

One-to-One Computing

One-One Computing: What We Are Learning in a High Poverty School

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Springfield Middle School serves a diverse population of students. Over 90% of our students qualify for free or reduced lunch, a 40% mobility rate, and over 20% identified as Special Education. As of February 2007 we are in our third year of a one-to-one laptop initiative.

We recently took two students to a review panel that was asking them about technology at home. Our students had blank stares while the students from other homes were describing iPods, Gameboy machines, etc. With the high poverty rate comes a deficit in technology experience other than what is learned in elementary school. Many other issues pertaining to parent support, students in foster-care, and the difficulties of life in poverty are pervasive hardship and must be considered when implementing a laptop initiative.

Benefits

- Real world application- preparation for a flattening world
- Differentiated curriculum through online software
- Differentiated curriculum through ease of differentiating projects and sharing resources through a server
- Uses less paper, server-based hand-in and return of papers/projects/assignments
- Highly engaging format
- Many options for how to present learning
- Ease of applying Marzano's 9 Research proven strategies for improving student achievement
- Ease of applying Marzano's strategies for building background knowledge
- Opportunity to learn 21st Century skills (40% of students have no Internet at home, most students come into our school with low to no skills)
- Student pride in the laptop as a learning tool entrusted to them, student pride in work

Challenges

- Staff development (SD) on effective use of technology to support learners
 - Finding mutually available time
 - Differentiating SD for staff member skills and comfort level
 - On task behavior during training (laptops are a temptation for most)
- Scheduling: short class periods impede ability for project-based learning and fully utilizing some of the power of laptops
- SOFTWARE: Purchasing of "packaged" software through third-party vendors- always test drive the software with teachers prior to purchase.
- Continued funding: funding of additional SD time, collaboration time, ability to collaborate with other schools, observe other programs.
- Tools: what technology tools are needed in addition to the laptops? Projectors, document cameras, probes, digital cameras, cam-corders?
- Pre-packed Staff Development: the purchasing of pre-packaged SD where it is not completely customized to the needs of your staff. Who communicates with the vendor about what is purchased, feedback, adaptations "on the go" during the training sessions, etc.

- Onsite specialist: SD, teacher support, student support and tech support. It is difficult to have it be all one person.
- Parent/family connections
 - Many parents struggle with life, not to mention with attending evening or weekend parent-education nights
 - Students quickly learn how to hide information on laptop from students since parent skills are so low
 - Moving from home-to-home, homeless, shelters, multi-family housing causes student to be in difficult situation with caring for laptop
 - Parents who have ‘family’ members staying for periods of time in the house, the guests use the laptop inappropriately, etc.
- Parents often can’t pay the insurance deductible, we cover it, students gets the repaired laptop back and breaks it again.
- Cyber-gang connections- recruitment and communication through social networking sites.
- Mobility: how do you track laptops when students suddenly move and the laptop is not returned. Police require a formal ‘demand letter’ before a report, etc

Logistics

- How are problem-laptops diagnosed and repaired?
 - Timeline for a quick turn around?
 - Onsite or offsite?
 - Can a teacher be trained to help with this if a tech is not available full time on the school site?
- Who offers guidance and ongoing support for the program? Will the vendor do this as part of the sales, not as an additional cost?
- Warranty should be purchased for life of program or basic wear and tear will damage too many laptops by fourth year
- Ongoing staff development is a must
- Onsite storage of laptops for students not able to, willing to, or have lost privilege of taking laptop home
- SMOKING: if laptops go home how will you monitor laptops from a smoking home. The laptops STINK after a few weeks in a home with a heavy smoker. How do you issue a laptop from a smoking home to a student whose parents don’t smoke?
- Minor damage: popped off keyboard or keys, 2 CDs crammed into drive, soda spills, etc- → how do you handle and policies in place to deal with these issues.
- Issuing laptops and chargers: how do you monitor the condition of each device? What happens if charger breaks and student swears it was that way when you gave it to them?
- We run 2-3 ‘laptop check-ups’ a year in which we quickly walk through classrooms and rank each laptop according to its wear and condition
- Be flexible- be ready to adapt, initiate and modify rules, guidelines and policies without being weak or undermining other rules and guidelines.
- Join ISTE and become part of their new One-to-One Laptop Special Interest Group- an international group of educators/administrators/programs involved in 1-to-1 programs