Collaboration in K-12 Schools: Anywhere, Anytime, Any Way

A CoSN Emerging Technologies Report

Executive Summary

When educators dream, it probably looks like this: A group of fifth graders takes a series of field trips to local water sources where they use handheld computers to gather water samples. When they return to the classroom, they upload their results to a database on the school portal, which aggregates their findings. Then they log onto the project Wiki to document their expedition, allow teachers and administrators to assess their work, read what other classes in the district have found, and share the process with parents and appropriate members of the community.

At the local university, the scientist in charge of the pollution project studies the aggregated findings and decides the data shows the source of pollution is not any one factory but runoff from gardens and driveways adjacent to the river. He sends an instant message to the students, teachers, and administrators thanking them. "Gathering this data would have been impossible without your help," he says. "I simply don't have the staff. But I have the evidence I need now to submit a report to the local government so we can stop this pollution from destroying our rivers."

The students are excited to be part of an effort to save the beach and rivers they love; they don't want to stop there. They set up a blog to publicize their findings. This ultimately leads to a news story, increased local awareness of the pollution problem, a response from the local government, and an eventual reduction in runoff and pollution. The students are galvanized by their success. That they learned a great deal about government, scientific study, and ecosystems is evident from their test scores. And school personnel—even across school boundaries—enjoyed collaborating on the project.

The reality of a teacher's day, however, more often entails delivering a lecture on democracy where 40 percent of the class stare into space; reading aloud from a book on ecosystems then giving a test that demonstrates the students weren't very interested; and delivering classroom experiments that dissolve into discipline problems.

The tools that transform the educators dream into reality are simple collaborative technologies: **instant messaging, blogs, wikis**', and **portals**. These tools simplify collaboration among students, experts, school personnel, and the community. Though these tools are widely available in workplaces and homes around the world, they have been—until recently--difficult to deliver to school districts. That is now starting to change—not because of an edict from Washington—though there have been some of those—-and not because of any revolutionary "it" technology—-though we live in an age rich with those--but because students, born in this era of technology, are integrating collaborative tools into their own lives and schools finally have the infrastructure in place to allow them to take advantage of those skills in the classroom. In the U.S., the average student to high speed Internet connected computer ratio is 3 to 9, according to EPE Research Center's Annual State Technology Survey as reported by Education Week in Technology Counts 2006. While that is not yet the one-to-one student-to-computer ratio a lot of technology advocates would like to see, it is well on its way.

Of course having access to technology and implementing it safely and efficiently are two entirely different prospects, which is why CoSN's Emerging Technologies Committee has undertaken this report on collaborative technologies. Neither a scientific study nor a review of products, this report draws from our varied experience as IT consultants, technology advocates and school technology administrators like yourself.

In order to isolate technologies that afford the most collaborative potential, we divided our experts into research teams. These teams sought technologies that enhance collaboration among staff, schools, and districts without imposing an excess burden on the IT staff. Once we identified the three technologies--Instant Messaging, Blogs and Wikis, and Content Management Systems (or portals)—our teams explored the opportunity and challenges each presented, the impact that each would have on policies and procedures, and identified the tools necessary to implement them district wide. For readers who seek further information on any of the topics presented here, we offer a literature review that leads deeper into each subject.

To help potential users envision not only how the technology works but also to imagine the experience of using the tools, we've identified models of collaboration for each approach. This effort, we hope, will help illustrate the effect of the each tool on the people who use them, giving a firmer ground for envisioning the type of collaboration, the learning process, and educational organization it enhances. That way we can choose the technology that bests support the learning experience rather than adopt a technology because it is current or popular. Collaboration can be one-to-one, one-to-many, many-to-many, and everything in between. For the purposes of this report, we've identified the following types of collaboration:

- **Conversation**: Two or more people are engaged in an exchange of ideas.
- **Radio Talk Show**: One person leads the conversation; others join to comment on the ideas.
- **Whiteboard**: A virtual writing space for multiple users to post, edit, and revise content in a single document.
- **Library**: A repository of content collected and organized by a designated group for others to access. Processes for selection, organization, and access are automated.
- **Lecture Hall or Conference Room**: This model offers two types of collaboration. One is a broadcast of ideas with limited response from the group for large, formal groups, and the other is a discussion.

There is no doubt these are defining days for our schools. Will we rise to the challenge presented to the traditional pen and paper methods, embrace the tools that will define our students' future, or will we hide from change and become increasingly irrelevant to students, ill-preparing them for a world where they need not only knowledge of the tools but the critical thinking skills necessary to use those tools well? This committee would like to take this opportunity to appeal to what you—the IT director—knows. Technology is empowering. It can transform the lives of students who are given access to it. It can turn those sleepy days of boredom into excitement over what is possible. You could be the agent for change for the entire population in your care. True, this may not be the easiest path. But did we go to the moon because it was easy? No. We went because it was hard.

Collaboration in K-12 Schools: Anywhere, Anytime, Any Way is the fifth report in CoSN's ongoing Emerging Technologies series. More information about the series, including free executive summaries of all reports, is available at www.cosn.org/resources/emerging_technologies/. **Collaboration in K-12 Schools: Anywhere, Anytime, Any Way** was produced for CoSN by the Emerging Technologies Committee under the leadership of project director Ivan Sindell, former committee chair Karen Greenwood Henke, and committee chair Darrell Walery, and was written by Christina Tynan-Wood. CoSN wishes to thank report sponsor Alcatel and media partner *Technology & Learning*. The full report will be available late summer 2006 at https://my.cosn.org/mycosn/store/.

About CoSN
The Consortium for School Networking (CoSN) is the country's premier voice in education technology leadership with a mission to serve as the national organization for K-12 technology leaders who use technology strategically to ultimately improve teaching and learning. CoSN provides products and services to support and nurture leadership development, advocacy, coalition building, and awareness of emerging technologies.

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