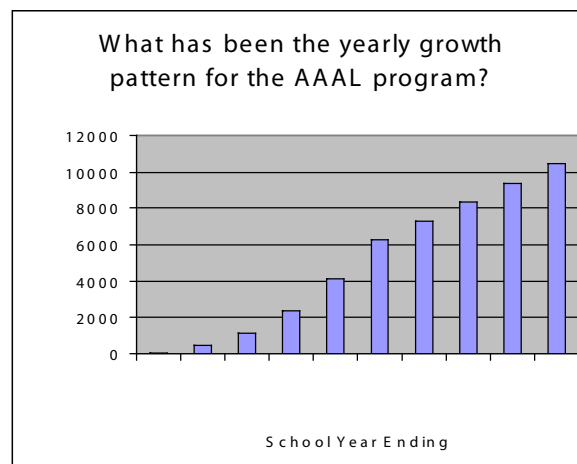
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-a partnership between the school district, our parent community and high quality technology vendors. The District was to provide training for our teachers, technical support for both students and staff, and “loaner laptops” for at least 10% of the students enrolled in these “total immersion” classes. Our parent community was to provide the remaining 90% of the laptop computers for their students in the “total immersion” laptop classes. Our business partners were to provide the real world hardware and software tools to enable students to solve real world problems using real world tools provided at the best possible prices. At that same time, the District purchased six laptops for other 7th grade History Social Science and Language Arts teachers to ensure that all students would have access to technology in the “non-immersion” classrooms as well.

During that first year, we quickly recognized the power of laptops when they were in the hands of teachers and students throughout the day. Students and teachers quickly learned when it was appropriate to use the laptop as their primary tool and when to use other tools and resources. Teachers found that the tool provided their students new opportunities to access electronic resources via the Internet and create reports that were professional looking while also increasing the collaboration and communication processes—both from student to student and between students and their teachers. The success of those first students set the stage for our continued pattern of growth that has developed over the years. Each year, we anticipate roughly 1,000 new 7th grade students will enter one of the AAAL programs offered at our four Intermediate Schools.



During this past decade, the focus of the program has remained the same. The teacher is the curriculum leader. The students need to be engaged in the learning process to be most successful and technology is a tremendous tool to enhance their achievement. Through the years, student achievement has been measured and the results always indicate improved academic achievement when students have access to the technology tools. The charts below indicate the percent of students whose growth was greater than or equal to 7 Normed Curve Equivalencies (NCE's) when comparing growth from 6th grade to 7th grade as measured by NRT assessments in Reading, Math, and Language for the cohort of 7th graders participating in our “full immersion” AAAL classes as compared to those who were in our regular 7th grade classrooms.



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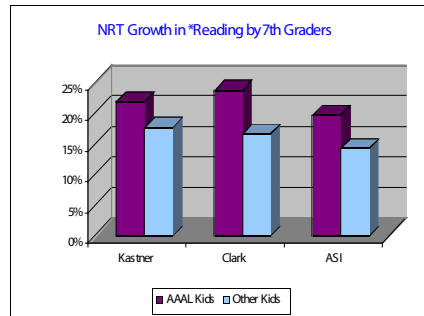
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One can see the data indicates significantly more students grew by more than 7 NCE's in the AAAL classrooms as compared to their peers who were not in the AAAL classrooms. Other studies indicated similar results when looking at student writing samples of students in the AAAL classrooms compared to students not in the AAAL classrooms. This phenomenon was summed up quite appropriately by one student who was asked if he thought his writing improved when he was using a computer, "...there is no bottom to the page!" He was referring to the fact that when his teacher gave him a writing assignment and he was using his laptop, he could write as much as he wanted as compared to the time before using a computer when his teacher told him to write a paper and he knew he had finished when he had filled up the one piece of paper that his teacher had given him.

Stories about school laptop programs where the ratio of students to computers is 1:1 appear more frequently in the news these days as compared to 1996 when the District began its program. We started down this path together with about 75 other public and private schools as a partnership with Microsoft. Many of those original private school programs are still flourishing. However, the majority of the public school programs have disbanded over the years as their funding models were not sustainable. One of the keys to the longevity of our program has been the inclusion of parents in this unique partnership.

The AAAL program began with just 94 students and included one classroom of students at each of three different intermediate schools in 1996. The program has now directly impacted approximately 10,000 students. The AAAL program is all about students engaged in the learning process, collaborating with their peers and teachers, and teachers using technology tools in very creative and innovative ways to positively impact student achievement.

Benefits

The AAAL program has definitely helped our students increase their academic performance as measured by various assessments as indicated in the charts above. We have also found that the AAAL program has had an impact in many other areas. This impact on students was first evidenced in a nation-wide study by Rockman, et. al. (<http://rockman.com/projects/laptop/>), which found significant evidence in its study that 1) students are more engaged in the learning process in an AAAL classroom as compared to the typical classroom; 2) students write better; 3) students are more collaborative with their peers and teachers; and 4) attendance improved (see the chart at the right). This research is further validated with formal and informal studies conducted by the District. For instance, parents report their students have become "...much more responsible with taking care of their own personal property" as evidenced by the fact that



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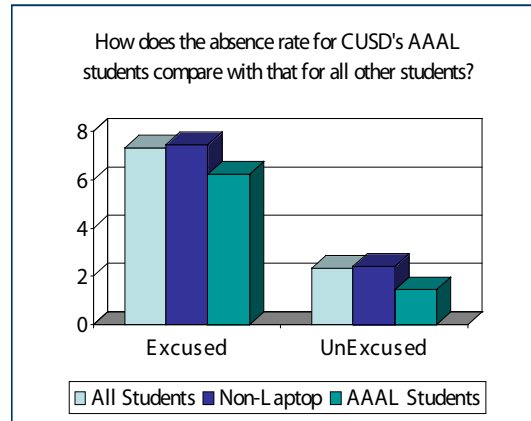
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very few (less than 20) student-owned laptops have been lost or stolen during the past decade. Teachers report their role in the classroom has changed over time as their "...students are more engaged and empowered in their learning process." Karen Ward, who was an AAAL Academic Block teacher at Alta Sierra Intermediate School, may have said it best when she declared, "...the AAAL program and access to the Internet allows me to teach a mile deep instead of a quarter inch deep and a mile wide!"



The Clovis USD AAAL program was recognized as one of four leading technology programs from the United States in 2003 as indicated in an international study that also included other outstanding programs from the Netherlands, Finland, Germany, the UK and Australia. This study was sponsored and conducted by the Bertelsmann Education Foundation (Germany). Finally, as Dr. Jose-Marie Griffiths, Seaton Hall, reported recently at ThinkTank 2005 held at the University of North Carolina (June, 2005), "...success criteria for 1:1 computing programs should focus on stability, reliability, customer satisfaction, handling of growth in the program and increased efficiency in the learning process." These performance indicators are evident in Clovis Unified's AAAL program and contribute to the longevity of this primarily parent-supported program.

The AAAL program has fundamentally changed the way staff and students use technology in the district. The laptop program jumpstarted our use of technology and has spawned the recognition of the power of personal access to technology tools in our entire learning community. Every teacher and administrator is issued a laptop computer which is "refreshed" on a three-year cycle to insure their technology tools are up-to-date. Wireless access, which was first introduced in our AAAL classrooms in 1998, has become ubiquitous as part of our District's standard for network communication. The District's vision is for a "web-centric" model where applications and information are accessible from the World Wide Web. This model is practical for the District to implement as technology use is a component of the very fabric of our culture.

Quality indicators showing the program to be innovative and exemplary were first evidenced in 1998 when the program received a "Technology Innovation Award" from the Smithsonian Institute. Additional evidence is supported by the number of other educational institutions sending teams of visitors each year to learn how our AAAL program really works in hopes of replicating our model in their schools. During the 2004-05 school year, a contingent of 27 Canadian educators spent three days visiting our AAAL classrooms to learn about the 1:1 program. In prior years, educators from 15 other states in the US, Australia, France, Singapore, Austra-



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lia, Croatia, and Bermuda have toured the District's AAAL classrooms to learn more about our program. Further, CUSD teachers and administrators frequently make AAAL presentations at various state, national and international conferences. These include: the California School Boards Association; National School Boards Association; Computer Using Educators; Microsoft's Anytime, Anywhere Learning Conferences in Seattle, Boston, Atlanta and Dallas; the United Kingdom's 1:1 Computing Conferences; the Australian Computing Innovation Conference; and numerous IBM sponsored ThinkTank Conferences. Most recently the AAAL program was honored with a Golden Bell Award by the California School Board Association as an "Outstanding Educational Technology Program."

The Importance of Technology

Information technology is pervasive in the world in which we live. It is our duty to prepare our students to be successful contributors in this new society. Therefore, it is incumbent that we provide our students with the tools they are going to use solve real world problems. Our belief in Clovis USD is that "real world technology tools will help students solve real world problems." Specifically, the use of mobile computing in a 1:1 environment is now the norm for our students and staff. As mentioned previously, all certificated staff are issued laptops as their daily work tool. Because of the AAAL program's impact on information technology, the access to electronic resources is a critical component for both students and staff as a research and communication tool. The use of email is the norm for communicating both internally and externally with our community while the majority of teachers and departments have created classroom or department web pages to better inform their students and parents about classroom activities.

Originality

When we first implemented our AAAL program in 1996 widespread use of technology and access to the Internet in the classroom was virtually non-existent. Most schools were hoping to achieve a ratio of one computer for every six to ten students in the classroom while trying to get their libraries or Administration offices "wired." One-to-One computing ratios were simply out of the question. Our first Superintendent, Dr. Floyd B. Buchanan, has a saying, "...don't let dollar signs get in the way of your dreams." Dr. Walt Buster, our Superintendent when we were first implementing the AAAL program, had a very similar philosophy and also wanted us to always do the "right thing for children." When Dr. Buster returned from a trip to Redmond Washington, which was sponsored by Microsoft in February of 1996, he had seen videos of Australian children in private schools carrying their laptops with them to and from class and engaged in the learning process. He was convinced that One-to-One computing was not only the right thing for those private school kids, but also that we, in Clovis USD, could make it happen in a public school environment. From the first meetings during that Spring with small groups of parent, teachers and the business community we formed a bond and developed goals and objectives that are still present today. Now, each Spring we continue to hold Parent Information meetings where we work with groups of 100's of parents and students at a time to discuss the AAAL program and the positive impact it can have on students and their learning process.



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While the AAAL program was not the very first example of one-to-one computing, its longevity in a public school, parent supported environment sets it apart from the rest. The Australians appear to be some of the first in the world to have explored the virtues of one-to-one computing models. It is a high honor for our CUSD teachers and administrators to have been asked by the originators to “come down under” on numerous occasions and provide their teachers and staff with new ideas and training to make their programs even better. At a recent “AAAL Pioneers Reunion”, 35 of us who represented some of the first institutions to develop laptop schools in the US met to discuss the opportunities for extending 1:1 computing during this next decade. Bruce Dixon, who many attribute as being the “father of laptop learning in Australia (maybe the world),” remarked that “...Clovis USD has the best laptop program of any I have seen all throughout the world.” This was a high compliment for a little school district located in central California.

Success

Success for a program like this can be measured in many different ways. For our AAAL program, we focused on these five key elements in the beginning to foster success for the long term:

- A. Create a “Shared Vision” which does not deviate from our core values.
 - Technology should support the core curriculum and not be the curriculum;
 - Learning would be more effective when one was using technology as a tool in the process;
 - Technology use should take place Anytime, Anywhere and be available for Anyone;
 - Students should use real world tools to solve real world problems.
- B. Articulate the vision with all customers.
 - Students, parents, the business community, teachers and staff all worked together to not only construct the vision but also to articulate that vision to others.



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C. Focus of the program.

·During the Fall of 1995, the CUSD Governing Board recommended a “Technology Graduation Competency” be developed that would become effective for all students entering the 7th grade the following year. Therefore, the 7th graders were identified as the target group for the pilot to begin in the Fall of 1996.

·Each subsequent year the program would move forward one grade level at a time until eventually it would be in place for grades 7 – 12. During the 1999-2000 school year, six elementary schools also started AAAL programs for their sixth graders so they could enhance the learning at that level.

·Capacity for providing staff development training activities would be most effective if it was focused on a relatively small group of teachers, i.e., 7th grade English, Math, History/Social Science and Science teachers (a cadre of 78 staff members).

·Capacity for technical support would be more effective with a small number of students and teachers.

D. Encourage innovation.

·There were really no “models” for us to study (other than the Australian, private school model), so collaboration amongst ourselves was critical. Many hours were set aside for discussion and sharing of ideas of district staff.

·We brought in trainers from Australia to help “open our eyes” to the possibilities for learning opportunities by integrating technology tools and increased accessibility. They taught us many new ways to look at the power of MS Office as a great, open ended teacher tool kit. For instance, we found that Excel was not just a fancy calculator that was good for analyzing numbers or creating graph. It could also be used as a tremendous tool for annotating maps in history or documenting labs done in the science classroom.

·Teachers quickly learned that their students knew more about the technology than their instructors and the role reversal of students teaching teachers became a powerful tool to use in the classroom. The teacher did not have to be the expert with the technology; rather, they needed to be the expert with the curriculum.

E. “Feed the rabbits...” In other words, provide opportunities and recognition for those who worked so hard to make the program successful.

·AAAL teachers were provided all the tools they needed for integrating technology effectively—personal laptops, technology training, Internet access for their students and large screen TV’s for displaying computer images for the entire class to view at the same time.

·Teachers were encouraged to become presenters at local, state, national and international conferences

·Students and teachers were featured in videos at national and international conferences about successfully integrating technology into the curriculum and their classroom.

·Classrooms were visited by educators from all over the world.

Has the program been successful?

Educators from outside the District say it is successful as evidenced by so many of them still



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coming to see for themselves what is happening in the AAAL classrooms of the Clovis Unified School District.

Parents say it is successful as evidenced by their continued support, year after year, as they continue to purchase laptops for their students to bring to school each day—now over 10,000 strong! As one parent said in a video outtake about the program, “the AAAL program is why I brought my daughter to Kastner Intermediate (CUSD) and took her out of private school.” Other parents talk about “the investment [of purchasing a computer for their student] as being more than worth it!”

Research indicates it is successful. This is evidenced by the statistical data presented above by our own Department of Assessment, Masters Theses which have evaluated the program’s impact on student writing achievement and the independent research compiled by Rockman, et. al.

Most importantly, the students say it is successful as evidenced by the addition of 1,000 or more new students who join the program at the 7th grade level each year and take their 6-7 pound machine from class to class and back home every day of the week.

Difficulty

To paraphrase a line from a speech by Dr. Glenn, an esteemed educator from the University of Washington “...the biggest obstacle we face with any educational reform seems to be our memories.” In the beginning stages of our AAAL program development, there were many “nay sayers” who fit Dr. Glenn’s words to a tee. They did not use computers when they were going to school and wondered why computers were so important for the students to use now?

Other key obstacles were:

A. Laptop technology was not very mature in 1996 and the machines were not very powerful, yet they were expensive and “crashed” often leading to anxiety for our teachers and students.

B. There was a very short timeline to get the program started—initial discussion was held in February and March with the various internal and external communities, purchasing was done from May through August, training was done in August when the equipment arrived and school began in September!

C. Teachers had to be hired and trained for the “full-immersion” classes where parents’ expectations were going to be high as they were investing a great deal of money in this new program for their students and it better work!

D. Equity issues for students who were not going to have access to a laptop school every day for whatever reason.

E. There were no “experts close by” who had already implemented a program like the one we envisioned to talk with us as we were part of this first group pioneering this project.

F. Wiring had to be pulled and switches installed in the “full-immersion” classrooms so that the Internet would be available to the teacher and students. We had promised parents “...their students would have access to electronic resources.”

G. Parents wondered why they should spend \$2,500 on a computer for their eleven year old when that same eleven year old “didn’t know where their tennis shoes were half the time!”



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Fortunately, all of these key obstacles were overcome. We knew we were embarking on something that was good for kids. We also knew that all of the hard work was going to be worth it. We never doubted that we would be successful and benefit so many kids. That is not to say that we didn't make many mistakes. The key was that we learned from our mistakes and overcame them. Very early on, we found that our biggest challenge was training our teachers to fully integrate the technology into the curriculum and not use it as an "expensive note taking device."

We had done an excellent job of hiring the three best teachers we could for our "full immersion" classes. We found that none of us really knew how to integrate that powerful learning tool in the classroom--a classroom where everyone was to have full time access to their laptop, to the Internet, and were supposed to use it in new, meaningful ways every day. We overcame this obstacle by providing half-day release time for each of our three "full immersion" teachers at the start of the second semester (Spring, 1997). This strategy provided them with an opportunity to collaborate more often with each other as well as their other peers on campus to design best-practice lessons which would be used by the "non-immersion" teachers who had access to the 6 laptops provided to them. The non-immersion teachers quickly realized that 6 laptops were only slightly better than having none at all. They partnered with each other and pooled their resources so they could have access to multiples of 6 laptops for their students. This strategy provided a very similar experience for the "non-laptop kids" to the "laptop kids" in the full immersion classes. Concomitantly, this strategy proved important because it enabled schools to build capacity in their teachers for being ready to teach the many more "full immersion" classes which would be forming in the near future. In retrospect, having very few "full immersion" laptop teachers and only 94 students to worry about that first year was probably the best thing that could have happened to the program as it allowed time and opportunity to grow into the program as it evolved and matured over time.

Funding is always a struggle in our District. As previously mentioned, the Clovis Unified School District receives much less funding than even the average school district receives in our State. Fortunately, during 1996, when the AAAL program began, the fiscal climate in California was much better than it has been in recent years and the District was able to purchase the 6 laptops per classroom and provide the necessary training which was required. A selling point for this program and our Governing Board was the fact that during the first three years of the program, parents were spending nearly \$5 for purchasing computers to be used in the classroom for each \$1 the District was spending on computers. That is not to say that the District was not spending significant dollars for technology during those early years, but a higher percentage of those technology dollars were being spent by the District on laptops for the "non-immersion" classes and for computer hardware for other teachers and staff to use rather than trying to fund a 1:1 computing program for the entire district; however, we were still laying the foundations for 1:1 computing in the classroom—a program which we continue to develop and sustain.