Do We Have the Will to Educate All Children?

If we embrace a will to excellence, we can deeply restructure education in ways that will enable teachers to release the full potential of all our children.

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Between 1953 and 1955 a young instructional assistant at Cornell University was completing graduate work. Abdulalim Shabazz was frequently selected to serve as a teacher or tutor to his peers when his professors could not be present, because, as he puts it, "I was blessed with a logical mind and an inclination to make things simple, plain, and real." This was nothing new for Shabazz. After all, he had graduated during the segregation era from the famous Dunbar High School in Washington, D.C., an African-American high school, which had produced some of the finest scholars in the history of the United States. There, too, when his mathematics teacher had to be absent, Shabazz was often called upon to take over the class.

Later Shabazz would earn his doctorate in mathematics and would serve as a faculty member at two historically black institutions, Atlanta University in Georgia and Tuskegee Institute in Alabama.

"Give Me Your Worst Students"

One period of his illustrious career as a research scientist and professor is of particular interest. During the years between 1956 and 1963, when Professor Shabazz was chair of the Mathematics Department at Atlanta University, 109 students graduated with master's degrees in mathematics. Thereafter, more than a third of that number went on to earn Ph.D. degrees in mathematics or mathematics education from some of the best universities in the United States. Of considerable significance is that many of them (the 109) produced students who also earned Ph.D.s in mathematics and mathematics education. It is estimated that nearly 50 percent of the present African-American mathematicians in the United States (about 200) resulted either directly or indirectly from Atlanta University's 109 master's degree recipients during the seven-year period from 1956 to 1963. This is an extraordinary record. Shabazz, directly or indirectly, is linked to the production of more than half the African-American holders of the Ph.D. in mathematics. That fact alone would be worthy of note. What is even more
Many professional educators are quick to insult the skill and hard work of such teachers as Escalante and Shabazz by labeling them "charismatic."

4. to have students believe as he does that mathematics "is nothing more than a reflection of life and that life itself is mathematical." He wants them to know that the symbols used in mathematics approximate the reality of human experience and cosmic operations;

5. to give his students a sense of hope that they can become superior performers.

Shabazz also emphasized teaching his students problem solving and, then, just as important, perhaps even more so, teaching them the skill to "write up" what they had done "in a beautiful way." When his students did this, and most did, he would point out to them that they had, after their deep study, "seen things that had not been there before," that they had actually seen what mathematics is all about, not merely the manipulation of numbers but perceiving "patterns." Shabazz's overall goal was to involve students in being mathematicians, not merely learning recipes.

Shabazz bristled at the thought of teachers who "taught down" to students, even those with a history of low academic performance, "treating them like babies." He decreed some teachers who start the year by announcing to their class that "at least one-half of the students in this class will fail." Instead, his approach was to "appeal to the intellect" of each and every student, "to their humanity," and "to their reasoning," rather than to an emphasis on the mastery of algorithms.

Shabazz lamented the fact that society in general has internalized a false paradigm about learning, especially in mathematics, that comes from late 19th century Social Darwinism. The tenets of this belief system include the idea that high levels of conceptually oriented mathematics achievement are accessible to but a few, and that even these few will not include many, if any, African-Americans, Hispanic-Americans, and certain other cultural minority groups.

Shabazz mentioned in passing, almost apologetically, that he had never had a course in teacher education.

"Practice, Practice, and More Practice"

Another example of successful teaching of minority students is the work of Jaime Escalante at Garfield High School in Los Angeles (Escalante and Dirman 1990).

During the past 10 years at this one high school, more than 500 students, mainly Hispanic, mostly low income, have been taught well enough that they passed the Advanced Placement SAT Calculus test. How many other high schools in America can boast of such a record, "inner-city" or not?

I am impressed by what Jaime Escalante, the catalyst on the faculty, had to say about his approach.

I do not recruit these students by reviewing test scores or grades, nor are they necessarily among the "gifted" or on some kind of "high IQ track," because believe that tracking is unworkable and unproven as a guarantee that students will be challenged into the program of classes best suited to them. My sole criterion for acceptance in this program is that the students want to be a part of it and sincerely want to learn math.

in 1979, when junior high school teachers would tell me, "Take Johnny, he's gifted in
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There is no shortcut for minorities at Garfield High School. In order for students even to sit for the AP exam, they must have completed Algebra I, Geometry, Algebra II, Trigonometry or Math Analysis, and Calculus for first-year and/or Calculus for second-year college. Some students also take analytical geometry or a precalculus program during the program. Most had never taken algebra prior to the program.

In spite of their astonishing success, Escalante and his colleagues found themselves, like Shabazz, struggling with the system. This teacher with an extraordinary track record was fighting Escalante and his colleagues found themselves, like Shabazz, struggling with the system. This teacher with an extraordinary track record was fighting...
have the capacity to conceive of these teachers of excellence as our models? I want us to engage the problem of how to structure an approach to education that aims to release the genius that is common in the masses of our children, just as these good teachers do! First, we must believe that the genius is there. Do we really believe that it is? It is hard to take seriously the idea that the masses of our children are geniuses when we embrace the wrong pedagogical paradigm—in spite of new rhetoric to the contrary. We have maintained historical commitment to the same paradigm that we had when public school education began in the U.S., ascribing genius to a select few. We have embraced a related prediction paradigm that tells us that the major task of assessment professionals is to forecast future performance, not to assist with problem solving in teaching and learning. We have continued to embrace the tracking paradigm. Even when children have been untracked organizationally, in our minds they remain “gifted,” “average,” and “retarded.” Otherwise our national achievement results would leave us with a greater sense of urgency than we now manifest.

Research on Infants and Complex Thinking

Sometimes, where educators are concerned, I wonder if the real meaning of the research findings on infant thinking has begun to sink in. Think of all the years that we have thought about thinking. For many of us, the model for human thought included the false concept of tabula rasa or the “blank slate.” Many of us were taught in teacher education that infants were not really capable of thinking complex thoughts, which were regarded as the result of maturation and long-term nurturance. One famous researcher on infancy told a Chicago audience of early childhood educators that “there just isn’t much there until babies are six-months old.” What has become increasingly well documented, however, is that while maturation and nurturance may explain some aspects of thinking, teaching, and learning, babies start from a cognitive baseline that is nothing short of awesome. In the November 1990 issue of the American Psychological Association Monitor, Lori Denton reported:

Contrary to the findings of developmental psychologist Jean Piaget, infants as young as three-and-a-half-months old understand some of the physical and spatial properties of objects hidden from view, according to Rene Baillargeon of the University of Illinois. She found that even very young infants share the physical reasoning ability of adults! They understand that objects continue to exist when hidden, that they cannot move through the space occupied by other objects, and that they cannot appear at two separate points in space without traveling from one point to the other (Denton 1990, p. 8, italics mine).

In reading about Professor Baillargeon’s work, I recalled the wonderful book Children’s Minds. In that book, Margaret Donaldson (1978), a cognitive psychologist, demonstrated that by constructing more sophisticated and appropriate tasks for infants and young children, it was possible to demonstrate that they reach standard levels of intellectual development months and years earlier than suggested in the research of Piaget. In other words, our judgment about the level and complexity of the mental functioning of infants was, in many cases, based on data that were artifacts of the form in which interrogation proceeded that it was a true representation of what infants could do.

In her experiments, Baillargeon used visual tasks rather than the manual search tasks Piaget used, reasoning that infants might perform poorly not because of their misunderstanding about hidden objects, but because they have limited ability to plan and execute the search task. In another series of experiments, she found that infants learned to solve qualitative problems before they learned to solve quantitative problems. That infants used qualitative strategies to assess the effect of quantitative variables because they cannot reason quantitatively about them. The inability to reason quantitatively has little to do apparently with mental ability and more to do with the possession of accumulated experiential content upon which quantitative reasoning can be performed. That is a matter of time and exposure, not intelligence (Denton 1990, p. 8, italics mine).

One of the highly significant things about the research is that the infants are examined at a stage in their development prior to the impact of inequitable cultural socialization. Baillargeon then delivers the bombshell:

“*No matter what their socioeconomic background, race, or gender, babies of similar ages tend to perform similarly on the basic test,*” she said. . . . Adults’ memories differ from infants primarily because they process information much more rapidly and have many more memories to make associations with,” she said . . .

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Teachers as Mediators of Students' Potential

I have been convinced for a long time that the meaning of the findings of this type of research, when considered in the context of the powerful teaching performances of such teachers as Shabazz and Escalante, is that there is a universal genius among human beings. Teachers are the mediators who provide or fail to provide the essential experiences that permit students to release their awesome potential.

We all have enormous mental capacity to do the things required of us in either a high-tech or a low-tech society. There simply is no reality base whatsoever for the pessimistic attitude about human potential that is so widespread.

In other words, the ubiquitous question about the intellectual capacities of students, which has preoccupied American educators for the past 80 to 90 years and which continues to be central in our thought structure, is for our purposes at this point virtually meaningless for powerful pedagogy! The continuing addictive preoccupation with mental assessment and labeling deters and distorts critical analysis of professional services, prevents the improvement of professional practice, and impedes the execution of valid strategies. Why can't we abandon harmful or meaningless professional practices—or replace them with valid ones?

Saying that the evidence for human genius is overwhelming is not to say that all people are identical in their abilities to do intellectual tasks. There may very well be cognitive differences among learners. However, our concern for these differences should come only after our students have reached an academic achievement level far beyond that which they reach now. Our current ceiling for students is really much closer to where the floor ought to be.

The Beauty and Promise of True Restructuring

The restructuring that educators need to do, then, is much more a matter of theory, philosophy, perception, conception, assumptions, and models than it is a matter of rearranging the technical and logistical chairs on the educational Titanic. It is not a matter of the amount of time, of middle schools or junior high schools, of site-based management, of schools of choice, of behavioral objectives, of access to technology. Deep restructuring is a matter of drawing up an appropriate vision of human potential, of the design of human institutions, of the creation of a professional work environment, of the linkage of school activities and community directions, of creating human bonds in the operation of appropriate socialization activities, and of aiming for the stars for the children and for ourselves academically and socially.

Just as there is a vast untapped potential, yes, genius, among the children, there is also a vast untapped potential among the teachers who serve the children.

The fundamental problem in deep restructuring has more to do with aim and appropriate practice than it does with additional resources. If we apply criteria from deep restructuring to existing practice, we will surely find and eliminate gross misuse of precious physical and human resources. Who could deny, for example, that we have wasted incredible resources trying to answer the capacity question for the past 70 years and that, in doing so, we have used the results so as to cripple the capacity of schools to serve the children? In addition, we have dragged professionals into practices that are not only inappropriate but professionally unrewarding, debilitating, de-meaning, and depressing as well.

The beauty and promise of true restructuring is that it will provide us with the opportunity to create educational systems that never have existed before, not because they were hard to create but because we have not yet made manifest the vision or tried to create them. If the 1990s is to offer anything to education, it would be a new vision of what it is that we are supposed to do and a new commitment to create educational systems that prepare students both for their economic role in society and for their social, intellectual, and spiritual enhancement as well.

For example, I have long wondered why it took us so long to "discover" cooperative learning, an approach that is well known among many peoples in the world, and why, once "discovered," it has become so difficult to execute. At least one reason must have to do with the fact that we do not have a cooperative philosophy in the general culture. The pervasive commitment to vouchers and school choice certainly does not suggest a cooperative but, rather, a competitive philosophy. We no longer accept, it seems, the idea that we are our brothers' and sisters' keepers.

Tapping the Potential of Teachers

While I am convinced that a large part
To restructure, we must first look deeply at the goals that we set for our children and the beliefs that we have about them.

The risk for our children in school is not a risk associated with their intelligence. Our failures have nothing to do with IQ, nothing to do with poverty, nothing to do with race, nothing to do with language, nothing to do with style, nothing to do with the need to discover new pedagogy, nothing to do with the development of unique and differentiated special pedagogies, nothing to do with the children's families. All of these are red herrings. The study of them may ultimately lead to some greater insight into the instructional process; but at present they serve to distract attention from the fundamental problem facing us today. We have one and only one problem: Do we truly will to see each and every child in this nation develop to the peak of his or her capacities?

If our destination is excellence on a massive scale, not only must we change from the slow lane into the fast lane; we literally must change highways. Perhaps we need to abandon the highways altogether and take flight, because the highest goals that we can imagine are well within reach for those who have the will to excellence.

References


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