MICHIGAN SCHOOLS **USE** **TECHNOLOGY** IN EXCEPTIONAL WAYS

Technology can contribute to school excellence in many different ways. In this expanded column, we will visit two schools that are making innovative uses of technology.[1]

The Edith B. Garrett Elementary School in Benton Harbor, Michigan, has 25 students and two teachers. Susan Bendrat, principal and upper-grade teacher, leads her school in the exceptional use of technology.[2] She knows that innovative and appropriate use of technology in the classroom cannot happen without sustained, appropriate staff development. Bendrat has attended more than 75 hours of training in the past two years. Some of this training was provided by the Lake Union Education Department, the rest by the Berrien County Intermediate School District as part of a grant for teachers in the county.[3]

The school's teachers decided that technology skills were best taught in the upper grades. The younger students are still struggling to become readers and independent learners, so they need to focus on basic skills. However, when students reach Bendrat's classroom, they put their skills to work learning about their world.

Though the school has only six computers, they are arranged for maximum use. The students use one computer in the back of the classroom as an Internet research center or the focal point for small-group presentations. In order to use the computers effectively, Bendrat divides her class into two groups. One group coaches the younger students, while the others work in the lab on their projects.

Technology is integrated into the curriculum. "We don't allow games during school," Bendrat states. Instead, the students use the computer for worldwide communication, to supplement their oral presentations, and to find information related to their studies. Many non-computer activities also reinforce the concepts taught.

Bendrat does not allow Internet access without supervision. She logs students on and they know they are not allowed to access the Internet if she is not in the room.[4] This is part of the school's policy, which parents and students signed at the beginning of the year.[5]

The class is currently studying a unit on languages of the world. Bendrat found a friend in Spain with E-mail access, and the students write to ask her questions about the culture and language of Spain. Each student types a letter and has it graded before E-mailing it.

Students' letters and responses from the friend in Spain are kept in a portfolio for this unit. Other activities included drawing freehand maps of the world, labeling the countries and continents, and learning words from other languages.

When I visited this classroom, students showed me their presentations from a recent unit on amphibians and fish. First they conducted their research, using books in the library, the textbook, and the Internet. Then they created a detailed storyboard showing what content and images would be on each slide of their presentation, and used PowerPoint to compile the information. Finally, they presented their findings to fellow classmates,

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Students at the Edith B. Garrett Elementary School work in pairs at the computer lab.

students from the lower-grade classroom, and a teacher. Students were graded on presentation skills, such as looking at the audience, appropriate gestures, and other skills. Their projects will be featured at the spring open house and entered in the annual Berrien County Arts and Sciences EXPO.

Other projects include: (1) a study of the aqueducts of ancient Rome, using information from bookmarked sites on the Internet,[6] after which students will build their own aqueduct; (2) an Internet treasure hunt on U.S. presidents sponsored by the Michigan Conference, and (3) a slide show that the 8th-graders are preparing for their graduation. With each of these projects, the computer is used as a tool to accomplish curriculum goals.

Bendrat has some words of wisdom:
• Don't use the computer as a reward or punishment.
• Allow all students access to the computer.
• Students who struggle academically often show their strengths when using the computer. They learn the software quickly and transfer this success to their schoolwork.

Other learning activities comprise

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The Niles Adventist School Store, from its World Wide Web site on the Internet.

each lesson and reinforce the concepts taught. Herein is the success of this school. The technology is truly integrated into all that the students learn and do.

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Next, we visit the Niles, Michigan, Seventh-day Adventist School. We feature this elementary school because it received one of the first annual "Awards of Excellence" given by the Adventist Association of Online Evangelism[7] to the best evangelistic and supportive Web sites in Adventist ministry. The Niles school, with 63 students and four teachers, was the only K-12 school listed as a finalist for this award.

Principal Melvin Wade is also the upper-grade homeroom teacher and Webmaster.[8] He and the other teachers see the school Web site as another avenue to "provide information to parents and prospective students, to publish students' work, and to create starting points for the students' use of the Internet."

Everything produced by or about the school, including the constitution, strategic plan, handbook, calendar, and weekly newsletters, is published on the school's Web site. Unlike many school Web sites, which are outdated and incomplete, the Niles Adventist School site features its newsletter each week, along with recent student work.[9] Student work displays only the pupils' first names. This year's project is called the World Fact Book. The students research each country in the world, compile the information using Microsoft

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An older student helps a younger one on the computer at the Edith B. Garrett Elementary School.

FrontPage, and publish it on the Internet. Teachers also use a classroom page with links to tools that they need for various projects.

Wade is piloting a unique fundraising use of the Web site. Many E-commerce retailers have an associates program to promote their site. The school has registered with several such sites. When someone clicks on the retailer link to purchase a product, the school receives a percentage of the sale.

The school has also established an active technology committee that meets once a month to review the status of the technology infrastructure and to find ways to upgrade and improve the system. Wade says: "All the individuals have expertise, time, and/or talent in different areas of technology, and they handle the maintenance, upgrade, and repair of the computer network. This saves the school a considerable amount of money in outside labor costs."

The technology committee has also helped increase the number of computers in the classrooms. The school uses donated 386 and 486 computers as terminals. Wade describes how this works: "We took one of our newest computers, a K6-2

333Mhz, added some extra memory, and installed Microsoft Windows NT Terminal Server Edition.[10] Then we set up the 386s with Windows 3.11 and installed the Terminal Server Client. With this in place, the older computers were not doing any of the work themselves.[11] The students see a screen that looks and acts like Windows 95." These computers are used for classroom writing tasks, Web page design, and Internet research.

These schools have found ways to use the tools at hand to accomplish curricular and school goals. It is important for teachers and administrators to integrate technology into the essential tasks of a school, such as research, writing, presentations, open house, sharing policy with parents, and displaying student work. In this way, technology can contribute to the making of an exceptional school. ✐

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NOTES AND REFERENCES

1. These schools are only two examples of those that are doing exceptional things with technology. Let me know about your creative uses of technology by E-mail at freedj@ andrews.edu.

2. See http://www.fromnowon.org/eschool/ eschool.html for some excellent reading.

3. More information about this program can be found at http://www.remc11.k12. mi.us/techlit/Goal2.htm.

4. The Garrett School's E-mail address is garrettschool@ameritech.net. Susan Bendrat will gladly answer your E-mail questions and comments.

5. This is called an Acceptable Use Policy. More information can be found at this address: http://www.erehwon.com/k12aup/ or you can see an Adventist school's AUP at http://www. tagnet.org/niles/aup2.html.

6. Bookmarking sites for students to visit later is a great way to guide their research on the Internet.

7. http://www.aaoe.org.

8. http://www.tagnet.org/niles/.

9. Documents can be converted by saving as HTML in most word processors, or by using Adobe Acrobat software for fast Web publishing. See http://www.adobe.com/prodindex/ acrobat/ for more info.

10. Windows NT information can be found at http://www.microsoft.com/ntserver/.

11. When the computer receives a command, it is sent to the server, which processes the command and sends the resulting information back to the computer screen.

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School computers are used for a variety of applications.