



Is It Possible To Educate All Children?

(Based on the Status Quo, No.)

Don Berg, Founder of Schools of Conscience

All children are mandated to attend school in the United States of America, and in most countries of the world.

So, at least on the face of it, there is an assumption embedded in this universal policy that they are all expected to be educated. But, is educating all children even possible?

Linda Darling-Hammond, in the preface to her 1997 book *The Right to Learn: A Blueprint for Creating Schools That Work*, wrote:

“Rigid and bureaucratic, [our current education system] was never designed to teach *all* children effectively, to teach learners in all their varieties, to attend to each child’s particular mix of aptitudes and barriers to learning. Educating all children effectively is the mission of schools today, yet great numbers of children still have no reasonable opportunity to acquire the knowledge and abilities that will help them thrive in and contribute to today’s society.”

As Linda Darling-Hammond points out in the quote above history has rendered judgments about the outcomes of our school system that do not reflect well on our record of success, assuming that the goal is to educate all our future citizens. Historically there have been (and remain) large segments of the United States population that have been educationally neglected despite the mandate to attend school. Since we've never succeeded before, is it even reasonable to consider it possible? I will argue that if we continue to enforce the delivery of instruction in the same way that it has been done for thousands of years, then the answer is no, it is not possible to educate all children. I will further argue that the answer could be yes, if we take seriously an approach to educating children that is grounded in the current scientific understanding of how the satisfaction of human needs *causes* effective and efficient learning.

Let's put this in perspective. According to Eric Haas, Gustavo Fischman, and Joe Brewer in their book *Dumb Ideas Won't Create Smart Kids*, education has been viewed for over 4,000 years as delivering instruction. But for most of that time it was about educating an elite few in society, and what they had to learn was basic by today's standards. In the ancient past our intuitions about the world were good enough to get by, both as individuals and as a society. In that context educational efficiency was irrelevant. If society needed more educated people, the solution was to push more people through the school system. The ones that failed to attain mastery were still marked by the privilege of having attended school. When they were given symbols to indicate

successful completion of school they did not even realize that they had been cheated, since the symbols of completion have usually been enough to get them good jobs.

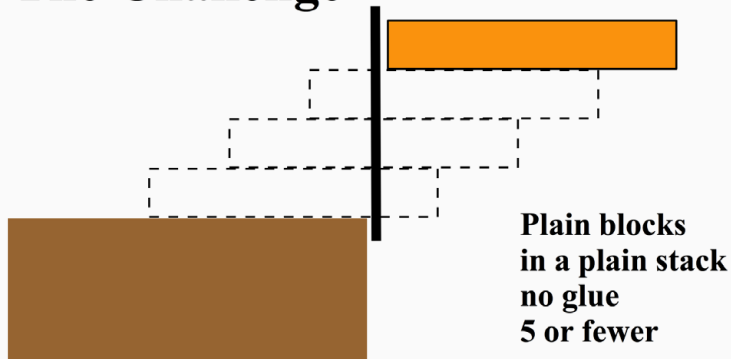
A little over 200 years ago, we in the U.S.A. began to adopt democracy. About the same time, the European and American scientific communities started generating more accurate causal models about the physical world, models that usually violate our intuitions. And within 50 years of the development of our democracy, schooling was promoted as the central protection of our democratic way of life. The best theories of democracy say that the more educated our citizenry is, the better we will be at making good decisions together. Because of the complexity of our society at this point in time, the decisions we have to make today require scientific, mathematical, and technological understandings that are inherently counter-intuitive. The success of our society to date has been the result of educating *enough* children, not of educating *all* of our children. With the rise of computing technology and globalization since World War II, the old foundations for success as a society have deteriorated. Educating a small class of elites to wield power is no longer enough. The globalized democratic systems that are arising require sophisticated understandings of the world in order to function well, and those understandings need to be widely distributed. This requires our schools to educate masses of citizens to participate meaningfully in effectively shaping policies that productively constrain the behavior of power-wielding elites.

Democracy and education are difficult to visualize, so let me illustrate the situation of schooling more concretely. Imagine that we are building with blocks. Our ancestors came up with the brilliant idea that in order to be the kind of society we want to be, each individual has to make a stack of blocks in the following way:

- On a table top
- Using only unsecured rectangular wooden blocks that are identical to each other
- Stack a set of 5 or fewer such that the top block is clearly not overlapping the surface of the table.

Now imagine that, based on all the block stacking experience of our ancestors and the best available theories, we have inherited the notion that it is possible for every person to accomplish this task with just four blocks. We have been operating for over 150 years as if we must each use a set of four blocks to achieve the goal.

The Challenge



And yet achievement of the goal has been a crap shoot using just those four blocks. Our theories clearly tell us it is possible, but even under the best of circumstances individuals succeed less than half the time. A small group fails to make any stack at all. A slightly larger group makes stacks of just two or three blocks with the top block clearly overlapping the table thus failing to meet the most basic criteria. Finally, a lot of people make a stack of four blocks giving the impression of success, but if the full criteria are properly applied, it turns out most of their successes are inadequate. Over half of all our citizens fall into one of these three groups of failures.

We know the rate of failure to educate is under 50% because of the combined rates of dropping out, failing to achieve, and fauxchievement. Fauxchievement is when someone goes through the motions in order to look good on the terms set by the system but fails to attain mastery. In traditional schools these are the students who appear to achieve but fail to master their subjects. The best-selling author and Harvard psychologist Howard Gardner in his 2004 book *The Unschooled Mind* cites numerous studies showing that, across all disciplines, there is a majority of people with advanced degrees (bachelors to doctorate) that cannot solve the most basic problems in their field of specialty when the problems are presented to them in a way that is different from how they were tested in school. When taken together these three modes of failure give any random individual more than a 50/50 chance that the system has cheated them out of some or all of the education they deserve.

This is the situation of our education system. For over 150 years we've been applying the ideas of industrial control to organize instructional delivery as our means to maintaining our democratic way of life. The current industrial control system starts by mandating that all children must attend school. All those schoolchildren are then made to endure the delivery of instruction. They are presumed to develop capabilities in the areas in which they are instructed. And finally, mandatory instructional bookkeeping, in the form of grades and test scores, accounts for their acquisition of instructional content.

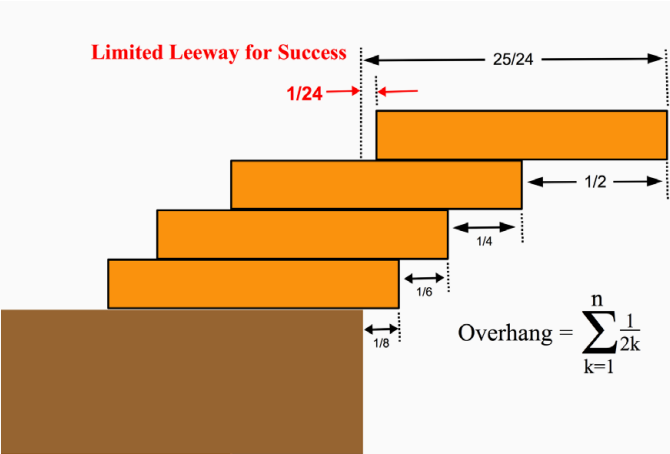
This impressive system of controlling the behavior of teachers and children has consistently failed to educate over half of the individuals subjected to the system, although the society as a whole has done a respectable job of succeeding in the world. So far, less than 50% has been enough.

“ The globalized democratic systems that are now arising require sophisticated counter-intuitive understandings of the world in order to function well. And those understandings need to be widely distributed.

Based on over 150 years of experience, it might be tempting to conclude that the aspiration for all children to become educated is impossible, and even unnecessary. But let's return to the blocks for a moment. After repeatedly observing many individuals failing to stack four blocks to meet our criteria, it is easy to conclude that getting everyone to achieve the overhang required for the top block is impossible.

The diagram below includes a mathematical formula that proves that a stack of four blocks can achieve the effect. The thing about it is that it is an idealized version of the problem.

It does not take into account the possibility that unnoticed variations among the blocks or the tables on which they get stacked may exist. We only have 1/24th of the length of the top block as leeway. The fact is that the unseen variations we encounter in the real world might take up that very limited amount of leeway. And the more that real world variations eat up the 1/24th, the more likely we are to fail.



The mathematical ideal also does nothing to inform us about how to do the stacking. If the procedure to achieve this outcome is too complicated, then it might just be beyond most people after all.

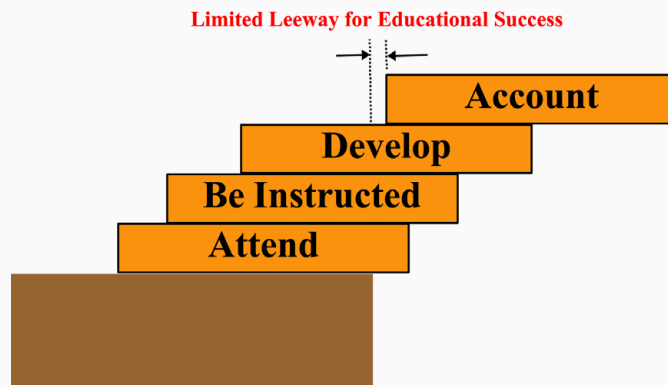
So, let's be clear about the four blocks that we have traditionally provided to students in our education system (and continue to do so):

The base block is the mandate that students attend school. (Attend)

The second block is the wide-spread expectation that students endure instruction. (Be Instructed)

The third block is the assumed development of student capabilities. (Develop)

And the top block is the mandated accounting of the instructionally generated outcomes: test scores and grades. (Account)



We know from the educational theories we've inherited that the four-block sets we equip our schools with should enable every child to meet the constraints that are required for our democratic way of life. And yet, our school system consistently fails to reliably educate most of our citizens.

Until the recent fads for high stakes testing and standardization, most schools had a lot of leeway to try out their own methods of attacking the challenge. With over 132,000 schools in the USA serving about 58 million children, probability dictates some will discover an effective procedure. But unlike stacking blocks, in the realm of education there has not been an equivalently easy way to demonstrate or describe precisely what actually works. So the procedure remains obscure and the rate of successfully educating individuals is quite poor, with privileged people reaping most of the benefits of the skewed distribution of results.

Let's broaden our view of the challenge we are attacking such that we reject constraints that are merely "traditional" and are not strictly required by our goal. Psychology provides us with a couple of principles we can use to re-think the nature of the problem. My studies in psychology have focused on motivation in educational settings. What we have learned in this field is that the bottom two blocks, while they seem intuitively correct, do not accurately reflect the causal reality that leads to the development of capabilities that we expect students to gain from instruction.

The truth is that the development of the capabilities we want do not require instruction. What is required is support for learning. When learning is properly supported, then it becomes more effective and efficient. It is a tremendous source of wasted time and energy to provide instruction that will only be received by students who will process it ineffectively and inefficiently. Simple respect for skillful instructors should dictate that they be put in front of students who are prepared to make good use of the instructors' efforts.

So, the first change we make is to substitute "Support" for "Instruct." Instruction is one way that learning can be supported, but it is not the only way. To be accurate, we must think in terms of "supporting learning," not in terms of "providing instruction."

Next we have to reconsider the mandate of attendance. Will mere attendance lead to the support of learning that we know will lead to the development of the capabilities we want? No. Once again the science of psychology is clear that the necessary prerequisite to successful support of learning is for the learner to be in a state of well-being. Effective and efficient learning is not possible unless well-being is assured.

Let's drop "attend" and put in "well-being." A student who is experiencing a state of well-being will seek out support for their learning.

They might not seek out instruction, but they will seek for some kind of validation and support for the behaviors, ideas, and understandings they are exploring.

This makes it clear why the skew of results favors the privileged. Wealth and social standing contribute to well-being; poverty and isolation contribute to ill-being. A severely impoverished child lives in an environment that compromises their physical and mental well-being.

Just the anxiety that accompanies poverty is a severe challenge for learning. Merely attending a school that removes the detriments to their well-being will improve their lives. This is the most likely source of the success of schools that take a “no excuses” approach to serving impoverished children. But even with the elimination of some of the time spent in detrimental environments, mere attendance is not enough to achieve the outcome of educating them.

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Something more is required. The fact that students from “no excuses” schools are frequently unable to get through college supports this point. Those students left the ranks of those cheated by dropping out or failing to achieve and joined the ranks of those citizens cheated by faux-achievement. The “no excuses” approach continues to use the same fundamental assumptions about the roles of attendance, instruction, and instructional bookkeeping and still has the same systemic tendency to undermine the cultivation of true mastery. The system still cheats most of them out of a proper education even if they are now getting the symbols of school completion.

We have to add a new base block, a new foundation, to our structure for educating our future citizens. The necessary prerequisite that causes well-being and therefore forms the proper foundation of education is the satisfaction of primary human needs. Satisfying primary human needs leads to well-being, which in turn leads children to seek support for their learning; this is how they develop capabilities for achieving relevant goals within their situation. I will return to the top block in a moment, but this is a good time to consider how we know that this new way of building up to the development of capabilities is accurate.

First, there is 30 years of research on the patterns of motivation in schools which have been using the traditional mandatory instruction idea in the industrial style. All the mainstream public and private schools studied to date show declines in intrinsic motivation and engagement.

This suggests that mandating instruction for children, who may or may not be in the right state of mind to get value from it, may be a primary cause of the failures of the current system.

In contrast, there is practical proof that another approach can produce a different pattern of results. Between 2009 and 2013 there were several studies (including one of mine) of patterns of motivation in alternative schools that maintain the intrinsic motivation and engagement of their students. The studies looked at three different types of schools which all use very different approaches, but share the characteristic of facilitating self-directed learning. In their own way each of the models enable children to make meaningful decisions about what to study and when. They make instruction an optional support for student learning, not a mandatory one.

Based on my experience with two out of the three different kinds of schools that have been shown to provide the proper foundations of education, I suggest we change how we think about the top block. The two models I studied were a democratic school and a home school resource center. They mostly reject the accounting concept and instead expect real demonstrations of learned capabilities. The accounting concept is just an overly narrow take on what is actually needed, just as instruction is an overly narrow take on supporting learning.

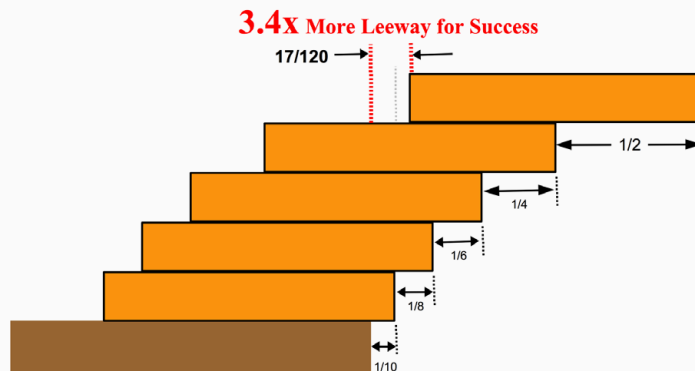
The instructional bookkeeping of test scores and grades can be useful demonstrations in the right circumstances, but we need to remember that authentic demonstrations are always superior to instructional bookkeeping.

When we add the fifth block to the literal stacking task we get 3.4 times more leeway to accommodate unseen variations in our blocks or the table.

So the solution is now set. The set of blocks that we provide to support children to make their best educational/stacking efforts should consist of:

A foundation block that is support for students to satisfy their primary human needs.

A second block that either enables students to attain well-being or reinforces their efforts to maintain a state of well-being.



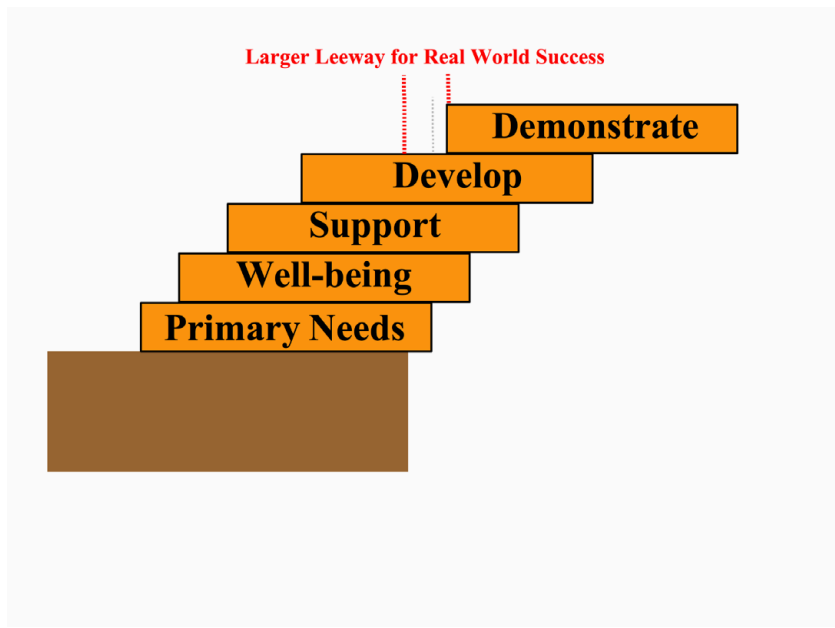
A third block that provides support for learning; this might include instruction, but not necessarily so.

A fourth block that provides conditions in which the development of capabilities is facilitated.

Finally, the top block is now authentic demonstration of capabilities, which in some circumstances might entail instructional bookkeeping such as grades and test scores.

So, is educating all children possible?

If you believe that education follows from the delivery of instruction, then the answer is no. It is impossible for all children to be educated by the method of forced instructional delivery. Our society has succeeded in spite of that fact because the overly narrow and incomplete misconceptions were close enough. But we can no longer accept the gross inefficiency that follows from those misconceptions.



In the current context of global democratic citizenship we need to maximize the educational attainments of everyone; therefore the inefficiencies can no longer be ignored.

With the humility that history teaches me, I will not claim that we can fully educate every single child. When medicine and public health were transformed by germ theory there was hope that child mortality would be entirely eliminated, but that has not been the case. However, I will claim that we will educate our children in direct proportion to how well we provide for their well-being. The analogy of block stacking above provides a new mapping of the crucial role that human needs play in education.

Recognizing that education has a foundation that we previously overlooked will enable us to make education far more reliable and consistent than ever before (and possibly less expensive). Once again looking to how germ theory transformed medicine, hospitals went from death rates of 40-80% in the late 19th century to under 7% today. With the development of the science of psychology we have discovered that the foundations of education are a little different than we intuitively supposed. If we think properly about education, as a process requiring a stable foundation in primary human need satisfaction, then we can resolve the core issues that cause the inefficiencies and inadequate outcomes we observe.

It is not enough to have another block and nice labels; the procedures for manipulating them is also crucial to success. When the full set of five blocks is used along with the right procedure, then we have the greatest chance for living our lives to the fullest both as individuals and as a society. In education, both psychologists and activists have been developing terms that refer to various aspects of implementing this new understanding. Grit, mindset, intrinsic motivation, engagement, student voice, authentic assessment, restorative justice, decisional capital and many other terms are being used to talk about ways that have been found to make education more reliable.

In block stacking, the trick is to start from the top and work your way down by pushing each block as far as it can go without falling over. In education we need to start at the bottom, with the scientifically validated causal source of education. We need to get clear about the primary human needs of both teachers and students. Then with a proper system of support for those needs, each child will build his/her education on that proper foundation. I encourage innovative schools that are already on board with this, or would like help to get on board with it, to band together for mutual aid and support. The dominant industrial delivery system is hostile to this approach (even without realizing it) and can be terminally disruptive.

The dominant system forces school innovators, like the ones I studied, to choose between public funding and remaining true to their pedagogy of self-direction. One of the schools I studied was at an earlier time a publicly supported alternative school. They chose to preserve their pedagogical commitment to “family-directed” education rather than capitulate to district pressure to impose instruction. There are numerous schools that began with the pedagogical principle of self-direction in mind but chose public funding. Almost all have been compromised or closed. The innovative models that I studied have been effectively marginalized by the system for a hundred years. The schools of the kind that I did not study and that show evidence of primary need support are all in the same charter network, so it is not all bad news. But when two out of three models are effectively excluded from public funding and all are marginal, this suggests that the space for innovation is too narrowly restricted.

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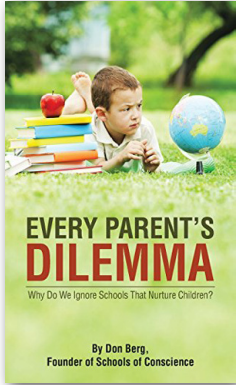
My book *Every Parent's Dilemma: Why Do We Ignore Schools That Nurture Children?* presents a policy that is necessary for protecting innovative schools from the misguided "accountability" schemes that follow from the delivery model. With a proper policy in place, we can create enough space for all the innovation that is possible, given the proper constraint that the space given is contingent on measurable support for, and achievement of, primary human need satisfaction in those schools.

This can be the basis of a meaningful trade-off: schools that show that they achieve primary human need satisfaction (the root cause of effective and efficient learning) should be relieved of the instructional bookkeeping that has proven to be an ineffective predictor of educative outcomes.

Despite the fact that it is unreasonable to assume that 100% of all children can be fully educated, I contend that we can educate a lot closer to 90% than the 50% or less that we get now. Given that the barriers to our achieving this are more conceptual than anything else, there is no reason to believe that the transformation will be particularly expensive.

All changes have costs, but I am confident that when we implement the kind of system that builds on the proper foundation we will also achieve efficiencies and benefits that are both unimaginable and abundantly worthwhile. 📖

Info



BUY THE BOOK | Get more details or buy a copy of [Every Parents Dilemma](#).

ABOUT THE AUTHOR | Don Berg is an education psychology researcher, alternative education practitioner, leader, and author. The peer-reviewed journals *Other Education* and *The Journal Of The Experimental Analysis Of Behavior* have published his research. He has over 20 years of experience leading children in self-directed educational settings. In order to build the nurturing capacity of all K-12 schools he founded [Schools of Conscience](#). He serves as an officer on the boards of several educational and political organizations. The Joyful Llama Ranch in West Linn, Oregon is his home.

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