

THE LEARNING System

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EVERY EDUCATOR ENGAGES IN EFFECTIVE PROFESSIONAL LEARNING EVERY DAY SO EVERY STUDENT ACHIEVES

WORLD-CLASS DISTRICT

Missouri district credits professional learning for international distinction

By Valerie von Frank

Search for information about the Clayton, Mo., public schools and you may find that the district's high school has a nationally top-rated speech and debate team, or that it won a state football championship in 2004, or even that its small, wealthy, suburban St. Louis community is the headquarters for Enterprise Rent-A-Car.

But a new accolade is making news for the district since results were announced in December

2010 from the 2009 Program for International Student Assessment (PISA).

Written across the top of a district web page: First in the world in science and reading; second in the world in math. Every sophomore in the district took the PISA exam as part of an

ACT study, benchmarking the district's achievement against the highest performing countries around the world, including Finland, Singapore, and Korea.

Separate myth from reality about international benchmarks with the tool on pp. 6-7.



The PISA, begun in 2000, is an international standardized assessment that evaluates student performance in approximately 70 countries, many of which are part of the Organization for Economic Co-Operation and Development. The standardized exam is administered every three years to the world's 15-year-olds. Several U.S. districts participate apart from the U.S. to see how they compare to other nations, as did Clayton in 2009.

How did Clayton get to the point that overall student achievement was among the highest in the world and second only to Shanghai (China) in math? Being great was never considered good enough, according to

Dottie Barbeau, the School District of Clayton's assistant superintendent of teaching and learning. She said for years, benchmarking has been a part of the district culture.

"That's what good schools do — they look around to see who is performing better at the things that we value and

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4 questions focus learning on expectations and accountability

Most educators struggle with how to focus their attention and effort. They are subject to so many demands that they frequently lose focus. When they attempt to respond to each expectation with equal time and effort, they dissipate their potential impact. Student achievement is usually the victim of this syndrome; it is so much easier to attend to the assigned tasks that are less difficult.

Doing everything correctly but nothing effectively can also compromise the results of professional learning. Organizing professional development that increases the learning of educators and their students is also difficult. At a minimum, it requires thoughtful data gathering and analysis, realistic planning, rigorous implementation, conscientious follow-up and serious evaluation. It is no wonder that expedient, event-centered professional development is such a temptation. Scheduling a session and securing a speaker, consultant, or video becomes the task, rather than organizing deep learning experiences that are appropriate and useful.

School system leaders should keep professional development focused on what matters most—authentic learning. They can do that if they create a climate of expectations and accountability by posing four basic questions to guide the organization of all professional learning:

What do the performance data of our students reveal about the learning needs of our teachers and principals? While professional development can serve many purposes in a school system, the most important is to increase the knowledge and skills educators need to help students learn what is necessary to meet academic standards. Understanding the gaps in students' learning should inform the content of educators' professional development. This works best, however, when educators use data from the students they teach rather than the school system prescribing one-size-fits-all professional development based on a study of systemwide data.


How are we organizing professional development so it causes our educators to take greater responsibility for their students' learning? When school system leaders identify a problem, and use professional development to address it, teachers and principals are usually passive participants. They don't own the problem and may not commit to solving it. It is important, therefore, to organize professional development in ways that engage educators in understanding more about their students' learning needs and how the educators' practices relate to those needs. If educators take responsibility for student performance and hold themselves accountable for it, they will more likely engage in and use professional development to increase student learning.

How are we organizing professional development so it causes our

educators to learn from each other's successes, and collaborate to learn from experts elsewhere? In all school systems, some teachers are much more effective than others. For their subject or grade, the achievement gap among their students may even be much less than in other classes. Professional development that draws on the expertise and experiences of these educators will in most cases be more relevant, credible, and cost-effective than contracting with an external consultant.

What is the evidence that our professional development is increasing educators' effectiveness in ways that also raise levels of student performance? Professional learning has limited value if educators don't develop new learning relevant to their students' needs, and if they don't apply that learning to benefit their students. Yet, few school systems systematically document whether and how professional development increases what both educators and students "know and can do." Collecting and publicizing evidence about the results of professional development is essential to improve and sustain it.

These four questions should not replace the use of Learning Forward's standards, but school system leaders can help focus professional development by asking the questions again and again—and demanding solid answers.

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School system leaders should keep professional development focused on what matters most—authentic learning.



Study puts science curriculum reform under the microscope

System-Wide Reform in Science: The Impact of District and School Context, Part I

Osthof, E.J., Shewakramani, V., & Kelly, K. (2010). WCER Working Paper No. 2010-4, University of Wisconsin-Madison, Wisconsin Center for Education Research.

OVERVIEW

Authors of this paper explore how districts and schools affect the implementation of curriculum reform, including related professional development, through the allocation of organizational resources. This study is one part of a research project undertaken in the Los Angeles Unified School District, titled System-Wide Change: An Experimental Study of Teacher Development and Student Achievement in Science. The district intended to foster teaching and learning for understanding through the implementation of hands-on, inquiry-based science curriculum units in grades 4 and 5.

STUDY APPROACH

This study uses data from interviews with educators from central office administrators to classroom teachers to explore the range of policies and organizational practices that influenced how the district allocated resources.

SELECTED FINDINGS

The size of the district contributed to fragmentation of this large-scale effort, as did constant change in the district. Teacher turnover contributed to the necessity to repeat basic

professional development, limiting the resources available for more advanced capacity building.

A districtwide effort to emphasize instructional guidance through the central office to improve standards-based teaching and learning brought some coherence to the vision for improving science instruction. However, differences between initiatives created competing change strategies.

District staff reported that state accountability policies related to NCLB shaped local instructional and professional learning priorities, creating a heavier emphasis on reading, English/language arts, and math achievement.

Local instructional priorities initially drove the system's commitment of resources for professional learning to implement inquiry-oriented science. However, when a shift of the science reform strategy introduced an alternative curriculum, fewer resources were allocated to support the professional development and the larger-scale change effort was constrained.

Finally, the administrative structure of the district often constrained efficient resource allocation because those involved in implementing the reform were often situated in different lines of authority.


IMPLICATIONS FOR SYSTEM LEADERS

Large-scale professional learning efforts require system leaders to consider a comprehensive view of a district's instructional priorities as well

as local, state, provincial, and national influences. Questions to consider:

- What factors beyond the district are influencing our instructional priorities?
- Do we have competing local initiatives related to our instructional priorities? How can we ensure alignment of these initiatives and our professional learning efforts to maximize resource use?
- Which staff members in the system will have the authority to allocate resources as needed? What structures and lines of authority are in place to facilitate communication, knowledge sharing, and informed decision making?
- How will we track and assess resources allocation to know if our investments are worthwhile?
- What is our long-term vision for improvement initiatives? What strategies are we employing to ensure full implementation and eventual sustainability of large-scale change efforts?
- What data will help us monitor and assess our efforts to maintain continuity over time as staff leave or move to other positions?



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what can we learn from those districts so we can bring those practices back to our teachers and our students,” Barbeau said. “Had we not scored as well, it still would have been important information for us because it would have given us a benchmark to work for so we would have a goal for achievement.”

BECOMING AN INTERNATIONAL PERFORMER

International benchmarking is the alignment of standards, instruction, professional development and assessment to those of the highest-performing countries, according to the Education Commission of the States (2008, p. 5).

Clayton began by benchmarking itself against a consortium dubbed Project Blueprint, comprising suburban districts with similar demographics in their respective states: Guilford, Conn.; Wayland, Mass.; Cape Elizabeth, Maine; Palisades, Penn.; Whitefish Bay, Wis.; Clayton, Mo., and Edina, Minn. Personnel, from the districts’ superin-

tendents to curriculum administrators and teachers, meet in a hosting district once or twice a year for opportunities to share best practices for professional learning. In addition, Clayton administrators researched schools with high ACT

scores and sought information from the high-performing districts about their practices. Leaders also searched out top-performing districts in the nation in an area of focus, such as math, visiting Massachusetts’ top 10 schools that performed well on the Trends in International Mathematics and Science Study (TIMSS) to learn more about those districts’ curricula and teaching, using the U.S. districts’ international standing as an indirect way to benchmark against international measures.

“We felt like we were cutting edge in terms of curriculum,” said Lee Ann Lyons, Clayton’s director of professional development and literacy, “but we must continually examine our teaching practices and curriculum, research what other people are doing, and use that information to inform us in our ongoing learning for professional development.”

In 2009-10, Lyons said, the district began a lab classroom approach that allows teachers to take part in intensive professional learning in a content area and then visit one another’s classrooms with a cohort team to collect data around individual teacher’s goals for improvement. An instructional coach receives a stipend to support teachers’ ongoing learning.

The district has 11 days each year when students come later to school so teachers can participate in professional learning teams. The teams meet additionally during their common planning times. Teachers are supported if they

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Learning Forward BELIEF

Student learning increases when educators reflect on professional practice and student progress.

ADDITIONAL RESOURCES

ARTICLES/REPORTS

21st century skills, education, & competitiveness: A resource and policy guide

Partnership for 21st Century Skills, 2008
http://ea.niusileadscape.org/lc/Record/277?search_query=

Benchmarking for success: Ensuring U.S. students receive a world-class education

National Governors Association, Council of Chief State School Officers, and Achieve, 2008
www.achieve.org/BenchmarkingforSuccess

From competing to leading: An international benchmarking blueprint

Education Commission of the States, 2008
www.ecs.org/IB/intro.html

How the world’s most improved school systems keep getting better

McKinsey & Co., November 2010
www.mckinsey.com/clientservice/social_sector/our_practices/education/knowledge_highlights/how%20school%20systems%20get%20better.aspx

Teacher professional learning in the United States: Case studies of state policies and strategies

Learning Forward, 2010
www.learningforward.org/stateproflearning.cfm

Darling-Hammond: U.S. vs. highest-achieving nations in education

The Washington Post, March 22, 2011
www.washingtonpost.com/blogs/answer-sheet/post/darling-hammond-us-vs-highest-achieving-nations-in-education/2011/03/22/ABkNeaCB_blog.html

WEB SITE

International benchmarking toolkit
Education Commission of the States, 2009
www.ecs.org/IB/intro.html

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want a day to leave the classroom for common meeting time or to observe peers. The district underwrites professional development grants that individual teachers apply for, from opportunities to learn about innovative practices to technology a teacher might want in order to integrate a new learning method into classroom instruction. Finally, Lyons said, the district routinely sends teachers to national conferences to learn from colleagues.

A CULTURE OF LEARNING

Lyons said the culture of professional learning begins with hiring self-motivated learners, “people (who are) always wanting to get better.” The pervasive sense of continuous improvement can be challenging, she noted.

“It creates a bit of chaos,” she said with a chuckle. “Everybody wants to try something all the time. We provide professional development in a way that gives teachers choice

and ownership over the process of learning. Teachers constantly reflect about their practice and ask what worked and how might it work better.”

Lyons and Barbeau pointed out that the district makes professional learning a high priority, even in tight budget times. Essential to the effort to continue board and community support is linking teacher learning directly to improved student performance, the leaders emphasized.

“We are continuously saying, ‘Look at

the results of what we’re able to do,’” Lyons said.

“We have to really attend to putting in place purposeful and meaningful structures that help professional development take place,” Barbeau said. “When you look at international benchmarking and international leadership, it doesn’t stop at the great level. We’re always looking at what’s out there and what should we be striving for. One thing we learn is (excellence) isn’t about individuals. It’s about shared practice, collaborative learning, and providing opportuni-

Countries taking the PISA include:

Albania, Austria, Brazil, Chile, Croatia, Dubai, France, Greece, Iceland, Ireland, Japan, Korea, Liechtenstein, Macao-China, Mauritius, Moldova, New Zealand, Peru, Poland, Qatar, Republic of Serbia, Romania, Shanghai-China, Slovak Republic, Sweden, Switzerland, Thailand, Trinidad and Tobago, Turkey, United Arab Emirates (except Dubai), United States, Uruguay.



ties for teachers to come together to work collaboratively on student work and achievement and talk about student needs and common assessments, how to differentiate for kids. That’s where the excellence comes from.


“It’s about keeping everybody educated about what’s most important for kids,” she continued. “We always have to bring it back to the student — if we do this professional development, how does it connect to the student? That is one of the things that sets Clayton apart. It takes what I call ‘a sense of strive’ so you can help the students learn more.”

National reports recommend that policymakers and education leaders evaluate professional learning and give teachers time to collaboratively assess how better to meet students needs in order to raise achievement (see box on p. 5 for further reading). To become internationally competitive, policies on professional learning must change, they say.

The National Center for Education Statistics recently announced an effort to link national and international student assessments so that states can measure their performance against international benchmarks. The NAEP-TIMSS Linking Study will use 8th-grade math and science data from the National Assessment of Educational Progress (NAEP) in 2011 to project state-level scores on the TIMSS.

Clayton Superintendent Mary Herrmann said in public statements about the PISA results that she believes other U.S. districts might perform equally well, but few measure themselves on a global level.

“Our district’s commitment to continual growth is exemplified by our courage to put ourselves out there to confront and to learn from our data,” she said. “As a learning community, we pride ourselves on setting high expectations, looking outside and benchmarking against the best in the world.”

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School District of Clayton

Clayton, Mo.

Number of schools: **One high school, one middle school, three elementary schools**

Enrollment: **2,487**

Racial/ethnic mix:

White: **65.9%**

Black: **22.4%**

Hispanic: **2.3%**

Asian/Pacific Islander: **9.4%**

Native American: **0%**

Other: **0%**

Limited English proficient: **4%**

Free/reduced lunch: **16.1%**

Special education: **10.7%**

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Myths and realities about international comparisons

Cultural and demographic differences between the U.S. and other countries are an important consideration when comparing educational practices. This list of myths and realities from the National Governors Association, Council of Chief State School Officers, and Achieve can help inform your understanding of, and subsequent conversations about, international benchmarks.



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Myth: Other countries test a more select, elite group of students.

Reality: That might have been true for early international assessments, but it is no longer true today. According to Jim Hull, who examined international assessments for the National School Boards Association, “Since the 1990s, due to better sampling techniques and a move by more countries to universal education, the results represent the performance of the whole student population, including students who attend public, private, and vocational schools, students with special needs, and students who are not native speakers of their nation’s language.”

While the U.S. still sets a relatively high age for

compulsory education among OECD nations, that does not automatically translate into higher rates of school enrollment. U.S. enrollment rates in primary and secondary education are the same as or below those in other industrialized nations. For example, among OECD member nations, the U.S. ranks only 22nd in school enrollment of 5- to 14-year-olds and 23rd in enrollment of 15- to 19-year-olds.

Moreover, on the most recent PISA assessment, OECD member nations on average tested a *higher* proportion of 15-year-olds than did the U.S. (97% versus 96% of those enrolled in schools, and 89% versus 86% of the entire 15-year-old population), which refutes the idea that the U.S. was disadvantaged by testing a broader population. While no assessment is perfect, PISA, TIMSS, and PIRLS all have tight quality-control mechanisms, including very strict and transparent guidelines for sampling students and administering assessments. All exclusions must be thoroughly documented and justified, and total exclusions must fall below established thresholds.

Myth: The U.S. performs poorly because of poverty and other family factors.

Reality: According to the U.S. Department of Education, the U.S. looks about average compared with other wealthy nations on most measures of family background. Among the OECD’s 30 member nations, U.S. 15-year-olds are slightly *above* the international average on a composite index of economic, social, and cultural status (ESCS); only 11% of U.S. students fall within the lowest 15% of the ESCS internationally. Moreover, America’s most affluent 15-year-olds ranked only 23rd in math and 17th in science on the 2006 PISA assessment when compared with affluent students in other industrialized nations. In fact, when the OECD uses statistical methods to estimate how PISA scores would look if the ESCS index were equalized across all countries — a leveling of the playing field — U.S. performance actually looks *worse* rather than better.

This is not to say that demographics are unimportant in American schools: The U.S. ranks high in the impact that family background has on student achievement (fourth out of 30 countries), in part because its education system does a particularly poor job supporting students and equalizing learning opportunities. For example, a 2006 study published in the *European Journal of Political Economy* found that out of 18 developed nations, the U.S. is the only country where weaker students are more likely to be enrolled in

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larger classes. Another study found that the U.S. has one of the largest gaps in access to qualified teachers between students of high and low socioeconomic status.

Myth: Cultural factors prevent U.S. students from performing as well as those in other nations, particularly Asian countries.

Reality: U.S. 15-year-olds reported spending *more* time on self study or homework in science, math, and reading than did students on average across the 30 OECD nations taking the 2006 PISA assessment, including those in Japan and, except for math, in Korea. Moreover, high-performing nations and states can be found all over the world, not just in Asia. For example, the five top-scoring nations in the 2006 PISA science assessment were located on four different continents, reflecting a range of cultures: Europe (Finland), North America (Canada), Asia (Japan), and Oceania (New Zealand and Australia).

Singapore is often singled out for its top performance on the TIMSS math assessment, which some say must be due to an unusually strong work ethic. But that belief was challenged in a 2005 study by the American Institutes for Research (AIR): “Singaporean students are hardworking, but if Singapore’s success is attributable only to work ethic, how can we account for the fact that its high achievement is a comparatively recent development? On the Second International Science Study in the mid-1980s, Singaporean fourth graders scored only 13th out of 15 participating nations, and Singaporean eighth graders did no better than their U.S. counterparts. ... In response to these poor scores, Singapore’s Ministry of Education re-engineered and strengthened the education system, reforming both the science and mathematics curriculum.”

Countries such as Finland, Korea, and Hong Kong have achieved major improvements in learning outcomes over time without changing their national cultures. In fact, as recently as the mid-1980s Finnish students performed only about average among OECD nations on tests used at the time. Hong Kong instituted numerous reading reforms that boosted its fourth-graders’ performance from significantly below the U.S. in 2001 to significantly above it in 2006.

Of course, cultural attitudes can play a role in achievement. Studies conducted in the 1980s found that mothers and students in some Asian countries were likely to attribute success in math more to effort than to innate ability, while the reverse was true for Americans. But experimental studies have shown that students’ beliefs can be changed in ways that positively impact learning; the National Mathematics Panel recommended that such strategies be used more widely in American classrooms.

Myth: Other countries are less diverse.

Reality: The U.S. is a diverse nation, but that diversity should not prevent states from improving student achievement. Among the 11 other OECD countries that like the U.S. had more than 10% immigrant students, all of them performed higher in math and nine performed higher in science. And Singapore, which scored at the top of the most recent TIMSS math assessment, is not as homogeneous as many assume. According to the 2005 AIR report, “Arguments about Singapore’s homogeneity are not persuasive. ... Singapore has three major ethnic groups. About three-fourths of Singapore’s population is Chinese, but almost a quarter is Malay or Indian. Like the United States, Singapore experienced serious ethnic strife in the 1960s.”

Cultural homogeneity has been cited as a factor in Finland’s high achievement in that it lends itself to a great deal of agreement about education and education reform. But Finland’s success also is attributable to very different educational policies and practices in areas like teacher recruitment and student support.

Myth: Wealthier countries spend more than the U.S. on education.

Reality: The U.S. is wealthier and spends more on education than most other countries. Among the OECD’s 30 member nations, the U.S. ranks highest in GDP per capita and second highest in educational expenditures. A report on the U.S. economy published by OECD last year observed, “On average, and relative to other OECD countries, U.S. students come from well-educated, wealthy families and ... go to schools that are unusually well-financed. Given any of these factors, U.S. students might be expected to be among the world leaders.” However, while the U.S. ranks high in education spending, it ranks only near the middle of OECD nations in its “effort” to fund education when expenditures are compared with wealth (gross national product).

Myth: U.S. attainment rates cannot be compared with other countries’ because the U.S. tries to educate many more students.

Reality: The U.S. does rank higher than average on access to higher education, but that does not explain its very low college-completion rates. While America’s entry rate for four-year and advanced postsecondary programs exceeds the OECD average by 10 percentage points (64% to 54%), its college “survival rate” trails the OECD average by 17 points (54% to 71%). According to OECD, “Comparatively high drop out rates in the United States are [negatively] contributing to the United States’ relative standing against other countries” in educational attainment.

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— Stephanie Hirsh
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