

The Archer's Dilemma

or

Why the question “What will preK-12 students need to know and be able to do in 2028?” is timely and important right now!

by [Hank Rubin](#) — September 26, 2008

The people who will be responsible for preK-12 students' learning in 2018 and 2028 are sitting in our preservice education classrooms right now; being prepared for today's licensure requirements by professors who were educated in the 20th century. Might this be a problem?

In early December, 2007, the Programme for International Student Assessment (PISA, a program of the Organization for Economic Cooperation and Development [OECD]) released its triennial study comparing the academic preparation of 15-year olds in all developed and developing nations. It's now well known that the statistical comparisons were not positive for U.S. students. There are, of course, all sorts of ways to interpret these data; and all sorts of things we know we should do in response to the stories they tell. But, for me, the most eye opening aspect of this study arose from an almost inadvertent comment that the study's lead author, Andreas Schleicher, made at the National Press Club in Washington, DC, on the day of its release.

“If it's easy to test, it's easy to digitize...” At first I thought it was a throw-away statement, tucked within a long answer to a reporter's question. It, too, could be interpreted in several ways. So, in subsequent correspondence with Schleicher, I confirmed the deeper meaning of his observation: if you can ask a person a question for which we know there is a limited number of appropriate responses, then we can teach a computer to run through those same responses and select what evidence tells us is the most correct response. In other words, if you can test it then you can delegate the task, knowledge or skill to a computer! The implications are profound: why in the world will we need to invest education dollars in preparing students with knowledge and skills that will be the domain of computers by the time they are ready to enter the world of work?

According to the OECD, we won't. “We have good evidence that the labour-market demand of routine cognitive knowledge is declining fast, so the kind of knowledge that is easy to teach and test is becoming less relevant” (Andreas Schleicher, 12/21/07 email to author). Yet “the kind of knowledge that is easy to teach and test” is at the center of US education policy, drives state learning standards for preK-12 students, is the focus of what it takes to earn teacher licensure and, therefore, shapes the purpose of nearly every domestic teacher education program.

Struggling with the ironies and challenges of these observations, as an educator, I framed my questions and thoughts in a white paper titled *The Archer's Dilemma*, carried that paper with me into dozens of conversations, and set out to learn more. Here's how the paper started:

Indoor target archers shoot at a distance of 20 yards.

They know that if they plant their feet in one place and aim at a consistent target, at the same distance, with the same bow and the same arrow, at the same time of day, in the same climate, they are very likely to get better and better at hitting the bull's eye. Error, doubt and unpredictability take over when they change their stance, the target moves, they step forward or back or try to change the technology...

The future of what, when, where, for whom, with what, and how we do public education is a jumble of unknown variables: right now, we are no better at predicting what preK-12 teaching and learning will look like and have to accomplish in 2028¹ than most of us are at hitting the bull's eye of a constantly-moving target.

This is worth examining for any number of reasons, not the least of which is that the people who will be responsible for students' learning in 2028 are sitting in our preservice education classrooms right now. And although we don't know for sure what the targets will be for their students' learning 20 or 30 years from now – precisely what students are going to need to know and be able to do in order to survive within and master the social, environmental and technological systems they will inherit in 2028 and 2038 –there is surprising alignment among corporate, civic and education visionaries around the categories of learning that students will need between now and then ... and generally are not now getting.

Groups as disparate as the Partnership for 21st Century Skills, US Labor Secretary's Commission on Achieving Necessary Skills (1992), American Association of Colleges and Universities, Business Round Table, and the National Commission for Teaching and America's Future share a common wisdom that a standard core of content competencies is only the beginning. Interpersonal, social, technological, entrepreneurial, problem-solving, media and communication skills are among the 21st century targets towards which most agree (and we all intuitively know) we must aim the curricula, contents, pedagogies and resources of teaching and learning. To this we can add that the targets we set for students' learning should be routinely adjusted to reflect rapidly evolving and reliably predicted changes in healthcare, communications, transportation, social and family dynamics, entertainment, jurisprudence, global finance, and other systems that impact – and, we hope, may be impacted by – educated adults.

In short, we have to teach more, teach differently, and start now.

In their influential report titled "How The World's Best-performing School Systems Come Out On Top", McKinsey & Company engaged a panel of international education experts to derive the following priorities from the countries that have emerged as leaders on the PISA charts: (1) get the right people to become teachers, (2) develop them into effective instructors, and (3) undergird their efforts with sufficient resources and systems support to ensure their success. In other words, sustainable educational change requires sustainably changing educators, and our schools, colleges and departments of education must be engaged to make this happen.

When schools, colleges and departments of education do their jobs well, preK-12 students learn. These university programs exist to prepare the professionals responsible for students' learning. They are inextricably connected to preK-12 education systems and the bodies that govern them. They are the agents of state licensing requirements, federal policies and program standards. They are R&D centers for preK-12 education. They are the nation's most productive pipeline of new professionals into the teaching professions. And they are the largest provider of inservice and continuing development for preK-12 professionals. Changes at any one point of the preK-20 continuum always reverberate across the whole range. Establishing and sustaining 21st century

education at any level of this continuum will always require preK-20 collaboration. That's why we know that changes in schools, colleges and departments of education will result in changes in preK-12 practice. We know, too, that changes in preK-12 practice alone – without attention to commensurate changes in teacher education – will be episodic and short-term; and any investment in causing changes at only the preK-12 level will just have to be repeated. The National Commission for Teaching and America's Future has called for the "reinvention" of teacher preparation and inservice programs. The Institute for Collaborative Leadership contends that, in the long run, investing in developing *21st Century Schools, Colleges and Departments of Education* can leverage the broadest and most enduring change in preK-12 students' learning.

Changing our preservice and inservice education programs in ways that are both significant and enduring requires a variety of changes among the actors and forces that shape the system within which teacher preparation occurs. These forces come together to pose a unique set of challenges. In the long run, successful strategies for significantly changing schools and colleges of education must include:

- changes in state licensure requirements for new and renewing teachers
- changes in state licensure requirements for school administrators
- changes in state standards for program approval (the state corollary of accreditation) for the initial and advanced academic programs that prepare (and inservice) teachers and school leaders
- changes in national standards for accrediting preservice and inservice education units and programs
- professional development and supportive networks of professionals aimed at informing, facilitating and encouraging systems and cultures that make change reasonable and expected by professors and administrators in schools and colleges of education and
- seed, incentive, research and transformative grants and funding strategies that encourage and support structural and instructional innovation and change.

So, if our central question is "*What should we be teaching—and how should we be preparing to teach –preK-12 students for today, tomorrow and looking forward to the year 2018, 2028 and beyond?*" then, from its answer should flow state preK-12 learning standards, teacher and administrator licensure requirements, and the instructional goals of universities' preservice and inservice education programs. *21st Century Schools, Colleges and Departments of Education* (and the universities and liberal arts colleges that support them) can provide intellectual leadership to the state-level preK-20 collaborations necessary to align systems in response to this question. Outside of issues of national security, it's hard to imagine a question more worthy of intense national attention.

Note

1. 2028 is an arbitrary year, selected because it's far enough away to be tantalizingly unknown but close enough to be in the professional lifespan of college students sitting in teacher education classrooms right now. I encourage the reader to think of this as a target twenty years out from the year in which you read this article.

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