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Transparent Training and Technological Intuition

by Eric C. Adams

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As at many schools, the past three years at San Carlos School have been witness to unprecedented, and recently unimaginable, access to educational technologies. In just three years

the San Carlos Technology Program has fully integrated a skill-based technology curriculum from Kindergarten to grade eight, and gone from a workshop model of technical skill training for teachers to an apprenticeship model of team teaching. The mission of the San Carlos Technology Community is to develop an intuition in students and teachers that enables them to transparently use technology as a learning tool. During the installation of the entire enabling infrastructure and the acquisition of the technologies to support these achievements, the school has always kept its mission in the forefront.

Creating a Technology Community

San Carlos has a “technology community” instead of a “technology committee.” We like to emphasize that the definition of participation in our technology program is not technical skill, but a desire to improve the learning environment of our teachers and students. This sense of community has enabled San Carlos to technologically evolve, in just three years, from five computers and a single modem connection to a self-contained technology center with 18 Internet-enabled computers, cable and Internet access in all classrooms, and a couple of portable centers combining computers with presentation systems.

One goal of the San Carlos Technology Program was to equip our technology center with 18 computers. This number gives us a 2:1 student to computer ratio, with class sizes of 35 allowing the center to accommodate an entire classroom at once. The San Carlos Technology Program has never supported the mantra of a computer for every student in our center. The pervasive image of a student, staring enamored into a computer screen, with a single finger clicking on the mouse doesn't represent learning to us. Instead we value, and deliberately support, the dialogue intrinsic to pairs of students working collaboratively on a computer. The San Carlos Technology Program views this learning distinction as the difference between an interface and an interaction. The same difference holds true in utilizing the technology center in professional development for teachers. The school has found that when working with technology, access to other people for idea sharing, troubleshooting and encouragement is as important as access to the technology itself.

Transparent Training

San Carlos initially attempted to use the ubiquitous workshop training model for teacher professional development. This unfortunately common format consists of clustering teachers together for lab training on specific skills (like Web searching, electronic grade books, etc.) and on technology not available in every classroom. The San Carlos technology culture was not changing as fast as it was acquiring technologies. Teachers, the most important stakeholders of our technology program, were not having their professional growth needs met. Focusing again on our mission to improve the learning environment for teachers and students, we realized that teachers needed to be trained in the situation in which they would actually be using the technology. In response to this realization, the San Carlos staff agreed to stop having teachers send students to the technology center, and began having teachers accompany them.

This simple move towards participation has transformed our technology program. Our technology center has ceased to be viewed as a separate entity and has become an extension of each teacher's classroom. What the technology is being used for in the center comes directly from the classroom curriculum. The Computer Teacher and respective grade level teacher co-instruct every class. The

role of our Computer Teacher has changed from being an instructor of a technology curriculum, to a personal guide through the use of technology to support what teachers and students want to achieve. The role of the grade level teacher is that of content specialist and transformational leader, simultaneously functioning as both teacher and student as they learn the technology alongside, and from, their students in this learning environment. This simple move towards participation has not only integrated each classroom curriculum with the technology program, but also provided our teachers with “transparent” professional development on a weekly basis.

Learning new technological applications frequently starts with our computer teacher modeling the potential of the technology to students and teachers. This serves two purposes: it initiates a dialogue around levels of functionality, and it also exposes the full range of application features to learners. During this dialogue, the Computer Teacher encourages and writes down questions posed by teachers and students. This generated list of questions provides the class with scavenger hunt-like content for practicing and honing its “technological intuition.”

Technological Intuition

Cultivating students’ and teachers’ “technological intuition” is similar to providing word-decoding strategies to emergent readers. The San Carlos Technology Program attempts to provide every student and teacher with a similar set of tools for reading the computer screen. The process starts with consciously determining what it is that the user wants the computer to do: from something as easy as “I want it to center this text” to something more complex like “I want this program to automatically open when I start the computer.” With this end product in mind, learners can then begin searching for the process leading to this result.

Strategies for decoding a computer screen includes steps like:

- Spending a moment looking at the screen, scanning for icons on the toolbar and desktop, reading descriptive labels on cursor-over pop-ups, trying toggle switches and always remembering the undo command.
- Looking across drop-down menus for words synonymous to what you want the computer to do.
- Checking out right click functions (or click and hold on a Mac).
- Checking in the software help function, an underutilized treasure trove of tutorials and tips.
- Asking someone if they know how to do it.
- Looking in manuals and in online FAQs.

These computer-screen-reading strategies are in no particular sequence, other than learning style and the inevitable impasse. Having a repertoire of screen reading strategies, and confidence from experience with decoding skills, San Carlos hopes to foster a technological intuitiveness in our students and teachers. This empowers students and teachers to get what they want out of the technology they choose to incorporate in the learning and teaching process.

Conclusion

In the past three years San Carlos has learned several significant lessons in successfully cultivating a culture around educational technology initiatives. The San Carlos Technology Program has evolved from technological bare minimums to technologically enhanced learning environments. The bridge between our culture and these enabling technologies is built by apprenticing our teaching staff in the assimilation of technologies into their instructional repertoire. Students and teachers concentrate on developing a technological intuition for the purpose of enhancing learning and leading. These achievements are a source of great pride, and continued purpose, at our school.

Eric C. Adams is a Technology Coordinator for the Catholic Diocese of Monterey at San Carlos School. His primary duties include providing technical support and professional development to school staff personnel on the integration of technology with classroom curriculum and the use of technology to support instructional methodologies. Adams also has experience training teachers and developing curriculum for schools in Shanghai, P.R.C. and Hiroshima, Japan. He is currently a doctoral student in Pepperdine University's Educational Technology program.

E-mail: ecadams@earthlink.net

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