STRUCTURE AND GOVERNANCE
INNOVATION AND COLLABORATION WORK GROUP
JUNE 26, 2014
MEETING NOTES

Present: Dr. Cori Mantle-Bromley, Chair; Senator Roy Lacey, Don Soltman, Katie Graupman, Teacher, Lakeland School District; Superintendent Greg Bailey; Principal Becky Meyer

Not Present: Bill Brulotte

Others Present: Hannah Crumrine, Senior Analyst, Office of Performance Evaluations (OPE); Marilyn Whitney, State Board of Education

Dr. Cori Mantle-Bromley welcomed the committee. She noted that the larger Structure and Governance Committee seemed surprised to learn of the depth issues with the Idaho System for Educational Excellence (ISEE) and SchoolNet.

Senator Lacey remarked that he is a member of the Joint Finance-Appropriations Committee (JFAC) and had asked the OPE to conduct an unbiased and thorough investigation on ISEE and SchoolNet to determine why so much money has been spent on a system that is not working, and to determine why it is not working.

Hannah Crumrine, Senior Analysist, OPE said that Senator Lacey was one of three legislators who submitted requests. The others were Senator John Goedde and Representative Darrell Bolz. Ms. Crumrine said that the OPE is in the very beginning of the work. Their final report, with specific recommendations, will be released in early January 2015. Until then, their work is confidential. Stakeholders input will play an important role. Last week, the OPE released a pilot survey to superintendents to gain insight into what is not working, and will also solicit the best person to work with in each district. So far, the OPE has received 28 responses and anticipates more. Using the responses from the pilot survey, OOPE will release a second, more comprehensive survey. After the surveys, the OPE anticipates site visits with both success and challenge locations, and will directly observe how data is entered. Ms. Crumrine said that their investigation hopes to cover:

1. Data requirements, collection, management, accuracy, and reporting
2. Demands on district and charter school resources
3. Factors that affect successful implementation and use
4. Strategies to achieve long term goals.

Don Soltman noted that it would be valuable that this committee's recommendation support those of the OPE. Dr. Mantle-Bromley agreed and suggested that one

recommendation of this committee would be to wait for the OPE report before making final recommendations. Both Don Soltman and Senator Lacey agreed.

Marilyn Whitney noted that it will be important that the final report in September provide some background on what this committee talked about and learned about data and teachers' ability to use data for decision-making. Dr. Mantle-Bromley agreed, and suggested that the committee review some of that information for Ms. Crumrine.

Dr. Mantle-Bromley noted her concern for bandwidth and infrastructure in rural districts where downloads and uploads can be slow. She thought that SchoolNet could be helpful, but it takes time.

Superintendent Greg Bailey replied that SchoolNet had a negative reputation, so his district chose MilePosts. In Grangeville, the system has gotten better over the last five years.

Senator Lacey advised that districts had complained that data sent to ISEE in the fall was returned incorrectly in January; it was sent back for correction, but was not returned again until June, after school was out. ISEE was part of the problem. Superintendent Bailey agreed that ISEE is the problem.

Marilyn Whitney suggested that the OPE talk with Carson Howell of the Data Management Council which is the right group to be looking at the governance and structure. Don Soltman said that Carson Howell should run that group and will talk to Dr. Mike Rush about it.

Dr. Mantle-Bromley asked the superintendents and teacher what would happen if Idaho eliminated the State Department of Education (SDE) as the middleman so that the information goes to the provider and comes back directly to the district, and the provider would be responsible for relaying the information to the State.

Katie Graupman said that each district could then use their own provider and get help from that provider. Superintendent Bailey and Becky Meyer agreed, adding that the providers need to make a profit, and it is in their best interest to make the system work.

Superintendent Greg Bailey remarked that the funds allocated to the districts by the 2014 Legislature have allowed them the choice to select which provider each wanted. It was not enough money, but it did help. Even though SchoolNet was free, the Moscow School District chose Mileposts because it was user friendly and performed as they wanted it to. If a system is hard to use, then it will not be used which really wastes money. Superintendent Bailey said that every district is different; some like SchoolNet, but others did not and so have taken a different route. Mileposts is more willing to listen and try to meet the district's needs. Mileposts is working on an evaluation process now, and he is very hopeful. The district has high demands and needs someone who asks what the staff needs. All the teachers are using Mileposts now and are enjoying how useful it is. Moscow is a strongly data-drive school district.

Becky Meyer, Principal, Sandpoint High School, said that her school has been a SchoolNet Pilot, however less than 5 percent of teachers are using it. They have met with Mileposts, but Mileposts did not seem to have a system that fit them.

Superintendent Bailey said that he had wanted consistency in the data system with PowerSchool or Skyward throughout the state. Washington State uses Skyward who has set up a system to match the needs of the state. Data moves with the students.

Dr. Mantle-Bromley replied that the State will be looking for a recommendation to one system, or perhaps three approved providers which the districts can choose. Such a move would be very controversial because of how badly the SchoolNet rollout has gone. Don Soltman noted that Skyward is tested and has a proven track record.

Katie Graupman added that if the State were to go with one system, it would be very important to acknowledge all the hard work the districts have done so far. It would be very frustrating. Superintendent Bailey agreed, adding that the staff right now would be in an uproar if we ask them to change again. Any change needs to be piloted first.

Senator Lacey said he thought the committee is correct to wait for the OPE study before making final recommendations. Meanwhile, the committee can report in September on the context of what they have learned.

The committee discussed status concerning school board member training in strategic planning. Marilyn Whitney advised the group that the Board had discussed a temporary rule regarding qualifications for individuals or organizations that want to provide training. That discussion was informed by this group's thoughts, together with those of Accountability and Autonomy, and the Board approved the rule. Some of the concerns were that trainers have 2-3 years experience. The Board is taking applications and will post a list so that districts can choose. The mechanism for district reimbursement has not yet been determined. One stipulation is that districts hire experienced providers and not employees of the district; all of the groups had concerns that districts seek professional outside guidance rather than using their own personnel. Districts have expressed interest and are ready to begin the process.

Ms. Whitney also advised that the Accountability and Autonomy group is concerned that strategic planning focus on continuous improvement with real benchmarks that boards, superintendents and administrators use as a continuous process. That group is looking at legislation that might need to be revised to reflect the continuous improvement aspect.

Dr. Mantle-Bromley suggested that the administrator, superintendent and principal preparatory programs should have the same training, and the continuous improvement process should also be embedded in preservice training. Greg Bailey agreed and is

currently participating in a pilot program to move the continuous improvement process into the accreditation program for advanced education.

Reviewing concerns from the Tiered Licensure/Career Ladder group, Marilyn Whitney asked the superintendents how well they thought superintendents and principals had been training in the Danielson Framework.

Greg Bailey, Dr. Mantle-Bromley and Senator Lacey agreed that a critical piece in evaluations is communication skills at the face-to-face level – how to have difficult conversation and leave a teacher feeling that continuous growth is possible. These are hard conversations to hold. Training for administrators for the evaluation system, like Danielson or TeachScape, needs to include communication skills to make evaluations more of a learning tool than a consequence. Superintendent Bailey also felt that the State made a mistake in requiring that a teacher's entire file be forwarded to a hiring district. He felt just one document – on probation or formal reprimand – would be sufficient. Otherwise he sees that instructors would try to fight their evaluations. He would like to use evaluations as a tool to identify poor teachers and encourage them to find another career.

Superintendant Bailey also conveyed that due to reductions in administrative staff, principals are sometimes conducting 30 or more evaluations and do not feel they have proper time.

Don Soltman said that teachers complain that their principal observations are not good. Superintendant Bailey reiterated that, while he does not have a problem with more training, he believes communication skills are key. Becky Meyer said that her school uses TeachScape and all of her administrators have passed. However, what each district calibrates will vary among districts.

Superintendent Bailey and Becky Meyer also agreed that the best observations are frequent, short and documented throughout the year. Mileposts is working on an application to facilitate compilation of those short reports.

Dr. Mantle-Bromley directed the group to technology devices, and said that she is concluding that schools and districts need to make their own decisions based on their goals. Early keyboarding skills are essential. The group agreed that a review of the technology grants would be useful to determine to what degree the funding has led to ideas that are scaleable. The committee will invite Alex Macdonald and Royce Kimmons. They will also consider pursuing a consultant study. One concern is that districts who have capacity and a capable grant proposal author are receiving funding, while districts really need funding but who lack capacity are not receiving the opportunity.

Don Soltman has asked Mary Ann Rannels to provide him with her report about 21st Century classroom technology needs.

Dr. Mantle-Bromley shared a study, http://www.teachingquality.org/globalprofessionallearning; which addresses job-embedded professional development and teacher collaboration in various parts of the world, and suggested that this study might inform the group's recommendations. She said that collaboration cannot be one time or one day a semester if teachers are going to get better. Rural teachers need to connect around the state.

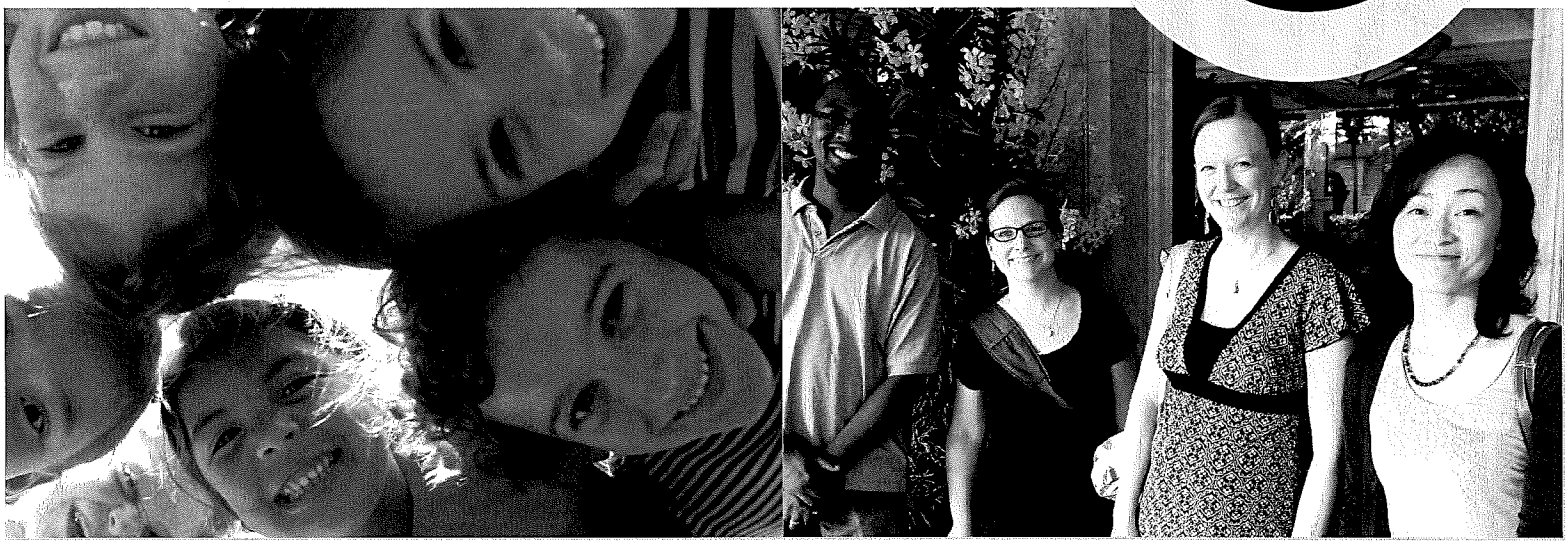
The group agreed that job-embedded professional development and site-based collaboration quickly becomes a discussion about funding and extending the number of days in the school year. They agreed they would need to build consensus before making a recommendation, and agreed to ask the Idaho Education Association how they might work together.

Dr. Mantle-Bromley suggested that the group consider regional training spaces, housed at universities, as is being done with math professional development. The OPE conducted a study about regional centers, and superintendents were fearful that they would be used for consolidation. Don Soltman said that he attended a Region 1 superintendent meeting and they did not like the concept at all. Dr. Mantle-Bromley acknowledged that without superintendent support, regional centers for professional development would not be a worthwhile recommendation.

Next meeting: July 15, 2014

Agenda items: Technology pilots programs: what has been learned—Alex Macdonald
Job-embedded professional development: teacher and the IEA
Presentation on July 28

A Global Network of Teachers and Their Professional Learning Systems



CTQ

The Center for Teaching Quality (CTQ) is a national nonprofit that seeks to create a high-quality public education system for all students—driven by the bold ideas and expert practices of teachers. We connect, ready, and mobilize teachers to transform their profession.

CTQ's work is centered in the Collaboratory—an open virtual community where teacher leaders connect, learn, and innovate. Since 2003, the Collaboratory has grown to **nearly 5,000 members.**

Within the Collaboratory are smaller groups, or "**labs**," for focused inquiry, analysis, and product development. In the Content Labs and Geo Labs, teachers learn about leading specific policies and practices, and in the Communications Lab, they support one another as writers, speakers, and thought leaders. CTQ has also partnered with the Asia Society's Global Cities Education Network (GCEN) to create a Global Lab in which teachers from nine GCEN cities collaborate to generate and share ideas.

Our vision for the future of teaching can be seen in our book, *TEACHING 2030* (Teachers College Press, 2011). For the past three years, CTQ has supported cohorts of teacherpreneurs from around the United States, partnering with school districts and local organizations to create "joint appointments" for classroom experts to continue teaching while also being afforded the time to incubate and execute their own ideas. Read more about our bold concept in *Teacherpreneurs: Innovative Teachers Who Lead but Don't Leave* (Jossey-Bass, 2013).

We gratefully acknowledge MetLife Foundation and its generous support of us in the launch CTQ-Global and this inaugural TeacherSolutions team. CTQ also appreciates the additional investment by Bill & Melinda Gates Foundation that allowed us to bring more of our CTQ-Global TeacherSolutions team together to work with their ministers and superintendents of education at the Asia Society's October 2013 convening of its Global Cities Education Network.

Teachers are leading. Join the movement.
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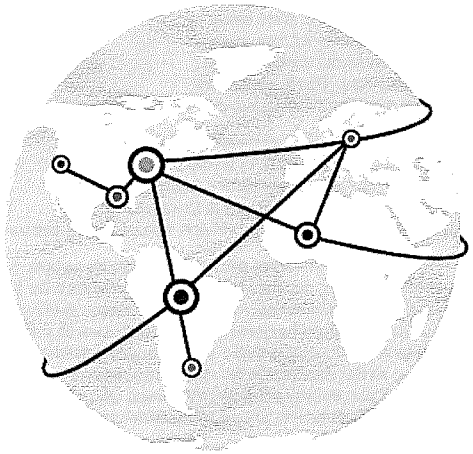
EXECUTIVE SUMMARY



Of all the lessons learned of late from top-performing nations, one stands out: effective education systems include structures and time for teachers to learn to teach effectively and collaboratively.

Policy researchers have underscored that in nations and provinces whose students perform well on international measures of student achievement, teachers teach fewer hours so they have time to improve their pedagogical practices. Singapore, for example, takes a highly engineered approach to educational management and improvement. And in Shanghai, teachers do not teach more than 15 hours of lessons a week, and they are specifically trained in their preservice programs for collaborative teaching and learning. Policymakers in these two jurisdictions invest deeply in teachers, placing a premium on time for them to optimize instruction and lead from the classroom. While provinces in Canada, e.g., Ontario and Alberta, have developed some of these features, such examples are rare in the United States.

We hope to dig beneath the surface of these general features to elevate the voices and perspectives of those who teach in a variety of contexts. In this TeacherSolutions report from the Center for Teaching Quality, seven teachers from Shanghai, Singapore, Toronto, and three U.S. cities offer their perspectives on the professional learning systems they experience.

By all accounts, Shanghai and Singapore have identified targeted ways to improve teaching quality, including well-designed structures for professional learning, time for teachers to learn from one another, and evaluation systems linked to instructional improvement. Education leaders in the United States and (to some degree) Canada, have yet to do so—or at least to do so at scale. This divide does not seem to be about differences in culture as much as it is about policy leaders' strategic work to create conditions necessary for effective teaching. In the United States, there are few concerted efforts to design school structures that allow teachers to learn in systematic ways.

Drawing on the rich descriptions of seven classroom experts, we offer the following recommendations:

- Rethink how teachers' time is allocated: We have learned that more time for teachers to learn ***is not enough***. As Noah Zeichner shared, even the limited time for collaboration and professional learning in Seattle is of limited value when it is sliced into small blocks of time, dispersed across several days of the week, and disconnected from the time colleagues have to work together and learn from one another.
- Connect teacher evaluations with professional learning systems: We have learned that ***tools and structures*** must be in place to align evaluation results and teacher learning. As Cynthia Seto and Irene Tan have indicated, Singapore has created specific learning communities so teams of teachers can focus on their goals, evidence, and action plans to improve instruction over their careers (beginning with their preservice preparation).
- Value opportunities for teachers to learn from one another: Xu Jianlan's experience in Shanghai taught us how trust in teachers translates into increased time for collaboration and mentoring—giving novices the necessary time to develop while valuing and positioning their most experienced teachers to share their expertise.
- Establish career pathways encouraging teachers to lead without leaving the classroom: Ali Wright's teacherpreneur schedule in Lexington (KY), much like what a university professor may have, has given her the ***unique*** time and space in the United States to incubate and execute her own ideas about professional learning communities, demonstrating how virtual learning networks can spread teacher expertise.
- Expand professional learning offerings and access points: Teachers in the 21st century expect to access professional development opportunities and experiences with the same ease they access their people, ideas, resources, and entertainment: on-demand, 24/7, and via mobile devices.

We are certain that many of the world's 55 million teachers are ready to work with their system leaders to pursue these recommendations in the best interest of their students.

INTRODUCTION

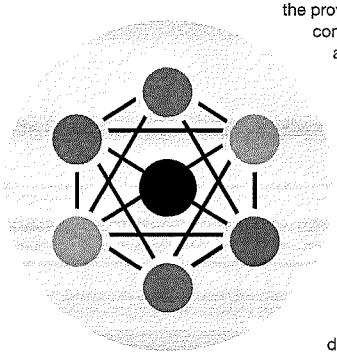
Over the last 20 years, researchers have reached near-consensus on the best ways for teacher learning to benefit student achievement. Simply put, teachers "need time to develop, absorb, discuss, and practice new knowledge,"[1] and the actual work of professional development must be "sustained and intensive rather than brief and sporadic."[2]

For some time now, it's been clear that teachers learn best when they focus on student work, and when their learning is integrated into their daily teaching.[3]

The world's top-performing education systems have learned how to put these propositions into action, as journalists and others have made clear in recent years. Marc Tucker assessed "The Meaning of PISA" and how top-performers invest in teaching in a recent (December 2013) *Education Week* essay:

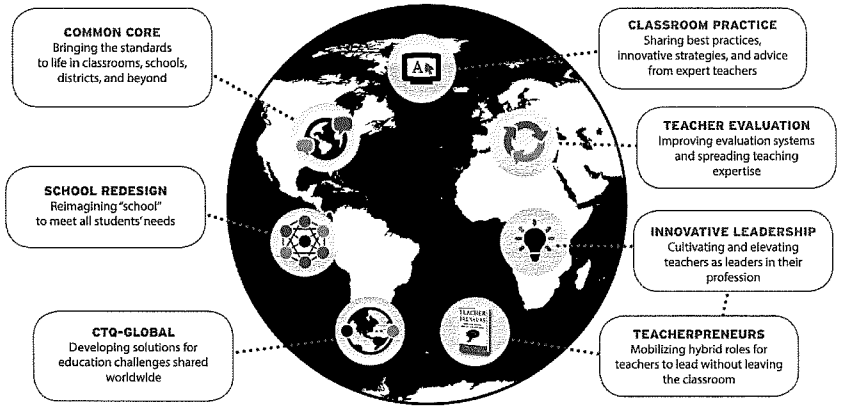
> High-performing education systems started recruiting their teachers from their most talented high school graduates rather than their least talented graduates. They insisted that all their teachers really master the subjects they would teach and spend at least a year mastering the craft of teaching. They provided an extended period of mentoring for new teachers under the supervision of master teachers. They provided strong support for the continuing development of their existing teaching force. They constructed real career ladders for teachers and paid them well.[4]

Well-known journalist Tom Friedman, author of *The World is Flat*, did not mince words after a recent visit to Shanghai, finding there was "no secret" to the province's rapid rise in PISA rankings—just "a deep commitment to teacher training, peer-to-peer learning and constant professional development."[5]



In top-performing provinces (like Shanghai) and nations (including Finland and Singapore), teachers teach students only 12 to 18 hours a week, with the remainder of their non-teaching hours used working with colleagues on lesson preparation, visiting one another's classrooms to study teaching, or engaging in professional discussions in their school or cluster.

Such practices are not readily found in other nations like the United States, where students do not fare nearly as well on PISA. This report, developed for the Asia Society's Global Cities



Education Network (GCEN), is the first by the Center for Teaching Quality (CTQ) and its growing virtual network of classroom experts to shed light on these different professional learning systems.

GCEN is a network of top-level leaders from ten urban school systems in North America and Asia: Denver, Hong Kong, Houston, Lexington (KY), Melbourne, Seattle, Seoul, Shanghai, Singapore, and Toronto. Over the last few years, GCEN has focused on common challenges and opportunities for improvement, particularly around three priorities:

(1) deepening preservice clinical training and induction for teachers;

(2) scaling quality instruction across systems; and

(3) teaching and assessment of 21st-century skills.

Along the way, many questions have surfaced as to how teachers really learn to teach in more powerful ways.

Granted, it seems like every week another think tank publishes a report on how teachers are developed in top-performing nations, much like the one published in 2011 for the recent International Summit on the Teaching Profession[6]. However, there is very little *first-hand evidence from teachers* themselves on how teaching and learning policies and practices work well, or don't.

CTQ, with support from MetLife Foundation, is supporting seven classroom experts from six of the ten GCEN cities to contribute to teacher-led deliberations on this topic. We have worked with teachers identified by the system leaders from GCEN locales: Paul Charles (Toronto), Xu Jianlan (Shanghai), Cynthia Seto and Irene Tan (Singapore), Karen Wagner (Denver), Alison Wright (Lexington), and Noah Zeichner (Seattle). This team of teacher leaders assessed the research on teacher development and critiqued the professional learning systems in which they teach. The team studied inside the CTQ Collaboratory (and its new CTQ-Global geo lab) and deliberated with GCEN system leaders on webinars and at a convening in Singapore.

This first-of-its-kind gathering of a global network of teacher leaders to advance policy reforms would not be possible without support from MetLife Foundation and the Bill & Melinda Gates Foundation, as well as a virtual community that allows teachers across twelve hours of time zones to connect with and learn from one another.

What follows are the insights of these teacher leaders into their own learning systems, with a focus on how their professional development is structured, the time they have for it, and how their teaching practices are evaluated (we have also included the perspectives of these teachers' colleagues who have recently joined the CTQ-Global community). Their words are not meant to be an exhaustive account. Not at all.

More research and study of these issues is certainly needed. Linda Darling-Hammond and Marc Tucker are currently leading a new comprehensive study, to be released later this year, that will highlight sound, well-grounded empirical evidence regarding the teaching policies and practices of top-performing nations. CTQ is working closely with this research team to capture global perspectives on teacher time and leadership for 21st-century teaching and learning.

That said, we can learn much from the seven highly accomplished teachers whose viewpoints are represented in this CTQ-Global TeacherSolutions report. Their system leaders made it clear that they were some of the most effective teacher leaders in their cities.

In taking account of the first-hand experiences of these teachers, the differences among the six locales are often stark. As expected, we find that teachers in Singapore and Shanghai encounter far more well-developed professional learning systems than the disjointed ones typically experienced by their U.S. counterparts. (Toronto seems to fall in the middle.) However, as each of the seven teachers' narratives unfolds, we begin to learn, with considerable nuance, how and why their professional learning systems differ as much as they do. We conclude with some recommendations on how to develop more insight into each of the GCEN priorities as well as the power and potential of an international network of teacher leaders who can share their policy and pedagogical expertise more widely.

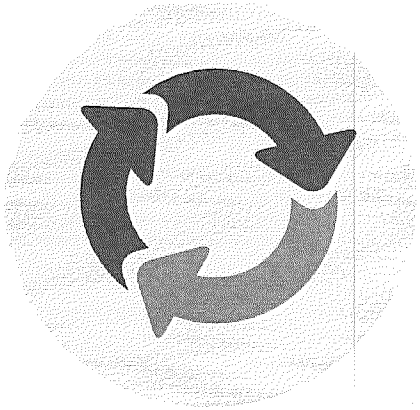
- Barnett Berry, Founder and Partner, CTQ
- Kris Kohl, Global Partnerships and Engagement, CTQ

STRUCTURE OF PROFESSIONAL DEVELOPMENT

In Singapore and Shanghai, professional development is deeper and more pervasive, and clearly viewed as coherent, helpful, and even essential to teachers' work. The systems found in Singapore and Shanghai rely primarily on practicing teachers as leaders of professional development, although the mentoring appears to be less reciprocal in Shanghai.

The seven teachers described the structured opportunities they currently have for continued professional development. For U.S. teachers, as has been reported elsewhere, professional development is episodic and often top-down as well as fragmented in its approach.

Toronto teachers appear to have lots of opportunities to learn new concepts and skills, and new teachers can experience a rather coherent system of training over the first four years of their teaching career in the district. But as we describe in the next section, veteran teachers in Toronto, much like their American counterparts, have far less time to learn than their teaching colleagues in Asia. They also have fewer opportunities for the self-directed, on-demand professional development that they have come to expect in an era when content, information, and social networks can be accessed for free at the click of a button.



Teacher Perspectives on Professional Development

ALISON WRIGHT

Math Teacher and CTQ Teacherpreneur

Lexington, Kentucky | Lafayette High School

In Kentucky, teachers are required to obtain four days (which most districts consider 24 hours) of professional development (PD) during the school year. I use the word "obtain" with good reason. Typically, a school will have a "PD Plan" set forth for every teacher by the beginning of the year. For example, last year, my "PD Plan" included six hours of school-designated PD, six hours of professional learning community time, and twelve hours to be decided upon by me. The school-offered PD occurs before the school year begins, during the mandatory staff development day, and usually entails what our school will be involved in during the coming year. This year, for example, it focused on the new teacher effectiveness system, the school writing plan, and state-mandated Program Reviews. In those six hours we cover a lot, but I am not sure I would call it professional learning.

Last year, we had less than $5,000 to spend for more than 150 teachers.

For the remaining twelve hours, teachers can choose what PD we want, but if it costs anything, it has to come out of our own personal pockets. Teachers are allowed to request to use money from school PD funds, although last school year, we had less than $5,000 to spend for more than 150 teachers. Granted, the district website lists all of the current district offerings available to teachers for free. But it is a hodge-podge of opportunities. Some of my colleagues use their remaining twelve hours for mandatory trainings such as the kind required for our site-based decision-making councils.

As a CTQ teacherpreneur, I have far more time to learn than the vast majority of my fellow teachers in Lexington. My schedule this year for the first time allows me an opportunity to invest significant time in both teaching AND leading.

NOAH ZEICHNER

Social Studies Teacher and CTQ Teacherpreneur

Seattle, Washington | Chief Sealth International High School

We seem to have two separate professional development systems for teachers in my district: one is for beginners, and the other is for everyone else. For example, I am proud to say that all first-year teachers in Seattle Public Schools are assigned a mentor teacher as part of the district's mentor program. Mentors are experienced teachers who are released full-time to support a group of about 20 new teachers. I have been teaching in the district for nine years, and my experience with my mentor almost a decade ago was a very positive one. My mentor visited my classroom every few weeks and provided helpful feedback, and more importantly, a set of ears. She did not report to my principal; her observations were not evaluative. She was truly there to help me get my systems in place and develop confidence as a beginning teacher.

Some schools have funds set aside in their budgets for teachers to use for self-directed professional development. Many do not. If I want to attend a conference or training that is not part of the district's offerings, I usually seek external funding. During my fourth year of teaching, I attended my first national conference. I applied for and received a grant from a local organization to pay for it. Since then, I have continually looked for funded opportunities to attend seminars and conferences that I think will help me grow professionally. Most require an extensive application, including letters of recommendation. Over the past few years, I have travelled to Washington D.C., New York City, and even Brazil to attend fully funded seminars and conferences.

In 2014-15, all teachers in my state will begin to transition to a new Professional Growth Plan system. Currently, for Washington teachers to renew their teaching licenses, they must complete a professional certification program (either National Board Certification or our state's ProTeach program). Some more experienced teachers are able to document 150 hours of coursework or professional development workshops every five years to keep their teaching certificates valid. Most school districts offer salary increases for accrued credits and clock hours through the 15th year of teaching. Soon our PD plans will be developed in the beginning of each school year and will be aligned with the teacher evaluation system.

Professional Development in Seattle Public Schools

In general, there are some opportunities for professional development in Seattle Public Schools after one's first year of teaching, but they are usually district-directed.

The district often offers subject-specific courses that are aligned with current initiatives. For example, all teachers will receive two days of Common Core State Standards training this year.

The district's current goal for professional development, as stated on the Department of Curriculum and Instruction's website, is to "guarantee all certified teachers receive effective training on the Common Core State Standards (CCSS) in English Language Arts, Mathematics, and 21st century skills." For these trainings, the district pays for substitute teachers and any other associated costs.

KAREN WAGNER

Third Grade Teacher

Denver, Colorado | Polaris Elementary School

In my district, teachers only have three official professional days annually, and what we experience is pretty much determined by the principal and/or district. Our School Leadership Team (a small group composed of the principal and a few teachers and parents) can provide input, and we seem to be fortunate to have a fair amount of say. For example, it was a teacher who convinced our principal that we need to switch to the Math in Focus (MIF) curriculum we currently use and the accompanying professional development that comes along with it. We can offer suggestions as long as the professional development is aligned with our district's Unified Improvement Plan (UIP), which is revised every year. Last year, our focus was on improving student achievement in math, as measured by the state accountability examination for Colorado.

Teachers may seek our own professional development opportunities outside the district, and many do, but we do not have a way to coordinate our learning.

Teacher leaders deliver some of the content on professional development days, using district-provided materials. But most of our extended professional development is dominated by outside trainers. For example, a MIF trainer came on one of our PD days in August to work with us to address any struggles we had with the curriculum. The trainer also helped us look at ways we could measure the curriculum's effectiveness by collecting whole school data on unit pre/post tests throughout the year. On another day (in October), the trainer taught demonstration lessons that we planned together and debriefed about afterwards. And the MIF trainer visited our school twice in December and in February to observe and critique two math lessons led by one of our third grade teachers.

There are some ways that I believe this PD could have been more effective. It would have been helpful if the PD had been more frequent (every two weeks at minimum) for a shorter period of time. We also had to spend a great deal of time determining how to change the sequence of the Math in Focus units so that students would be exposed to key concepts (fractions, angles, measurement) before taking the state accountability examination in March. It's unfortunate that even our professional development time wasn't immune from the influence of high-stakes testing.

We do have other opportunities. For example, I had the chance to hear some great speakers, like Lucy Calkins, as part of my district's speaker series. Teachers may seek our own professional development opportunities outside the district, and many do, but we do not have a way to coordinate our learning.

XU JIANLAN

Primary Science Master Teacher

Shanghai, China | Han Wen Primary School, Qin Pu District

I am very much involved with our system of lesson study, which is central to how Shanghai approaches professional development. Lesson study, when we observe one another teaching the same lesson, has allowed teachers to transform their focus from their own teaching to students' learning. We used to sit at the front of the classroom lecturing. Now we are sitting beside students, observing their emotions and dispositions when encountering challenges. And with our observations and reviews of lesson videos, we are able to coach teachers to transform their instructional plans.

I have been teaching for fifteen years, and much has changed in how teachers are prepared. Teachers are now taught research methods during their professional preparation and expected to use them as they work with colleagues in lesson study to improve their teaching practices. We often spend hours assessing one 45-minute lesson, and often record detailed case studies of student learning.

We have many master teachers. They are called Jiao yan yuan *which means "teaching researcher." Every subject has its own teacher researcher.*

We have many master teachers. They are called *Jiao yan yuan*, which means "teaching researcher." They are promoted from the best teachers from all kinds of schools, and every subject has its own teaching researcher. More than 1,000 work in this role full-time. Many more, like me, teach students while also working as a teaching researcher. It varies in different districts, schools, and subjects.

Each month, for each subject, a school in our district hosts a public class for other teachers in the district to visit. Likewise, within each school, a public class is offered weekly for teachers in the school to visit.

Most teachers spend many hours each year on their professional development. We are required to have 360 hours of professional development every five years, but many teachers spend much more time on their learning. As we learn, we get to develop and apply our research skills and investigate teaching and learning in order to solve instructional problems as well as develop our own inquiry abilities. Also, teachers with less than five years of experience often have two mentors and are expected to offer demonstration lessons.

CYNTHIA SETO AND IRENE TAN

Master Teachers

Singapore | Academy of Singapore Teachers

We are proud of the Singapore system of professional learning that seamlessly connects the preservice training experienced at the National Institute of Education (NIE) and ongoing professional development. The system pays just as much attention to how teachers develop their identity as professionals as to their content-pedagogical knowledge. All teachers are trained at the NIE, and during their training they receive a monthly salary. They do not have to pay tuition; it is covered by a tution grant from the Ministry of Education.

Professional Development in Singapore

All new teachers have access to a special induction program during their first two years of service in which they can learn more about classroom management, basic counseling of students, working with parents, and how to reflect on and analyze their practice. Each new teacher is assigned a mentor who teaches the same subject.

Each year, all teachers are entitled to 100 hours of professional development paid for by the Ministry. Much of this training goes on within schools, in clusters of schools, and as well as those organized by the Academy of Singapore Teachers. The Academy has subject chapters, focus groups, and professional networks. This is important as it allows teachers to spend time with colleagues in other teaching contexts. These 100 hours can be part of or in addition to the one hour a week (and often more) set aside for teachers to learn with colleagues who teach the same subject or grade.

Besides these opportunities, a school may arrange for in-house workshops, led by an experienced teacher in the building or engage trainers from NIE or other service providers if outside help is desired. The teachers do not ever pay for these workshops or courses—either the school or the Ministry does. Each year a number of Singapore teachers are offered professional development leave or scholarship to study locally and abroad. The Ministry also creates opportunities for some to be appointed as teaching fellows to teach in NIE for up to three years.

PAUL CHARLES

Fifth and Sixth Grade Teacher

Toronto, Canada | Willow Park Junior Public School,

Toronto District School Board

Like Seattle, the Toronto District School Board offers new teachers a special training program, funded centrally by the province. All novices participate in the New Teacher Induction Program (NTIP), which provides a range of supports, including orientation, mentoring, and professional development. NTIP supports are focused on key areas of need identified by new teachers, including classroom management, communication with parents, assessment and evaluation, and work with special-needs students. We have related beginning teacher programs for first- and second-year as well as third- and fourth-year novices. This means we don't have a one-size-fits-all program for new teachers. We also have a training program for mentors who provide support. First- and second-year teachers receive up to three days of release time per year, and third- and fourth-year teachers have up to one day of release time. This is helpful, but not enough.

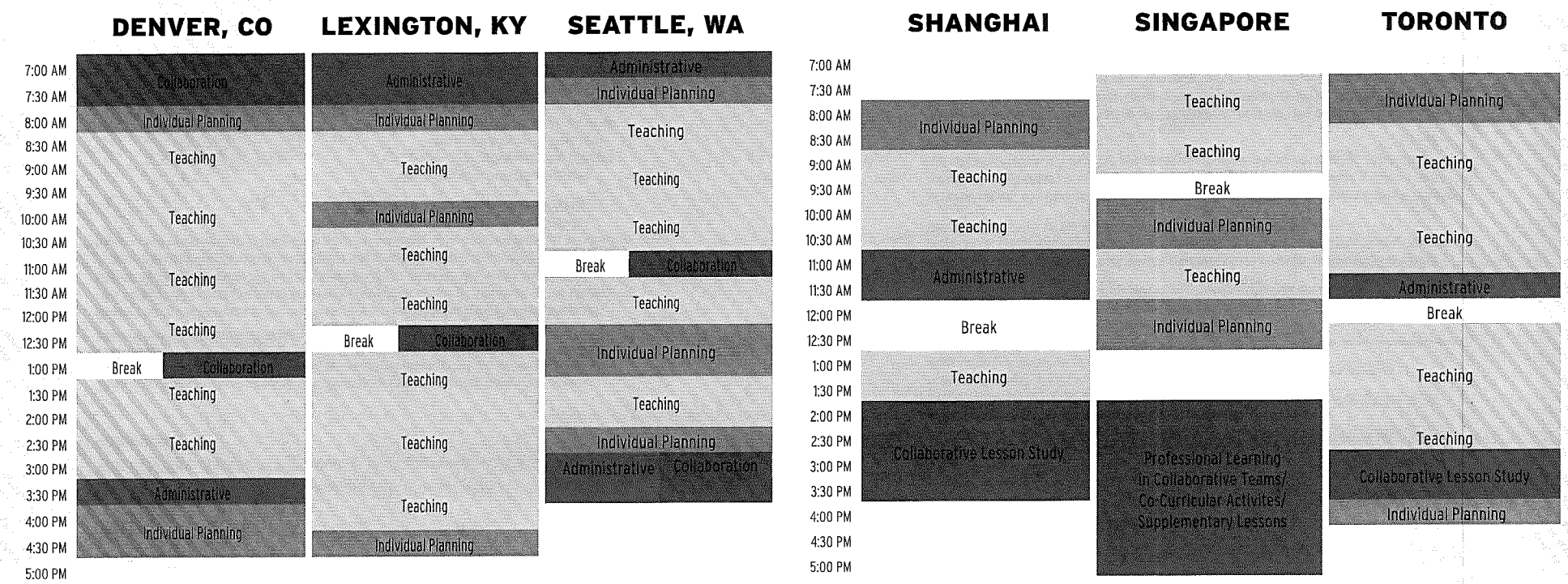
The district offers a wide variety of learning modules at no cost to teachers. These include "Small Group Learning," "Student Work Is the Work," "Aboriginal Voices," "Culturally Responsive and Relevant Pedagogy," "Culturally Responsive and Relevant Pedagogy in Kindergarten," and "Community Voice and Space." Teachers are offered this kind of professional development through teleconference, podcasts and face-to-face training. The modules take anywhere from a half day to five full days to complete. The district pays attention to teachers' professional development needs by surveying us routinely, and as a result, new learning modules are added regularly.

> *"Distributive leadership that allows for new collaboration will be necessary in order to ensure multiple voices are part of [professional learning systems]."*
>
> *Karen Murray, Toronto District School Board, Coordinator of Teachers Learning and Leading Department*

Teachers also have the opportunity to pursue Additional Qualifications (AQ) on an ongoing basis to expand their knowledge and skills in subjects they are already qualified to teach, as well as to acquire knowledge in new subject areas. Unlike system-provided professional learning opportunities, AQ courses are offered by teacher education institutions at a cost to teachers ($650-$800 per course, depending on the course type and the institution offering the course). Institutions offer various means by which teachers are able to engage in learning (e.g. in-person, blended learning, and online). However, I am not sure our system is as responsive as it needs to be. As I will speak to later, we have far too little time to lead the kind of professional development we need.

TIME FOR PROFESSIONAL LEARNING IN SIX GLOBAL CITIES

Typical Teacher Schedules



NOTE

Teaching schedules represent the typical experiences of the CTQ-Global TeacherSolutions team and their colleagues. These are estimates and are not intended to represent all teachers in their respective school systems.

- Most teachers work at least 50 hours a week, well beyond their contract days.
- In Shanghai and Singapore, teachers teach students 10 to 18 hours a week.
- In the U.S and Canada, teachers teach students 25 to 32 hours a week.
- Singapore and Shanghai schedule additional time for teachers to engage in collaborative learning.

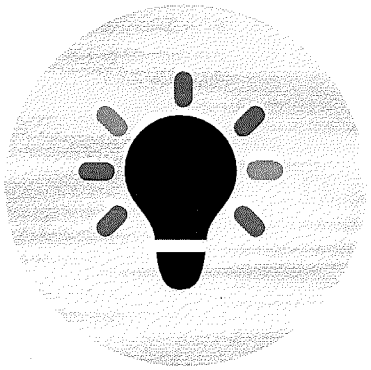
- Classroom Teaching
- Administrative Tasks
- Individual Planning
- Collaborative Lesson Study

TIME FOR PROFESSIONAL LEARNING

In top-performing systems, teachers teach fewer lessons to students so that they can engage in high-quality professional development with their colleagues.

The stark reality is that Shanghai and Singapore system leaders have no problem structuring time for teachers to learn. In these two top-performing systems, teachers teach fewer lessons to students so that they can engage in high-quality professional development with their colleagues.

Examining the schedules of the teachers, we were struck by another palpable point of difference between the Asian and North American systems. Teachers in the United States and Canada have the same schedule day in and day out, while their counterparts in Shanghai and Singapore have different responsibilities and assignments, offering them much more variety in their daily work. In addition, U.S. teachers tend to experience fragmented professional learning, especially compared to their Asian counterparts.



When opportunities to plan and work with colleagues are divided into small blocks of time and dispersed over the course of several weeks, maintaining focus and momentum on a set of professional learning goals proves challenging. And when teachers are limited to in-person training or a predetermined set of web-based options, their ability to engage with content available through virtual learning networks, open source materials, and popular online media (e.g. TED-Ed Talks) is stifled.

Teacher Perspectives on Professional Learning

ALISON WRIGHT

Lexington, Kentucky

Before I began serving as a CTQ teacherpreneur (teaching high school math classes three days a week and leading Common Core reforms the rest of the week), I would typically work at least 50 hours each week. In a typical week, I would spend about 28 hours teaching, supervising, or tutoring students, and another 20 or more hours planning and grading. Over the last several years, I have been able to spend about four hours on professional learning and collaboration each week. However, I typically do not see another teacher teach at all unless I am involved in our state's mentoring program (which I am this year). I have not had another teacher observe me teaching at all during this school year, except for a 20-minute peer observation that was conducted last semester as a part of our new teacher evaluation pilot.

Most often, teachers meet voluntarily after hours on their own time.

Most teachers in my school collaborate predominantly through professional learning community (PLC) meetings, which are mandatory and occur every other week. Teachers can receive PD hours for the first six PLC hours, but not for any more.

In some cases, the district provides support for teachers from the same content area to meet and collaborate. This is the case for math teachers, since there is a district math coordinator. (There is a content specialist at the district level for English, math, science, and social studies.)

These convenings are designed to share resources and discuss best classroom practices, but they are episodic. Usually, the district has a grant to support meetings that happen during the school day. This year, we are working together, with some release time, as a part of a foundation-funded Common Core grant. But most often, teachers meet voluntarily after hours on their own time.

NOAH ZEICHNER

Seattle, Washington

A typical secondary teacher in Seattle Public Schools works 7.5 contractual hours a day, but most work far more than 37.5 hours a week. Our 7.5 hour contract day includes half an hour before school, half an hour after school, a 30-minute duty-free lunch, and a 50-minute planning period. A full course load includes five classes for secondary teachers. Elementary school teachers' schedules are similar. Per union contract, teachers are required to participate in up to one after-school meeting per week that extends one hour

beyond the workday. When all instructional and non-instructional hours are added up, secondary teachers are formally in front of students for a little more than 26 hours a week. This accounts for approximately 70% of the total contractual workweek.

The ten to eleven contractual hours per week that teachers have for non-instructional activities (planning, grading, professional collaboration, meeting with students, contacting parents, etc.) is highly fragmented. The time is broken into 30-minute segments before and after school and a daily 50-minute planning period. This does not create extended periods of time for teachers to engage in professional learning or other activities that are necessary for being effective teachers.

In actuality, the vast majority of teachers work well beyond their contractual hours.

My personal work schedule is unique. Through a partnership between Seattle Public Schools and the Center for Teaching Quality, I serve as a teacherpreneur in a hybrid role. I teach two classes a day, and I am released the rest of the time to work on a variety of projects that support my district, my school, and CTQ (including work on this report). Typically, I teach in the mornings and engage in leadership work in the afternoons—and well into the evening.

In our high school, the monthly PLC meetings are organized by academic department. Within the social studies department, we have subdivided into smaller groups. I participate with three other teachers in a PLC dedicated to improving our teaching and assessment of collaborative group skills. We design common instructional strategies and assessment tools, test them out, analyze the results, and then improve them. My PLC work is integrated into my individualized goals for the year and my evaluation. Specifically, I am measuring student growth according to speaking and listening standards when using the tools that we develop in our PLC. But we have too little time for this important work.

XU JIANLAN

Shanghai, China

I only teach about nine hours of lessons a week, and this gives me time to help other teachers in my school and district. The most that teachers teach is about twelve hours of lessons. We meet in research groups three hours a week, and all teachers are assigned to at least one group. We are expected to give public lessons (*gongkaike)* to have our teaching reviewed, and then revise our lessons.

We are expected to give public lessons, have our teaching reviewed, and then revise our lessons.

I am a science subject leader, and I am expected to give demonstration lessons. We are supposed to share our lessons and help underachieving schools. This is the job of the teacher. We also make sure teachers teaching the same subject in the same school have the same schedules. But a teaching researcher (*Jiao yan yuan*) supports many teachers.

KAREN WAGNER

Denver, Colorado

On average, I work about 50 hours a week. About 30 of those hours are devoted to teaching or supervising students. We do not have an official amount of time each week that is allocated for professional learning with colleagues. Most schools in my district have 90 minutes devoted weekly to professional learning, but my school does not. Some teachers have resisted more professional learning time because they do not feel like they have enough time to plan for the individual lessons that they teach, and many are skeptical as to whether any "mandated" professional learning time will actually be worthwhile. Our professional learning is fragmented throughout the year—perhaps two hours a month on average.

Another teacher (peer observer) will observe my teaching twice each school year through a new evaluation system we have called Leading Effective Academic Practice (LEAP). My principal, who was formerly a teacher, also observes me twice a year. But it's extremely rare for another teacher in my building to see me teach. It only happened once last year when another colleague observed one of my math lessons—and the feedback was very informal.

One structured way that teachers improve their teaching practices is through Professional Development Units (PDUs). When we complete a PDU, we receive a financial incentive of $762.36 that is base-building to our salaries. But while some of the PDUs have been helpful, they often feel fragmented and not clearly connected to the work I am doing in the classroom. And an enormous amount of time is spent documenting the work in a specific format.

PAUL CHARLES

Toronto, Canada

My work week is officially about 35 hours long, 25 of which I spend in front of students delivering direct instruction. Each week, I formally collaborate with my colleagues for about an hour and engage in about three hours of professional learning that is not tied explicitly to my Annual Learning Plan.

Opportunities do exist for teachers to observe one another in the classroom, but the current structure and/or environment does not necessarily support this practice. For example, in order for me to observe another teacher, I would have to plan for a "supply" teacher (we call them Occasional Teachers) to cover my class. Also, I have noticed that there are a significant number of teachers in my system who are not comfortable being observed by their colleagues, which is possibly due to teachers feeling that they are being evaluated rather than engaging in a mutually beneficial practice. I have approximately four hours each week to devote to preparation, but that is not nearly enough time to prepare for what students need, so I spend an additional five to ten hours planning each week.

To avoid bringing too much of a workload home each day, which was customary for me

during my first few years in the classroom, I arrive an hour early, work through lunch by choice (another hour) and during recess periods (30 minutes). This is a consistent daily schedule that I stick to in order to preserve my time at home for family. On weekends I spend two to three hours preparing for the week ahead, reviewing assessment results from the previous week and modifying my instructional plans accordingly. This is the habit of most teachers.

Ideally, I would like to have time to collaborate and co-plan with my colleagues during the instructional day as often as possible—preferably on a daily basis. I would teach for a couple hours before a block to observe the instruction of colleagues, reflect on lessons learned, and co-develop plans for improvement based on our conversations. Following afternoon instruction, there would be another block of reflection and collaboration, leaving time to independently process my learning and modify strategies for the following day's instruction.

I arrive an hour early, work through lunch by choice (another hour) and during recess periods (30 minutes). This is a consistent daily schedule that I stick to in order to preserve my time at home for family.

CYNTHIA SETO and IRENE TAN

Singapore

Teachers in Singapore teach students for 10-18 hours a week, depending on our job designations and schools' deployment. The typical instructional timetable is from 7:30 a.m. to about 1:30 p.m. Teachers may also have co-curricular activities and supplementary or remedial lessons with students on one or two afternoons.

All teachers are entitled to 100 hours of Professional Development (PD) provided by the Ministry, including extended workshops (up to four days) or mini-courses that last ten weeks (up to four months in some cases). The 100 hours of PD include at least one hour a week to meet with subject- and grade-level peers in professional learning teams. The Ministry also sponsors teachers to attend local and overseas conferences.

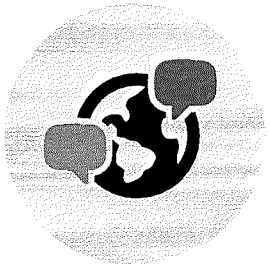
Teachers have three career tracks (Teaching, Leadership, and Specialist) to choose from. Depending on performance and potential, a teacher who opts to be in the Teaching Track will move from being a Senior Teacher to becoming a Principal Master Teacher whose responsibilities include mentoring and pedagogical leadership. For the Leadership Track, the teacher moves from Subject Head or Head of Department to Principalship or other leadership roles in the Ministry. Teachers on the Specialist Track move from Senior Specialist to becoming Principal Specialist.

CONTOURS OF TEACHER EVALUATION

In Denver, Lexington, and Seattle, teachers are just beginning to experience new teaching evaluation systems that are built on formulas derived from highly structured classroom observations and scoring rubrics as well as value-added statistical gains calculated from year-to-year student test scores. The systems in Toronto as well as Singapore and Shanghai are quite different, with a greater focus on holistic assessments co-constructed by administrators and teachers. The Singapore and Shanghai systems do not use student test scores in calculating teaching effectiveness, instead incorporating a much wider range of measures.

Over the last several years in the United States, there has been much debate over teacher evaluation, rightfully long derided for its lack of both rigor and helpfulness. School reformers in America lament that too many ineffective teachers do not receive poor ratings, and those who teach lament the lack of high-quality feedback on their teaching. In Denver, Lexington, and Seattle, teachers are just beginning to experience new teaching evaluation systems that are built on formulas derived from highly structured classroom observations and scoring rubrics as well as value-added statistical gains calculated from year-to-year student test scores.

The systems in Toronto as well as Singapore and Shanghai are quite different, with a greater focus on holistic assessments co-constructed by administrators and teachers. The Singapore and Shanghai systems do not use student test scores in calculating teaching effectiveness, instead incorporating a much wider range of measures. In these two locales, classroom observations do not involve checklists. Most observations are conducted by master teachers who use their professional judgment in assessing teaching effectiveness. Singapore's system focuses on how well teachers win the hearts and minds of students and spread their expertise to colleagues.



Teacher Perspectives on Teacher Evaluation

KAREN WAGNER

Denver, CO

Denver launched a new teacher evaluation system called Leading Effective Academic Practice (LEAP) a few years ago. Teachers are observed twice a year by their principal. In addition, newer teachers and teachers who do not receive high enough scores on their evaluations are assigned a peer observer. Both principals and peer observers use Denver's Framework for Effective Teaching as a way to score these evaluations. The framework includes both the Learning Environment (Positive Classroom Culture and Climate, Classroom Management) and Instruction (Masterful Content Delivery and High-Impact Instructional Moves).

Beyond formal observation, teachers are also evaluated based on student growth, student perception surveys, and professionalism.

My evaluation is not strongly connected to professional learning. I can receive a bonus through completing a PDU, but the work is not connected to my evaluation. I'm assessed as a teacher based on observations (either from my principal or peer-observer), professionalism (teacher provides evidence for this), student perception surveys, and student test scores. Our evaluation system has been piloted by our school for the past three years, and this is the first year that student growth will be incorporated into how we will be judged. We are going to receive a score for student growth this year, but it is unclear as to exactly how that will be calculated.

I will also be judged on how I collaborate with other teachers in ways that positively impact student outcomes as well as advocate for and engage students, families and the community to support academic achievement. It is unclear as to how I will be judged, but I know I will have to provide documentation.

ALISON WRIGHT

Lexington, Kentucky

In our state's new evaluation system, I will be assessed on my performance in the five domains of Charlotte Danielson's Framework for Effective Teaching: Planning and Preparation, Classroom Environment, Instruction, Professional Responsibilities, and Student Growth. Each domain has several components, and each of those has its own set of elements. There are a lot of elements—eighty in all.

For the student growth domain, four elements are used to determine overall evaluation. Teachers are responsible for writing their own student growth goals, and then one-fourth of the components are determined by student growth percentiles.

For each component, teachers are given a holistic score (ineffective, developing, accomplished, or exemplary) after peer and administrator observations, as well as ongoing evidence collection. Since this is the pilot year, I am not sure exactly how a "final score" will be calculated or what impact this score will have on professional development. In the past, professional development was not a part of the teacher evaluation process.

I am not sure how the results will be used. It would make sense that, if a teacher scored "ineffective" in the component "communicating with families," then the administrator would help that teacher find professional development activities to improve his or her effectiveness in that area. But there is no formal process for doing so at this current time.

We are supposed to participate in a professional community, which is what I help lead for CTQ as a teacherpreneur. I wonder how the system will evaluate my efforts for this work.

XU JIANLAN

Shanghai, China

Our evaluation system is based on how we develop students' learning habits, not their test scores. (Test scores are important in Shanghai, but we are not evaluated on them).

Our evaluation system is based on how we develop students' learning habits, not their test scores. (Test scores are important in Shanghai, but we are not evaluated on them). We are also evaluated holistically on our participation in collaborative professional development and lesson study. The teaching researchers make decisions about teachers' promotion. I believe the system works well because we get to see one another teach a great deal. Teaching is very public in Shanghai. We get training in how to observe one another's classrooms. We are also expected to diagnose student learning, develop effective lesson plans, reflect critically on our practice, and conduct research-oriented teaching.

CYNTHIA SETO and IRENE TAN

Singapore

As teachers in Singapore, we are assessed holistically on how well we develop the children we teach. The Ministry recently established the Teacher Growth Model (TGM), which includes expectations that we will develop as ethical educators, competent professionals, collaborative learners, community builders, and transformational leaders.

Our system includes a focus on teachers' contributions to pastoral care and wellbeing

"Teachers are assessed by administrators and peers on how well they teach, the personal care they offer their students, their relationships with parents, and their contributions to the school and beyond. I cannot decide who is an effective teacher and who is not by myself."

Frederick Yeo, Principal, CREST Secondary School, Singapore

of our students and to co-curricular activities. Teachers are assessed based on three main areas, namely students' outcomes, professional outcomes, and organizational outcomes. Our teacher evaluations focus on outcomes, but not on test scores like in the United States.

Teachers are assessed and ranked by a panel of key personnel in their schools. The panel includes Principals, Vice Principals, Heads of Departments and Subject Heads. This ranking exercise is moderated by Cluster Superintendents each year. Teachers' performance bonuses range from zero to three months of their salaries. For teachers to progress up the career ladder, they have to demonstrate their skills and knowledge, as well as their leadership competencies which are underpinned by the ethos of the teaching profession.

NOAH ZEICHNER

Seattle, Washington

Similar to Lexington Public Schools, Seattle Public Schools use Charlotte Danielson's Framework for Effective Teaching for evaluation. Furthermore, Washington is in the first year of implementing a new statewide teacher evaluation system. The new system moves all teachers from a two-tier system (satisfactory/unsatisfactory) to a four-tier system (distinguished/proficient/basic/unsatisfactory). Washington's state legislature is still determining to what extent student growth data (based on standardized tests) will be used to calculate summative evaluation scores for teachers. The issue of what role assessment scores play in teacher evaluations has been politically divisive, particularly due to new standardized tests coming out next year that most teachers have not yet examined.

As the primary evaluators, school administrators have had to change their evaluation practices. With increased paperwork and rigor in the evaluation process, it is critical to have conversations that provide helpful feedback to both administrators and teachers being observed.

In 2012, I asked several colleagues what advice they have for administrators who are implementing our state's new evaluation system. Responses included those below:

- Principals need a better understanding of content- and subject-specific teaching techniques.
- After providing feedback, administrators should follow up to see that teachers are making needed changes for improvement and growth.
- Post-observation conferences are helpful, but evaluators need to support teachers on an ongoing basis.
- Evaluation results should be connected to professional development opportunities.

This year, for the first time in my career, I have been able to align my goals for the evaluation process with professional development experiences. One of my primary goals this year is to teach and assess collaborative group-work skills more effectively. Using baseline data and formative assessment tools, I hope to see growth in this area for all of my students. Once a month, I meet with a Professional Learning Community (PLC) that includes three other teachers who are also trying to improve their teaching and assessment. We are designing common assessment tools and analyzing student work as a team. With the support I receive and the resources we develop collaboratively in my PLC, I hope to have a meaningful and constructive evaluation experience this year.

PAUL CHARLES

Toronto, Canada

Our evaluation system is intended to provide teachers with meaningful appraisals that encourage professional learning and growth. New teachers are appraised twice within their first twelve months of employment and must achieve two "satisfactory" ratings in order to receive their certification of qualification record from the Ontario College of Teachers. Experienced teachers are normally appraised once every five years, although a teacher can be evaluated at any time if there is a performance concern.

In collaboration with their principals, teachers set growth goals, along with a rationale, a set of strategies, and an action plan for achieving them.

The key components of the Teacher Performance Appraisal (TPA), which is conducted by the principal, includes a pre-observation meeting, classroom observation, a post-observation meeting, and a summative report. Novice teachers are evaluated on eight of sixteen competency statements based in three domains (Commitment to Pupils and Pupil Learning, Professional Knowledge, and Teaching Practice), whereas experienced teachers are appraised on all sixteen competencies.

Experienced teachers must also complete an Annual Learning Plan (ALP), which outlines their plan for professional growth. In collaboration with their principals, teachers set growth goals, along with a rationale, a set of strategies, and an action plan for achieving them. The ALP is teacher-directed and teacher-authored. Teachers engage in ongoing professional development on a voluntary basis related to their own professional learning needs.

Conclusions

In a compelling 2011 report from the National Center for Education and the Economy, Marc Tucker makes the case that, in top-performing nations, teachers are prepared with research skills in their preservice training so that they can lead the alignment of professional development with instructional improvement processes (including evaluation). The narratives penned by our teacher colleagues from Shanghai and Singapore inform us as to how they experience the nexus of professional learning and teaching effectiveness. On the other hand, Tucker pointed out:

> In the United States, teachers are generally the objects of research rather than participants in the research process itself. The topics for professional development are often chosen by administrators in the central office rather than by teachers seeking to improve their own practice on terms of their choosing. Because the topics chosen for professional development are typically not the topics the teachers would have chosen, they often perceive the professional development they get as not particularly helpful.[7]

In a March 2014 report from Grattan Institute, Ben Jensen offered cutting-edge information and practical advice on how to find more time for teachers to learn and lead. He also points out clearly the characteristics of intensive professional learning programs found in high-performing education systems across the globe:

(1) teacher mentoring and coaching that is intensive and involves regular classroom observation and feedback;

(2) lesson and grade groups, in which teachers work together to plan lessons, examine student progress, and discuss alternative approaches;

(3) research groups of teachers who identify a research topic (how to introduce a new pedagogy, for example) and analyze the evidence of what works and what doesn't;

(4) teacher appraisal where teachers receive meaningful feedback on how they can improve teaching and student learning; and

(5) classroom observation that provides constructive and immediate feedback.[8]

But perhaps most importantly, Jensen's previous report noted that in top-performing locales such as Shanghai and Singapore, teachers are "partners in reform."[9]

We know full well that teachers are ready to learn from one another—working with administrators and policy leaders to create the kind of professional learning systems that support effective teaching for 21st-century schools. No doubt many more teachers than the handful who worked on this report are frustrated by the lack of coherence between what they are expected to teach their students and how they are to learn to teach more effectively. Karen Wagner, from Denver, offered us a compelling way to conclude this report by asking a number of simple questions:

- If sufficient time is allocated so teachers can collaborate, what structures need to be in place so this time can be used effectively?
- When are teachers most ready to collaborate, and when can they be given time to reflect and transfer new ideas into practice?
- How do we identify teacher leaders to play new roles?
- How can schools design the structures themselves to meet the needs of their unique populations?

By all accounts, Shanghai and Singapore have figured out answers to these questions. Education leaders in the United States and (to some degree) Canada have yet to do so—or at least do so at scale. This does not seem to be about differences in culture as much as it is about policy leaders' strategic work to create conditions necessary for effective teaching. In the United States, there are few concerted efforts to design school structures that allow teachers to learn in systematic ways. We know there is a better way—and the paths that must be traveled are sufficiently well known. With these issues in mind, we offer the following recommendations:

- **Rethink how teachers' time is allocated:** We have learned that more time for teachers to learn *is not enough*. As Noah Zeichner shared, even the limited time for collaboration and professional learning in Seattle is of limited value when it is sliced into small blocks of time, dispersed across several days of the week, and disconnected from the time colleagues have to work together and learn from one another.

- **Connect teacher evaluations with professional learning systems:** We have learned that *tools and structures* must be in place to align evaluation results and teacher learning. As Cynthia Seto and Irene Tan have indicated, Singapore has created specific learning communities so teams of teachers can focus on their goals, evidence, and action plans to improve instruction over their careers (beginning with their preservice preparation).

- **Value opportunities for teachers to learn from one another:** Xu Jianlan's experience in Shanghai taught us how trust in teachers translates into increased time for collaboration and mentoring—giving novices the necessary time to develop while valuing and positioning their most experienced teachers to share their expertise.

- **Establish career pathways encouraging teachers to lead without leaving the classroom:** Ali Wright's new teacherpreneur schedule in Lexington (KY), much like what a university professor may have, has given her the *unique* time and space in the United States to incubate and execute her own ideas about professional learning communities, demonstrating how virtual learning networks can spread teacher expertise.

- **Expand professional learning offerings and access points:** Teachers in the 21st century expect to access professional development opportunities and experiences with the same ease they access their people, ideas, resources, and entertainment: on-demand, 24/7, and via mobile devices.

We are certain that the world's 55 million teachers are ready to work with their system leaders to pursue these recommendations in the best interest of their students.

THE CLASSROOM EXPERTS

PAUL CHARLES is a fifth and sixth grade teacher at Willow Park Junior Public School in the Toronto District School Board, one of the largest and most diverse school boards in Canada. He earned his bachelor's degree in education with a focus on urban diversity at York University in 2006. For two years, Paul was a Student Work Study Teacher, analyzing student learning through collaborative inquiry.

XU JIANLAN is a primary school teacher in Shanghai who has taught first, second, and third grade science for more than 15 years. She earned her bachelor's degree in primary school education from Shanghai Normal University.

CYNTHIA SETO is a master teacher with the Academy of Singapore Teachers, Ministry of Education (MOE). She has taught mathematics for more than 30 years and authored the textbook *Teaching Fraction, Ratio, and Percentage Effectively*. She is a past recipient of the Microsoft-MOE Professional Development Award and the Hewlett-Packard Innovation in Information Technology Award. She researches assessment, mathematical modeling, and professional development.

IRENE TAN is a master teacher of chemistry with the Academy of Singapore Teachers, Ministry of Education (MOE). She graduated from the Institute of Education in 1988 and taught for 20 years at her alma mater, Jurong Secondary School. She completed a degree in departmental management in 1999 at the National Institute of Education, was appointed a master teacher in 2008, received the MOE Local Scholarship for Postgraduate Studies at the National Institute of Education in 2010, and finished her studies in 2011. She is currently the first vice chairman of the Science Teachers Association of Singapore.

KAREN WAGNER has taught third grade for seven years at Polaris Elementary School, a K-5 magnet for gifted and high-achieving students in Denver. She began her education career teaching English in Japan. Upon returning to the U.S., she pursued her teaching license through the Stanley British Primary School. Karen is passionate about integrating her extensive travel experiences into her teaching. She holds a B.A. in psychology, a B.S. in business, and a master's degree in educational psychology from the University of Colorado.

ALISON CROWLEY WRIGHT is a National Board Certified high school math teacher of 13 years from Lexington, Kentucky. This year she holds a hybrid teaching role, spending half of her time teaching algebra 2 and AP calculus and the other half working as a teacherpreneur for the Center for Teaching Quality (CTQ). In her work for CTQ, she focuses on Common Core State Standards implementation. She is well-known for creating an innovative program early in her career, Camp Crowley, to increase minority students' participation and success in AP calculus.

NOAH ZEICHNER is a National Board Certified social studies teacher at Chief Sealth International School in Seattle, Washington. He currently teaches global leadership, American government, and IB theory of knowledge. He works in a hybrid role, spending part of his day supporting the Center for Teaching Quality's global teacher leadership initiatives. Noah has traveled with students to China and Guatemala, and in 2012, he journeyed to Brazil as part of the Teachers for Global Classrooms fellowship. For the past three years, Noah has coordinated a student-led festival, World Water Week. He was named 2013-14 World Educator of the Year by the World Affairs Council of Seattle for his efforts to promote international understanding in the classroom and develop global education resources.

ENDNOTES

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