Boards Making a Difference

Osage Schools Models Forward-Thinking Computer Science Initiative

Published: Feb. 4, 2020

Although less than half of all school districts in Iowa offer computer science, it is a goal shared by many; however, one district has taken the initiative to offer more than just computer science coursework. They have trained all teachers in K-12 computer science and became the first district to require high school students to take computer science.

It all began in 2015 when they launched their 1:1 initiative and realized that teachers weren't prepared—they needed more training.

"We looked at gaps or holes, ways to do things differently. We know computer science is essential for future jobs and careers. It was a gap for us, teachers didn't have training. So that was the obvious place to start," Barb Schwamman, Superintendent, Osage and Riceville Schools.

Once the school board's support of additional training became clear, three teachers came forward and volunteered to get computer science endorsements.

"If it's good for kids, it's good for us. For a school board member, it has to fit in to our budget, and this fit. We received a training grant, several teachers volunteered so the board didn't have to go find special teachers, we had teachers here who just wanted more training and were willing to train counterparts," said Rick Sletten, President, Osage School Board.

The district received a $40,000 computer science grant to train teachers, which helped get the computer science initiative off the ground. The district has since created a computer science pathway,

Osage Esports has been in existence for 1 year and placed 2nd at the state tournament and competed regionally in Illinois and has several members who have signed letters of intent to compete on Esports teams in college.

5th graders use Makey, Makeys to code Operation style games in science.

revamped standards, and now offers exploratory classes in code.org for middle schoolers. The initiative is good for both students and teachers.

 "Teachers are trying new things in the classroom, they are presenting at conferences, they are leading the initiative," said Barb Schwamman, Superintendent, Osage and Riceville Schools, "Almost every job today has a technology base with it—health field, farming, automotive, construction. Everything deals with technology, so it's essential our students are proficient and prepared for their future and careers."

Governor Reynolds visiting AP Computer Science Class in Osage.

Computer science education supports the four C's—creativity, communication, collaboration and critical thinking.

"The four C's are the foundations of every job. There are very few jobs in isolation in today's world, you have to work with other people. Whether it's in your physical workspace or virtually online. We are preparing students for jobs that don't exist yet, foundational skills that are applicable everywhere," said Schwamman.

In 2017 the district formed a partnership with [NewBoCo](#) in Cedar Rapids. Through this partnership, they became the first school in the state and nation to use code.org training with all elementary staff to help integrate computer science curriculum into multiple subjects—math, English, art, etc.

All the work over the last several years is coming to fruition—the district is seeing an increase in the number of students enrolling in the program, higher Advanced Placement test scores than the state and national average, increased student engagement, and statewide recognition by Governor Reynolds in her 2020 Condition of the State Address.

"Everyone in our community works together to do what's best for kids. Our students are successful because of their well-rounded education background. We are proud of where we're at and happy we made this shift. But like any school district, we're never done," said Schwamman.

The computer science initiative has opened doors for students and allowed them to become the creators of content, rather than just being consumers of content. The district plans to add additional courses to the computer science curriculum next year, including cybersecurity through STEM grants from the Iowa STEM BEST program.

Meet the Osage School Board