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Planning for a 1:1 Environment

by Sharon Wallace

Yesterday I was monitoring students before school and I asked them if they thought it would rain. One second grader promptly responded that, no, it would not rain. She had checked her iTouch at home, and it was not supposed to rain until Thursday.

We are teaching 21st-century children. They have grown up with cell phones, laptops, DVR, and GPS. The question is no longer whether or not to put computers in the school, but how.

What is a 1:1 environment?

In a 1:1 school each child in the building has his own personal computer for use during the day. Usually that computer is some sort of laptop, [netbook](#), or handheld device. Ideally he takes it home after school and uses it for practicing skills taught that day. The computers that the students use are connected to the internet that is filtered and the software the student uses is either installed on the machine or available from a network.

A banner for 'PROJECT School Zone' featuring a collage of photos of children and adults. The text reads: 'PROJECT School Zone Where Lutheran schools grow'. Below the photos, it asks 'What if you could take your Lutheran school door-to-door?' and states 'Door-to-door is just a click away' with house icons. The website 'lcef.org/schoolzone' is listed at the bottom.

A banner for 'One in Christ' with a green and white background. It features the 'One in Christ' logo and the text 'New Day School Curriculum'. Below this, it says 'View sample lessons' with a link.

Review, Reflect, Resolve

Students are called *digital natives* because they have grown up in the digital world, and they are unaware of a time when devices didn't exist. Many teachers are called *digital immigrants* because they have moved into this world of new technology. What have you seen that suggests differences between the two groups?

Has your faculty and/or board discussed the potential for a 1:1 environment for your school. What challenges exist? (A growing number of Lutheran schools already have a 1:1 environment.)

Take a peek at the practical considerations of 1:1 at [Salem Lutheran School](#) in Orange, California.

Links & Resources

Find out more about some of the technical terms and tools mentioned in this article:

[bandwidth](#)

[cloud computing](#)

[Comsifter](#) appliance

[Cybersitter](#) software

[netbook](#)

[United Streaming](#) and [Education City](#) are tools to help integrate technology into instruction, used in conjunction with curriculum.

Take a peek at the practical considerations of 1:1 at [Salem Lutheran School](#) in Orange, California

School board standards of Lutheran Schools



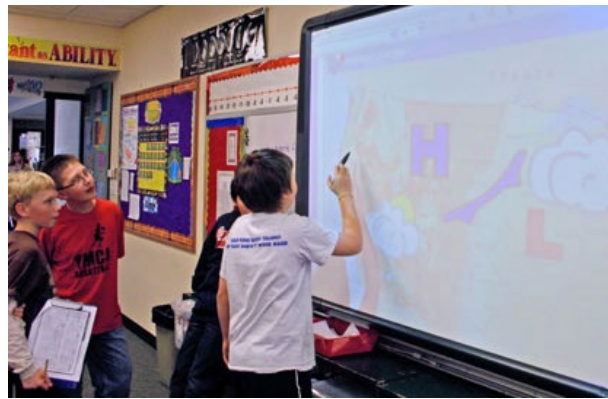
The teacher is responsible for planning the use of the computers at various times throughout the day. Some teachers will allow students to use the computers as a resource at any time, while other teachers will build in times for the computers to be used. Students may have the computers on their desks all day, or, more commonly, the computers are kept in a cabinet or on a shelf until it is time to use them. High school students may carry the laptops in backpacks from class to class.

When planning to implement a 1:1 environment in an elementary school, a three-step approach may be used as a guide.

- Build a solid infrastructure.
- Give the teachers the tools.
- Give the students the tools.

Infrastructure

It is important to have a strong-enough wireless signal and enough [bandwidth](#) so that every student in the school can access the network and the internet at the same time. This happens in business all the time, so it should not be difficult for a company to install a quality system. However, a technology business will probably not think a school would need the same service that business needs. Be sure to insist that the installation will be able to support all students and teachers during simultaneous access. Questions will come up during the installation process. For example, do you want to have guest access to the internet in your building? Will you receive the internet already filtered, or will you filter it yourself with an appliance like a [Comsifter](#) or software like [Cybersitter](#)? The infrastructure will ensure success when teachers and students have personal computers. Lack of internet strength can cause frustration throughout the implementation of the 1:1 program.



Tools

Once the infrastructure is in place, the teachers need to have the tools first. Teachers need to have laptops to use so that they can begin to structure lessons around the new technology. Professional development should focus on integrating technology into instruction during this time. Tools such as [United Streaming](#) and [Education City](#) should be considered for their value in conjunction with the curriculum. Ideally the teachers should have an entire year with the new technology before the students have access to the same tools. Support from the administrator will be key as teachers navigate a path to teaching with technology.

Computers for students

Finally, it is time to put computers in the hands of the students. There are many options in making this happen. A school may wish to require students to bring a computer to school. Other schools may purchase the machines the way they purchase textbooks and the students will borrow them for the school year. Another option may be to purchase the computers as a school and allow families to buy them over the course of two to four years. The decision about what type of computer to use needs to be answered much earlier since, at this point, the teachers have had the computers ahead of the students.

Funding and protecting your investment

Supporting a 1:1 program is a major challenge. Computers can break, passwords will be forgotten, and settings will be changed. Two measures will greatly help this process. A well built network will prevent problems and will make solutions easier. Second, insurance on the computers will protect the investment. Two types of insurance should be considered: A warranty on parts and damage, and self insuring by purchasing 5 percent more computers than needed. By keeping extra computers on hand, troubled machines can be easily swapped with one of the extras until the computer with issues can be re-imaged. A warranty will allow for one to three years of protection against failing computer components.

Teaching students who have the internet at their fingertips throughout the day is an exciting and daunting task. It is not sufficient to maintain a classroom environment where students wait to be informed by the teacher and the textbook. Students are able to call up information and misinformation within seconds. Students will be eager to present their ideas and the results of their research with the digital tools and new emerging technology.

of Excellence at www.lsportal.net.



Other articles you might be interested in in this issue of **Shaping the Future:**

Prescription for a Healthy School Ministry by [Paul Brandt and Jill Zempel](#) ([Feature](#))

Universal Preschool by [Ray Smith](#) ([ECNet](#))

Effectively Engaging by [Bill Leese](#) ([SECnet](#))

Moving to a 1:1 program gives teachers and students the advantage of accessible technology throughout the day. The computer lab or mobile cart does not provide the same advantage. Funding can be a challenge in providing an extensive program, however with [cloud computing](#) on the horizon and the prices of technology falling, this may be a good time to consider becoming a 1:1 school.

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