

Shanghai: Teacher Quality Strategies

By [Marc Tucker](#) on January 30, 2014 9:53 AM

Those of you who make it your business to follow the PISA survey reports know that, in 2010, the first year that PISA reported results for Shanghai, China, this megalopolis of 23 million souls came out on the top of the world's league tables. The same thing happened again in 2013.

Right after the most recent PISA results came out, I interviewed a number of people in China and elsewhere who I had reason to believe were in an unusually good position to provide some insights into Shanghai's achievement. You can find an edited volume of the interviews [here](#).

These interviews provide a rounded, nuanced and coherent picture of a very complex system, one that merits serious study by anyone who is responsible for turning a good education system into a great one or who is advising such a person.

Space is tight here, so I will restrict myself to some observations on one aspect of the Shanghai strategies that seems central to me: the attention to teacher quality. The Shanghainese have a lot to teach us all about how a country or state can produce a very high quality teaching force with very constrained resources.

First of all, Shanghai requires all their teachers to have a bachelor's degree in the subject they will teach. This is true for all levels of the system, including primary school (elementary school in the United States). The United States typically requires only secondary school teachers to have majored in the subject they will teach and often allows districts to reassign teachers with who have majored in one subject to teach another subject, often unrelated to the subject they were educated in. Some countries we track require all primary teachers to have at least minored in the subject they will teach, and all secondary teachers to have majored in that subject. In many countries, all secondary school teachers and upper primary school teachers specialize by subject, but lower primary teachers do not. In others, all primary school teachers specialize by subject. In the United States, elementary school teachers typically teach all the subjects in the curriculum. The Shanghai requirement that all teachers have an

undergraduate major in the subject they will teach and that all teachers in the primary schools specialized is the toughest requirement we know of anywhere in the world. This policy position could, by itself, explain a major portion of the variance in student performance.

But, if all teachers in training major in the subject they will teach and they only need bachelors' degrees, how do they learn the craft of teaching? Some of that is evidently taught in the schools of education they attend. But, as far as I can see, the real answer is apprenticeship. Shanghai has a thirteen-step career ladder. There are fewer than 1,000 teachers (a tiny number in a city with a population of 23 million) in the top step. It is a great honor to get to the higher steps on the ladder. Every new teacher in Shanghai is assigned to a mentor teacher, who is often relieved entirely of teaching duties in order to mentor a small set of new teachers. The mentees, who have a greatly reduced teaching load while this is going on, a period of one to two years, spend their time watching their mentor do master lessons in teaching and being critiqued by their mentor when they are themselves teaching. It is hard to think of a strategy with more leverage than apprenticeship to quickly expand the number of great teachers.

Now here is the kicker. Not only does Shanghai have an impressive strategy for producing high quality beginning teachers at low cost; it also has a winning strategy for continuously improving the skills of teachers already in the workforce. I mentioned the teacher career ladder system a moment ago. It is also a mentoring system. All the teachers, except those at the very top, have a mentor, who is also a coach. Mentors and mentees meet regularly. The aim is continuing improvement of performance. But that is only part of the system. Grade level teachers and subject matter teachers meet regularly in their schools, typically once a week. Here, again, the main focus is improvement in performance--of teachers as well as students. But this is a transaction not between the principal and the individual teacher but among the teachers themselves. They are working together to build more and more engaging lessons, trying out the lessons they build together, critiquing each other's practice as they learn to teach those lessons and so on. They are also working together to perfect the questions they are asking their students, not solo--off in their individual classrooms--but together. The questions are a crucial part of the lessons, used by the teacher to find out

whether the students are actually absorbing what is being taught, the extent to which they misunderstand what has been taught and the nature of those misunderstandings and the degree to which their fixes for those misunderstandings are working. What is called formative evaluation in some countries is thus built in to the very texture of the lesson itself and the teachers work together to make this system as effective as possible.

In this environment, the teachers are accountable to one another, not to the supervisor, for their performance, and there is no place for them to hide if they are slackers or inept. Thus the system is not only the vehicle for disciplined continuous improvement, but, at the same time, sets a high floor for the teaching standards in the school. The system I have just very briefly outlined does not require extensive data gathering by officials, nor does it require cumbersome administrative accountability systems. It is built right in to the normal routines of the school professional culture.

The literature on expert performance strongly suggests that high expertise is not so much a function of rare talent as of disciplined effort. You have to work at it, hard, every day, for years. The Shanghai system creates an environment in which that becomes every teacher's routine, all the time.

There is far more to this system than I can relate in this small space. You will, I think, be richly rewarded for the time you spend with the thin volume of interviews we have just published, to which I referred above.