

The background of the entire page is a close-up, slightly blurred image of musical notation on staves. The notation includes various note values, stems, and clefs, rendered in a light blue or purple color. The staves are white with blue lines. The overall effect is a textured, artistic representation of music.

Singing Out of the Same Songbook:

The Standards Aligned System in Pennsylvania

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Introduction

The information in this portrayal of Pennsylvania's statewide system of support is derived from an on-site visit by the author to the Pennsylvania Department of Education (PDE); telephone interviews with PDE staff members, Intermediate Unit staff members, and district superintendents; the transcript of a conversation the author facilitated between PDE and New York State Education Department's staff members; artifacts provided by PDE; and artifacts obtained independently by the author. The author is grateful for the support of the many persons in Pennsylvania who enabled this study and expresses special gratitude to Dr. Gerald L. Zahorchak, Secretary of Education, Commonwealth of Pennsylvania. The Pennsylvania Department of Education is Pennsylvania's state education agency.

Evolution of the Statewide System of Support

Prior to the passage of NCLB, Pennsylvania had a statewide school improvement strategy codified in law. In May of 2000, the Pennsylvania legislature passed the Education Empowerment Act (EEA). The Act placed school districts that had either a record of low performance on state and local assessments or a pattern of financial difficulty on an Education Empowerment List.

The Pennsylvania Department of Education (PDE) sponsored Academic Advisory Teams (comprised of external consultants) to work with teams from districts on the Empowerment List. Their shared task was to create a plan to improve both student performance and operations within the district. Districts on the Empowerment List were authorized to enact broad measures, ranging from replacing administrators and teachers to conducting instructional and fiscal audits to turning school operations over to educational management organizations (Goertz, Duffy, & Carlson-LeFloch, 1999).

Two themes mark Pennsylvania's transition from the EEA to its current statewide system of support (SSOS): a focus on root causes and increased coherence. Under EEA, PDE focused heavily on adopting research-based programs. This stance was helpful, but ultimately limited. A district with low reading scores, for

instance, was assumed to lack a strong reading program. Consultants, in turn, prescribed a program and offered technical assistance emphasizing fidelity of implementation. Districts appreciated the consultants' expertise, but often perceived a disconnect in the prescriptions. Oftentimes, districts faced challenges that preceded or were distinctive from what a research-based program could resolve. For instance, Philadelphia once opened the school year with 300 teacher vacancies. Without a teacher in front of the room, the best reading program available would not solve Philadelphia's problems.

PDE concedes that a misstep in the 90's was thinking that it could analyze a district's data and recommend actions. PDE has come to understand that it can recognize a district's reading scores are low, but it cannot tell a district how to remedy the problem. It can, however, build a district's capacity and give it tools to undertake a robust analysis and develop strategies.

In 2002, PDE initiated a process called *Getting Results!* to examine the root causes of performance levels. The *Getting Results!* process enables users not only to examine their data, but also grapple with its implications. Rather than reacting to low reading scores by simply hiring another reading specialist, through a focus on root causes, *Getting Results!* helps a district examine why its reading scores are low. For Pennsylvania, a critical change has been to start the school improvement process by identifying root causes and only then designing solutions to address them.

The second major shift has been to establish coherence among the many programs sponsored by PDE. "A lot of initiatives years ago...were very disjointed," says one PDE professional. By developing a theory of action for its SSOS, Pennsylvania turned disparate initiatives into a coherent system.

Their theory of action holds that if all education stakeholders focus without vacillation on six components (clear standards, curriculum frameworks, materials and resources, instruction, fair assessments, and interventions) in all trainings, professional development, resources, and technical assistance, then student achievement will improve

Figure 1: Standards Aligned System



Adapted from "Standards Aligned system," by Pennsylvania Department of Education, n.d.(d). Reprinted with permission of the author.

rapidly. These six components comprise Pennsylvania's Standards Aligned System (SAS). Pennsylvania considers the SAS its architecture for school improvement (see Figure 1).

Since conceptualizing the SAS, PDE has strived to connect every state education initiative to the architecture of the standards aligned system. The chief state school officer in Pennsylvania, Secretary Gerald Zahorchak, emphasizes that the SAS aligns the school improvement efforts in Pennsylvania: "We're building one thing—standards aligned systems. For everybody, it's one clear planning set of tools to build one thing—standards aligned systems."

A final note on the evolution of Pennsylvania's system of support should underscore that many components have undergone dramatic change, or have been developed, within the last four years. Consider a few examples:

- ✦ In 2002, Pennsylvania Department of Education supported only an annual state assessment. Today PDE actively supports a comprehensive range of assessment and data analysis tools—ranging from benchmark assessments to a value-added analysis to classroom formative assessment.
- ✦ In 2005, the United States Department of Education rated Pennsylvania 46th out of 50 states for readiness to implement a longitudinal data system. Today PDE has both an

information management system and longitudinal data system in place.

- ✦ Before May 2007, certification regulations for teacher candidates were loose, resulting in a fragmented approach to teacher education across the state. Today the regulations are specific. Content taught in public teacher preparation programs must now align with state academic learning standards and the SAS.
- ✦ Before 2006, Pennsylvania had vague standards governing education leadership training programs. Today, it has a clear set of nine descriptive standards, connecting to the SAS, to which all higher education programs that train K-12 leaders must ascribe.
- ✦ Today, Pennsylvania supports an induction program for all new principals in the state, along with professional development for experienced education leaders. Both programs are aligned to the state's leadership standards. Neither program was in operation before 2006.
- ✦ Pennsylvania recruits, trains, and monitors a fleet of distinguished educators to assist schools and districts that need substantial face-to-face support. This program did not operate until 2005.

States seeking to redesign, or at least refurbish, their systems of support may find encouragement in knowing that serious overhaul is possible in four years. Even with the substantial progress Pennsylvania has made to date, construction on its SSOS remains underway.

Factors that Contribute to Improvement and Services that Address Them

Question: What factors do you think are most important in contributing to a school's or district's improvement in student achievement, and why? What services does the system of support provide that you think have the greatest impact on the improvement factors you just described, and why?

1. Stimulate improvement across all schools and districts by articulating and supporting a clear vision, a set of core components, and a theory of action.

The Pennsylvania Department of Education has one vision: "Every child by name reaching core academic proficiency in core academic disciplines regardless of zip code, economic status, race, ethnicity, or disability" (Pennsylvania Department of Education, Office of Educational Technology, Division of Data Services, 2004, March). In the words of Secretary Zahorchak, beyond the six components of the standards aligned system, "all else is just noise." PA advises other states to establish core components and then push, promulgate, and promote the components so everyone in the state internalizes and aligns with them.

2. Communicate the vision.

Even to obtain the simplest understanding of the vision and theory of action, Secretary Zahorchak reminds his staff that people have to hear the message repeatedly:

You have to start pushing at it. It's going to take lots of repetition. Start from the beginning as if people don't understand what you're saying and move towards a better understanding. People will start to build at the conceptual level; then they'll start building the related competencies to do the work.

3. Center technical assistance and professional development around the core components.

PDE welcomes all—consultants, regional education agencies, foundations, non-profit organizations, parents—to support PA's students and schools so long as they focus on the core components. Zahorchak comments:

State sponsored trainers and distinguished educators may have their own packaged programs. Those are fine for the Saturday matinee, but between 8 and 5, if you are going to support PA's students and schools, we're going to all do it in service of the same six components. The six components form the big architecture, and everyone in the system of support must work on that architecture.

Diane Castelbuono, Deputy Secretary for the Office of Elementary and Secondary Education, says to the distinguished educators in the state, "You all come

to the table with tremendous amounts of expertise, but [focusing on the six components] is what we're doing, and this is what we need you to do as our ambassadors."

4. Promote a single school improvement planning tool to be used by all schools.

PDE endorsed a single school improvement planning instrument called *Getting Results!* Through *Getting Results!*, schools create one annual school improvement plan grounded in PA's SAS. All schools are given access and training on it, however, schools in improvement status are required to use it.

5. Provide high quality tools based on the core components.

PDE invests in tools, aligned with the SAS, that all educators may access. Not only is there alignment between the tools and the core components, but also among the roles and responsibilities. For instance, *Getting Results!* connects to Pennsylvania's value-added assessment system. PDE's technical assistance to distinguished educators and Intermediate Units enables use of these resources. All tools must be evidence-based and build the capacity of districts and schools to improve teaching and learning.

6. Focus the work of the SEA on the instructional core.

"The focused work has to be what's happening on the student's desktop at any grade level in any school building," says Zahorchak. For example, PDE supplies teachers with examples of exemplary student work in 3rd grade mathematics and the best evidence on how teachers can share exemplary work with students to improve learning. "All the stuff outside [the instructional core] becomes noisy stuff that must not pull us away from what really matters. Learning matters most. Teaching matters second in priority, and those two things matter more than every other thing."

7. Use data to advance the core components.

At all levels of the system, from the Department of Education to the classroom, there must be a continuous stream of easily accessible, simply understood data aligned to the state's core components. PDE supports this by modeling a data use process.

In Pennsylvania, data are "the opener in a 3 phase process," explains Secretary Zahorchak. "First, we organize and unpack data, then we analyze it to discover root causes, and third, we identify research-proven solutions to address the discovered root cause."

Moreover, the state must make a variety of ready-made data management tools available. Pennsylvania sponsors a student information system, a longitudinal database, a value-added assessment system, and benchmark assessments. Beyond ready-made tools, Pennsylvania invests in teacher knowledge and skill to use classroom formative assessment to elicit minute-by-minute evidence of student understanding.

Lessons Learned

Question: What are "lessons learned" from your state's experience with a statewide system of support that would be helpful to other states?

1. Focus on a few vital things.

"Your core components must be the focus of your work. If you pay attention to other stuff that people try to get you to pay attention to, you'll be distracted," says Zahorchak.

2. Use leadership training as an opportunity to focus on systems and core components.

Juan Baughn, of the Distinguished Educator Program, says of PDE's role: "We have to make sure that principals are instructional leaders. We have to make sure that the technical assistance and best practices, in terms of instructional strategies, engage students in relevant curriculum and instruction in the classroom."

"In education we grab onto the 'magic bullet,' and teachers get really weary of this," says Sharon Brumbaugh, Special Assistant to the Secretary. "Too often we oscillate from program to program, but it's really not about programs. It's about good instructional strategies [and] good leadership. It's about systems and institutions, not charisma. We're saying to principals, you've got to put these systems in place."

3. Expect resistance.

People will resist efforts to improve systems. Expect this and be prepared to weather it.

4. Build trust over time.

PDE had to undergo a trust building process. In the words of Castelbuono, “The old model of a state education department that focuses on compliance and playing ‘gotcha’ with schools and districts after they failed to perform never worked. We knew that if we were going to be successful, schools had to see the state department of education as a support, a resource, a partner who was there to help, not an overseer who showed up to deliver sanctions.”

This took time. “When the distinguished educator program came out and Sharon [Brumbaugh] and I were first introducing this PIL [Pennsylvania Inspired Leadership] program, we got beat up unmercifully,” recalls Baughn. He pleaded with friends in troubled districts, asking if PDE could send a distinguished educator as a personal favor. Now, when districts do not receive a distinguished educator, they plead with Baughn.

Baughn emphasizes the importance of relationships: “No matter how good your ideas...it still comes down to interpersonal relationships and trust. If you don’t have those, then people aren’t going listen to you; they aren’t going to trust you or believe you. There is still no substitute for interpersonal relationships.”

5. Allocate the necessary financial support.

PDE recognizes that serious system-wide improvement requires a serious commitment of dollars. Pennsylvania made that commitment. For example, when Governor Rendell entered office, PDE’s professional development allotment was \$3.6 million dollars. The 2008-09 state budget allocated \$47 million, says Baughn.

As significant as state funding has been, PDE’s disciplined use of funds is just as important. PDE continually strategizes, cajoles, and sometimes fights to keep funds aligned to its core components. Adhering to work that creates sustainable, long-term improvement and resisting popular programs

takes wherewithal. The lesson goes hand-in-hand with communicating the vision. “You have to stay focused on the vision and what you want to achieve—not just throw out a bunch of programs. You must keep communicating the focus of how it all fits together,” says Brumbaugh.

6. Align everyone around core components to shore up capacity.

Nationally, most state department officials believe they lack adequate capacity to improve struggling schools (LeFloch, Boyle, & Therriault, 2008). According to Zahorchak, however, there is tremendous capacity in Pennsylvania if the state department of education encourages every K-12 education stakeholder to focus on the core components.

Here is Zahorchak’s theory:

If we have 190,000 teachers, over 20,000 administrators, including principals and superintendents, and the staff of central offices and we say, “We don’t have the capacity,” then there’s something wrong. The state has capacity so long as it does not limit its thinking to the 800 persons in the Department of Education. When you say you can grow that department’s capability exponentially by adding 150,000 or 200,000 people, you have a lot of potential. Now the question is, can you make it clear and coherent? Can you ensure that the vocabulary, the conceptual understandings, the competencies are the same around all of those folks? If you can get to that, you’re at a place where you can help kids.

7. Ensure the system of support serves all schools.

Pennsylvania endeavors to be proactive rather than reactive. Without question, Pennsylvania invests in restructuring and corrective action efforts, but it concentrates on supports that benefit all schools. Leadership training, a high-quality state database, and voluntary model curricula—these supports benefit the highest attaining to the most struggling schools.

Zahorchak says for the corrective action schools the message is, “Come back to the fundamentals. Come back to those tier one supports, and abandon

anything that you're doing that's outside of the fundamentals. Even the schools we assume are best performing," says Zahorchak, "if they focus on the fundamentals, 100% of their students will be [at proficiency or better]."

8. Model the behavior at the SEA level that is to be emulated in the field.

PDE staff have come to understand that if they want to see people in districts and schools working in alignment to improve student learning, PDE must also work cohesively.

"When you understand the standards aligned system, you see that if you are going to impact the classroom, you [the SEA] have to be aligned," says Castelbuono. "You have to apply the rules to yourself," explains Sheri Rowe, Chief of School and District Planning and Continuous Improvement. According to Zahorchak, nowhere is PDE's modeling more important than when it comes to focusing on student learning:

Our leadership needs to zero in like a laser on what's happening on the child's desktop. If in our work as SEAs we are worried about forms or the bureaucracy's minutia, schools will act like us. [If] we're modeling that it's the teaching and learning that matter most with an emphasis on learning, schools will model us.

9. Focus on building capacity rather than negative pressure.

Pennsylvania has learned that it can better support schools by focusing on proactive efforts that build capacity—such as providing leadership training, creating voluntary model curricula, a strong database, and repertoire of assessment tools—rather than reactive, corrective measures. Pennsylvania has learned that it must be unmistakably clear on what it expects, give educators a lot support to reach those expectations, and hold people closely accountable.

Functions of a Statewide System of Support

Providing Incentives for Change

Publicly Disclosing Low Performance

While, like any state, Pennsylvania shares all performance data on its website, it does not put a high-profile public spotlight on schools and districts that show continued low performance. Consistent with its theory of action, Pennsylvania works with districts to develop a laser-like focus on the root causes of low performance and to implement solutions that improve student achievement. Rowe explains, "Our philosophy is very much about supporting the schools. We don't target or highlight the negative. We ensure that there are supports there and do everything we can from both a local and a statewide level to address their needs."

Levying Consequences for Low Performance

In recent history, the Pennsylvania state legislature has removed governance authority from four districts with severe governance problems. Pennsylvania has not exercised this authority since 2002, and the four districts represent less than 1% of the districts in the state. Nonetheless, Zahorchak declares that the action shows "this government is not afraid to say when it is necessary to be extraordinarily assertive in terms of moving in on those that don't seem able to, or don't want to, respond on behalf of the kids."

State approval of district plans to restructure schools with persistent low performance—an improvement instrument in some states—is not in Pennsylvania's repertoire. Nor is encouragement for districts to make improved student learning outcome a condition in administrator's contracts. Nevertheless, districts may apply some state funds toward performance contracts for superintendents, assistant superintendents, and principals.

Providing Positive Incentives for Improvement

Recognition for Accomplishment

Recognition for positive results sprouts up occasionally in the SSOS. PDE grants a Keystone award to any district or school that makes adequate yearly

progress (AYP) for two consecutive years. Though the award itself is merely a cardboard cut out costing two dollars, “it’s treated like gold, and people work hard to get it,” says Zahorchak. “When walking into a school, I don’t go into the gymnasium to find the banners; I don’t go to the auditorium. As soon as [I] walk into the building, right in [my] face, are these great recognitions of achievement, because what they symbolize is really worth gold.”

Funding Contingencies that Encourage High-Leverage Improvement Strategies

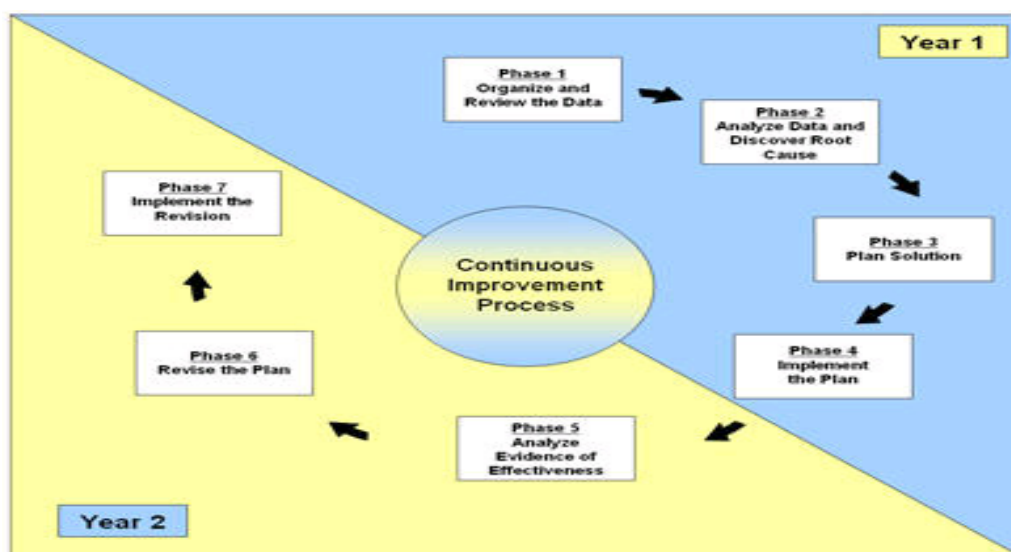
In Pennsylvania, schools must use Title I school improvement set aside funds as well as state “capacity building” funds to support the strategies specified in their school improvement plans. Improvement plans are designed using *Getting Results!*, which enables schools to identify root causes and apply a focus on them (see Figure 2). This funding stipulation reinforces the message of “coming back to fundamentals” contained in the standards aligned system. Moreover, it encourages schools to focus on depth, not breadth, of improvement strategies and facilitates true implementation of the planning process within the school and the classrooms.

Also, the guidelines attached to PA’s Accountability to Commonwealth Taxpayers (PA PACT) funds are designed to encourage high-leverage practices. Once again, districts are brought back to their achievement data through *Getting Results!* The PA PACT application asks districts to use *Getting Results!* to analyze student performance data. From there, districts identify root causes and determine interventions to address instructional needs from a menu of more than 11 state-supported strategies. Applicants are brought back to their data; they are brought back to root causes and brought towards a set of approved solutions.

Financial Rewards for Working in Hard-to-Staff Districts and Schools

Any reward for performance programs for principals or superintendents that may exist are sponsored at the local level, not at the state level. “There has been legislation proposed [for financial rewards], particularly for principals,” explains Terry Barnaby, Director of the Bureau of School Leadership and Teacher Quality, “but it hasn’t been passed.” Similarly, PDE does not consider rewards for serving in hard-to-staff districts and schools a primary strategy. Nonetheless, through both the

Figure 2: The *GettingResults!* Process



Adapted from “Getting Results! Continuous Improvement Process” [Powerpoint presentation], by Pennsylvania School Improvement Planning, n.d., slide 6. Reprinted with permission of the author.

PA PACT fund and Accountability Block Grants, districts may fund “highly-effective, qualified teachers to work in academically challenged schools” (Pennsylvania Department of Education, PA-PACT, n.d.). Districts may also allocate PA PACT funds toward “incentives for the most highly qualified principals to work in academically challenged schools” (Pennsylvania Department of Education, PA-PACT, n.d.).

Greater Autonomy

The bestowal of greater autonomy to districts over budgets, staffing, governance, curriculum, assessment, or the school calendar as a reward for improved results is not a state strategy. However, mandate waivers and the state charter school law (discussed in the Providing Opportunities for Change section) do afford an opportunity for greater autonomy.

Providing Market-Oriented Incentives

Competition for students from charter schools or through public school choice other than that required by NCLB are not improvement vehicles actively endorsed by PDE.

Providing Opportunities for Change

Removing Barriers to Improvement

PDE helps districts manage regulations so that districts in hard-to-staff areas may recruit teachers. For example, the Philadelphia school district was struggling to find qualified math and science teachers. It had identified qualified foreign teachers willing to teach in Philadelphia, but these teachers were finding it difficult to acquire green cards.

In response, PDE worked out a cultural exchange program that allowed math and science teachers from Austria to gain employment in Philadelphia. “We help them move through the regulations,” explains Barnaby. “It’s more about technical assistance at a high level.” The opportunities the state facilitated in this case were more ad hoc than institutional. “If other districts who have these kinds of issues ask, we give them help.” Pennsylvania’s Mandate Waiver Program, on the other hand, is an example of an institutional effort to remove obstacles to improvement.

Under the Mandate Waiver Program, public school districts—along with vocational-technical schools,

Intermediate Units (IUs), and groups of schools—can seek exemption from certain provisions of the Public School Code. Though regulations surrounding teacher contracts or the certification requirements for principals and teachers cannot be waived, applicants can seek waivers on other matters if they can demonstrate one of two things: 1) that a waiver would improve instructional programs, or 2) that a waiver would result in more efficient, effective, or economical operations. Since the program began in 2000, PDE has granted over 767 waivers ranging from procurement to construction to alternative education to district superintendent qualifications to the use of fuel or land.

To date, most waiver requests concern the second category. In particular, district business managers have used the program to generate operational efficiencies, such as saving construction or bus fuel costs. While acknowledging that education reform strategies rarely intersect with decisions about bus fuel and construction, Rowe notes that, “if you can help improve operational efficiencies, then you’re going to be able to target more dollars into the classroom.”

Pennsylvania districts have done well to leverage the program to improve operational efficiencies. Now, PDE is encouraging districts to use the Mandate Waiver Program to directly improve instructional programs. Rowe explains that a task force “is encouraging people to think about how to use this opportunity to improve instruction. The state as a whole has not thought about it that way before. The advent of SAS has prompted us to think about and explore how mandate waivers can create flexibilities and opportunities that ultimately improve instruction.”

PDE will continue to improve and amend the mandate waiver evaluation that districts file so that it includes data on Pennsylvania State Standardized Assessment (PSSA) scores, high school graduation, and higher education matriculation. At the same time, PDE will continue to communicate to the field that waiver mandates, in addition to the other tools and resources PDE provides, are an opportunity to improve student achievement.

Creating New Space for Schools

In 1997, state law authorized the creation of charter schools in Pennsylvania. In 2002, a law passed specifically allowing cyber charter schools, of which there are now 11 in the state. PDE is the authorizer for all cyber charter schools. Brick and mortar charter schools, however, must be authorized by the local school board. There is no cap on the number of charter schools that may be authorized in Pennsylvania. While charter schools have comprised a notable portion of the school improvement efforts in Philadelphia, they are not a principal component of the statewide school improvement strategy.

Building Systemic Capacity

Creating and Disseminating Knowledge

PDE creates and disseminates a host of knowledge and tools that support the SAS. Improving student achievement requires affecting the instructional core, “which requires changing the behavior of teachers,” explains researcher Susan Lusi. The challenge for a state department of education, according to Lusi, is how it can influence “the practice of a large number of practitioners over whom it has little, if any, direct control” (1997, p. 10). Creating and disseminating tools and knowledge answer the question of how PDE can affect school improvement at scale given its limitations. Tools pegged to four of the six components of the SAS—curriculum frameworks, resources and materials, instruction, and fair assessments—merit attention.

Curriculum Frameworks

State standards are often too numerous and vaguely written to guide the daily work of teachers. PDE acknowledges this, and in response, created curriculum frameworks. PDE’s SAS website explains curriculum frameworks:

A curriculum framework specifies what topics are to be taught at which grade levels for each subject in the curriculum. At any given grade level, the topics that are taught are those—and only those—that are needed to provide the foundation for what comes next.

PDE builds curriculum frameworks by unpacking standards into anchors, big ideas, concepts,

competencies, essential questions, academic vocabulary, and exemplars. Curriculum frameworks animate standards into useable targets for teachers and answer pressing questions about practice in the classroom. They ensure teachers address essential skills and knowledge that span grade levels. Curriculum frameworks are designed to benefit any teacher in the commonwealth.

Resources and Materials

In the SAS, standards inform curriculum frameworks. Curriculum frameworks enable educators to transform textbooks into resources, not just for covering content, but for advancing all students toward mastery of essential concepts and competencies. In fact, one resource on PDE’s workbench is a set of alignment guides. These guides explicitly inform users to align the most commonly used textbooks in Pennsylvania to state standards and frameworks.

A resource being developed is a state endorsed “end-of-course” high school exam in ten subjects. This ensures the rigor of a diploma from every high school in the state. Model units and lesson plans constitute another resource under development. For districts, schools, and teachers that do not wish to purchase their own textbooks and align them to standards, PDE’s model units and lesson plans offer high-quality, standards-aligned teaching materials for free.

PDE is recruiting researchers and consultants to join teachers and administrators to collectively design these materials. In addition to the perspective teachers and administrators provide, their participation instills buy-in. The goal is for the users to own the materials, not PDE. Teams that developed the curriculum frameworks will then review the end-of-course exams and model units and lesson plans to ensure true alignment.

Instructional Supports

PDE has dedicated the 2008-2009 school year to bolstering two sets of supports for pedagogy: 1) formative assessment, which straddles assessment and instruction, and 2) *Teaching Matters*, PDE’s brand for five research-derived instructional actions that yoke effective regular education and special

education practice. Additionally, PDE continues to promote an instructional support it rolled out in school year 2005-2006, *PowerTeaching*.

When PDE examined the research on special education instruction and general education instruction, it concluded that, at its core, effective teaching employs common practices. Drawing from the work of Robert Marzano for general education and Doug Carnine for special education, PDE identified five strategies: engagement, explicit instruction, metacognition, scaffolding, and teacher modeling.

PDE branded the confluence of the five strategies, *Teaching Matters*. *Teaching Matters* helps educators from general education and special education speak the same language. Effective instruction is founded in the same principles for all students. “There’s no magic fairy dust,” comments Angela Kirby-Wehr, formerly Special Assistant to the Secretary and now Director at Pennsylvania Training and Technical Assistance Network (PaTTAN) in Harrisburg. The ultimate goal of *Teaching Matters* is to improve instructional practice.

Through ongoing investment in videos, PDE demonstrates what each strategy looks like in a classroom across different groups of students and student needs. For instance, videos will illustrate what active engagement looks like at the whole class level and in small groups. They will show how a teacher can foster metacognition at the end of a lesson or what effective guided independent practice looks like. An administrator will see what to look for when supervising and supporting these strategies. PDE will also leverage online courses, WebEx presentations, and live trainings to deepen understanding of how to enact these strategies.

Another way PDE offers guidance and resources to support the SAS, specifically instruction, is through the *PowerTeaching* program. *PowerTeaching* presents an instructional framework for cooperative learning and individual student assessment and feedback. PDE’s *PowerTeaching* brochure explains:

It guides students through a cycle of instruction that includes minute-to-minute assessments, structured team practice to promote

opportunities for mastery by every student, individual assessment to monitor student learning, and feedback on team and individual progress to increase team interdependence and motivation. (Success for All Foundation, n.d.)

PDE’s website for *PowerTeaching* emphasizes that “*PowerTeaching* is not a program.” It is a framework for instruction, which focuses on student engagement. As of the 2008-2009 school year, PDE has made the framework available free to all districts willing to commit to the professional development necessary to implement it with fidelity.

Voluntary Model Curricula

When PDE’s curriculum frameworks, assessments, resources and materials, and pedagogical supports are fused, any user in the state has what PDE calls voluntary model curricula. PDE is, however, cautious with the term because confusion often results from users that mistakenly equate it with textbook content. Castelbuono describes the voluntary model curriculum:

Our voluntary model curriculum is really a misnomer, because it’s not just going to be content...teachers will actually be able to access information about pedagogy—there’ll be videos of experienced teachers delivering content and using formative assessment in the classroom. Every content area will have exemplary lesson plans tied to the standards and which detail the content, show you how to use formative assessment for each lesson, provides you with a benchmark assessment you could use, [and] helps you build a final exam that you could use with your students.

Voluntary model curricula, in other words, fuse each SAS component into tools that improve the instructional core. “It won’t be a cookie cutter approach. It won’t work for every kid,” states Castelbuono, “but it will give every school the preconditions for success.”

Besides serving as a support for all schools, voluntary model curricula also provide immediate solutions for struggling districts. Districts spend tremendous resources every year on curriculum design, explains Castelbuono. “Wouldn’t it be great

if they could spend that on training to do a curriculum that's already there? You don't have to adopt it, but make it a reference point."

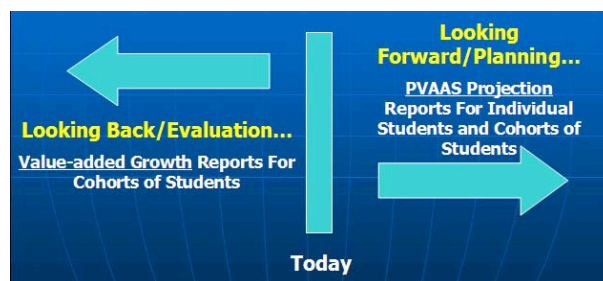
Bob Staver, Director of the Division of Professional Development and Instruction, calls the tools PDE creates, "great bootstrap resources for districts." The hope is that any district could latch on to the PDE resources and be guaranteed to have a high-quality, research-based, standards-aligned curriculum and suite of instructional practices. PDE is not there yet, but is making headway.

Comprehensive Assessment and Data Analysis Tools and Supports

PDE invests in tools and knowledge to better apply and use fair assessments and the data from those assessments. Nationally, researchers call on schools and districts to be data-driven and to employ multiple measures of student learning. Many schools and districts, however, use only a few assessments—for example, diagnostic tests, annual state standardized tests, and classroom unit tests supplied by textbook providers. As Rick Stiggins (2006) and other education assessment experts contend, improving student performance requires shifting from an over-reliance on summative testing to a balanced assessment system that provides teachers with information about student learning that teachers can use to revise instruction. Yet when districts uniquely create their portfolio of assessments, the effort can be backbreaking. Moreover, access alone to more data from more assessments is not helpful. Many schools and districts struggle to manage their recent influxes of data (Popham, 2008).

As an underpinning to its SSOS, Pennsylvania has developed (and continues to refine) a statewide comprehensive assessment system that enables all districts to acquire and use a robust range of data without extraordinary local investment. Specifically, PDE supports districts' and schools' use of four types of assessments: diagnostic assessments, benchmark assessments, classroom formative assessment, and the PSSA. PDE complements these assessments with two key data analysis tools: the Pennsylvania Value Added Assessment System and e-Metric.

Figure 3: Value-Added Assessment System



Adapted from "Introduction to PVAAS," by Pennsylvania Department of Education, n.d.(a). Reprinted with permission of the author.

The Pennsylvania Value-Added Assessment System (PVAAS) promotes improvement for the entire spectrum of districts and schools in the state. PVAAS is an analysis of PSSA assessment data that provides two types of information:

1. *value-added (or growth)* data on cohorts of students, and
2. student level *projection* data

Value-added analyses look back at PSSA data from previous years to quantify how much a cohort of students gained in a year of schooling. PVAAS projections analyze data on students' past PSSA performance to offer a percent of likelihood of an individual student attaining proficiency on a future PSSA (see Figure 3). "Projection data can be used for intervention planning and resource reallocation," advises PDE's website.

Kristin Lewald, PDE's PVAAS Statewide Project Director, underscores that PVAAS "is not another test. It's an analysis of existing assessment data that are common across the state." PDE asserts another caveat—PVAAS is intended to offer one data source in a larger, comprehensive system of data, and should not be interpreted in isolation.

In the fall of 2006, for the first time, all 501 districts received PVAAS reports. This scale was not achieved overnight. PVAAS began small and with clear intent from PDE. It also began among suspicion. The rollout of PVAAS illustrates PDE's emphasis on communication with statewide stakeholders as well as its hardnosed resolve.

In 2002, PDE approached Lancaster-Lebanon IU 13, asking it to coordinate a pilot for a value-added assessment system. IU 13 and a bureau director from PDE helped districts with time-consuming data collection. To a lesser extent, the team supported the more appealing job of understanding what to do with the data. PDE made no sudden moves with the PVAAS rollout. From 2002 to 2005, three cohorts of pilot districts (totaling 100 districts) were phased in strategically. Lewald says the initial work “was a little controversial at the time.” Some worried PVAAS would be used to evaluate individual teachers. “We were very careful that the set of materials and the language used would consistently communicate about PVAAS so we wouldn’t create more misunderstandings.”

To ensure statewide support and feedback, Secretary Zahorchak initiated a workgroup that included a wide swath of stakeholders. Representatives from the principals’ association, the superintendents’ association, parent-teacher associations, higher education, the state business roundtable, the teachers’ unions, even legislators and a state board of education member, joined PDE staff on the workgroup.

The workgroup developed a communication kit, conveying the program’s intent and dispelling rumors, which PDE sent to every superintendent in the state. Next, the group developed a professional development plan. As the workgroup assembled professional development plans, IU 13 shared them with other IUs and received feedback. Meanwhile, the workgroup made sure their constituencies were on board, advocating face-to-face and answering concerns.

In the fall of 2006, PDE launched statewide implementation, which involved professional development and resources that a state core team and PaTTAN staff delivered in partnership with the 29 IUs across the state. The concerns that existed in the pilot have subsided. Lewald contributes this “to very consistent messages” from PDE and the statewide workgroup. “The intent was communicated,” she explains, “that this was another tool to use for continuous improvement planning, not a tool for evaluating the effectiveness of a teacher.”

eMetric and PSSA

Even for the PSSA, the annual summative state test, PDE sponsors resources that activate it as a tool for teaching and learning, not merely accountability. Like many states, PDE provides large-format trainings to the field on administering its annual summative tests and understanding AYP. Pennsylvania’s most significant investment towards enabling all districts and schools to leverage PSSA as a tool for improvement has been eMetric. A commercially produced tool for analyzing and presenting data, eMetric enables users to easily access, interact with, and run queries of their PSSA data online. For Shula Nedley, PDE Bureau Director of Assessment and Accountability, Pennsylvania’s sponsorship of eMetric demonstrates how the SSOS features tools that local clients can customize to meet their needs.

Diagnostic Assessments

PDE explains “the purpose of diagnostic assessment is to ascertain, prior to instruction, each student’s strengths, weaknesses, knowledge, and skills. Establishing these permits the instructor to remediate students and adjust the curriculum to meet each pupil’s unique needs.” Pennsylvania believes that diagnostic assessments can foster improved instruction at the school and classroom level. PDE is also investing in aligning diagnostic assessments with the voluntary model curricula that are under construction.

Benchmark Assessments

State supported, but not mandated, benchmark assessments constitute another component of Pennsylvania’s comprehensive assessment system. PDE explains that its benchmark assessments “provide feedback to both the teacher and the student about how the student is progressing towards demonstrating proficiency on grade-level standards.” Well-designed benchmark assessments, explains PDE, “Measure the degree to which students have mastered a given concept” and “measure performance regularly, not only at a single moment in time.” PDE guides schools to conduct benchmark assessments every six weeks. PDE offers districts a menu of benchmark assessments that are aligned to state standards and the PSSA. Kim

Marshall, education writer and trainer, contends that, in general, benchmark assessments have several benefits, a few of which include:

- ✦ “Interim assessments, if they are cumulative, allow teachers and administrators to track students’ progress as the year unfolds.”
- ✦ “Interim assessment data allow principals, other administrators, and instructional coaches to get involved with the teams as they look at interim test results.”
- ✦ “They can be used to identify students for systemic follow-up, including small-group tutoring and focused interventions with students of major concern”
(Marshall, 2008, p. 4).

In essence, benchmark assessments offer a medium for data-driven action. Nonetheless, they are only a medium.

Formative Assessment

Many programs and approaches, including benchmark assessments, claim the alias formative assessment. PDE has embraced the definition of formative assessment proffered by the Council of Chief State School Officers (CCSSO): “Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended instructional outcomes” (2008).

PDE’s website expands on this understanding of formative assessment:

One key feature of this definition is its requirement that formative assessment be regarded as a process rather than a particular kind of assessment. A second important part of the definition is its unequivocal requirement that the formative assessment process involve both teachers and students. The students must be actively involved in the systemic process intended to improve their learning. The process requires the teacher to share learning goals with students and provide opportunities for students to monitor their ongoing progress.

PDE personnel talk about formative assessment in their own words. Rich Maraschiello, Associate for

Assessment in the Office of the Secretary, says, “It’s about instructional feedback in the moment—six weeks can be too late for some kids. You really have to get it today, before the kids leave the room.”

Zahorchak describes formative assessment:

Strategies that have been proven to check an important concept so you’re not always calling on the first kid who raises his hand—and it’s you and that kid for 40 minutes enjoying each other’s company. It’s deliberate. ‘I’m going to check on these three things, because they’re my three things for today as we’re talking about building this competency.’

PDE recognizes that enabling teachers to frequently check for understanding, give students feedback, and involve students authentically in their own learning does not simply mean handing over a recipe book of nifty strategies. Building capacity in schools and classrooms to implement formative assessment requires professional development, a variety of tools and resources, and the creation of conditions in which people can build new knowledge and skills while unlearning old beliefs (Heritage, 2008). Pennsylvania is unfurling this level of support.

Pennsylvania connects formative assessment to its larger standards aligned system. In the summer of 2008, PDE sponsored a statewide, week-long Governor’s Institute for schools, districts, and IUs on data-informed decision making that attracted 1,600 attendees. Formative assessment was a central focus of the institute. While the institute focused on formative assessment, it also connected formative assessment to the state’s overarching strategies for improvement. The institute gave participants data use strategies and helped them see connections among standards, assessment, instruction, and curricular materials for improving student achievement. As Maraschiello points out, “Everything is anchored within this [the standards aligned system] as part of the statewide system of support so districts understand where everything should fit in the big picture.”

Connecting assessment to curriculum frameworks and instructional materials is a priority work-in-progress for PDE. PDE is embedding support for

formative assessment in the curriculum frameworks and voluntary model curricula it is building. For each state standard, there are assessment anchors, and each anchor is broken into competencies. Sample lesson plans are available for each competency. Those lesson plans contain suggested formative assessment techniques to check for understanding. Maraschiello explains, “[Teachers] can go to a training on formative assessment and learn it’s a great idea and wonderful. But, if they don’t get how to use it in daily life, [it won’t work]. Teachers need real examples of how to use it every day in the classroom.”

PDE is helping educators see real examples by developing a repertoire of videos that illustrate formative assessment practices. Providing video examples enables PDE to both offer technical assistance at scale and dispel myths that formative assessment practices will only work with certain ages or types of students.

Videos help stakeholders understand formative assessment as an instructional matter as much as an assessment matter. Formative assessment exemplifies the interdependence of the parts in the standards aligned system. Kirby-Wehr says, “If you go to our website, not only under assessment will you see formative assessment defined... you’ll also see [formative assessment] under instruction. And that’s what we’re really trying to emphasize.”

In addition to its web resources and large-format trainings, PDE builds capacity to implement formative assessment in its trainings for distinguished educators and IU personnel. Education researchers Carol Cohen and David Barnes (1993, as cited in Elmore, 2000) find that historically, policy makers concentrate on issuing requirements but pay little attention to the learning required of those expected to implement their requirements. PDE addresses this shortfall. “We’re going to model and scaffold this as if we’re teaching our teachers and administrators,” explains Kirby-Wehr.

Getting Results! Improvement Planning

As in other states, Pennsylvania schools and districts in improvement status must complete improvement plans. *Getting Results!* is a tool for planning

school and district improvement that includes three benefits. First, it enables users to examine root causes by focusing on data. Second, it addresses the six components of the standards aligned system. In Secretary Zahorchak’s words, *Getting Results!* “forces people into focusing on these six component parts and looking for root causes as they analyze data.” Third, the tool aligns with other resources and programs in the state system of support. Although schools and districts in improvement status are required to use *Getting Results!*, by delivering these three benefits, all schools and districts can find value in it. *Getting Results!* offers a single, statewide approach for improvement planning. For the first time in 2009-10, the *Getting Results!* framework will be an online system providing further opportunities for schools to use the process and resultant analysis.

Governor’s Institutes

Every summer, PDE invites educators from across the commonwealth to a series of large-format professional development sessions. Named Governor’s Institutes for Educators, these institutes carry three purposes: 1) energize participants and exhort them to undertake challenging work; 2) foster relationships among participants that will endure after the seminar and stimulate continued sharing of knowledge; and 3) impart content linked with standards-aligned systems and engage participants in applying the presented content to their local problems of practice.

The institutes’ themes for the large-format sessions persist from year to year: Data-Driven Decision Making, Innovation in Education (HS Reform), and Science/Technology/Engineering/Math (STEM) (Pennsylvania Department of Education, Office of Educational Technology, Division of Data Services, 2009).¹ Pennsylvania invests substantial resources in the Governor’s Institutes and deems them an integral component of its system of support.

¹Staff from the Center for Data Driven Reform in Education is joined by distinguished educators, IU curriculum coordinators, and PDE personnel to facilitate the institutes.

Enhancing the Supply of Personnel Equipped for School Improvement

Pennsylvania employs several strategies to enhance the supply of personnel for school improvement. Through statutes and policies, it influences university programs that prepare teachers so that graduates of these programs understand evidence-based teaching practices, the state's standards, and the state's accountability system. The most concerted and notable strategy for enhancing the supply of qualified personnel is Pennsylvania's school leadership training program, the Pennsylvania Inspired Leadership Program (PIL). This is described in detail in the next section.

Prepare School Leaders for School Improvement

Pennsylvania has new state standards for leadership that are part of the SAS. State law requires all education leaders to receive training in those standards and reciprocates that demand by offering a flexible suite of free state-funded training modules. PDE solicited the input of a cross-section of state stakeholders at each step of development of the standards and has recruited the support of several partners to put them into practice throughout the state.

There are nine new leadership standards in Pennsylvania regulations—three core standards and six corollary standards. The core standards read:

- ✦ The leader has the knowledge and skills to think and plan strategically, creating an organizational vision around personalized student success.
- ✦ The leader has an understanding of standards-based systems theory and design and the ability to transfer that knowledge to the leader's job as the architect of standards-based reform in the school.
- ✦ The leader has the ability to access and use appropriate data to inform decision-making at all levels of the system (Pennsylvania Department of Education, Office of Educational Technology, Division of Data Services, 2009).

The leadership standards and SAS are symbiotic. The standards emanate in part from the SAS. The

SAS, in turn, is served when leaders operate with the knowledge and skill these standards stipulate. While the three core standards are technically equal, Secretary Zahorchak is not shy about declaring the middle standard paramount: "Chief among those standards is how to be the chief architect of building standards-based systems."

Through the PIL, Pennsylvania has made a large ante to train every principal in the state, believing that PIL will make the principals of all schools more effective, not just those leading schools in need of improvement.

Every novice principal in the state is required to take a principal induction program within the first five years of service. The induction program must address the three core standards. The state offers an induction program, developed in partnership with the National Institute for School Leadership (NISL), free of charge. PDE scales up the program statewide by clustering its IUs into eight regions to administer the program with the same curriculum. Principals are welcome to take an induction program from an approved provider using a curriculum different from the state's, though the principal is on his or her own to pay for it.

PDE also encourages experienced administrators to take the induction program. For those seeking more advanced training, PDE offers the Leadership for Administrator Development (LEAD) program—also state funded and also offered through the eight IU clusters.

In time, administrators trained by the current modules will need new offerings to earn professional development credits. Pennsylvania will go deeper into the existing nine standards, not work on new standards.

The process of PIL training is as important as the content. PIL training models the behaviors it wants leaders to foster in schools, districts, and IUs. Sessions are collaborative and demand active participation in a community where knowledge is shared. While sessions transmit specific content, they are grounded in the questions and inquiry of participants. The focus is application. Participants discuss concrete problems of practice in their jobs,

and are supported by coaching and expert modeling to apply the content toward solutions in their daily work. In the words of Baughn, “The Secretary’s vision was for us to not only change the preparation programs, but to create very comprehensive, standards-based, continuing professional education programs designed around what the research tells us is good professional development.”

Participants complete evaluations after each PIL training, which are analyzed by higher education researchers. The quantitative jury is still out, but scores of leaders—both veteran and novice—attest the program has benefited them. Educators with thirty years experience tell Brumbaugh, “I never had anything like this when I was a young administrator. It’s the best professional development I’ve ever had in my career.” Chuck Kensinger, a PIL trainer, educator for 36 years, and principal for 16 years says, “If I’d had this training, I would have been a much better administrator.” Baughn tells the story of a young principal who spoke to him:

He’d just gone through the first year of the program and was asked to make a presentation to the school board about what they needed to do to enhance their science and math curriculum. Based on what he’d learned in [PIL], he pulled together relevant data...and showed them where the gaps were and what they needed to do to improve the curriculum and instruction. When he got done telling me about that he said, ‘In ten years everybody, all the leaders in this state, are going to be speaking the same language and focused on improving instruction. That’s what it’s going to be about.’

Influence Universities that Prepare Teachers and School Leaders

Barnaby says of teaching, “I keep telling people it’s not just an art.” To advance teaching towards becoming as much a science as an art, in May 2007 the Pennsylvania Board of Education amended certification regulations for teacher candidates in public university programs. New regulations cover Pre-K through 4th grade and 4th through 8th grade certifications. A second motive for revision was to ensure that a state certified teacher is simultaneously “highly qualified” under NCLB.

The technical revisions to the Pre-K to 4th grade regulations were straightforward. On the other hand, because NCLB requires middle school teachers to hold a major in a content area to be highly qualified to teach that content area and requires that the teacher be prepared to teach all subjects in a self-contained classroom in 4th through 6th grade, revisions to the grade 4-8th grade regulations demanded some inventiveness. A student planning to become a middle school chemistry teacher might already be double-majoring in education and chemistry. To also teach biology, that student would have to triple major in education, chemistry, and biology. This would be grueling and discourage many potential science teachers.

Pennsylvania negotiated the conundrum by requiring teachers to have a certain number of credits in a concentration area. Under revised regulations, to become “highly qualified” for middle school in two subjects, a student can earn 21 credits each in two subjects and pass the appropriate subject-matter test. Alternately, to be “highly qualified” in one subject now requires a major in that subject of 30 credits. NCLB presents the same challenge for middle school special education teachers—teachers must be dually certified in special education and in each content area they teach. Pennsylvania enacted a similar solution. Teachers can now attain dual general and special education certification for middle school by earning 21 credits each in a content area and in special education. High school certification requirements were not altered.

Few would disagree that effective teachers are necessary to school improvement. Behind Pennsylvania’s passage of new teacher certification standards lies the belief that a powerful way to create effective teachers is to ensure they have a grounding in rigorous, evidence-based knowledge and skill when they leave pre-service preparation. Accordingly, under the revised regulations the content taught in preparation programs must align with state academic learning standards, the content of the PSSA, and most importantly, the SAS. In the words of Castelbuono, “A key component of school improvement is getting teacher prep programs to produce the kinds of teachers with the skill sets we

need. [The new regulations] were designed specifically with our school improvement efforts in mind.”

Education researchers and advocacy groups nationwide, such as the Carnegie Foundation, argue that for teachers to become more effective, teaching must become an academically taught, clinical practice profession. Policymakers and the public demand the 21st century teacher to reach a diverse range of students—from rural to urban to migrant to recently immigrated. Pennsylvania’s recent revisions respond to these challenges. Previously, PDE required 12 weeks of student teaching. There were no specifications on type of school or location of the school where the student teacher would train. Today, students must have 190 hours of pre-student teaching in multiple settings. The first 40 hours entail observing a master teacher. Students must then conduct 150 hours of actual teaching with responsibilities escalating from tutoring individual students to leading differentiated instruction to teaching a whole class.

New guidelines specify that teachers will know how to apply the range of assessment in Pennsylvania’s comprehensive system from benchmarks to diagnostics to formative assessment. New guidelines also require college programs to align their content with Pennsylvania’s curriculum frameworks. This ensures that a candidate at Penn State and at the University of Pittsburgh preparing to teach middle school math will both learn to peg their instruction to same competencies of what students should be able to do. In fact, every middle school math teacher trained in a public university in the state will learn to target instruction to the same competencies.

Passing the new regulations was not easy. It took three years for the state board of education to pass the revisions. Much of the three years were spent negotiating with higher education. Barnaby comments, “This was a huge change for higher education. Before, [requirements for teacher preparation programs] were very loose. The Pre-K to 4th grade guidelines formerly were two and a half pages. Now, there are 60. We are very, very specific about what has to be done.”

More work remains; revisions to private school certificates, for instance, are underway. Policy around alternative routes to certification awaits attention. Pennsylvania also has a program under construction for former military personnel to become teachers.

The development and passage of the new leadership standards exemplifies PDE’s commitment to coalition building. All certified higher education leadership degree programs must now align with these standards. “We’re asking for a whole lot more from higher ed,” says Brumbaugh. “We went from two-page guidelines that were so vague that you could do anything and call it a principal or superintendent certification program to twenty-page guidelines that are very specific about what the expectations are for principal preparation and superintendent preparation—all around the standards.” Forty principal preparation and twenty-three superintendent preparation programs in the state will all need to go through a re-approval process in 2009-10.

At the inception of the standards revision idea, Secretary Zahorchak assembled educators from higher, secondary, and elementary education, along with IU and PDE personnel, to rethink state standards for leadership. The inclusion of higher education in these conversations was key to their buy-in of the new standards. Baughn comments on the inclusion of higher education:

We invited everyone that had a principal preparation program or a superintendent preparation program. We weren’t talking about just state colleges. In the very beginning, when legislation was just a dream, we had all these folks in the room.

Providing a Strong Data System to Assist School Improvement

PDE’s data system is about improving student achievement for all students in all schools through more efficient and effective use of data. More descriptively, its data system, called the Pennsylvania Information Management System (PIMS), enables use of robust data at all levels from the state to the

classroom. Under heavy and rapid construction since 2005, the data system aspires to:

- ✦ make life easier and cheaper for districts by leveraging the state's comparative advantage in managing a powerful data system with little marginal cost for each additional user in order to provide every district robust and useable data;
- ✦ enable IUs, districts, and schools to be driven by evidence, not anecdotes and opinion; and
- ✦ facilitate PDE's shift from a compliance monitoring to a customer service organization.

In 2005, Pennsylvania's data system was in tough shape. The U. S. Department of Education had rated it 46th out of 50 states for readiness to implement a longitudinal data system. Within PDE, eight distinct systems warehoused data, ranging from assessment to special education to career and technical education. While most states were collecting data on individual students, PDE still gathered student data only in the aggregate. Meanwhile, at the local level, 75 different student information service vendors managed data for districts across the state. PDE was relying on a potpourri of paper and stand alone electronic sources for collecting district information. Districts struggled just to deliver required data to PDE. This disabled PDE from giving timely, reliable information back to districts.

Decision makers confronted incomplete or inaccurate information. Data were often lost or in several places at once. Without internal capacity, PDE had to rely on expensive contractors to grind through its data when it conducted analyses. Finally, little capacity existed to track data on students and programs over multiple years and multiple sites. In short, Pennsylvania lacked data that came accurately enough and timely enough to give educators and policymakers the knowledge to advance performance.

Since 2005, Pennsylvania has made aggressive efforts to take its system from troubled to exemplary. Senior PDE leadership recognized the problems and authorized action. In January 2006, Pennsylvania rolled out a permanent, statewide student identifier to its 1.8 million Pre-K to 12th grade students

within 18 months. During that same period, all teachers and certified staff were assigned Professional Personnel Identifiers (PPIDs). Federal grant money supported these efforts.

As with many initiatives, PDE mobilized a cross-role stakeholder group to advise the efforts. IUs, districts, student information system vendors, principals, and teachers were represented. Internally, PDE coalesced a steering committee, composed of the Secretary and PDE senior managers, to ensure the effort had the support to move expediently. With the unique identifiers secured, Pennsylvania could begin construction on PIMS.

By the fall of 2008, PDE had integrated data from seven of its eight former stand alone databases. PDE expects to collect data on 72 unique elements, though data on student, staff, course enrollment, and attendance comprise the bread and butter of PIMS.

PDE is excited by the vitality of its emerging new system. In 2008, PDE was for the first time able to collect information on courses in a unified format. This has given PDE a start at cracking the riddle of how well, for example, an algebra II course in York compares to an algebra II course in Erie. With the new ability to source teacher certification data into PIMS, PDE can determine the proportions of highly-qualified teachers from one district to another. Overall, PDE now possesses the ability to answer a host of questions that before were left to a guessing game or required intense labor. To rigorously compare and evaluate the effectiveness of its programs, however, requires stacking data over time.

PDE began building a longitudinal data system in 2007. Without it, the state has no way of knowing if its investment in programs is working. Are principals trained through PIL really more effective? Do schools employing *PowerTeaching* improve student learning? Are students whose teachers had formative assessment training more likely to graduate?

With ground-level construction of PIMS completed, the next level of work is enhancing technical functioning of the system and increasing the knowledge and skill of those who use it. Data interoperability, a term for the ability of different

systems and applications to communicate, is rising in Pennsylvania. This means there is a better two-way flow of information from districts to the PDE and from PDE back to districts. In a fully interoperable system, a superintendent can see all the data on the schools in his/her district compared against statewide trends. Likewise, a principal can see data on all the classrooms in his/her school and compare his/her school against others in the district and state. PDE is not there yet, but has its sights trained. “The ultimate vision,” says Dave Ream, PIMS Lead Coordinator, “is that teachers can see the roster of all their kids and see the longitudinal data of each student.”

PDE is honing PIMS so it can generate instant, painless, customized reports with a few keystrokes for stakeholders, including researchers and parents, across the state. Through online courses and PIL, PDE has begun to train principals and superintendents on how to use PIMS and make instructional and program decisions from it.

Rather than be intuition-driven in its policymaking, PDE staff understand how the longitudinal data system is enabling better identification of what works and what does not so that finite resources are allocated strategically. PDE personnel share thoughts on the impact of the data system upgrades:

- ✦ “This is a huge change from anecdotal information to real information.”
- ✦ “Until this time, no one knew the impact of any program or initiative. You can spend 60 to 70 million a year on a tutoring program and only guess at the impact. We’ll now be able to track the impact of all our programs.”
- ✦ “We can use the database to identify high performing districts by specific program or demographics. Districts can compare themselves to other districts.”

PDE personnel understand their data system is more than a tool for researchers and monitoring agents. PDE sees the data system as a vehicle to empower educators to make better decisions about curricula, materials, interventions, assessment, and instruction. If finished according to plans, the data

system will add capacity to districts across the state, especially rural and financially strained districts.

Building Local Capacity

Coordinating Capacity-Building Structures and Roles

Growing empirical evidence suggests that an effective system of support must also have central direction. Some person or team must have responsibility for ensuring coordination among actors and coherence in the delivery of supports. Furthermore, an effective system of support must be, in fact, a system—an interdependent group of processes working in concert.

Observers of state departments of education from inside and outside their ranks often decry the silo nature of their operation. In her study of SEAs’ role in complex reform, Lusi finds that SEA personnel “are accustomed to working in fairly narrowly defined areas and to performing predefined tasks” (1997, p. 15). While the Bureau of Teaching and Learning is responsible for managing the system, responsibility for carrying out the work of the system stretches across many offices, bureaus, and divisions within PDE. Pennsylvania’s SSOS overview offers an example:

The Division of Federal Programs provides technical assistance, support, and training regarding the use of federal funds to improve academic achievement while remaining in compliance with federal regulations; the Division of Professional Development provides support and technical assistance to school districts regarding the development and implementation of effective professional development plans; the Bureau of Accountability and Assessment provides training and support on the implementation of the PSSA and proper analysis of results. (PDE, 2007, February p. 8)

The wide involvement of offices and bureaus maximizes the resources the department can press toward school improvement. School improvement in Pennsylvania, however, is not an all-hands-on-deck endeavor. More hands are only helpful if they agree where to sail the ship. The linkage between the

Bureau of Special Education and the SSOS offers an example of PDE's ability to integrate separate entities toward a common vision.

In several pilot districts and to all 29 IUs, the Bureau of Special Education provides technical assistance to implement Response to Intervention (RtI). Customarily, and by definition in federal regulations, RtI is a special education initiative. PDE, on the other hand, defines it as an instructional program beneficial to all students. PDE asserts RtI and general education are connected. First, RtI stipulates that all students are first given high-quality instruction against the same standards. Second, all students are administered the same progress monitoring and benchmark assessments. In the words of Fran Warkomski, former Director of Pennsylvania's Training and Technical Assistance Network in Harrisburg, "If those are the standards for all kids, we need to provide instruction for all kids, and we need to look at the assessment and the interventions that are available before we send kids off for a special education evaluation." As a result, RtI in Pennsylvania is fundamentally about school improvement. "School improvement and RtI—we're seeing them as the same thing. You can call them something different. Call it school improvement. Call it RtI. Call it student assistance teams. It's the same thing."

PDE's support of RtI as a general education initiative exemplifies the interdependence of PDE's parts. Without question, there are structural elements, such as IU 25's role, that fosters coordination among PDE's 17 bureaus. Pennsylvania also credits the SAS for exerting a centrifugal force. Secretary Zahorchak explains, "We started with a conversation about aligned systems, student achievement, and what matters inside of that system, and all of a sudden, everyone was talking the same language. It became easy to work across the boundaries because of the goal."

Zahorchak holds that, through the SAS, coordination occurs without a heavy hand. "A lot of people say 'thou shalt' get along and work together—then it never happens. By aligning all education stakeholders in the state to the same theory of action and facilitating their coordination, PDE believes it has

the capacity to achieve its vision of 'every child by name, reaching core academic proficiency.'"

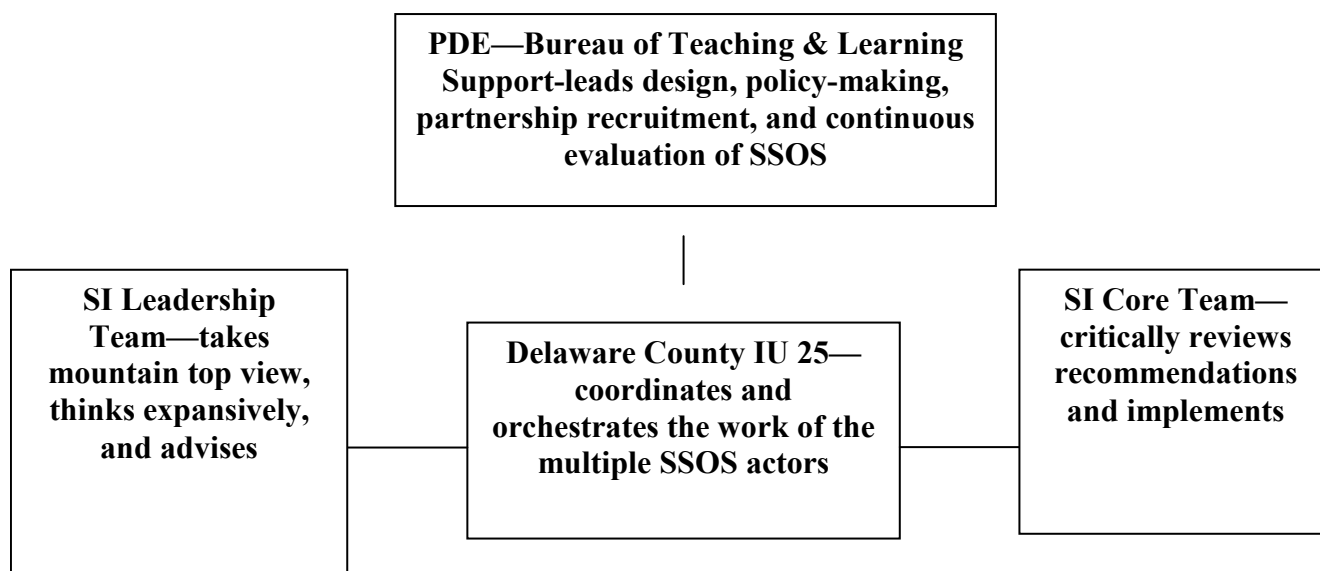
Size and Organization

There is a growing national recognition that a state department of education's comparative advantage lies not in providing direct services to schools, or even, in most cases, to districts. A state department finds its advantage in providing leadership by designing, managing, evaluating, and continuously improving the statewide system of support—setting policy, ensuring resources, and managing relationships.

Six offices, containing a total of 17 bureaus, comprise the Pennsylvania Department of Education. As Figure 4 illustrates, one bureau, the Bureau of Teaching & Learning Support, holds internal department responsibility for managing the SSOS. The PDE SSOS overview paper explains that the Bureau of Teaching & Learning maintains the partnerships necessary to support the SSOS, garners new partners as needed, and makes policy-level decisions around the work of the SSOS (PDE, 2007, February). To complete these duties, the Bureau of Teaching and Learning actuates three leadership groups. First, it contracts with Delaware County IU 25 to coordinate services offered by all school improvement technical assistance providers and trainers statewide. Second, Pennsylvania assembles a state-level council that takes a mountain top view of the many improvement efforts in the state and helps them cohere. Called the School Improvement Leadership Team (sometimes shortened to Leadership Team), it keeps a pulse on the school improvement efforts across the state.

Like other advisory councils in the state, the Leadership Team consists of IU executive directors, superintendents, PaTTAN personnel, professional association representatives, special education representatives, PDE representatives, along with Delaware County IU 25 personnel. The Leadership Team also reviews research-proven strategies and emergent challenges in the SSOS and floats trial balloon solutions. Ultimately, its responsibility is to capture a panoramic view of SSOS, think unrestrictedly, and provide information and advice to PDE and the Bureau of Teaching and Learning Support.

Figure 4: Organization of PA's SSOS



Adapted from “Pennsylvania’s statewide system of school support,” by Pennsylvania Department of Education, 2007, February, p. 2. Reprinted with permission of the author.

Third, a subsection of the Leadership Team forms an executive body, the School Improvement Core Team. Comprised of PDE staff and Delaware County IU 25 staff, the Core Team meets twice a month to weigh the Leadership Team’s recommendations and enact them if appropriate. Pennsylvania’s SSOS overview paper contrasts the Leadership and Core Teams: “While it is the SI Leadership Team’s task to bring out issues, initiate conversations, and come up with solutions, it is the SI Core Team’s responsibility to make everything happen in a manageable, coordinated, organized, effective manner.” Overall, these three groups enable the Bureau of Teaching and Learning to lead a system that is dynamic and multi-faceted yet aligned toward the same vision around the same theory of action.

Distinguished Educators

Distinguished educators perform a critical support function. PDE assigns distinguished educators to districts in the second year of corrective action who provide intense, customized, and often directive support to help districts dramatically improve components of the standards aligned system.

The description of the distinguished educators specifies three roles:

- ✦ drive firm, prescriptive district-level solutions;
- ✦ coach administrators; and
- ✦ provide feedback to inform PDE’s policy and regulations (Pennsylvania State Education Association, 2007).

More generally, distinguished educators “assist struggling districts in identifying instructional or systemic barriers and critical gaps to improving student achievement and then work alongside that district’s staff to overcome those barriers and fill those gaps” (PDE, 2007).

Launched in SY 2006-2007, the distinguished educator program selects retired teachers and administrators who commit to serve two full-time years. Distinguished educators work in teams to build district capacity, though they spend considerable time providing in-building school-level assistance. Need alone does not determine whether a district receives distinguished educator support. PDE wants distinguished educators to be set up to succeed and therefore writes that districts must “demonstrate readiness to receive technical assistance” before assignment (PDE, 2007, para. 1).

Pennsylvania finds that a rigorous selection process is critical to the success of the program. “We’ve gone to great pains to make sure that we scrutinize the candidates who want to be distinguished educators,” says Zahorchak. Pennsylvania also invests substantially in training distinguished educators before and during their service. The PIL curriculum crafted by NISL includes a 5-day boot camp training. All distinguished educators are required to participate. During service, distinguished educators interact with researchers and trainers and complete reading and writing assignments. “Training includes multiple modes of interaction with nationally recognized researchers, authors, and trainers as well as reading and writing assignments, journal reviews, and week-long residential institutions” (CCSSO, 2006, p. 2).

Ultimately, the value of the program derives from its anchorage in the standards aligned system. Distinguished educators do not work on different things than what all schools are asked to work on, nor provide support different than schools may receive from their IUs. Rather, they work on the same six components only with more intensity. Secretary Zahorchak punctuates the idea:

The work of the distinguished educator is simple. Assist the superintendent who has a high volume and a wide variety of interruptions to focus on the construction of six circles. Help with the analysis of data to discover areas of need and to look for solutions. Help with the systematizing of planning that will help schools from the classroom to the school level build standard aligned systems.

In SY 2007-2008, PDE pioneered a corollary of the distinguished educator program, called the distinguished school leader program, to serve schools in corrective action exclusively because of missing targets for students with disabilities. PaTTAN offices supervise their work, which typically involves high schools. Distinguished school leaders work alongside distinguished educators when possible. Warkomski points out that distinguished school leaders, though they focus on IEP student needs, also work on “the standards

aligned system.” In SY 2008-2009, PDE mobilized a distinguished educator program specifically for vocational-technical schools.

Support Teams

NCLB uses the term “support team” or “school support team” to describe a group of SEA staff, intermediate unit staff, organizational partners, distinguished educators, and other consultants assigned by the state to assist a specific district or school with improvement. It activates fluid groupings of IU personnel, distinguished educators, and school leaders. The work ascribed to a state support team is inseparable from the work ascribed to distinguished educators or distinguished school leaders. Rowe explains:

The teams vary depending on the expertise of the IU and the needs of the district/school. There are multiple supports. The process by which Pennsylvania engages IU teams is not quite as formal as the state support teams in some states, but is targeted and deliberate in its delivery of assistance and supports.

PDE typically trains IU Curriculum Coordinators to lead a team of local administrators, distinguished educators, and distinguished school leaders. The team supports the *Getting Results!* planning process, intervention planning, and then brokers or delivers support.

Other Consultants in the Statewide System of Support

Besides teachers and administrators, IUs and PaTTANs, distinguished educators, and EAP technical assistants, Pennsylvania’s SSOS relies on several external partners to do its work. In the words of Secretary Zahorchak, “Our partners include a bunch of people, and that’s the excitement about it all because all of our partners, I think for the first time in a long time, are singing out of the same songbook.” Overall, PDE invites and leverages talents from a variety of people and places, and every contributor must be willing to work directly with some aspect of the SAS.

Differentiating Support to Districts and Schools: Three-Tiered System of Designation and Support

To differentiate support to districts and schools, PDE employs a three-tiered system: Foundation Assistance, Field-Based Assistance, and Targeted Assistance. The intensity and directness of supports and resources increases as the federal accountability improvement status of the district and school turns more critical. Foundation Assistance, or Tier 1, entails supports and resources that PDE makes available to all districts and schools and believes will benefit all districts and schools. These services have been described earlier in detail including the curriculum frameworks, state sponsored resources and materials (*Teaching Matters*, *Power Teaching*, *Getting Results!*, as well as others), assessment tools, the voluntary model curricula, and Governor's Institutes.

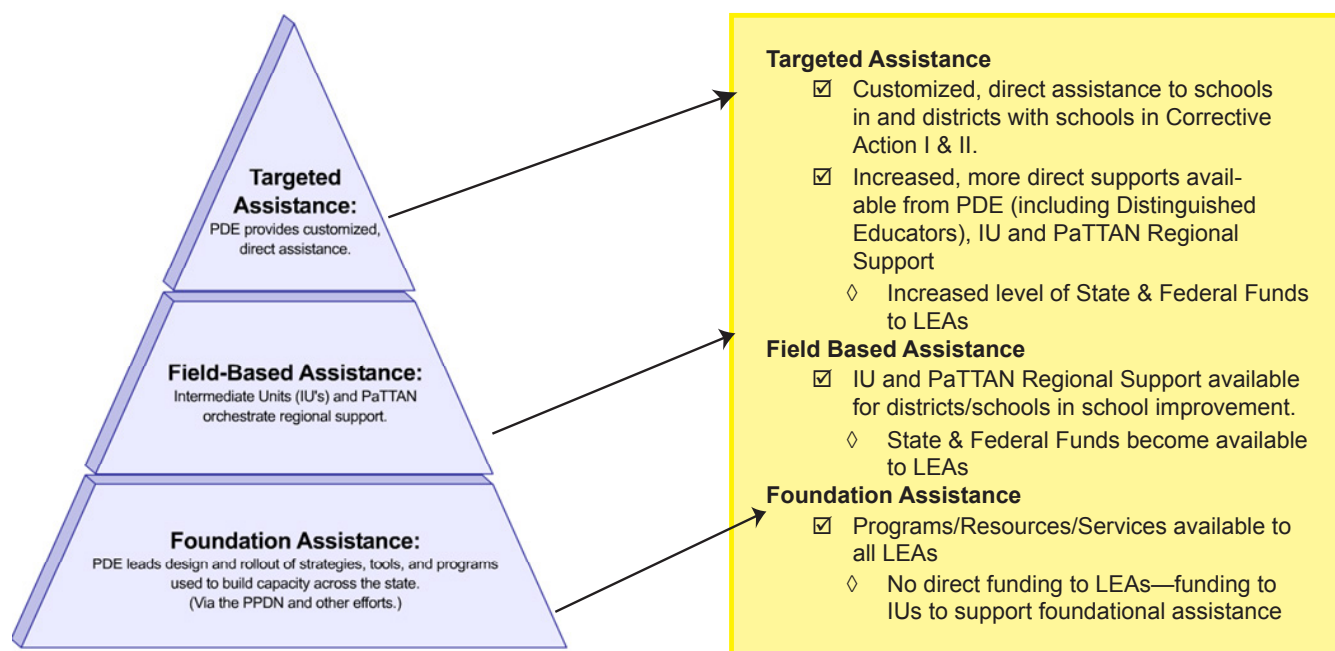
As districts and schools enter improvement status, they receive more intensive Field-Based Assistance. For those in the highest tier of need, PDE actuates supports targeted and customized to districts and schools' individual needs. Figure 5 illustrates the three-tiered system.

While schools with the most intense needs receive the greatest per capita investment from PDE, such as a full time distinguished school leader, state-wide, PDE invests the most heavily in Foundation Assistance—high quality resources that benefit all schools. PDE summarizes this decision:

Certainly, schools and districts struggling with achievement issues and falling short of state AYP targets need and receive more intensive, differentiated supports, but in order to ensure that ALL students are challenged and inspired, Pennsylvania's Statewide System of School Support provides assistance for ALL, wherever they find themselves right now in their goal of having all children proficient by 2014. (PDE, 2007, February p. 1)

As demonstrated school performance and capacity fall, PDE support rises in quantity and shifts in disposition. Field-Based Assistance (Tier 2) supports, PDE explains, provides "more targeted, focused support to schools identified by the PSSA as School Improvement I or School Improvement II" (PDE, 2007, February, p. 8). Schools that may have disregarded Tier 1 supports are now more strongly encouraged to utilize such tools. In some

Figure 5: PA's Three Tier Assistance



Adapted from "Pennsylvania's statewide system of school support," by Pennsylvania Department of Education, 2007, February, p. 1. Reprinted with permission of the author.

cases, they are required. A school's IU or regional PaTTAN office is often the entity that renders Tier 2 assistance.

PDE provides funds for the heightened level of Tier 2 support. One funding source for Tier 2 schools is Title I school improvement dollars. The stipulation is that these dollars may only finance activities detailed in a school's improvement plan. State IU Capacity Building Support funds districts in support of their schools. Through IU Capacity Building Support grants, a district receives \$9,500 for each school identified for improvement. Districts usually enlist the Curriculum Coordinator in their regional IU for assistance in deciding how to use the funds. PDE explains:

The funds may be used to pay for more intensive IU supports from the local IU or any other IUs that may have expertise in the areas of need. As well, funds may be used to access outside support. IU Curriculum Coordinators work intensely with schools identified for improvement to develop review data, determine root causes, and identify solutions. They also serve those schools who may not yet be in the improvement cycle but want to use the framework and process to ensure success for all of their students. IU staff continue to support schools through the school year with the needed professional development and assistance during the implementations of school improvement plans. (PDE, 2007, February, p. 9)

Whereas attendance at Governor's Institutes is voluntary for Tier 1 schools, Tier 2 schools must send teams including teachers and administrators to attend the Data-Driven Decision Making Governor's Institute.

PDE provides districts identified for improvement access to state funding for tutoring. The Education Assistance Program (EAP), which supports the intervention component of SAS, funds tutoring for students who fall below proficiency on the PSSA in eligible districts.²

²One hundred and seventy-five districts were eligible in school year 2007-2008.

The program allows flexibility. Tutoring can occur during school or after school, on weekends or in the summer. Districts may provide the services directly or partner with a provider. Unlike federal Supplementary Educational Services, the state does not manage an approved program or provider list. Instead, PDE only recommends programs. It allows districts to select a program of their choice, but has concomitantly attached greater accountability.

In addition to accountability, PDE gives districts support to implement the EAP. PDE finances Technical Assistants (there were 14 in school year 2007-2008) to work one-on-one with assigned districts and schools to run successful tutoring programs. Technical assistants are not desk workers; they are empowered to develop relationships with districts. "They actually go out; they do onsite visits," says John Nau, Chief of the Division of Student Interventions and Instructional Supports. Because credibility and relationships are critical to the job, PDE selects people who command credibility and can build relationships, such as retired superintendents and former distinguished educators.

Another Tier 2 support includes instructional coaching. In a paper entitled, "Coaching in Pennsylvania: Universal Expectations," (Zahorchak, 2006) Secretary Zahorchak summarizes the role that instructional coaches play in Pennsylvania: they "enhance educators' knowledge, skills, and practices to help students achieve at greater levels." One example of Pennsylvania's commitment to coaching as a statewide strategy to enhance instruction is Classrooms for the Future (CFF).

CFF creates, according to Pennsylvania's SSOS overview paper, "environments for deeper cognitive development through inquiry, real and relevant project-based learning, and differentiated instruction" (PDE, 2007, February, p. 5). Over three years, Pennsylvania granted \$200 million through CFF for schools to purchase technology. Recognizing that technology alone will not drive improvement, CFF relies heavily on coaching for teachers. The program allots an additional \$20 million for coaches. In the words of Nau, "It's not just how you work the equipment; it's how you use this equipment to

get students engaged in learning. That's the whole purpose of the professional development."

Just as teachers are supported intentionally by coaches, so too does PDE support coaches. A large-format three-day session, where coaches receive tools, resources, and guidance, spearheads coaches' preparation. A fleet of statewide mentors provide instructional coaches with ongoing support as do webinars and online courses.

Beside CFF, PDE supports five other statewide initiatives that involve coaching, including Reading First and the Pennsylvania High School Coaching Initiative.³ To synergize coaching across the state, PDE established the Collaborative Coaching Board. Comprised of representatives of the five major coaching initiatives—along with higher education, IUs, districts, and PDE—the board meets monthly. "Our mission," states Nau, "is to coordinate and integrate all of the coaching initiatives in the commonwealth." The board disseminates guidance on effective practice, including a white paper on how coaching fits into the SAS.

Schools and districts that enter Tier 3 status receive the most intensive, personalized assistance. Field-Based and Foundation Assistance remain available, though now schools are eligible for additional funding and support. These include distinguished educators, distinguished school leaders, state support teams, IU capacity building grants, and Title I school improvement grants.

Distinguished educators provide customized, and often, directive support to help districts dramatically improve components of the standards aligned system. Distinguished educators work in teams to build district capacity, though they spend considerable time providing school-level assistance. Overall, distinguished educators help districts identify changes to instruction or other components of SAS that will improve student achievement. Then, they work alongside district staff to make those changes (PDE, 2007).

³As of school year 2006-2007, 41% of Pennsylvania's districts spent \$91 million on coaching.

To engage in the intense school improvement PDE expects of schools in corrective action, it makes available an additional \$10,000 in IU Capacity Building grants on top of the \$9,500 granted at the Tier 2 level to districts. In contrast to Tier 2 IU Capacity Building grants, Tier 3 dollars go to the school's regional IU, not the district, but result in an agreed upon plan between the districts, the supporting IU, and the distinguished educator team assigned to them. IUs commonly use these dollars to fund the work of the distinguished educators and distinguished school leaders. IU staff and local administrators team with distinguished educators and distinguished school leaders in support teams to stimulate sustainable, yet sizeable, improvements in performance.

While Tier 3 IU Capacity Building funds are channeled to IUs, PDE supplies an additional Title I set aside to schools in corrective action. These funds come in addition to the base Title I set aside. As of school year 2007-2008, PDE also confers Title I School Improvement Grant funds to schools in their second year of corrective action or higher, in addition to Title I set aside dollars (PDE, 2007, February).

Delivering Services

Building Intermediate Units' (IU) Capacity

Because of the advantage of scale that districts hold over schools, the literature on the state systems of support asserts that states should engage districts, not individual schools, as the locus of capacity building efforts (Laguarda, 2003; Mazzeo & Berman, 2006; Massell & Goertz, 1999; Rhim, Hassel, & Redding, 2008). PDE extends that rationale a step further. Many PDE programs and resources focus squarely on districts, but a prominent feature of Pennsylvania's SSOS is its emphasis on building the capacity of its Educational Service Centers (ESCs). PDE engages many partners in its system of support, but its ESCs, called Intermediate Units (IUs), have an enduring role.

With 501 districts and more than 100 charter schools spanning densely urban to remotely rural areas, direct assistance to each district, let alone school, would overreach PDE's resources. PDE

recognizes that it has limited staff capacity and, therefore, focuses its finite time and resources on strengthening the 29 IUs, which in turn, serve districts and schools. The numbered areas in Figure 6 shows the geographic regions the IUs service (Pennsylvania Department of Education, Office of Educational Technology, Division of Data Services, 2004, July). IUs take their names from these regions, such as Delaware IU 3 or Central IU 10.

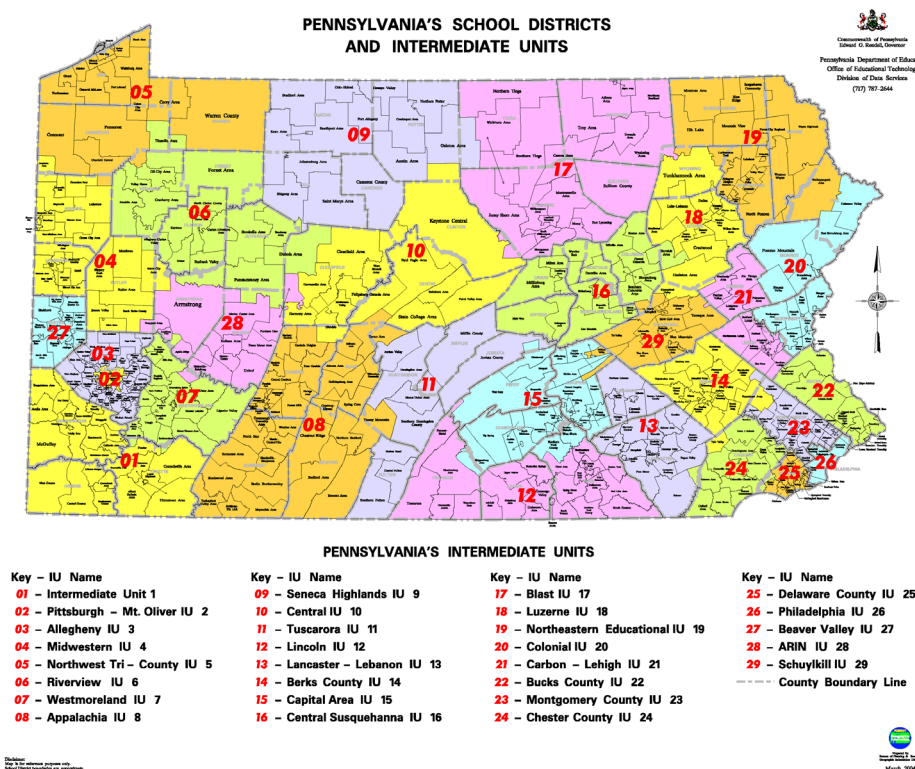
IUs, creations of the Pennsylvania legislature, serve the districts and schools in their prescribed geographic regions. Because IUs receive state funds, PDE can negotiate and hold IUs accountable for supporting PDE's programs and policies. IU staff are trained by PDE and outside consultants to assist schools in identifying root causes using data to inform decisions, develop and implement improvement plans, provide onsite assistance, and deliver job embedded professional development. IUs are a linchpin in the Pennsylvania SSOS, and PDE gives its connection to IUs continual attention. PDE has not found force-feeding its ideas to IUs to work.

To become effective purveyors of a program, IUs “have to own it as theirs,” says Diane Castelbuono, Deputy Secretary for the Office of Elementary and Secondary Education.

PDE staff uses the terms “adamant and passionate” to describe their engagement with IUs and assert that without them, PDE could not provide the technical assistance to districts that it does. Enhanced technical assistance is not the only benefit of the close connection between PDE and its IUs. IUs also serve as ambassadors for PDE's messages and give PDE feedback from districts and schools.

A national study by Marsh et al. (2005) found that the trust districts had for their support providers and the credibility they perceived of the intermediaries influenced efforts to improve instruction and performance. Accordingly, in Pennsylvania the proximity of IUs to districts does not just permit PDE to deliver support to all 501 districts, but also enhances the quality of those supports.

Figure 6: Geographic Regions of the IUs



Adapted from “Pennsylvania’s school districts and intermediate units,” by Pennsylvania Department of Education, Office of Educational Technology, Division of Data Services, 2009, July. Reprinted with permission of the author.

PDE can give resources and guidance to the entire state, but cannot offer customized solutions to every district. PDE produces key resources but also works alongside IUs to develop tools and deliver training to districts and schools. IUs lead and manage some PDE programs. Partnerships with IUs allow PDE to act more quickly and take actions it might not be able to take otherwise.

PDE accrues a final advantage from leveraging its IUs in that working with the IUs increases the likelihood that programs and policies attain sustainability. Castelbuono comments, “IUs will be here when this administration is gone. We get their buy in, and the school improvement process we’ve helped create becomes part of the infrastructure.”

In addition to IUs, the PaTTANs are a critical intermediary provider in the SSOS. The mission of the PaTTAN system is to support initiatives of PDE’s Bureau of Special Education. With three regional offices across the state, PaTTANs work with IUs, as well as with districts and schools, directly. PaTTAN offices develop training courses, offer technical assistance, and provide resources.

Allocate Resources for Services

Set pre-service and in-service training standards for teachers and administrators. Create resources and tools that serve the standards-aligned system. Tie the purse strings to programs that work. These constitute Diane Castelbuono’s summation of the levers a department of education holds to effect school improvement. Pennsylvania’s system of support allocates resources for districts and schools to secure services from other providers or fund internal efforts. Tying policy to funding, “that’s how you get attention,” says Castelbuono. PDE has become increasingly strategic in its use of funding to advance school improvement.

Strategies specific to schools and districts in need of improvement—Title I School Improvement funding and IU Capacity Building Grants—have already been discussed. In 2008, Pennsylvania took two bold steps to change the way it allocated resources for districts. First, it completed an analysis of the necessary cost for each individual district in the state to enable all students to attain proficiency,

termed the Costing-Out Study. Second, it consolidated three separate State Department grant applications into one, named the Pennsylvania Pact (PA PACT).

“Pennsylvania for years has had one of the most inequitable and inadequate ‘funding formulas’ – and you have to put ‘funding formulas’ in quotes because it wasn’t really a funding formula – in the nation,” says Castelbuono. In response, Pennsylvania completed the Costing-Out Study in 2007 to address equity and adequacy across the state. The study computed the spending required to enable students in each of Pennsylvania’s 501 districts to master state academic standards, given that different districts face varying challenges educating their students.

In each district, the study factored the many variables that influence the cost of educating a student to proficiency, including the percentage of poverty students and students with limited English proficiency, the districts’ size, and the regional costs of business. Secretary Zahorchak underscores the fact that the study considered each district individually, determining “how much does it take, uniquely in that district, to bring your children, with lots of factors included, to proficiency.”

Overall, the study found that 465 (93%) of Pennsylvania’s districts had fewer resources than necessary to adequately educate each student. This need drove the state of Pennsylvania to develop the PA PACT and commit an additional \$2.6 billion over six years to districts.

The PA PACT consolidated three major state funding streams from state to district. The first stream, the Accountability Block Grant (ABG) sends funds to all 501 districts in the commonwealth to spend on a limited menu of strategies set by the state. ABG funds totaled \$175 million dollars in SY 2008-2009. Second, the Education Assistance Program (EAP), the state’s tutoring program, sends \$66 million dollars to 175 districts based on student proficiency levels. Both ABG and EAP existed before the Costing-Out Study. To deliver the additional funding necessary to meet the adequacy targets identified by the Costing-Out

Study, Pennsylvania initiated the PA Accountability for Commonwealth Taxpayer (PA PACT) fund in SY 2008-2009. It allocated \$137 million in its first year.

A circular written by Governor Rendell and Secretary Zahorchak states that to “ensure Pennsylvania’s taxpayers will have confidence that these significant new resources are being used for the most effective strategies for boosting student achievement....[PA PACT] funds must be invested in proven school improvement strategies.” Similar to ABG funds, PDE provides a menu of options on which districts may spend PA PACT funds.

Districts apply all three funding streams in PA PACT together. Pennsylvania cites three advantages to the funding method: 1) All districts are encouraged to examine root causes and use common language; 2) Districts can weave funding and focus on student needs rather than perpetuating funding; and 3) Districts can fund systemic improvements, not just add-on remedies.

The PA PACT asks all applicants to use *Getting Results!* to show how they will use ABG, EAP, and PA PACT funds to address root causes. Every applicant encounters the same language and same process from *Getting Results!* Because all districts are eligible for PA PACT funds, all districts have another incentive to use *Getting Results!* Diane Castelbuono talks about the statewide coherence that stems from tying the PA PACT application to *Getting Results!*

[*Getting Results!*] is the process. This is what you need to be engaged in. Even if you didn’t do a *Getting Results!* plan, we’re going to ask for you to go through the same type of analysis. The state is coming forth with a unified message around what comprehensive school reform is as opposed to disjointed messages. We are not just creating a process that’s good for our struggling urban districts. It is a process that’s good for... suburbia and good for rural schools too. It’s common sense.

The idea is that to enable high performance for all, not just remediate low performance, the system provides a streamlined set of tools that can benefit all schools and districts.

Castelbuono notes that the more districts vie for separate funding applications, the more they think in terms of funding programs, rather than student needs and strategies to address those needs. The consolidated PA PACT application enables districts to first determine student needs and the best strategy to support those needs and then focus on attaining funds. For instance, under PA PACT, a district that determines an extended school day would address its root causes could blend ABG, EAP, and PA PACT funds to finance that intervention.

The simplification reduces the incentives for districts to employ grant writers who are divorced from administering programs. Castelbuono explains, “I want the program people to write it. I don’t care if it’s not well written,” says Castelbuono. “What matters,” she continues, is that “it’s rich in analysis, it’s data informed, [and that] they really get what they’re talking about.”

Pennsylvania has also moved from a one-year to a two-year school improvement plan. PA PACT, combined with the two-year school improvement plan, mitigates two problems of timing. First, statute requires the districts to make budget decisions for the upcoming year by March. PSSA results, a key data source that informs budget decisions, are not released until June. Districts, thus, have incomplete information for budget planning. Prior to SY 2008-2009, PDE required districts to re-apply for ABG funds each year. With never more than a year of assured funding for a strategy, districts coped by funding add-on programs rather than systemic improvement that require sustained investment. Castelbuono explains the phenomenon:

If I know you’re giving me more money next year, I can plan ahead. If I know you’re giving me less money, I can plan ahead. But, if I don’t know if you’re giving me any more money until the last second, I’m not going to be able to integrate that work into daily life with kids. It’s going to be an add-on.

When the funding amounts were uncertain, disjointed activity from districts was often the result. Consistent funding over time is better than

a single year of more funding, argues Castelbuono. Pennsylvania has a six-year funding formula under consideration.

Evaluating and Improving the Statewide System of Support

Beyond the continuous improvement enabled by Pennsylvania's feedback web, formal evaluation of its programs is a mainstay of Pennsylvania's SSOS. PDE annually evaluates many programs in the SSOS to make modifications. A formal evaluation of the SSOS in totality is underway. A contractor will complete an evaluation that recommends to Delaware County IU 25 (the coordinator of SSOS services) and PDE how the state system of support may be improved. The evaluation will also identify how the IUs and Delaware County IU, in particular, can act on the recommendations. The study will gather input from PDE staff and IU Curriculum Coordinators on the efficacy of tools such as *Getting Results!* and the expected improvement needs of schools and districts.

Even the best systems need constant calibration. In Pennsylvania there is a rich, intentional—though neither simple nor clean—matrix of analysis, discussion, and feedback throughout the SSOS. As Richard Elmore contends, large-scale improvement requires “analysis and discussion of successes and failures, and feedback about this into the larger pool of knowledge and skill in the organization” (Elmore, 2000, p.13). In Pennsylvania, the School Improvement Leadership Team plays a key role. The web of analysis, feedback, and refinement extends beyond the SI Leadership Team and its three corollary groups. The following illustrates a typical month in Pennsylvania.

IU executive directors meet with PDE senior leadership, as they do each month. Similarly, all 29 IU curriculum directors meet twice. PaTTAN directors join one of these meetings, or they convene separately with PDE. Distinguished educators across the state join for a day; in the morning, they receive professional development on model units and lessons; in the afternoon, they share successes and struggles with PDE and each other on efforts to support classroom formative assessment. IU 13

leaders drive to Harrisburg to gain direction from the Bureau of Assessment and Accountability on rolling out new PVAAS guidance.

Meanwhile, the many coalitions and councils PDE convenes to guide its programs are at work. The collaborative coaching board explores ways to enhance cognitive coaching practice, while teachers and principals spend a Saturday vetting a diagnostic assessment under consideration with state support.

Eight PIL regional coordinators discuss, over a conference call with PDE and the Center for Data Driven Reform in Education, how the new superintendent module went last month. The superintendents' association and district business managers engage in a WebEx session to analyze challenges with the new PA ACT grant application.

The feedback activities do not always center at PDE. PDE encourages schools to share successful practices through presentations at state and local workshops. This month, teams from 27 schools gather at the PaTTAN-Pittsburg office. In the morning, they hear presentations from two schools on how they raised achievement for English-language learners over a four-year period. In the afternoon, members of the presenting schools work alongside the other 27 teams to practice using diagnostic screening tools and rethinking intervention strategies. Afterward, PDE posts a summary of the strategies presented on its website.

Most PDE senior managers spend time at the IU every month. For instance, all intermediate units convene monthly meetings with their superintendents. The Secretary assigns every senior manager an IU to which it serves as a liaison. Each PDE liaison attends that monthly meeting among superintendents and its assigned IU—“Not only...giving them information about whatever we want to communicate, but also listening and bringing back” to PDE, explains a PDE associate. The “listening and bringing back” highlights a critical element of the Pennsylvania feedback system.

While PDE is proud of the work it has accomplished so far, it recognizes much work remains to improve its internal policies, structures, and norms. If even the best schools are to improve continuously,

PDE needs feedback to enhance its own practice. “We’re under construction and continuous improvement ourselves, and we don’t want to pretend that we’re something we’re not,” says Zahorchak.

Local Perspectives

Superintendents from three districts were interviewed separately, with a principal joining one interview. Two of the districts enroll the third and fourth largest number of students in the state (after Pittsburgh and Philadelphia) at 15,000 and 18,000. Respectively, 78% and 71% of their students are eligible for free or reduced lunch. One superintendent reports that of the 278 largest American cities, African-American students in his district are among the very poorest African-American students in the country. A third superintendent interviewed leads a district of just under 7,000 students outside Harrisburg. Students in her district are 23% special education eligible, 40% Hispanic, and 42% African-American, with 89% of all students eligible for free or reduced lunch.

Factors Contributing to Improvement

Interviewees were asked what services their district has received from the state system of support that have been most important. Here is a synthesis of their responses.

Data analysis and assessment tools

All three superintendents laud the data analysis and assessment tools conferred by the SSOS. By name, they specify PVAAS and 4Sight Benchmark assessments along with the tools to disaggregate PSSA as valuable instruments. Just as appreciated as the PDE sponsored instruments is the approach to using data cultivated by the SSOS.

One superintendent commends PDE’s “emphasis on reflection on multiple sources of data to determine root causes.” In particular, she praises PDE’s sponsorship of consultants from the Center for Data-Driven Reform in Education who help administrators analyze 4Sight and PSSA data. Another superintendent recognizes her district has standardized its approach to analyzing data through the state support. A principal concurs with the support for

standardization, saying PDE has “given us common language, tools, and assessments to ensure you’re moving at the right direction.”

A third superintendent appreciates that the data analysis and assessment resources have promoted a greater focus on individual students. They have helped educators know, he says, “what were the issues and what were the gaps, how can we measure progress and move it from opinion to performance—student performance. We’re all for degrees and PD,” he continues, “but at the end of the day, can we show the increase in student learning through data?” He notes that it is often said that public education is driven by emotion: “We acknowledge emotion but we make decisions about data.” He attributes part of the impact of the tools to their ready usability by teachers. “[They have] permeated everything we do,” he concludes.

Getting Results!

One particularly valued instrument provided is *Getting Results!*, Pennsylvania’s standard school improvement planning tool. Respondents value that it elicits, in the words of one superintendent, “clear identification of root causes, and action plans identifying timelines, responsibilities, and training needs.” The same superintendent also appreciates that *Getting Results!* involves a spectrum of stakeholders in the district. For example, through the *Getting Results!* process, “We try to get the [local school] board to understand what is needed to improve instruction,” says the superintendent.

Getting Results! helps districts ask the right questions, including, according to one respondent, “How will you and your staff improve instruction? How will you know if it’s working? What professional development is included? How will it result in changes in the classroom? In addition, *Getting Results!* gives educators common language.”

Instructional supports

Districts articulate a variety of ways the instructional supports serve them. One superintendent mentions capitalizing on and expanding its use of *PowerTeaching* in the district. Moreover, she states that curriculum frameworks facilitate aligning

curricula to state standards. A principal in another district comments that curriculum frameworks “allowed us to better create local assessments.” The superintendent in a third district says PDE’s emphasis on the instructional supports “really helps....Educators are famous for changing structure, but not the instruction as Elmore argues.”

The standards aligned system

Districts applaud the standards aligned system for impelling a focus on instruction and providing common vocabulary. One superintendent had held the belief that administrators have to spend more time in classrooms. The SAS gave her the impetus to make that happen. Before SAS, “each school was doing something different,” she recalls. “Now the district enjoys a common process for engaging building and district administrators in examining instruction.”

Impact of the SSOS

Districts articulate a number of ways the SSOS has enhanced their local work. Many of the impacts they cite are inseparable from the factors they mention that contribute to improvement. One compelling impact—compelling in part because all three districts cite it—is improvement of local leadership support for classroom instructional practice.

Here is the reflection of one superintendent: “Our whole approach to administrator meetings has changed from going down a list to an opportunity to learn and a focus on student achievement. It’s about the work, it’s about the kids, and what are we doing to monitor those expectations in the classroom.” To productively bring administrators into the classrooms and focus on student achievement, the district has formalized several processes. They include learning walks, where district administrators join building administrators to use a protocol to collect classrooms visits and a central office model for examining data.

Similarly, in another district, teams comprised of a principal, teachers and specialists, distinguished educators, and a central office administrator visit classrooms in learning walks and analyze data to

identify trends in instructional practice and student growth within the school.

Administrators are not the only ones applying the tools from the SSOS to sharpen their focus on instruction. Teachers too are benefiting. As one superintendent describes, “One of the great struggles is to allow teachers to collectively look at each other’s teaching. One way to do that is to take objective data and say how would you approach this?” The same superintendent sees professional development in the district overall becoming more targeted to instruction and job-embedded for teachers. In his words, “Teacher PD has been less of a market place and more about being specific about what they need and providing that support in the building. No one is making statements about causality yet, but the superintendent notes his district is seeing less teacher turnover.

Lessons learned

Respondents offer lessons learned from their districts’ experience with school improvement that would be helpful to other districts and states.

Student performance defines success

One superintendent speaks of the redefinition of success that has occurred in his district. “It’s a measure of student performance,” he explains, “not just more degrees, more credits, more years of service, but ultimately, it’s about educating all kids and doing the things that allow us to take responsibility for doing that.”

Focus

Protect the goal of student performance and focus on only the activities that foster that goal.

Instruction matters most

Of the activities that foster increased student performance, instruction matters most. As one superintendent says, “The difference between a bright child and a failing child is good instruction. Move from the bell curve to the J-curve,” he recommends. “We don’t believe intelligence is normally distributed. Education—teaching and learning—can increase intelligence.”

Districts recognize that leadership plays a critical role in creating the conditions for good instruction. “The role of instructional leadership is to build capacity and connection to improved student learning and interface to meet the needs of all kids,” says one superintendent.

Collaboratively analyze multiple data sources

Districts should base program decisions on a review of multiple data from the past several years, considering the needs of a diverse population. Not only should the data represent multiple factors from multiple years, the review of data itself should be collaborative. It should spur “collective responsibility for finding generalizable solutions to particular problems,” as one respondent avows.

The work requires a significant commitment of resources

Superintendents recognize that serious improvement costs money, and they praise the state’s commitment. “This cannot be done without the dollars. You must allocate resources and material to support them when you are talking about battered urban schools,” says one superintendent. In this superintendent’s opinion, her district is seeing results from the Costing-Out Study. A second superintendent says the Costing-Out Study will make “PA the premier leader of making educational opportunity not a function of zip code but determination and effort.” A third superintendent remarks that the district could not have done the work it has without the state allocated resources.

Experience with the SSOS

Respondents comment on several specific aspects of Pennsylvania’s SSOS.

Working with IUs

All three superintendents report positive experiences working with their IU. Reviewing improvement plans, analyzing data, and providing professional development on special education instruction are among the useful IU services superintendents note. For instance, one superintendent offers, “We work very closely with the IU for professional development and training. We have a good relationship

with our IU. I see a direct connection from district to IU to PaTTAN to PDE,” she continues.

Yet the contributions districts cite of IUs extend further. One district received support on student behavior as well as integrating technology into instruction. Furthermore, because of the district’s size, one large district has internal capacity for much of the staff development that IUs offer elsewhere. For this district, the IU acts as a facilitator. For instance, it serves as a liaison between the district and PDE to expedite “bureaucratic details.”

IUs do not only consult and facilitate, they also collaborate. At another district, DEs join monthly district leadership team meetings where participants examine progress in teaching and learning. Furthermore, DEs join administrators for learning walks to observe instruction. “IUs really are partners,” summarizes the superintendent.

Distinguished educators (DEs)

Superintendents value the contribution of their DEs. This was not always the case, however. When the program started, says one superintendent, “There was no structure. A group of superintendents with the Association of School Administrators gathered to give feedback to PDE on the need to have more guidance about the DE program. PDE responded. That same superintendent requested DE’s for 2007-2008 and 2008-2009 school year. In her words, “They have been invaluable in providing support as critical friends, mentoring principals, and assisting us in focusing our work more directly on a standards aligned system.”

A second superintendent describes the work of her district’s DEs in this way:

We have two full-time DEs. They have established themselves in a collegial, collaborative manner with the staff. They participate in walk-throughs. They help with data analysis. They help with planning professional development opportunities and participate as members of the district team in trainings like the Governor’s Institute.

Pennsylvania Inspired Leadership (PIL) Program

Respondents deem PIL “an outstanding program.” One superintendent explains that “PIL has helped create a vision of what administrators are all about.” “From a principal’s perspective you can know exactly what you need to do to be effective,” says a principal in the district. Particularly touted is the program’s ability to bring instructional leadership from a glib term to a set of concrete behaviors. “It is the first time I’ve talked about what would we see in classrooms,” says this principal.

State incentives

None of the interviewees report that incentives have a large effect on school improvement. One superintendent comments that “while appreciated, financial incentives are not of large enough significance to drive behavior.” Another superintendent questions the value of positive incentives such as financial rewards to effective schools, principals, and teachers: “Money [extrinsic reward] is never the ultimate motivator.” Many variables would need to be considered to instate financial rewards, she cautions, and “appropriate evaluation that looks at the big picture of performance must be the foundation.”

From the same superintendent, interview questions about negative incentives, such as restructuring requirements or financial loss for persistent low performance, drew stronger skepticism. For example, “labeling of the schools in improvement status...has a negative impact on the efficacy of the staff,” she responds.

State opportunities

Interviewees do not cite opportunities as a primary driver of their school improvement efforts. One superintendent does comment on the value of a state-supported high school reform initiative for the district. His district wanted to create a college preparatory school for inner city students that could compare with any school in the region. The district asked PDE for support to create a magnet school for urban students. “Now we have a magnet school that is among the most competitive schools in the Commonwealth,” says the superintendent. Leveraging the momentum and lessons from the

magnet school, it then infused more rigor into its schools that have schools within a school. The district is grateful for PDE’s help navigating the regulations through the process.

How might a state department of education continuously examine the effectiveness of its support and improve it?

Respondents suggest ways PDE might enhance its SSOS.

Tie fewer regulations to new resources

One superintendent recommends PDE “become more cognizant of the increased regulatory approach it is using.” Decreasing the many mandatory reports, site visits, and audits would stave off the burn out of many staff, says a superintendent. “On the other hand,” states the superintendent, “I cannot say enough positive about PDE – they are conscientious and caring and try to help us in so many ways.” This superintendent recognizes the regulatory pressure PDE feels from state legislators and the federal department of education.

Attend to the impact of categorical funding

The preponderance of categorical funds can be “unwieldy for urban districts,” says one superintendent. “Fewer compliance reports and regulations tied to additional resources,” would help the district, submits the superintendent. The superintendent appreciates the new resources and understands the necessity of accountability, but believes the time consumed by reporting impinges on its ability to implement the programs funded by the resources. Categorical funding has “limited our ability to provide nurses, psychologists, and other key support services necessary to address the comprehensive needs of our students,” states the superintendent. Nonetheless, the same superintendent compliments a PDE agent for helping her “figure out how to work with the categorical funds in a creative manner.”

Attend to the effect of public accountability labels

Superintendents hold varying opinions about the effect of public accountability designations.

One superintendent feels accountability labels are not productive, stating, “staff is demoralized by labels when in fact they are working together with a huge commitment to improving student achievement.” Another superintendent maintains that “the threat of restructuring drives away the senior and expert teachers” from the schools that need them the most. This same superintendent, however, acknowledges that PDE has tried to work with the Pennsylvania state teachers union “to drive the best teachers to the most complicated settings.”

According to the same latter superintendent, overall, “public accountability has had a positive effect. In a collective bargaining environment there needs to be clear external vectors that create movement toward the goal. It’s wise to be public about our successes or failures.” This superintendent adds that while accountability cannot solely drive improvement, when coupled “with a strong educational structure, we can produce higher percentages of students that succeed every year.”

Simplify teacher certification requirements

One superintendent laments the “difficult certification requirements” for teachers in Pennsylvania. She regrets they cause “stress” for those seeking teaching jobs from another state and submits that they have a “negative impact on our attempt to not only recruit highly qualified teachers, but to seek a diverse professional staff.”

Continue to enhance teacher preparation and instructional practice

A superintendent advises PDE to concentrate its next level of work on continuing to enhance teacher preparation policy—“to make sure the best and brightest are in front of our students.” The principal interviewed urges the state to continue providing support on instructional practice.

Concluding Thoughts

Remarks from each of the three superintendents interviewed are offered in conclusion.

- ✦ “The state of Pennsylvania has provided us with a framework to work in and has provided us with the valuable resources to make it happen

and that has not always been the case, at least from my perspective as an urban district.” “The work isn’t done but there is a sense of success.”

- ✦ “We think the state is sending a similar message [to the district’s message], that real progress is student progress. We understand there are obstacles, but we also understand there are opportunities. We are adamant about not blaming the child. Every child has the possibility, given the support and instruction, to do well. We have to have the right emotional environment and instructional environment in a culture that has a vision for opportunity and success for every student.
- ✦ “I do want to conclude with emphasizing my high regard for the Secretary of Education and his staff. He is an exemplar in leadership and has given me great support. I am very assertive and not afraid to get in there and ask the questions and do the work. I also value the leadership of our Governor as he has put education first and foremost. It is a privilege to work in Pennsylvania. We educators are facing unbelievable hurdles nationally and our leadership must be resolute if we want to save our students and ensure their future success.”

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