Answer Sheet

How to reframe the education reform debate

By Valerie Strauss November 19 at 5:00 AM

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Education policymakers have successfully framed the language of modern school reform to reflect specific values — “accountability,” for example, means standardized test-based accountability, and “no excuses” means that teachers are to blame if students don’t do well. The author of the following post argues that to move past this limiting reform model supporters of public education will have to reframe the debate with language that infuses their own values of shared responsibility and empathy. This was written by Arthur H. Camins, director of the Center for Innovation in Engineering and Science Education at the Stevens Institute of Technology in Hoboken, N.J.

By Arthur H. Camins

"We are in this together," Bill Clinton told the 2012 Democratic National Convention, "is a far better philosophy than you are on your own."

Such language is what George Lakoff, cognitive scientist and linguist, calls values framing. Clinton's words and phrasing evoke two already accepted, if contested, American values: shared responsibility and empathy. These values offer markedly different framing and different solutions for education improvement than current education policy. In his new edition of "Don't Think Like an Elephant," Lakoff offers the insight that evidence will only shift public opinion and increase engagement in critical debates when the ideas that evidence are marshaled to support resonate with core values. He also reminds us that using the language of empowered idea framers– even in a critique– activates in listeners the very imagery critics seek to oppose. He advises, "Know your values and frame the debate."

The words a*ccountability, no-excuses and choice* have already been claimed and defined by currently powerful policy makers and associated with their values. Their *accountability* language evokes the authority of the powerful to direct others to improve education, but not shared responsibility. Their *no excuses* language evokes blaming teachers, administrators, students and their parents for disappointing outcomes, while deflecting attention from the need to address systemic issues, such as

the burden of poverty on children's lives and inequitable school funding. Their *choice* language evokes the individualism of "I am my brother's competitor" rather than the shared responsibility of "I am my brother's

keeper.”

Shared responsibility and empathy frame alternatives to get-tough management strategies. Recent polling data suggests that the tide of public opinion may be turning against over-testing and teacher bashing. Now is the moment for supporters of equitable, democratic public education to re-frame education improvement. Four steps can combat decades of successful framing by powerful conservatives, Republican and Democrats alike.

Step 1: Articulate contrasting language that frames the values of shared responsibility and empathy.

Step 2: Offer compelling images of the education that evoke voters’ yet-to-be realized hopes for children.

Step 3: Propose concrete examples of different solutions to achieve those hopes.

However, these steps are still not enough.

Step 4: Since improving education can only be achieved by attending to complex systems, there are no simple or cheap quick fixes. This must be said outright.

Renewed attention to the need for broader and deeper science literacy is a case in point. We are entering the third wave of contemporary efforts to improve science education in the United States. The post-Sputnik and post-Nation at

Risk waves each brought new insights and incremental improvement, but not deep, sustained or systemic success. Whether the new wave will make landfall with enough force to permanently transform the science education landscape will depend on its framing and whether we act systemically.

Without shared responsibility and empathy there is no progress.

My experiences in the early 1990's, when I led a science education improvement effort in a New York City Community School District located in the Bedford-Stuyvesant section of Brooklyn, provide an historic example and cautionary tale. We developed what we called the "no excuses" approach to improve science learning. However, those words meant something strikingly different than in today's education reform climate of externally imposed demands and blame. Most of our elementary teachers did not have a strong science background or experience with inquiry-based instructional methods. Previously, there had been little emphasis on or support for the science instruction. As a result, many teachers either avoided science instruction altogether or taught from a textbook that emphasized recall of facts, rather than conceptual understanding built through engagement in the practices of scientists. Out of frustration, I sometimes used to say, "You know, science is not an elective."

Reflecting decades later, I see that the language we used

did not frame the intended values of shared responsibility and empathy. Nevertheless, when teachers cited issues that constrained their ability to teach science, rather than say, "That's no excuse," we did something that was at the time very uncommon: We tried to eliminate constraints. Our no excuses approach was about our shared responsibility as leaders, not the now common catch phrase for unsupported demands and punishment. We did

say to teachers, “We are responsible for support. You are responsible for teaching.” *That is what shared responsibility sounds like.*

Beginning in 1990, our school district was fortunate to have had an opportunity to contribute to the development and field testing of a National Science Foundation supported science curriculum and then, when it was commercially available, implement it in all eleven of our elementary schools. The visionary reciprocal-style leadership of the superintendent, Mildred Jones, supported our efforts. She committed the district’s resources to purchase needed curriculum materials. Equally important, she advocated for inquiry-based science instruction. She used the authority of her position to say, “I am not a science education expert, but I see in this science instructional program a model for how teachers and students should be engaged in learning in all subjects.” Courageously, she did so when our schools were under pressure to increase reading and math scores. Even then, teachers and principals lived in fear of finding their schools at the bottom end of the annually published school rankings and then enduring the punishments and humiliation that came with being declared a “school under review” by the New York City Board of Education. Test pressures incentivized principals and teachers to prioritize instructional time for reading and math test preparation. However, we refused to accept the still all too prevalent idea that students in our schools– who were overwhelmingly African American and came from predominantly low-income families– had to master “the basics” before they could engage in science, social studies and the arts.

In this context, progress was not easy. Teachers had little

experience with how to engage students in active science learning and few materials to support such learning. The district had no structures to support the supply and refurbishment of materials. The leadership and support issues we grappled with twenty years ago remain with us today. The lessons we learned are still relevant.

Addressing these constraints on progress took listening to people, patience and persistence.

When teachers complained that they did not have materials to teach “hands-on” science or that their own science backgrounds were weak, rather than blame them or worse, fire them, we provided what they needed.

Teachers need high-quality instructional materials.

We recognized that the then new National Science Education Standards and Benchmarks for Science Literacy provided strong direction, but that most teachers did not

have the time, resources or expertise to translate standards into effective daily instruction. We recognized that the prevalent facts-driven textbooks were an impediment to making needed changes in content and pedagogy. In response, we adopted a science program that was based on instructional materials that were researched and developed with support from the National Science Foundation. The program included all the materials needed for student investigations and well thought out and tested pedagogical guidance and content background information for teachers. Our intent was not to use the program as a rigid script, but instead as malleable guide

program as a rigid script, but instead as malleable guide and model. We tried to balance direction and autonomy. *This is what empathy looks like.*

We changed course when evidence led us to question our original assumptions. For example, in the beginning, to save money we asked teachers to share instructional materials, but quickly found that this was a substantial logistical challenge and limited instructional flexibility. We eliminated that obstacle, by purchasing enough materials so that teachers could keep the science supplies in their own classrooms for a given period of time. In addition, we examined the history of previous science education reform efforts and learned that when restocking consumable materials was left to the efforts of individual teachers or schools, over time, supplies were depleted and therefore science instruction was undermined. As a result, we established a centralized science materials rotation and refurbishment system for all schools. Based on a pre-determined schedule, science "modules" were collected, restocked and then delivered to another teacher in other schools. Classrooms received what they needed when they needed it in time to teach. Our rotation system was designed to swap between teachers in different schools to facilitate the school level collegial interaction and support teachers wanted. When teachers let us know that time and resources to duplicate printed student materials was challenging at the school level, we assumed that responsibility at the district level. We did the printing for them. *This is what shared responsibility looks like.*

Teachers need support for professional growth.

Listening to teachers and principals, we learned that their expectations regarding new programs were framed by their prior experiences with “drive-by” professional development and fleeting, “program of the year” district priorities. So, we established a multi-year professional development program that included three-week summer institutes, school year and after school sessions, and in-class support. In the beginning of our implementation, I was the sole district-level support and coordinator for K-8 science education. Because we listened to teachers, we realized that we needed to overcome their distrust of district administrators “here to help.” That required building trusting professional relationships. In response, we hired additional professional development staff with support from a grant from the National Science Foundation. We ensured that in-class support was seen as coaching for improvement, rather than monitoring for compliance. We also knew that external support would not

ensure sustainability, so we established a program to develop and support teacher leaders so teachers could support one another. We also engaged principals and assistant principals in professional development so that they could support teachers as they wrestled with the sometimes, difficult early stages of adopting new practices and an unfamiliar curriculum. *This is what shared responsibility looks like*.

Leaders need to offer patience and empathy.

We learned the value of patience and empathy. Our staff developers learned to accept and act on the emotional roller coaster that came with personal contact with

teachers whose progress along the continuum from novice to expert science teacher was highly variable. Almost all were well intentioned and hard working. Some made leaps and some made very small steps.

Our non-threatening approach and consistent multi-year support did not result in compliance behavior. It resulted in shared professional investment. Did a few teachers find excuses to not teach science? Sure, but the vast majority of teachers welcomed the heretofore, unavailable science materials and the previously unheard of continuity of professional development. Teachers implemented the program, many mechanically at first, but over years of practice and support many developed solid expertise. In the natural engagement that active science learning catalyzed, they found unrealized motivation and potential in struggling, previously disengaged learners. *This is what progress looks like*.

We can only solve complex problems with complex solutions.

I located and contacted one of the participants in our National Science Foundation project, Harold Barber, who entered as a teacher and eventually became a teacher leader, science staff developer and adjunct education professor. He recalled:

> Science in the Seamless Day [NSF project title] opened up many great educational opportunities for me. I began to grow and push the boundaries of what good educational instruction should look like. Students need to be engaged in meaningful

like. Students need to be engaged in meaningful activities that tap their curiosity and inquiry skills. It's unfortunate that the current system is still caught up in test scores. I haven't seen a real thrust with science since our days in District 16.

His comments reflect the power of shared responsibility, but also the limitations of non-systemic solutions. We attended to elements of our subsystem, but could not control the complex larger system. As a result, we made progress, but it was not sustained. Ultimately, our efforts were interrupted and the gains we made eventually withered. The first blow–an all to common occurrence in urban districts– was the non-renewal of the superintendent's contract. She ran afoul of the more parochial interests of several school board members. In a new decidedly hostile atmosphere, I left too. The leaders we developed hung on for a time, but without strong support it became impossible to sustain the momentum for science instruction in the face of new system-wide instructional and financial priorities and escalating pressures for improvement of reading and math scores.

Improving science teaching and learning cannot occur in isolation. It functions within a web of complex systemic problems that can only be solved… well, with complex solutions. The superintendent's evocation of a model of active inquiry-based learning fell victim to escalating test preparation pressures, just as the community sought to recover from the twin plagues of the crack epidemic and economic dislocation.

In the intervening years that engaging children in the practices of scientists as a vehicle for learning has gained

more traction, although it is by no means ubiquitous. The Framework for K-12 Science Education and the Next Generation Science Standards provide additional impetus, clarity and direction. However, they point to substantial reorientation about the goals of science and engineering education, changes in instructional practices, topic sequence and depth. Such transformative change never emerges quickly. The standards provide direction, but they cannot do the work. They do not provide the long-term professional development or new instructional materials teachers will need. They do not solve the still unaddressed systemic constraints on improvement. Poverty continues to mar children's lives.

Shared responsibility, empathy and systems thinking are not new ideas, nor are our lessons learned new discoveries. Reading this article, many, teachers and administrator may think, "What's so special, we do all of that." Indeed, these values and practices are thriving in many places across the country. However, they are still not the norm. Too many others continue to work in conditions in which "no excuses" only applies to test-measured results and not the empathy, shared responsibility and systemic supports needed to get better results.

We are better than that.

Postscript: Improving science education poses an additional challenge because science itself is a contested value. The discipline of science represents the idea that knowledge is not absolute or based on authority, but rather it is subject to revision based on evidence. One of the contributing factors to the waning of our improvement efforts was our lack of attention to building community

support for that idea. Parents did not rise up to say, “You can’t take that away from my children.” We need to rebuild public support for the idea that science and engineering are powerful tools for solving our most pressing problems when combined with the values of shared responsibility and empathy.

Valerie Strauss covers education and runs The Answer Sheet blog.
