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"Student Achievement, Marketable Job Skills, and Global Competitiveness": America's Unhealthy Education Priorities

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Abstract. Over the last 20 years, American K-12 education has been profoundly transformed to reflect the values and principles of market-based thinking. This market-oriented transformation has profoundly narrowed the mission of American public education to be about boosting test scores ("student achievement") in hopes of developing marketable job skills to grow the economy and enhance America's economic competitiveness. This article analyzes why making student achievement, marketable job skills, and global competitiveness top priorities for public education is unhealthy for students, for local and national communities, and for protecting the health of the planet. Suggested alternative priorities for public education in the United States are discussed.

Keywords: education goals; student achievement; marketable job skills; global competitiveness; educational policy.

Introduction

> *"Education is the most powerful [tool] which you can use to transform the world."* - Nelson Mandela

For over a century, public education in the United States has reflected the values and principles of business and manufacturing to a substantial degree while only weakly and sporadically reflecting the values and principles of human development and democracy (Bowles & Gintis, 1976; Callahan, 1962, Wheatley, 2015a). The same is true of many other countries. However, learning and most of life do not operate according to economic and mechanistic principles, but rather, operate primarily according to organic and cultural principles. Thus, this reliance on the thinking of markets and manufacturing has yielded educational systems that are sharply at odds with the needs of developing human beings, local and national communities, and the earth as a natural system. Perhaps nowhere is this more apparent than in the United States, where fifteen years of

corporate-oriented education policies have yielded stressed-out students, narrowed and dumbed-down curricula, burned-out teachers, and a profound corrupting of the sacred mission of public education (Bracey, 2009; Nichols & Berliner, 2007; Nelson, 2016; Pope, Brown, & Miles, 2015; Wheatley, 2015a). And despite the enormous effort, expense, and collateral damage involved, these intrusive and unhealthy policies have yielded no meaningful improvements in overall student learning.

Those seeking to challenge and transform unhealthy educational systems would be wise to challenge the core priorities of those systems, for all systems revolve around their goals, so truly transforming any system requires a transformation of its guiding priorities (Meadows, 2008). Therefore, in this article, I analyze three levels of educational priorities in the United States, discuss why the current framing of these priorities is unhealthy, and propose healthier alternatives. Scholars, educators, and citizens from many other countries will likely discover many parallels between their situations and that of the United States.

I begin by outlining the goals that thousands of Americans have said are their top priorities for PK-12 students and the world. These serve as a foil for the subsequent analysis. Following that, I examine how the intense focus in American classrooms on raising "student achievement" undermines healthy whole-child development and even impairs academic learning. Next, I analyze how the narrowing of the mission of American public education to focus on "marketable job skills" further narrows education while harming students and perhaps imperiling the United States and other nations. I then unpack the ways in which the broader focus on promoting America's "global competitiveness" distorts American education and society in unhelpful ways, while undermining the preparedness of citizens of the United States for collaborating with others to face our shared global challenges. Finally, I propose healthier ways of framing national priorities, the mission of public education, and our priorities for classrooms.

Our Most-Cherished Priorities for Children and the World

Since the late 1980s, I have polled thousands of teachers, administrators, parents, and other American citizens about their top priorities for children—the things that they most strongly hope children will learn, develop, and become by age 18. With remarkable consistency, audiences from all over the United States reported that their #1 priorities for children were goals such as caring, love of learning, creativity, initiative, respect for oneself, respect for diverse others, critical thinking, problem-solving, communication skills, self-confidence, persistence, social skills, independence, risk-taking, good character, and to be happy and healthy.

The specific items and wording vary a bit, but the list is always dominated by social, emotional, moral, and motivational goals, or you could say it is dominated by life skills and character traits, not academic outcomes. Only about a third of the time does any academic goal make the list, and it was almost always the ability to read. Having done this activity with roughly 4000 people

since 1989, only three people ever said that their top goal for children was higher test scores.

Many others have reported similar lists of top priorities for school-age children, including the education author Alfie Kohn (1999). Similarly, the award-winning principal Dennis Littky (2004) reported that at the heart of his work at The Met, a nationally-renowned high school, were the goals of becoming lifelong learners, creative, passionate, ready to take risks, able to look at things differently, able to work independently and with others, to persevere, to care and want to give back to their community; to have integrity, self-respect and moral courage; to be able to use the world around them well; to speak, write, and read well; and to truly enjoy their life and work. Another highly successful principal, Deborah Meier (1995) reported that their nationally renowned school (Central Park East) focused on five habits of mind: "concern for evidence, viewpoint (who said it and why?), cause and effect, hypothesizing, and 'who cares?' (Does it really matter? Why, and for whom?)" In *Educating for Human Greatness*, former teacher and principal Lynn Stoddard described the whole-child goals that came from interviewing thousands of parents about their top goals for their kids. This led to that school's efforts to place identity, inquiry, interaction, initiative, imagination, intuition, and integrity at the center of their curriculum (Stoddard, 2010). That's right, those seven goals became more central to their curriculum than was traditional subject matter.

Such broad goals are not merely the wishes of warm-hearted parents and educators. In the book *The Global Achievement Gap,* Wagner (2008) described interviewing CEOs and other executives about what they saw as the "survival skills" for the workplace of tomorrow. These survival skills were curiosity, imagination, critical thinking, problem-solving, collaboration across networks, leading by influence, agility, adaptability, initiative, entrepreneurialism, effective oral and written communication, and accessing and analyzing information. And one survey found that business leaders valued creativity as the number one thing that workers and professionals need today.

Thus, multiple real-world sources provide very similar lists of our top priorities for students' development and learning—lists that prioritize the development of the whole person. Also, these lists are unanimous in proclaiming that ultimately, academic content is not what matters most. These non-academic goals are important in their own right and they play critical roles in creating healthy individuals, healthy communities, and a healthy planet—while also supporting academic learning.

Consistent with their hope that schoolchildren will be prepared to create a better world, people also consistently report ambitious dreams for a better world. More specifically, people state that they dream of a world with much less poverty and inequality, less pollution, a more stable climate, an end to wars and terrorism, less crime and more caring communities, strong families, food security, economic security, less disease, and governments that truly listen to the will of average people. Unfortunately, it will become obvious that the central priorities of public education in the United States are not in alignment with these top priorities that Americans describe for children and for the world.

Three Misguided Priorities of American Public Education

Anyone familiar with American public education knows that educators, researchers, and teacher educators in the U.S. talk endlessly about "evidence-based practices." Indeed, American teacher education is intensely committed to teaching teachers how to use these evidence-based teaching methods. However, there is no such intense attention to whether or not public education is focused on the right overarching goals to begin with, and thus, whether or not we are training teachers in evidence-based methods of achieving the wrong goals. To be sure, many of those inside and outside of education grumble about an overemphasis on high-stakes standardized tests and raise questions about isolated academic content standards or items on tests. But the public and professional discourses around education have been devoid of any sustained questioning of the overarching goals that American public education should pursue and is pursuing. Below, I seek to help remedy that situation by providing a research-based analysis of the problems with the overarching goals that are central to American public education today.

Problems with "Student Achievement" as a Central Priority for Teachers

Despite the wonderful whole-child goals that educators and non-educators say they cherish most for children, the reality is that most K-12 education in the United States officially ignores those goals and instead focuses primarily on test scores in a few traditional academic subjects (Abeles, 2015; Meier & Gasoi, 2017; Nelson, 2016). Classroom instruction has come to be overwhelmingly focused on raising students' scores on these standardized tests as much as possible and as rapidly as possible, much like a diet whose goal is not long-term overall health, but rather, maximizing weight loss in the short run. To be sure, many good teachers do much more than this, but in doing so, they are going beyond official policies.

This single-minded focus on test scores is puzzling for many reasons. One reason this focus on is puzzling is that standardized tests are well-known to heavily emphasize lower-level knowledge and skills while neglecting the deep understanding and higher-order thinking that we say we value (Madaus, Russell, & Higgins, 2009). Another mystery about this intense focus on raising test scores is that it is a truism among American students and educators alike that much of what students learn in cramming for these tests is rapidly forgotten, a familiar dynamic captured by the common saying "read, regurgitate, forget." A third reason this narrow focus on test scores is confusing and troubling is that by narrowly focusing on raising test scores, educators are simultaneously ignoring many of the goals we value most for children.

These mysteries aside, it is essential to understand why classroom teaching centered on raising "student achievement" as much as possible and as fast as possible is inherently unhealthy. First, because they are often desperate to keep students motivated to work and pass tests, especially in schools labeled as failing, teachers too often resort to giving students unhealthy food rewards such as candy, pizza, and ice cream. Next, with the threat of punishment for failing to

perform well on high-stakes testing looming over their heads, teachers and students alike feel a great deal of stress and anxiety. One Chicago mother reported:

> *"My son is in a 'good' kindergarten, but they are obsessed with skills. He works so hard at school (for five hours and 45 minutes) to "be good" that by the time he comes home he can't do anything but have temper tantrums!"*

Seeing the damage done after students emerge from test-driven K-12 schooling, Merilee Jones, the former dean of admissions at the Massachusetts Institute of Technology (MIT) lamented that, "We're training our children to be the most anxious, stressed-out, sleep-deprived, judged and tested, poorly nourished generation in history" (in Trelease, 2006, p. xiii). The billionaires and CEOs behind these get-tough policies seem to assume that the intense pressure they are putting on students and teachers will make education better, a position that reveals a profound lack of understanding of human development and learning. Sleep is crucial for physical health, mental health, and for learning, with sleep playing a crucial role in helping us consolidate our memories (Berk, 2013), but the endless homework associated with test-based accountability leaves many students chronically sleep-deprived, especially at the high school level. As for stress, chronic stress is well known to pediatricians and developmental psychologists alike as the enemy of healthy development and learning, undermining physical and mental health, learning, and memory, and even causing brain shrinkage (Berk, 2013; Bremner, 2006; Garner & Saul, 2018).

Beyond these obvious areas of collateral damage, the assumption that greater gains in "student achievement" (i.e., test scores) inherently indicate better teaching and learning conflicts with key realities of education and development. Critically, the focus of most educational research and most educational accountability data in the United States is on short-term effects. As a result of this, the emphasis on "student achievement" winds up really being an emphasis on raising test scores as much as possible in the short run. Unfortunately, there is strong evidence that the direct instruction teaching methods that work best to raise standardized test scores fastest in the short run simultaneously undermine many of the goals we value most for children, including intrinsic motivation, creativity, and initiative (Kohn 1999; Olson, 2009; Walberg, 1986; Wheatley, 2015a). Indeed, the patterns are so consistent across multiple studies that steady declines in student motivation, engagement, creativity and initiative across the years of schooling can be considered to be hallmark consequences of traditional test-centered education. Like a fad diet that works for losing weight in the short run but backfires in the long run for both weight and overall health, the highly controlling nature of direct instruction sets in motion various dynamics that sabotage long-term developmental outcomes. We can see these dynamics at play in early reading research. On the one hand, direct instruction is markedly superior for boosting reading test scores in short-term research (Coles, 2003). On the other hand, research longer than a year in duration finds more child-centered approaches (i.e., whole language, free voluntary reading) to be as good or better than direct instruction for promoting reading comprehension, while yielding better outcomes for attitudes towards

reading, student conduct, and for maintaining a comprehensive curriculum (Coles, 2003, Krashen, 2004; Wheatley, 2012a).

Why does traditional test-focused instruction yield some apparent short-term successes while backfiring overall in the long run? At the core of the problem is that fact that humans have basic psychological needs for autonomy, competence, and relatedness, and that humans develop and learn better when these needs are met (Ryan & Deci, 2017). However, the standardized and controlling of traditional instruction reliably thwarts the satisfaction of these basic psychological needs, thus setting in motion a cascade of developmental problems (Bonawitz, et al., 2011; Kohn 1999; Olson, 2009; Ryan & Deci, 2017). Why aren't these negative dynamics well-understood by all? Wherever the purpose of teaching has been narrowly defined as boosting short-term "student achievement" (i.e., test scores), all that whole-child collateral damage is under-reported at best or invisible at worst. To be sure, well-meaning teachers and schools in the United States are engaged in intense "data-based decision-making." However, that process revolves almost entirely around lower-level academic knowledge and skills that are easily tested, while data is not collected on the effects of the educational process of students' physical health, mental health, intrinsic motivation, satisfaction of basic psychological needs, social skills, creativity, initiative, and much more. Thus, a persistent and intense focus on raising "student achievement" inadvertently steers educators and policymakers to use the direct instruction teaching methods that are superior for boosting test scores faster in the short run, but that are also inferior for promoting healthy whole-child development in the long run. This focus on "student achievement" also steers us to collect wholly inadequate data on student outcomes. In this way, organizing teaching around "student achievement" plays a pivotal role in institutionalizing an unhealthy and counterproductive system of education (i.e., test-driven, factory-style schooling, see Wheatley, 2015a).

So how did education in the United States get to this strange juncture, and how did our emphasis on the frame "student achievement" arise from that history? Several factors are important in this story. First, in the late 1800s, American education became committed to teaching what we now think of as the traditional academic subjects, teaching them as separate subjects during separate time blocks, and teaching them in a very teacher-directed way that is profoundly divorced from real life. The logic of assembly lines, reductionist science, and sheer force of habit and institutional inertia have kept us largely following this model, although developmental research from recent decades suggests that teaching this way, in an important sense, works against the laws of nature (Ackoff & Greenberg, 2008; Hirsch-Pasek & Golinkoff, 2003; Wheatley, 2012b, 2015b). Second, in the early 1900s, psychologists, educational researchers and other social scientists in the United States tried to seek stature for their professions by mimicking the research approach of the better-respected hard sciences (Hunt, 1993). One consequence of this development was an obsession with reliably "measurable objectives" over many of those lofty but harder-to-quantify goals that we value most:

> *"What was once educationally significant, but difficult to measure, has been replaced by what is insignificant and easy to measure. So now we test how well*

we have taught what we do not value." - Art Costa, professor emeritus

The fixation on test scores rather than what people value most for education is a direct reflection of this obsession with reliable measurability, but whether people say they are promoting "measurable objectives" or "student achievement," the odds are very high because they are steering education away from the broad range of priorities we value most. Third, education in the United States has come to be organized around a series of conceptual frames (e.g., "failing schools, measurable objectives, objective testing, student achievement") that distort reality and obscure the nature of what we are really doing (Wheatley, 2017). Imagine if schools in the United States told parents and the public the following:

> *"The main priority of classroom instruction in our public schools is raising students' scores on tests of low-level knowledge and skills, even though research clearly shows that this single-minded focus interferes with developing deep understanding, causes a great deal of collateral damage for students' overall development, and prevents us from pursuing the goals that parents and society value most for children."*

Obviously, such a transparent articulation of the educational priorities lurking behind "student achievement" would be quickly rejected by everyone. Well, what if state boards of education and school districts simply put "High Test Scores" at the center of their mission statements and primary organizational documents? This too would be resisted by the public as too narrow, although test scores have become the implicit organizing priority of most classroom teaching in the United States. Instead what we see and hear from educators, researchers, and government education agencies are the less transparent and more impressive-sounding phrases "student achievement" and "high student achievement" (or the recent spin-off term, "student growth"). This is the language we have been professionally conditioned to use.

Education research consistently reports on the effects of specific teaching methods on "student achievement, reading achievement, or student growth," but in virtually all cases, the only thing that was studied were test score gains, not students' deep mastery or achievement of the full range of goals we value most for them. Similarly, guiding documents from public education agencies have consistently cast "student achievement" or "student growth" as the main focus of classroom teaching. By dressing up the narrow pursuit of test scores in more impressive-sounding language, terms such as "student achievement" have played a critical role in perpetuating an educational system that not only ignores many of our most cherished goals, it prevents achieving many of those goals and directly undermines some of them (see Wheatley, 2015a).

One can readily see the power of the framing of our goals for teaching if we simply imagine that all schools in the United States were to replace the goal of "high student achievement" with the goal of "healthy whole-child development." Such a shift in priorities would be wholly consistent with child development research, such as the research on humans' basic psychological needs (Ryan & Deci, 2017) or research on the profoundly interrelated nature of human development (Berk, 2013). Most importantly, making "healthy whole-

child development" a central priority for teachers would likely set in motion a true revolution in the curriculum and in the way public schools are operated.

Problems with Making "Marketable Job Skills" the Central Priority for Public Education

Historically, the stated mission of public education in the United States had been to develop healthy and well-rounded individuals, wise and active citizens, and ethical and skilled employees and leaders. However, just as the focus of classroom instruction in the United States has been narrowed to focus on raising "student achievement" (i.e., test scores), the broader mission of public education has been simultaneously narrowed to emphasize "marketable job skills" to help students "compete in the global economy." Whether we call it "marketable job skills" or "college and career readiness," this single-minded emphasis on the economic and occupational functions of education has sharply reduced attention to two of the three traditional purposes of public education, while forestalling serious attention to another vital mission—environmental stewardship. Let's examine each in turn.

Although it is true that public education in the United States has never done a consistently stellar job of the mission of developing healthy and well-rounded individuals, its profound abandonment of this part of its mission could not have come at a worse time. With growing national crises in obesity and diabetes, anxiety and depression, opioid addiction, and dementia, now would be the best time for the structure and content of public K-12 education in America to be carefully and explicitly crafted to promote healthy and well-rounded individuals. Instead, remaking American public education in the corporate image and to serve primarily economic interests has yielded a test-based, factory-style style system of schooling that unintentionally erodes physical and mental health while making it harder for students to become well-rounded (Abeles, 2015; Olson, 2009; Pope, Brown, & Miles, 2015).

As noted above, the threats of punishment and failure surrounding test-based accountability has made schools incubators of stress for students and educators alike (e.g., Abeles, 2015). While exercise and play are great ways of defusing stress, play has been largely driven from American K-12 education and recesses have often been shortened or eliminated to make more time for test-prep instruction that is supposedly linked to employability (Wheatley, 2015a).

Meanwhile, the arts, the humanities, and elective courses have also been driven out of American K-12 education to a remarkable degree—so as to spend less time on subjects deemed not marketable and make more time to cram for standardized tests that are supposedly related to the available jobs. Even higher education has also become much more vocationally oriented, making it much less likely today than in decades past that an American college graduate will have received a well-rounded liberal education. This is evident in the shrinkage in the general education requirements at many colleges and universities. None of these unhealthy trends would have occurred if all educators and policymakers were committed to the proposition that public education must always serve the critical mission of developing healthy and well-rounded individuals.

Next, the general trend in the United States to re-make public schools in the corporate image, coupled with this narrowed focus on marketable job skills, has shrunken the role of democracy in managing public education and in the classroom. Public education has become increasingly controlled by the agenda of corporations, CEOs, and billionaires, including the development of the Common Core State Standards that now are at the center of education policy in most states (Schneider, 2015). In turn, students' achievement of these standards is assessed by commercial standardized tests, and thus, districts adopt commercial textbooks and curricular materials aligned with these commercial tests—and usually mandate that teachers use those commercial curricular materials. Thus, the freedom of individual teachers and local communities to democratically deliberate about and decide curricular priorities or to design their own teaching and assessment methods has been sharply limited. Some brave teachers still create innovative curricula, but with the threat of test-based accountability looming over their heads, it takes a substantial faith and courage to teach in ways that are not explicitly aligned with these high-stakes tests. For a quarter century, I have taught PK-3 teachers and prospective in Cleveland, Ohio, America's poorest major city, and I regularly have the experience of showing my students a video of excellent teaching involving play or project-based learning, only to hear this response from them:

> "Professor, we know this is good teaching, we know this is what's best for children, and we'd love to teach this way, but we can't. We have to teach to the test or we'll be fired."

And because most teachers do not feel free to make consequential decisions about teaching and learning, students have even less freedom. In fact, I have increasingly heard both teachers and students say that "school is prison." Thus, although students theoretically live in a representative democracy, they get little practice during their school years with making choices, taking initiative, and collaborating with others to arrive at democratically-generated decisions about what to learn, do, and how to do it. And the problem is not simply that the values and skills of a representative democracy are too often atrophying in such an unhealthy and undemocratic context, it is also the case that students are being trained to unthinkingly follow orders, to do work that is often meaningless, and to passively accept these unhealthy conditions instead of challenging and changing them:

> *"Just about everywhere we turn the next generation is being indoctrinated to think of themselves narrowly as producers, employees, spectators, and consumers—everything but citizens."* - Bill Moyers

If public education is merely about training compliant workers and nothing else, the passive acceptance of this situation makes sense. However, if schools and teachers in the United States were firmly committed to the goal of preparing student to be wise and active citizens well-practiced in the skills of representative democracy, then people would immediately recognize how inadequate and unhealthy our current approach to public education is.

But the most troubling aspect of the narrow focus of American education on marketable jobs skills to grow the economy is that this focus is incompatible with what is arguably the most important mission that public education should be serving—educating students who have what it takes to save the Earth. In a nutshell, a mountain of scientific research makes it abundantly clear that our globalized and industrialized economy is rapidly making the earth less and less able to support life, including human life (Klein, 2014; Kolbert, 2014). As a result, the Earth is currently undergoing a "sixth extinction," a staggering die-off of plant and animal species almost entirely caused by human activity and the damage it causes (Klein, 2014; Kolbert, 2014). Addressing this issue adequately is beyond the scope of this paper. However, the dangerous categories of harm that humans are causing to the planet include pollution of the air, water, and soil; depletion of essential natural resources, deforestation, water shortages, loss of topsoil, disruption of the nitrogen cycle, creation of genetically modified organisms, dramatic loss of biodiversity, global warming, climate disruption, ocean acidification, and the collapse of global fish stocks. To reverse these dangerous harms, the human population needs to stabilize, and lifestyles in developed nations need to become vastly more environmentally friendly, all while developing nations improve their living standards. We must actually shrink the material consumption of the global economy by one third or more, and also find a way to live within the constraints of a finite planet and the laws of nature (Dietz & O'Neill, 2013; Klein, 2014; Orr, 2004). Accomplishing all this will require a revolution not just in the lifestyles in developed nations, but also in our economic and political systems. As those authors and other scientists have noted, this means is that the built-in tendencies of globalized, financialized, industrialized capitalism are simply incompatible with the long-term needs of living things. Klein (2014) framed the dilemma in this way:

> *"Our economic system and our planetary system are now at war. Or, more accurately, our economy is at war with many forms of life on earth, including human life. What the climate needs to avoid collapse is a contraction in humanity's use of resources; what our economic model demands to avoid collapse is unfettered expansion. Only one of these sets of rules can be changed, and it's not the laws of nature."* (p. 21)

Thus, instead of educating students with marketable job skills to grow our current economy, we need to figure out how to educate students who have the knowledge, skills, and character needed to totally transform our economy so as to save the planet—while simultaneously revolutionizing our political systems (Dietz & O'Neill, 2013; Klein, 2014; Lifton, 2017; Nelson, 2016; Orr, 2004). For centuries, citizens have grumbled about politicians selling out to the demands of big business, but civilization has now reached a tipping point at which any more selling out puts the livability of the planet and even the survival of humanity at enormous existential risk (Klein, 2014). What kinds of leaders and citizens must public education in the U.S. and other nations be developing, if we want to make the giant "swerve" needed to create a healthy, fair, and sustainable world? I don't pretend to have all the answers to that question, but it seems clear from history that it won't come from blindly following the wishes of CEOs and

continuing to surrender public education to the narrow and unhealthy focus on developing marketable job skills.

Problems with Making "Global Competitiveness" the Central Priority for a Nation and its Public Education System

In the United States, leaders from both major political parties have emphasized that their concern about test scores and marketable job skills are all due to their overarching goal of "global competitiveness." This framing of the purpose of the lives of individuals and nations—to win at competitions against others—fits perfectly with the competitive zero-sum mindset of so-called "free market" capitalism. However, as noted above, solving our global environmental problems requires a fundamentally different economic model, one that is marked by broadly shared prosperity and profound global cooperation with respect to taxation and regulation, especially with regards to regulating environmental impacts (Dietz & O'Neill, 2013; Klein, 2014). For example, we now know that the existence of poverty makes people living in poverty susceptible to letting their land or resources be exploited by corporations in ways that have profoundly negative environmental impacts (Klein, 2014). And we also know that environmental disasters anywhere on earth (deforestation of the Amazon, drought in Syria) tend to have widespread negative impacts globally. Thus, it is in the best interest of all of us to eliminate poverty worldwide. Furthermore, there is abundant and robust research showing that higher levels of inequality in societies result in much higher levels of social dysfunction (Wilson & Pickett, 2009). Unfortunately, the design of free market capitalism ensures increasing such inequality to staggering levels (Ehrenreich, 2016; Stiglitz, 2012). Therefore, reducing poverty and inequality so as to have healthy societies and a healthy planet appears to require progressive taxation, effective regulation, and a willing sharing of resources—all of which are opposed by the competitive and materialistic mindset of capitalism. In short, we have entered a new era that demands much less competition and selfishness, and much more caring and cooperativeness—so preparing students for global cooperation must become one of public education's highest priorities.

Happily, the research is quite clear that competitiveness and cooperativeness are both learned behaviors (Kohn, 1992). Even in times of scarcity, people (or animals) can either cooperate or compete against one another, depending on how they have been raised. It is worth noting that on an increasingly hot and crowded planet, inducing a cooperative mindset reduces anti-social actions and violence, while increasing pro-social behaviors: Not surprisingly, a competitive mindset reduces prosocial behaviors and increases anti-social behaviors and violence (see Kohn, 1992). Thus, promoting an inclination towards global cooperativeness will not only help us achieve our critical environmental goals for the earth, it will also help us to keep the social fabric strong, and to have healthy communities and democracies.

Limitations

The foregoing analysis reflects well robust research findings in educational research, developmental psychology, economics, political science, and environmental studies, but it still represents a specific perspective on educational goals. Although rarely discussed openly, all sets of educational goals and all judgments of educational effectiveness ultimately reflect some perspective on the good life, the good society, and the qualities in students that help achieve those larger goals. This analysis is clearly grounded in a perspective that believes that education should focus on the full range of goals we value most for children rather than the narrow range of academic objectives in a few subjects that can be reliably quantified on standardized tests. This analysis is also grounded in the moral perspective that education should be aimed at making the world a better place for everyone. Finally, this analysis is grounded in both the perspective and the evidence suggesting that although free market capitalism has achieved many remarkable things, it has too often done so by simultaneously eroding the foundations of our future successes. From my readings, converging psychological, sociological, economic, political, and environmental research is clearly indicating that we must replace free market capitalism with a healthier model very soon—for the sake of today's children and future generations.

However, others will have different interpretations of the good life, the good society, the causes of humanity's current struggles, and of the role of free market capitalism or other forces in causing those problems. Those with very different perspectives may consider this analysis wanting, or one-sided.

Discussion

American public education is filled with talented, hard-working, and talented individuals, and the public schools are not failing at their assigned mission, a misleading critique that has been repeatedly leveled by the American business community and that I have rebutted at length (Wheatley, 2017). However, like sending brave and skilled soldiers to fight the wrong war, American K-12 educators have arguably been sent on the wrong mission, a mission that reflects an unhealthy set of overarching goals.

It was no accident that the CEOs and billionaires who have largely taken over American public education first waged an intensive media campaign in order to control the narrative around public education, and especially around the goals of education (Emery & Ohanian, 2004; Lakoff, 2004; Ravitch, 2010). Thus, Americans have now been inundated for decades with talk of "higher standards, measurable objectives, higher student achievement, marketable job skills, and global competitiveness." This framing of education goals was a part of the larger effort to "run public schools more like a business" (Emery & Ohanian, 2004) and to make public education increasingly serve the agenda of expanding free market capitalism.

For centuries, developed nations have followed a more-or-less capitalist economic model that solved certain problems brilliantly for some people and in

some places, but created terrible problems for other people and in other places (Klein, 2007), while simultaneously destroying the web of life that our very lives depend upon (Klein, 2014). The collateral damage from industrialized capitalism has been steadily building up in societies and in the planet, with symptoms including vast inequality, unbearable debt, disease, wars, terrorism, the sixth extinction, and climate disruption (Ehrenreich, 2016; Klein, 2007, 2014; Kolbert, 2014; Stiglitz, 2012). We can see these warning signs even in the citizens of the richest and most powerful nation the earth has ever known, as poor health is rampant and epidemics of anxiety, depression, drug abuse and suicide have appeared. Many struggling American families work multiple jobs but still cannot pay the bills, and as with many other western democracies, our government is now largely controlled largely by billionaires and corporations and pays little attention to the needs or wishes of "we, the people" (Ehrenreich, 2016; Hacker & Pierson, 2010). Like an ancient coal-fired power plant, free market capitalism has helped us achieve remarkable things in centuries past, but it has done so by incurring very high costs that are totally unsustainable in the long run. Most disturbingly, and despite all the wonderful new technologies our economy produces each year, the foundations of a healthy civilization—healthy individuals, strong families, economic security, broadly-shared wealth and power, responsive governments, and a healthy planet—are being rapidly eroded. In short, human civilization is rapidly approaching dangerous tipping points, and to have a livable planet and healthy societies, scientists have made it very clear we need to make a giant swerve in direction very soon (Klein, 2014; Lifton, 2017).

However, our own education and our public education systems (at least in the United States) have not prepared us with the knowledge, skills, values, beliefs, or habits needed to successfully navigate these challenges. Instead, a narrow focus on test scores, marketable job skills, and competitiveness against other individuals and nations has developed in too many of us precisely those personal qualities that get in the way of solving the biggest problems facing humanity, while leaving badly underdeveloped the qualities that we need the most. We know well how to grow the economy, but we are uneducated in the task of transforming and shrinking the economy so that if obeys the laws of nature. Thus, the peaceful and healthy transformation that we need in society must be accompanied by a simultaneous revolution in the form and content of public education. To the extent that the United States remains the most powerful nation on earth, it is especially critical that this healthy and peaceful transformation gets underway very soon in the United States.

Implications

In terms of research implications, this analysis suggests that educational research should focus less on what methods yield the greatest gains in the short-term (under two years) on achievement tests in a few subjects, and instead should focus more on long-term effectiveness for the goals we value for children and our shared future. The evidence is quite compelling that the direct instruction methods that are demonstrably superior for achieving short-term test

score gains (i.e., "student achievement") are also demonstrably inferior for achieving the full range of goals we value most, whether we are talking about early reading instruction or education in general (see Coles, 2003; Kohn, 1999; Wheatley, 2012a, 2012b, 2015a). Such a shift in educational research will require sacrificing some statistical reliability in order to achieve much better real-world validity. However, it's critical to remember that the hallmark of good science is not using a specific research method or maximizing the reliability of one's data, but rather, using those research designs and methods that are best suited to the phenomena at hand. With that in mind, if we wish public education to serve the broad and long-term goals we value most for children and the planet, we will need a different kind of educational research, one focused squarely on those broader outcomes and much longer-term effects. And we must do so even if some of those outcomes are not easily "measurable."

In terms of policy implications, People frequently wonder about the most effective way to enact a major transformation of systems such as public education, and the present analysis suggests that one of the most promising sites for intervention is reframing the top priorities of public education. Success in policy advocacy depends to a large degree upon controlling the terms of the debate (Lakoff, 2004), and given that systems are oriented towards achieving their goals, regaining control of the framing of educational goals may be the most important aspect of education advocacy. Fortunately, progressive education has provided a strong model for broadening the goals of education while achieving better overall student outcomes, practicing democracy, and better preparing students for improving the world (Chamberlin, Chamberlin, Draught, & Scott, 1942; Kohn, 1999; Meier, 1995; Meier & Gasoi, 2017; Nelson, 2016; Walberg, 1986). However, because most educators and researchers have been trained to judge effectiveness in terms of short-term test scores gains, and misleading language such as "student achievement," my experience has been that most educators and researchers are unaware of the broad and long-term superiority of such progressive methods. Others need to learn about this evidence.

What about implications for American schools and classrooms? Let's imagine for a moment that the mission of American public education was framed as being about healthy whole-child development, healthy and well-rounded individuals, wise and active citizens, ethical and skillful workers/leaders, careful environmental stewards, as well as promoting global cooperativeness around our biggest shared global challenges. Now imagine that these healthier priorities had been the main focus of public education in the United States for two or three decades. Replacing America's unhealthy focus on "student achievement, marketable job skills, and global competitiveness" with these healthier priorities would lead to a profound transformation of public education in the United States. In turn, that would likely lead to a profound and healthy transformation of the United States as a society and as an actor on the world stage. History teaches us that events unfold very differently when nations see others as collaborators crafting a healthy shared future than when they perceive other nations as opponents in a race for scarce resources or a battle for global dominance.

Education truly is the most powerful tool we can use to transform the world, but in order for American public education to bring about a healthy transformation of the world, Americans must first replace our current unhealthy education priorities with much healthier priorities. All our futures depend on it.

> "Establishing lasting peace is the work of education; all politics can do is keep us out of war." -Maria Montessori

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