



Case Study
Statewide Implementation
21st Century Learning

Statewide Implementation of the Intel® Teach Program Promotes 21st Century Learning

“State leaders are in the best position to turn the vision of 21st century learning into a reality. Education is largely a state issue—and one that the public continues to make a top priority.”

A State Leader's Action Guide to 21st Century Skills, prepared by the Partnership for 21st Century Skills, released July 2006

Educational Challenges

- Improve professional development and student outcomes
- Scale research-based professional development with high quality and consistent positive results (fidelity)
- Enhance development of students' 21st century skills
- Improve integration of technology for teaching and learning
- Maximize the results from state investments in technology infrastructure and resources for teachers and students

Solution Methodologies

- Coordination of free Intel® Teach Program professional development offerings with state and local resources
- Capacity building to enable state department sponsored trainers to become certified Master Teachers and Senior Trainers in the Intel Teach Program

Preparing Tomorrow's Leaders

This year's kindergarten class will enter an economic and cultural universe transformed from their parents' time. When it's their turn to graduate, this class will enter a technology-rich, global knowledge economy, where 21st century skills like problem solving, critical thinking, collaboration, and innovation are needed to succeed. Technology is leveling the economic playing field and is already increasing worldwide competition.



From L-R: Valerie Quarto (Cochise County TIS), Tammy Hernandez (Intel Program Coordinator), Carol Elders (Graham County TIS), and Lillian Hritz (SIT Project Coordinator)

Professional Development's Critical Role

Professional development is a critical component in accomplishing the needed shift in pedagogy toward 21st century learning. Teachers need fluency in technology as a powerful tool to develop their students' higher order thinking and 21st century skills. Such change requires practice, and time to reflect on new behaviors as teachers experiment outside their comfort zones.

Research-driven models that utilize peer-to-peer teaching, such as the Intel Teach Program, have been found to be extremely effective in helping teachers engage technology to truly support and enable learning outcomes.

Consistent Results on the State Level

State education leaders are leveraging the successful Intel Teach model and combining it with new and existing state resources to improve professional development on a statewide scale. In Alabama, Arizona, and North Carolina, Intel Teach is a part of the statewide professional development program.

Cathy Poplin, Arizona's Director of Educational Technology, has followed the work and evaluation of the Intel Teach Program for several years. Poplin is part of the School Improvement Unit within the School Effectiveness Division of Arizona Department of Education. "The program has a proven track record for getting teachers to integrate technology into learning and for improving teachers' technology literacy," says Poplin.

Frances Bradburn, Director of Instructional Technology for the North Carolina Department of Public Instruction, agrees. "Intel Teach has been a wonderful fit for our state," she says. "Our philosophy is to make technology an integral part of the curriculum. Not teach it for its own sake, but infuse it into what teachers are doing. And Intel Teach does exactly that."

Melinda Maddox, Ed. D., Director, Technology Initiatives for the Alabama State Department of Education (ALSDE) puts it simply:

"Intel Teach is a whole big piece of the pie that we didn't have to develop. The curriculum has research and evaluation behind it, and frankly, there's nothing in it we would change. It fits our needs."

Statewide Efficiencies

What's unique about Alabama, Arizona, and North Carolina is the way they have leveraged structures already in place to scale the program and improve service to teachers, including:

- state-sponsored trainers who already work closely with local districts (and understand their particular requirements) that blend Intel Teach with state and local resources to serve local needs
- state and local investments in online resources for teaching and assessment that are used for program registration and resource sharing

All these elements work together at the state level to make delivering targeted professional development efficient and consistent, ensuring fidelity of the research-proven delivery model.

Extending the Reach of State-sponsored Training Specialists

Alabama is a rural state, with school districts spread out from the Gulf Coast up to the Tennessee border. Eleven regional education in-service centers support the state's 1,389 districts. Given the geographic spread, local education agencies (LEAs) found that it could be difficult to deliver consistent training to all teachers. Those close to urban areas and universities had an easier time, while those in the more rural parts of the state did not have as many options.

So the state turned to its staff of regional Technology In Motion (TIM) specialists to help solve the problem.

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Arizona's Director
of Educational Technology,
School Effectiveness Division,
Arizona Department of Education



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Eleven TIM specialists became Master Teachers (MTs) in the Intel Teach Program, and now five have gone on to become Senior Trainers (STs). “The Intel Teach Program gives them outstanding curriculum material that’s research-based, standards-driven, and free. And since our specialists are regional, they connect with districts throughout the state, and can facilitate trainings that make sense,” says Hayes.

By selecting outstanding TIM MTs to serve as Alabama STs, the State Department of Education built capacity to scale the program statewide through a train-the-trainer approach.

“These are certified teachers,” says Cheri Hayes, project manager for the state’s TIM program. “They’re very good at knowing where and when to bring technology into the curriculum.”

Site-based Communities of Learning, Statewide

“Our basic program model is to work with individual school systems to design a schedule that best meets their professional development needs,” says Hayes. “Our specialists work with the LEA Technology Coordinator or Professional Development Manager to identify one technology contact per school.” From here, the school-level contacts go through the program as Participant Teachers, and receive follow-up support. Many of these, in turn, become MTs, and take the program to their school sites. These newly minted MTs conduct site-based Intel Teach courses and function as mentors to participating classroom teachers.

The goal is to have a MT at each school in the state, and to have every teacher trained in the Intel® Teach Essentials Course.

“This sustained professional development model results in a learning community of experts within the school system,” concludes Hayes. “They test and implement their lesson plans with support from peers and the staff of Technology in Motion.”

Strategic Advantages, Regional Opportunities

Regional specialists can also coordinate efforts and create synergies in how they deliver professional development; another reason the statewide implementation model is a powerful tool for meeting objectives for teacher growth.

For instance, a district or region’s language arts teachers might join forces for a year-long professional development program that begins with the Essentials Course, to lay the foundation for technology integration. Then, throughout the year, they

participate in content-area programs sponsored by the state. But the essential questions model and technology integration skills they learned in Intel Teach become a frame of reference for further learning.

“We have a variety of programs districts can select,” says Melinda Maddox, “and having Intel Teach as a part of the roster means we can bring technology integration in strategically, exactly where it’s needed, in combination with other programs to raise the skill level, and ultimately, improve student outcomes. This is something you can only do at the state level.”

Statewide Technology Infrastructure Pays Off

Arizona is a geographically diverse state, with growing population centers around Phoenix and Tucson, and rural conditions elsewhere. This can create challenges in delivering consistent professional development throughout the state’s 1,737 public and charter schools.

Like Alabama, Arizona Department of Education uses its network of regional Technology Instructional Specialists (TIS) to implement offerings from Intel Teach. Since October 2005, 11 TISs gained MT certification. They’re now delivering training in districts throughout the state.

These MTs have the online edge when it comes to recruiting participants for their courses, as Debra Lorenzen explains. She is Executive Director of ASSET (Arizona School Services through Educational Technology).

“One thing we’ve done to extend the reach of this program,” says Lorenzen, “is to use the online registration system within the ASSET Education Portal to make it easy to enroll. Through an agreement with the Arizona Department of Education as part of the department’s IDEAL (Integrated Data to Enhance Arizona’s Learning) Initiative, the ASSET Education Portal is available to all Arizona educators statewide.”

Now teachers interested in taking an Intel Teach course can log into the ASSET system, see their options, and enroll on the spot. It works well for the Technology Integration Specialists, too. They simply list upcoming trainings, and gain statewide visibility.

“We’re hearing a lot of good feedback on how easy it is to recruit teachers,” says Tammy Hernandez, Intel Teach Program coordinator for ASSET.

Collaboration and Communication are Hallmarks of Success

North Carolina has an ambitious EETT (Enhancing Education Through Technology) Grant Initiative designed to give teachers the necessary time and training to teach 21st century skills. A key part of that training includes the Intel Teach Program. Evaluation is a strong component of this grant initiative.

The preliminary findings are encouraging. "Everyone says the technology is great," says Frances Bradburn. "But collaboration is what makes the real difference. Intel Teach helps teachers change because they have time to think, to discuss, to try things and make adjustments—with support from peers."

She adds: "Once they get the training, teachers tell us that this is exactly how they want to teach, that these are the kinds of lessons they've always wanted to do with kids. It's helped our recruitment and retention enormously."

"The Intel program is so well organized," adds Mary Lou Daily, the state Technology Consultant who coordinates Intel Teach Program for North Carolina. "It includes ISTE standards and EETT criteria which dovetail perfectly with our state and district technology plans. Intel's application process insures coordination of the program with specific LEA goals and objectives."

Daily credits the constant communication between the regional consultants and their districts, along with the excellent support from the Intel Teach customer service team, as key to making the program a success at the state level.

Scalability, Fidelity, Research-driven

The Intel Teach Program is built on the belief that educators learn best from one another, fostering a community of practice that is invaluable in creating systemic change. Its research-based curriculum—refined by extensive yearly evaluations—aligns to state and national standards. Perhaps most importantly, the program results in increased technology integration and an energized standards-aligned curriculum, created by the teachers themselves, that speaks to today's students.

As Alabama, North Carolina and Arizona are discovering, implementing Intel Teach at the state level is an excellent way to ensure consistent

professional development, so that all students graduate prepared with the 21st century skills and knowledge they need to succeed.

Key benefits for statewide systemic implementation include:

- Research-proven professional development on technology integration with a student-centered-approach
- Courses that support state and national standards while fostering 21st century skills and content knowledge – relevant for K-12 teachers of all subjects
- Scalable train-the-trainer model that establishes a peer mentor network for ongoing local support and collaboration
- State-led approaches that enable the state to control and customize delivery to meet unique needs and priorities for local schools and districts
- Statewide implementation that retains program quality and fidelity by keeping delivery within research-proven parameters

Learn More:

The Intel Teach Program is a proven, worldwide professional development program that helps educators to improve the effective use of technology in the classroom to promote 21st century learning. The most successful educator professional development program of its kind, the program has been driving systemic change in teaching and learning since 2000, with over 3 million teachers trained in 35 countries.

Intel® Education Initiative

The Intel Education Initiative is a sustained commitment to prepare students with the skills required to thrive in the knowledge economy. Through collaboration with educators and governments in more than 50 countries, Intel delivers programs that improve the effective use of technology to enhance 21st century learning, and encourage excellence in mathematics, science, and engineering. Intel's education programs are adapted to the needs of individual countries and utilize an approach focused on building local competency for teacher training and technology innovation.

- To learn more, visit: www.intel.com/education

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