Empowered LEARNERS

Boosting learning by putting computers in the hands of every student

Shelby Anderson

Engaging students through technology has been a pillar of Shannon Luehmann's teaching philosophy. When she began teaching third grade at Prairie View Elementary School in the Oregon School District, she was one of the first teachers to have a Smart Board in her classroom.

The Smart Board allowed her to present lessons in new ways but, most importantly, she noticed it helped her reach students who had been hard to draw into classroom activities. She specifically remembers one student, who had difficulty paying attention in class, was engrossed in the lesson when she used the Smart Board.

"Seeing how that student reacted to the Smart Board was kind of an 'ah-ha' moment for me," she says. "Using the Smart Board in the classroom kind of sparked everything."

talks feature leaders on the cutting edge of their respective fields. During her presentation, Luehmann mentioned that her ideal classroom would be one in which every student has his or her own device – such as a netbook or tablet computer – to use in the classroom.

A link to a recording of Luehmann's presentation was forwarded to the Oregon school board members who were impressed.

"We got excited when we saw that video, we knew we wanted to get her class a set of computers," said Oregon school board president Deedra Atkinson. "Shannon has been a great role model for teachers and technology."

Soon after watching the video, the board surprised Luehmann with a classroom set of Google Chromebooks. She and her students were the first to receive a classroom set of the computers in her district.

In a post on Google's Enterprise blog, Luehmann recalls, "It was like Christmas morning in my class when I shared the news with the kids and let them open the Chromebooks. Some student reactions were, 'So, you're telling me this is mine to use all year?'"

Classroom Activities

After using the computers for almost a complete school year, Luehmann and her class of third graders have integrated the small, sleek Chromebooks into regular classroom activities.

Each school day, students use the Chromebooks for some activity or another. Luehmann's students all have active blogs where they post updates about the book they're reading and other classroom activities. The blogs are only open to the students, their teacher and parents. Luehmann and parents can post comments directly to their student's blog.

"Parents really like the blogs," Luehmann said. "It gives them a way to connect with their children's daily learning."

"Using the Smart Board in the classroom kind of sparked everything." — ***Shannon Luehmann,*** *teacher, Oregon School District*

TECHNOLOGY IN THE CLASSROOM You can view Shannon Luehmann's Tedx Madtown presentation at TEDxmadison.com. Luehmann discusses how to successfully integrate and utilize technology in the classroom.

Recognized as something of an expert in using technology in the classroom, organizers of a TEDx event in Madison invited Luehmann to speak about the role of technology in education. TEDx events are created in the spirit of the TED talk mission, "ideas worth spreading." The internationally recognized TED

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Not only do the blogs give parents a look at what their student is doing in school each day, it also provides students an opportunity to practice their writing and editing skills, which Luehmann says have benefitted with the use of the Chromebooks.

"When you have students use paper and pencil, sometimes you have to have them rewrite the sentence or paragraph they wrote all over again to revise their writing," she says. "This is much faster."

The Chromebooks also allow for interactive lessons. For a geography activity, Luehmann had her class use Google maps. Students started in their hometown of Oregon and then zoomed out to Wisconsin, the United States, and the rest of the world.

Her class can also use learning apps on the computers. Luehmann said she was looking forward to upcoming apps on teaching the solar system and another on body systems. "There's a lot out there, you just have to look," she says.

The students look forward to using the computers for just about any activity. "My favorite thing is almost anything," said third grader Emily Morgan Lagraves.

Individualized Learning

Like the Smart Board, perhaps the most important aspect of putting a device, such as the Chromebook, in the hands of each student is the power it can give them.

Luehmann has been surprised to see how every student, no matter where they are academically, have benefitted from the Chromebooks. It's helped Spanish-speaking students develop their reading skills. Luehmann can also use the books to challenge advanced students to use their Chromebook to search for information on their own.

"Students have used Chromebooks to engage in the classroom, be more productive, and even be more positive," Oregon School District director of technology Jon Tanner said.

The **Flipped** Classroom

RETHINKING THE ROLES OF TEACHER AND STUDENT

In 2007, two teachers in Colorado began recording their lectures as PowerPoint presentations and saving them online so students who missed class could stay up to speed with their peers in the classroom.

Soon teachers all across the country were posting their lessons online so their students could access the lessons at home. Many of these teachers discovered it often was more effective to have their students view these PowerPoints or videos online at home and then use classroom time to work collaboratively on what used to be homework.

This flipped classroom model changes the role of teachers from "sage on the stage" to "guide on the side." Instead of lecturing at students, teachers are guiding their students' education and are available to answer questions that students encounter as they work through problems and projects.

At Clintondale High School in Michigan, the entire school uses the flipped classroom model. Teachers record about three lesson videos a week. Students then watch the 5-7 minute videos at home or in school if they don't have Internet access at home. Classroom time is then devoted to interactive activities that are designed to illustrate the concepts introduced to students in the videos.

Teachers at Clintondale High School have found that in the flipped classroom model, students are more likely to succeed. Teachers can give instant feedback to students, and students are less likely to get frustrated with school work if a teacher is there to help them understand difficult concepts.

Before Clintondale High School moved to flipped classrooms, about 44 percent of freshman failed math. Now, under the flipped classroom model, that number has dropped to about 13 percent.

"It's about changing instructional models so the students can receive more instructional support in the classroom from the experts that Clintondale has on staff," said Bruce Umpstead, Michigan Office of Education Technology and Data Coordination. □

ONLINE RESOURCES are available that offer more information on flipped classrooms. Some websites include: **edutopia.org, educationnext.org,** and **knewton.com**. Type "flipped classroom" into the search bar of any of these websites for a listing of articles and other resources.

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— ***Deedra Atkinson,*** *president, Oregon school board*

Luehmann remembers when the Chromebooks first arrived, one of the class's quieter students, who happened to have a Chromebook at home, was able to help students learn how to use the new devices.

"Here this introverted student is suddenly the classroom leader," she said. "He's our Chromebook guru."

In fact, Luehmann said that has been one fun aspect of using the new computers – learning how to use them along with her students.

"I'm learning right along with them," she said. "Sometimes they're teaching me how to use them."

Other Technology

While Luehmann is grateful for the Chromebooks, she says schools can benefit from technology without investing in a classroom set of computers.

"A lot of people view technology as expensive," she says. "But there is a lot that's free."

Before she had the computers at her disposal, Luehmann used a number of interactive websites such as wordle.net, blabberize.com, edu.glogster.com, and freerice.com. Each website offers something different. Wordle.net is a great website for creating your own word clouds and freerice.com gives students an opportunity to answer educational questions and earn rice that is donated to the United Nations World Food Program.

Technology is Key

Luehmann's class has served as a sort of test lab for the Chromebooks. It seem like the computers passed the test because Prairie View Elementary plans on purchasing another classroom set of Chromebooks that will be used by students on a check-out basis. A second set will also be bought for another third grade classroom. The plan is to have all third grade students use the Chromebooks during Language Arts time.

Like all school districts in the state, discussions about using technology wisely are circulating in Oregon. Atkinson said school leaders do know that technology, like handheld and personal computers, is crucial for students.

"The difference between a child who succeeds and the child who doesn't will be technology," Atkinson said. "We have to figure out how we can ensure that all students have technology." ■

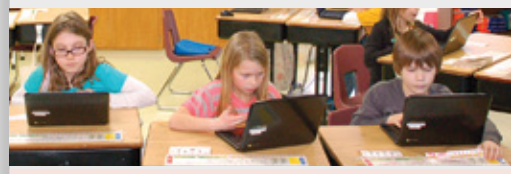
Anderson is editor of Wisconsin School News.

Digital Learning in Wisconsin

On February 5, as part of the nationwide Digital Learning Day, the Department of Public Instruction (DPI) released a plan "A Vision for Digital Learning in Wisconsin," that calls on public and higher education, business and other education stakeholders to integrate technology and student learning.

"To meet the needs of today's students – to ensure they are college and career ready in the modern world – we must be innovative in new student learning experiences, adopting technologies and instruction in ways that meaningfully engage the digital generation," said State Superintendent Tony Evers.

DPI describes the plan as a "blueprint" for schools to use as they work to meet the learning needs of their students. Among other initiatives, the plan encourages districts to provide their teachers with professional development that helps them bring technology and innovative practices into all classrooms. Recognizing that learning takes place anytime, anywhere, the plan also calls for infrastructure that allows students to be connected at all times. This includes allowing students to bring their own digital devices to school and use them in the classroom. □



TO VIEW MORE DETAILS of "A Vision for Digital Learning in Wisconsin," **visit dpi.state.wi.us/** and select "Digital Learning Day" under "State Superintendent's Intiatives."