

Pg. xii

Tony Wagner's passion: "to help schools and districts improve learning, teaching, and leadership; to better understand the obstacles to change and the most effective strategies for overcoming them; and to share what I'm learning with others through speaking and writing".

Students and teachers continued to work in isolation – whereas the rest of the world had been organized into teams for decades. (p. xiv)

Jury Ready Graduate (p. xvi)

- Distinguish fact from opinion
- Weigh evidence
- Listen with head and heart
- Wrestle with conflicting principles of justice and mercy
- Work to seek the truth with team

"In today's highly competitive global "knowledge economy," *all students need new skills* for college, careers, and citizenship. The failure to give all students these new skills leaves today's youth – and our country – at an alarming competitive disadvantage. Schools haven't changed; the world has. And so **our schools are not failing. Rather, they are obsolete – even the ones that score the best on standardized tests.** This is a very different problem requiring an altogether different solution" (p. xxi).

"Work, learning, and citizenship in the twenty-first century demand that we all know how to *think* – to reason, analyze, weigh evidence, problem-solve – and to *communicate effectively*" (p. xxiii).

"The longer our children are in school, the less curious they become. **Effective communication, curiosity, and critical-thinking skills...are essential competencies and habits of mind** for life in the twenty-first century" (p. xxiii).

"There are two achievement gaps in our education systems. The first of these is the gap between the quality of schooling that most middle-class kids get in America and the quality of schooling available for most poor and minority children and the consequent disparity in results. **The second one is the global achievement gap – the gap between what even our best suburban, urban, and rural public schools are teaching and testing versus what all students will need to succeed as learners, workers, and citizens in today's global knowledge economy**" (p. 8).

Global Achievement Gap by Tony Wagner

After reducing office footprint and allowing people to work from the road – “One of the lessons we learned quickly was that the hardest thing to change was the behavior of the employees. They didn’t know how to operate individually and then collaborate from afar, and so we had to provide coaching and counseling on how you communicate via e-mail and conference calls” (p. 23).

“Collaboration is an essential skill for us. People have to understand the importance of working fluidly and across boundaries. As organizations become more global, the ability to work fluidly around the world is a competitive advantage: understanding how to leverage the globe, time zones, where the work can best be done, where there are skills that best match the task, either because of the culture or the training” (p. 23).

“It’s hard for people in the U.S. to work globally because they are used to being in control. It’s hard for many to let go and trust people to do the work, to truly empower people to achieve results, not just to complete tasks; to let people in more junior organizations have power – and the resources they need to get a job done” (p. 25) – *Implications for the classrooms – Teachers need to learn it is OK to not be in control all the time so that their students can learn to take on more responsibility.*

“Students are accustomed to having teachers tell them what to do. And students almost never work in teams” (p. 26).

“Students have a naiveté about how work gets done in the corporate environment. They have a predisposition toward believing that everything is clearly outlined, and then people give directions, and then other people execute until there’s a new set of directions. They don’t understand the complexities of a organization – that boundaries are fluid, that rarely does one group have everything they need to get a job done” (p. 26).

“Our system of schooling promotes the idea that there are right answers, and that you get rewarded if you get the right answer. But to be comfortable with this new economy and environment, you have to understand that you live in a world where there isn’t one right answer, or if there is, it’s right only for a nanosecond” (p. 32).

“All high school graduates need to learn how to access and analyze different kinds of information” (p. 36)

“In the knowledge economy we have lots of highly idiosyncratic niches not only with products or businesses, but also within companies. I think the most successful worker will not merely adapt to working conditions that are given to him but be able to adapt in a way that creates a position that fits his own profile – active adaptiveness. We still think that work is given to people; whereas I think people actually are increasingly taking the work” (p. 40) by Michael Jung – “People have so many ways to influence what they do and how they do it that, if they are good, they actually create their work space” (p. 41).

Global Achievement Gap by Tony Wagner

Global Achievement Gap – “the gap between what our more academically able students are being taught versus what they will need to succeed in today’s world” (p. 43).

“The quality of teachers’ preparation, continuing professional development, and supervision is very low in our nation’s schools” (p. 52).

“Most teacher evaluation systems are checklists of teachers’ techniques, which must be filled out periodically by school administrators” (p. 52).

“Rather than look only at what teachers are doing, I try to assess what students are being asked to do: the specific skills and knowledge that students are expected to master and the level of intellectual challenge in the lesson. What the teacher does is the means by which the students learn – not the end” (p. 52).

“A working definition of excellent teaching would include challenging all students to think every day in every class” (p. 56).

“Teaching for the sake of succeeding on the state and national standardized tests is quickly becoming an epidemic in our nation’s schools – one that is profoundly infecting our students and their ability to become critical thinkers” (p. 59).

“Teachers who use academic content as a means of teaching students how to communicate, reason, and solve problems – are rare, fewer than one in twenty in my experience” (p. 65).

“If I’m an employer of a multinational corporation, and I need to hire lots of employees who can solve problems, all other things being equal I’m likely to locate my new facility in a number of other countries before I’d consider coming to the United States. We are simply not developing our intellectual capital to the extent that many other countries are” (p. 75).

“Our nation’s public schools are not contributing significantly to this country’s capacity for creativity, imagination, and innovation – any more than they are developing the problem-solving skills of our students” (p. 75).

Azim Premji, the chairman of Wipro, one of India’s premier technology companies – “We need to encourage more incubation of ideas to make innovation a national initiative” (p. 75)

Nirmala Sankaran, the CEO of HeyMath, an India-based education company – “If we do not allow our students to ask why, but just keep on telling them how, then we are only going to get the transactional type of outsourcing, not the high-end things that require complex interactions and judgement to understand another person’s needs” (p. 75).

Global Achievement Gap by Tony Wagner

Q – “To what extent do these state tests assess the skills that matter most for work, citizenship, and college?” (p. 90)

Q – “What is the impact of teaching to these tests on students’ motivation to learn and to stay in school?” (p. 91).

“We keep hearing that all students need more math and science courses, but I believe that all students need more engaging and relevant math and science courses” (p. 93).

Q – “Looking back, what about your high school experience did you find most engaging or helpful to you? (I would ask the question differently today: In what ways were you most well prepared by high school?)” (p. 101).

David “Conley lists the core “habits of mind” that matter most for success in college: “intellectual openness; inquisitiveness; analysis, reasoning, argumentation and proof; interpretation; precision and accuracy; and problem solving.” He then goes on to identify the most important “Overarching Academic Skills”: writing and research, Knowledge of subject content ranks third behind this list in his typology” (p. 104).

“The rigor that matters most for the twenty-first century is demonstrated mastery of the core competencies for work, citizenship, and life-long learning. Studying academic content is the means of developing competencies, instead of being the goal, as it has been traditionally. In today’s world, it’s no longer how much you know that matters; it’s what you can do with what you know” (p. 101).

“According to a recent study sponsored by the Partnership for 21st Century Skills, “80 percent of voters say [that] the things students need to learn today are different than 20 years ago.” And “almost nine in 10 voters (88 percent) believe 21st century skills can and should be part of the curriculum” (p. 125).

Wagner – “If your goal is to improve student learning – and that is the only goal that really matters – the first problem that you have to work on is to improve teaching and the coaching of teachers” (p. 128).

“If you want to improve instruction, you have to first agree on what good teaching is all about” (p. 128) ***** Quote for Delphi*****

“We are often looking for the same things – but we do not agree on what we see” (p. 129).

Wagner – “We can have debates among our teachers about what rigor is, but the world – employers and colleges – have a very clear definition of rigor – of what they expect your students to know and be able to do. They’re demanding a set of skills that are not subject to debate” (p. 130).

Global Achievement Gap by Tony Wagner

“I truly believe that viewing and discussing videos of teaching and supervision is the single most effective strategy for improving instruction for all schools; yet it is almost never done” (p. 142).

Arthur Levine, President of Teachers College at Columbia University from 1994-2005 – “Many students seem to be graduating from teacher education programs without the skills and knowledge they need to be effective teachers. More than three out of five (62 percent) report that schools of education do not prepare their graduates to cope with the realities of today’s classrooms” (p. 145).

Richard Elmore, Harvard – “Education is a profession without a practice.” “He means that we have no clear standards for what is good practice in our work – no standards for what is effective teaching or leadership – unlike doctors or lawyers or accountants or architects, all of whom have clear standards of practice that are continuously reviewed. And as educators we work alone, all day, every day. Lacking both standards of practice and colleagues from whom we can learn, we must try to figure out how to be competent teachers or leaders all by ourselves” (p. 154).

Anthony Alvarado – “Isolation is the enemy of improvement” (p. 157).

Rob Fried – “School is a kind of ‘game’ for many students who are bored in classes and so give the adults only the minimum required to get a good grade, while craving opportunities to do more intellectually challenging or creative work” (p. 169)

John Seely Brown – “The real literacy of tomorrow entails the ability to be your own personal reference librarian – to know how to navigate through confusing, complex information spaces and feel comfortable doing so. ‘Navigation’ may well be the main form of literacy for the 21st century” (p. 179).

Jason Frand, UCLA – “Students with an information –age mindset expect education to emphasize the learning process more than a canon of knowledge. They want to be part of learning communities, with hubs and spokes of learners, rejecting the broadcast paradigm of television (or the note-taker in the lecture hall.)” (p. 179)

“Young people hunger for a more creative and interactive relationship with the world. They have to be interactive producers, not isolated consumers” (p. 187).

“They long to interact – with the net, with ideas and problems that need solving, with friends and colleagues – and even with older adults – but in new ways, as we’ll see. Wherever they are, they long to learn and to create in a collaborative, collegial environment” (p. 188).

Global Achievement Gap by Tony Wagner

Susan Metros, University of Southern California – “We knock creativity out of kids, with our focus on memorization, teaching to the test, and making them learn things that they don’t have to. Because of the web, they don’t have to memorize all of what we used to memorize. In order for young people to respect learning and school, we need to think more carefully about what we’re asking them to learn – to ensure that schoolwork is not busywork or make-work but real, adult work that requires both analysis and creativity” (p. 189).

Andrew Bruck, Stanford Law Student - “I learned the most in my extracurricular activities. I learned about how organizations work by editing my school paper, and I learned more about editing and writing there than I did in my English classes. It was more exciting to have projects to work on than a curriculum I had to follow. We could use our own creativity to find things of interest to us” (p. 191).

Tracy Mitrano – “You have to make the work more interesting and allow them to work in different ways. They are prepared to work just as much and just as hard – but not at a desk eight hours a day” (p. 194).

John Abele, Boston Scientific – “This generation’s loss of opportunity to struggle...So in the robotics competitions, we build in frustrations. And to win, [the kids] have to master many skills, besides just the ability to build a robot that can compete. They learn teamwork, fundraising, project management, strategy...But having an adult mentor makes the critical difference – the difference between productive and unproductive struggle” (p. 206).

“Rigor is about discerning among the avalanche of content that’s coming at us all the time – and increasingly so in the Age of Google. Second, it’s not just about more complex content. It’s about deepening the quality of analysis. Rigor is being in the company of a thoughtful, passionate, reflective adult who invites you into an adult conversation which is composed of the rigorous pursuit of inquiry” (p. 210).

Habits of mind – “to think about *significance* – why is it important; *perspective* – what is the point of view; *evidence* – how do you know; *connection* – how does it apply; *supposition* – what if it were different. These ‘habits of mind’ are really habits of question – asking” (p. 214).

Teacher comment - “My job is to question, to prod and provoke them to think and to come to their own conclusions – not to give them the answers” (p. 219).

Student comment – “Projects make us figure things out – we’re always thinking, planning, organizing, working in a team” (p. 227).

Teacher comment – “My job is to harness their potential and make sure they’re moving ahead” (p. 238).

Global Achievement Gap by Tony Wagner

Student – Ways I was prepared for success in college: “I learned to express ideas and to think critically. I learned how to do long-term projects and to manage my time. I learned to revise my work and to give others feedback on their work. I learned how to make good connections with faculty – how to find people, ask questions, advocate for myself, and take ownership for my own education. I learned leadership skills” (p. 251). *****Ask teachers to consider if their own students can do these things.*****

“Teaching through the use of questions, as Socrates did, is still considered state-of-the-art and is widely practiced in graduate schools of law and business. When done well, it develops students’ abilities to ask good questions, play with ideas, reason, weigh evidence, and communicate clearly – skills that the elites of many societies have needed” (p. 255).

“In a very short period of time, our world has changed in three significant ways, and methods of teaching and learning must adapt to these changes: 1. All students need new skills to thrive in a global knowledge economy. 2. In the age of the Internet, using new information to solve new problems matters more than recalling old information. 3. Today’s youth are differently motivated when we compare them to previous generations” (p. 256).

“In today’s world, academic content must be the means by which we teach core competencies – rather than through merely memorizing (and often forgetting) academic content for its own sake” (p. 263).

“There is a profound disconnect between what students are taught and tested on in most high schools today and how they are expected to learn, versus what the world will demand of them as adults and what motivates them to do their best” (p. 264).

“All students should have the choice of whether to go to college. The skills students need to succeed in college are the same skills they will need to succeed in today’s workplace” (p. 264).

“Most successful businesses want to hire as many employees as they can with these skills because they are harnessing talent as the key to staying competitive” (p 266).

“The Seven Survival Skills can best be understood as the essential tools and intellectual foundation a young person needs to excel in a time of rapid social, technological, and economic change – the kind of change that is occurring now and will continue to accelerate in nearly every country around the world” (p. 267).

Jean Piaget – “The ultimate purpose of education is to overcome egocentrism in both the intellectual and emotional domains” (p.268).

“I thought I knew what students needed to learn and what a good school looks like – because I was a student once and I went to school, and it worked for me. But times have changed. And maybe students today do need something different. I wonder what it is?” (p. 269)

Michele McCurdy

“Powerful questions are what drive real learning and that such learning is a precondition for lasting change” (p. 269)

- “In light of the fundamental changes that have taken place in our society in the last twenty-five years, what does it mean to be an educated adult in the twenty-first century? What do we think all high school graduates need to know and be able to do to be well-prepared for college, careers, and citizenship? And since we can’t teach everything, what is most important?” (p. 269)
- “How might our definition of academic rigor need to change in the age of the information explosion?” (p. 269)
- “What are the best ways to know whether students have mastered the skills that matter most? How do we create a better assessment and accountability system that gives us the information we need to ensure that all students are learning essential skills?” (p. 269)
- “What do we need to do in our schools to motivate students to be curious and imaginative, and to enjoy learning for its own sake? How do we ensure that every student has an adult advocate in his or her school who knows the student well?” (p. 270)
- “How do we both support our educators and hold them more accountable for results? What changes are needed in how educators are trained, how they work together in schools, and how they are supervised and evaluated in order to enable them to continuously improve?” (p. 270)
- “What do good schools look like – schools where all students are mastering the skills that matter most? How are they different from the schools we have, and what can we learn from them?” (p. 270)

Rabbi Hillel – “If not you then who? If not now, then when?” (p. 271)

Compass to 2015 Strategic Plan <http://www.vbschools.com/compass/StrategicPlan.pdf>

“How do we know when we have encountered critical thinking in classrooms?” (p. 278)

- Students successfully grapple with higher-order questions asked by teacher.
- Students articulate meaningful response to “so what” (what if, why).
- Students generate higher-level questions.
- Students engage in authentic learning activities and/or create authentic work.
- Students defend positions with justification based on factual evidence and data.
- Students analyze and solve new problems by generating a variety of ideas and solutions.
- Students recognize and pose problems inherent in a given situation.
- Students adapt learned knowledge to more complex/ambiguous situations.
- Students use and explain the right method of thinking (reasoning, decision making, problem solving, making judgements).
- Students evaluate and communicate their own thinking.
- Students make connections and predications using prior knowledge.
- Students select, create, use and communicate effectiveness of a variety of tools, such as graphic organizers or grid paper.

“The only real evidence of critical thinking happening in the classroom was in what the students were doing” (p. 280).

“The most effective way to assess the quality of instruction in a classroom – and to ensure that students have the skills they need for careers, college, and citizenship – is to systematically look at student work and to regularly require students to ‘show what they know’” (p. 280).

“According to a recent survey of employers conducted on behalf of the Association of American Colleges and Universities, ‘Nearly all those surveyed (93%) agree, ‘a candidate’s demonstrated capacity to think critically, communicate clearly, and solve complex problems is more important than their undergraduate major’” (p. 293).

“No corporations make important hiring or promotion decisions on the basis of a standardized test score. What corporations rely on is collective human judgement, informed by evidence. If it is good enough for our best businesses, then why isn’t it good enough for our schools?” (p. 299)

Brandon Busteded, executive director of Gallop Education – “The drop in student engagement for each year students are in school is our monumental, collective national failure. There are several things that might help to explain why this is happening – ranging from our overzealous focus on standardized testing and curricula to our lack of experimental and project-based learning pathways for students – not to mention the lack of pathways for students who will not and do not want to go on to college” (p. 299).

Global Achievement Gap by Tony Wagner

“Values also matter enormously as a vital part of the culture of a classroom and a school. Without trust and respect, neither students nor teachers will take intellectual risks or try new things. Without trust and respect – among students, between students and teachers, and among adults – there is no real learning or lasting change” (p. 302).

Grit – “Research shows that traits like perseverance, tenacity, and the ability to recover from setbacks and to self-regulate are more important to adult success than talent or IQ” (p. 302).

“The alternative to a mindless test-prep curriculum, then, is not merely a focus on the Seven Survival Skills – important though they are. Yes, we must teach the skills that matter most, but we need to do it through engagement in rich and challenging academic content and by motivating students with more play, passion, and purpose in their learning. Every day. In every class” (p. 303).