

Should Schools Use Wireless in Classrooms?

by Janet Copenhaver

As new technological advances are invented, schools and school divisions must investigate these innovations and then decide their value for the classroom. With the growth of wireless technology, a decision needs to be made whether to keep stationary computers in place or switch to portable machines that are "connected" without cables.

After many hours of deliberation, my division has chosen to implement wireless mobile technology in our middle and high school classrooms. We assessed many factors in our decision, including our technology plan and the reasons for going wireless; our network and what was needed; how we were going to use the wireless, and the curriculum effectiveness of the technology itself.

"Why wireless?"

The background data from our laptop program provides insights for understanding why we chose a wireless environment. In 1998 with the collaboration of our School Board and Board of Supervisors, our division purchased laptop computers for each fourth and eighth grade student. The next year, we purchased laptops for each fifth and ninth grade student. Unfortunately, though, several major companies in our area announced layoffs and closings by the end of this fiscal year.

Among them were well known companies like Dupont, Tultex, and Pluma. In addition to these large companies, several smaller companies closed immediately or filed for bankruptcy. Because of our county's economic conditions, our goal of having laptops in grades four through twelve seemed unattainable. However, after many meetings, the two local governments came to our rescue and allowed the division to purchase around 300 laptops.

We chose the wireless iBooks and with certain strategic planning endeavors with the Apple Computer Company, we placed the iBooks in carts with two airports on top of the cart. Staff members assigned IP numbers and allowed ten computers to hit each airport. After days of frustration we quickly decided this was not our answer.

During this time frame, I was selected as an Apple distinguished educator. As part of this award, I attended the University of Florida for training sessions. When I opened my laptop, I found that I could access the Internet through a wireless connection anywhere in the building where the training was being

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Wireless in Classrooms, continued

conducted. After further investigation, I saw that airports were placed in certain areas in the building and not on carts. I knew this was the answer we were looking for in our four middle schools.

When I came back to work, we took the airports from the carts and placed them, all over the schools, with some of them being placed near the ceiling. Success at last! We now have thirteen mobile labs divided between four middle schools that can be checked out by teachers. The mobile lab goes to the classroom rather than students going to a lab. With a wireless mobile lab, network cabling is not visible or necessary. The lab is more convenient and faster to implement. It is truly "plug and play" technology. This new technology helps maintain our technology plan's goals of smaller computer/pupil ratio and technology integration with a tool that is easily accessible.

"How can we use the wireless?"

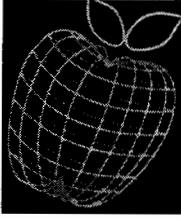
We use the wireless labs and mobile carts with web and server-based curriculum applications. Riverdeep and Alexandria are two of the software applications that we access with laptops. All of the laptops are allowed to access the Internet but are proxied and filtered through a server housed at the high school in their zone. Media specialists use the wireless labs in the media center. As soon as students check out their books, a laptop is taken out of the cart and students start accessing the server or web-based applications. Classes can also be held outside the school and students are able to "hit" the network as they work on projects within wireless range.

Probably one of the most rewarding activities we have experienced with wireless technology is our interaction at night with parents and students. We received a Learn and Serve grant that allows us to bring schools and communities together to work on projects. This grant gives the communities an opportunity to come to their schools and interact with teachers, other parents and business partners. Students and parents then use the wireless laptops' connections to research the Internet and create a project usually based on an aspect of our Virginia Standards of Learning.

After implementing our laptop program, we assessed the effectiveness of the program on our curriculum. Our technology scores went up 20% in each tested grade level with a laptop. We are excited about the wireless and will track these students' scores in technology and subject based test scores. Our goal is to make this tool transparent. We can already state that the wireless makes students eager to learn. Because of being easily accessible, our wireless technology motivates students at all learning levels to use this technology as a tool to further their expertise in all subject matters. Technology acts as an equalizer for students that may not be able to write as neatly or effectively as other students in their classroom. We have also found that discipline problems are reduced if a student uses a laptop to fill daily time gaps in certain classes.

Where do we go from here?

Since we have achieved success in the middle schools, we decided to integrate the wireless into our four high schools. As stated from our laptop



Wireless in Classrooms, continued

program, our two local governments purchased laptops for all ninth graders. After one year in the ninth grade, we decided to give the laptops to seniors and issue each one a dial-in account to our server. We have not experienced a great deal of difficulty with this implementation but have changed our focus to installing a wireless card in all 745 MetroBooks laptops, establish mobile wireless classroom sets, and issue a wireless laptop to each high school teacher. Our technology staff will install Lucent technology wireless access points in each of the four high schools to make the inside of the building totally wireless. In addition, we issued a wireless laptop to middle school teachers. Basic training was given to teachers before the end of school and an intermediate and advance training and integration sessions will be given in the fall.

School divisions interested in implementing this form of technology will need computers with wireless cards, several access points, carts, networked printers, a network to hook airports into and basic configuration knowledge.

As cognitive learning becomes merged with e learning, students and teachers are changing the technological environment. Appropriate tools are necessary for this merger and as more and more of these products are constantly being 'birthed' discriminatory measures are necessary for instructional and technology staff members to reach the right conclusion.

As Eleanor Roosevelt stated, "The future belongs to those who believe in the beauty of the dream."

About the Author

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