Assessment without High-Stakes Testing

Protecting Childhood and the Purpose of School

David Mitchell, Douglas Gerwin, Ernst Schuberth, Michael Mancini, and Hansjörg Hofrichter [1]

Picture a breezy spring morning at the beach. White-tipped waves roll rhythmically up the sand, washing away footprints like a blackboard eraser on a classroom blackboard. A group of children on a school outing marches purposefully along the shore through the edge of the frothy waves. A couple of eager kids stride out in front.

The teacher walking along with the main group of the class notices that one of the boys is lagging behind. She slows her step to find out why this child is not keeping up with his class. There are several possibilities:

1. The child is unable to keep up with the group, due to some disability, physical or emotional, or simply exhaustion for lack of sleep or nourishment;
2. The child is unwilling to keep up with the group, due to a lack of interest or, perhaps, a surfeit of distractions along the way; or
3. The child does not know how to keep up with the group, possibly because he is new to this experience and has not been taught how to hold his balance against the waves.

In each of these cases, the teacher will respond differently. In the first case, she may scoop up the boy and carry him, or ply him with a quick snack or a sip of water. In the second, she may draw his attention to something of interest up ahead or coax him with some gentle words of sympathy and encouragement. Or, in the final case, she may teach him how to high-step through the waves without losing his balance. In each of these three scenarios, the teacher assesses the situation of the child—as well as her most appropriate response—by taking in the full context of his circumstances, rather than by testing his performance against a standardized norm that may threaten to exclude him from the company of his classmates if he does not speed up.

Yet, increasingly, this is what happens to students in school—whether or not they are lagging behind—as the result of government legislation enacted in 2002 under the promise "No Child Left Behind" (NCLB). Six years and billions of state and federal tax dollars later,[2] we may recognize that children don't learn faster or better by being subjected to high-stakes tests. If anything, the contrary appears to be the case.[3]

Former Assistant Secretary of Education Diane Ravitch is commonly recognized as one of the chief architects of the modern standards movement. In her book *National Standards in American Education: A Citizen's Guide* (1995), Ravitch provides this rationale for standards:

> Americans … expect strict standards to govern construction of buildings, bridges, highways, and tunnels; shoddy work would put lives at risk. They expect stringent standards to protect their drinking water, the food they eat, and the air they breathe.… Standards are created because they improve the activity of life. (pp. 8–9)

Ravitch asserts that just as standards improve the daily lives of Americans, so, too, will they improve the effectiveness of American education: "Standards can improve achievement by clearly defining what is to be taught and what kind of performance is expected."[4]

> The purpose of a test is to inform the teachers how well they are doing in their teaching.

This we may call "technocratic thinking," thinking that sees society as a problem to be solved, that approves technological fixes to improve living interactions and relationships, and that mistakes children for products. Standards, of course, are helpful, even necessary, in all areas of modern technology. They make products cheaper, more reliable, and of better quality. But children

are not technological products, nor are they just a collection of parts; they are whole organisms and they belong to the social organization as a whole. They cannot be summarily tested, rejected, and recycled like aluminum cans. Human beings require a different approach to educational assessment, one that will have as much to do with teachers as with students.

To return to our school hike at the beach: For the child who lags behind due to physical or emotional impediments, or, metaphorically, cognitive challenges or learning difficulties, much has been achieved in the field of remedial education. These students are not exempt, however, from the testing required of the NCLB act, which is to say that these students may be treated differently from their peers in degree but not in kind.[5] For the child who falls behind due to lack of focus and motivation, high-stakes testing exacerbates the divide between those more focused students who perform well on tests and those more easily distracted who do not. And for the child who slips behind because of inadequate teaching, we must ask: What is the point of testing students if their learning deficiencies are due in significant measure to the ineffectiveness of their teachers? And what will it take for these students to receive an adequate education?

As the NCLB legislation comes up for reauthorization, a broad coalition stretching across the political spectrum is rising up to demand a new approach to evaluating students, teachers, and schools.[6] A fundamental question needs to be posed, however, before any new laws are formulated, namely: Why are a growing number of children falling behind in their learning?[7]

There are many ways to find out, but even those who actually prepare for and administer these tests say that the tests are not one of them. As one critic of this legislation puts it, the closer one is to the classroom and the process of learning, the less useful this form of testing becomes.[8] At a practical level, high-stakes, norm-referenced testing does not deliver the information it has promised. At a deeper, more troubling level, it raises moral questions when information from this testing is used for "non-educational purposes" such as grading, ranking, manipulating salaries, and student profiling. What are we trying to achieve when we send children to school? How can we help them to succeed as learners?[9]

NCLB legislation has a noble intent—to provide every child with a good-enough education. The resultant high-stakes testing, however, has become a wolf in sheep's clothing. Interpretation or misinterpretation of NCLB has led to heightened stress in children,[10] compromised the integrity of teachers, and has created an intellectual caste system in which end results have replaced established educational practice.[11] High-stakes test preparation is even found in preschools and kindergartens as schools struggle to create an edge that will increase their funding.

It is the birthright of every child to enjoy a healthy childhood that involves free play, loving warmth, and healthy child-centered rhythms—the unfolding of which will be transformed later into cognitive and moral capacities that become sources of strength in adult life. As teachers speaking on behalf of all children, we offer in this paper alternative methods of assessment that focus not simply on the performance of students but on the efficacy of teachers.

Why Should We Send Our Children to School?

Before we can address the forms of assessment appropriate to childhood, it is important to identify and set aside three widely held yet misleading assumptions given as the purposes of education or the reasons for going to school. The first assumption is that *one chief purpose of school is to instruct students.* By this is meant that teachers know and students do not. The teachers' task is to convey what they know to their unknowing students, then confirm the efficacy of this transaction by testing the students' ability to remember—or at least recognize—what they have received. The lesson may be transmitted to the students by the teacher, but often the instruction takes place by textbook or other medium. In other words, students receive their lessons primarily through what they hear and what they see. Other modes of learning such as working with the hands, demonstrating through gymnastics, and practicing elocution are secondary, perhaps entirely neglected, approaches. Teaching is not only involved in the transfer of knowledge but also serves to focus insight and the self-learning forces within the child—each requiring modification based upon the developmental stage of the child.

This assumption is valid only if by education we mean simply the transmission of information. A teacher's task is not to pour in material but to draw out students' nascent capacities. Herein lies the fundamental difference between instruction, which in its etymological origins means to pour stones (Latin *structus*) into an empty vessel, and education, which in its origins means to lead or draw (Latin *ducere*) forth or out (Latin *e*). When they instruct, teachers insert what they know into the empty vessel of the student who knows not. By contrast, when they educate, teachers draw forth from a student what he or she in some sense already knows, whether implicitly or explicitly. Like Socrates in Plato's dialogue *Meno*,[12] the teacher coaxes from the students—with the help of skillful leading questions—responses that help them figure out the lesson for themselves, instead of waiting for the teacher to supply it. In so doing, instead of receiving and retaining someone else's thoughts, the students create their own. That is, they think. And in thinking students use more than simply their visual and auditory senses, crucial though these are to learning. The difference between storing content and developing capacities is simple enough: in the one, you receive, primarily via eye and ear, something from without; in the other, you generate, usually with the participation of your entire body, something from within. Instruction proceeds from the outside in; education from the inside out. Both aspects are needed at appropriate stages of development, but education entails a more active, participative—albeit more time-consuming—form of learning.

This latter approach to educating is sometimes called "the discovery method" or, in some forms, "constructivism," or even "the Socratic method," and yet all too easily education is replaced, either for lack of time or lack of teaching skill, by instruction. If we are to place education ahead of instruction, we will need a new form of assessment, since the purpose of assessment will be to determine whether a teacher is drawing forth capacities from his or her students, activating the full resources of their entire organisms, not whether the students are retaining certain information, primarily through eye and ear.

A second assumption about going to school, also widely held, states *that another chief purpose of education is to prepare students for the work force.* This assumption posits an economic motive for an essentially cultural activity. We read, for instance, that schools need to ready the next generation to compete in the global marketplace. In this view the mark of successful schooling will be students who are productive wage earners. To the extent that this paradigm rules the learning experience, testing will focus on skills having to do with economic values such as competition, efficiency, and speed.

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To discern the fallacy of this assumption, it is helpful to distinguish in society three interrelated, sometimes overlapping, yet distinct spheres of activity: one economic, one political, and one cultural. To the economic sphere belongs all activity having to do with commerce and the generation of wealth; to the political sphere, all matters of law and political rights; and, to the cultural sphere, all that has to do with such things as the life of arts and humanities, science and technological research, morality and social customs, religion and philosophy.[13]

A school, then, is not primarily an economic organization; it is primarily a cultural organization. Put differently, the purpose of school is not to generate wealth as a business but to unfold human capacities as a center of learning. Place schools in the service of economic goals and we begin to undermine the purpose of schooling. Instead, the best way to prepare students for both economic and political life is to develop in them capacities of judgment and discretion.

It is perhaps an unwritten rule that cultural institutions or activities motivated by something other than themselves soon lose their cultural integrity. The value of a poem is … its poetic worth. Cultural values, in other words, are self-reflexive. Consider what would happen if, say, the primary value or purpose of a publication were to become economic (that is, to make money) rather than remain cultural (that is, enrich the life of ideas). Which journals most successfully reward the profit motive? These are pornographic maga-

zines. Which forms of music pay the best? Advertising jingles. Which forms of cooking make the most money? Fast food outlets. This is not to say that a cultural activity cannot be profitable. Rather the point is that a cultural activity made subservient to economic gain may typically result in the loss or even the perversion of its cultural value.

Social scientist Donald D. Campbell arrived at a similar conclusion by means of a social law he has formulated in this way: "The more any quantitative social indicator is used for social decision-making, the more subjected it will be to corruption pressures and the more apt it will be to distort and corrupt the social process it was intended to monitor."[14] We have only to recall reports of cheating by school officials anxious to raise their state-mandated test scores to recognize the efficacy of this social law.

An education free of economic motives requires a different form of assessment, since assessments will inevitably be grounded in the values of the very activities they are designed to test. Instead of basing assessment on the economic goals of efficiency, speed, and competitive advantage, schools will approach assessment based on the cultivation of essential human qualities that may unfold slowly, often laboriously, over long periods of time. Even the most essential skills—reading, writing, 'rithmetic—can be successfully evaluated without resorting to standardized tests.

Educational practices may be distorted not only by a commercial motive; they may also lose their integrity if their motive is political. Literature taken over by political activity can easily devolve into propaganda; religious worship controlled by the state can soon appear as idolatry. This brings us to a third commonly held assumption: *A further chief purpose of education is to prepare students to become responsible citizens.* The motive for teaching, here, is to inculcate the values of a society and thereby help students align themselves with their political and social environment. Here testing will take the form of assessing familiarity with (and perhaps even obedience to) codes of conduct and social norms.

But this assumption flies in the face of the original intention of the founding fathers of the American nation—Thomas Jefferson in particular—who explicitly inspired a system of education designed to strengthen the individual against the tyranny of social norms and conventions. Far from raising children to fit a pre-existing order, according to Jefferson, education was intended to cultivate a generation of leaders who would ceaselessly renew society out of their own insights and their own thinking. In a letter to his friend William Roscoe on the subject of public education, Jefferson wrote:

> These schools will be based on the illimitable freedom of the human mind. For here we are not afraid to follow truth wherever it may lead, nor to tolerate any error so long as reason is left free to combat it.[15]

In sum, education needs to be pursued for its own ends, not for some extrinsic goal beyond itself. The moment education becomes primarily a means to some other goal, political or economic, it begins to lose its cultural value. The moment education—and, by extension, the assessment of education—is overshadowed by some economic or political motive, it begins to lose its own integrity.

And what is this integrity? Here we return to the question posed earlier about the reason for sending children to school. If not to fill them with instruction, train them for the work force, or outfit them as good citizens, what are the most important purposes of education?

An Alternative Way to View Growing Children, How They Might Be Educated and Why

The art of teaching presupposes a science of education based on accurate observation of children as they pass through distinct phases in their development from early childhood and elementary grades to the high school years and beyond. During these phases, each lasting roughly six to seven years, children learn in radically different ways:

- To educate preschoolers we need to encourage them to "do" something. We engage their will. Powers of imitation in young children provide fertile educational possibilities. A life rich in play-—both free and structured—is crucial to learning at this age. In this phase we cultivate and discipline children's will, which sets the ground-

work for more conscious learning in later stages in childhood.

- To educate elementary school children we need to not only invoke their will but also stimulate their imagination through storytelling, which builds beautiful images and expresses the feelings and yearnings that reside deep within students' inner life. We work with their hearts in order to stir the imagination and invoke a sense of awe and wonder. A life rich in inner imaging holds the key to learning during these years. This is the phase of emotional development.[16]

- To educate high school students we need to not only to stir their powers of intrinsic motivation and imagination but also challenge their abstract thinking, exercise their powers of discrimination, and give them a sense of confident participation in the world. A life rich in ideals is vital to learning at this stage of development. At puberty, critical observation, scientific investigation, and rigorous thinking are exercised. This is the phase of cognitive development.

In all three phases, the overarching purpose of education is to assist human unfolding. Ultimately, school serves not the business world nor any political agenda, but rather the child and young adult as he or she unfolds those capacities that make him or her uniquely human. And what makes the human being unique? By contrast with any animal, the human is distinguished by, among other traits, its exceptionally high degree of flexibility. We see this, for example, in the free play of a preschool child, in the tireless creativity of a grade school child, and in the dawning of free and self-determined thinking in a young adult.

A teacher who works with the flexibility —behavioral, emotional, cognitive—within human beings at the appropriate stages of their development fulfills the purpose of education.

In this context, standardized tests have a minor role to play in the assessment of cognitive abilities in the high school years, though even here other forms of evaluation are likely to be more productive as tools of learning and prediction of success in adult life. The younger the child, the less useful are these tests, since they assess primarily cognitive function.

More alarming is the effect that testing can have not only on the classroom but on children's motivation to learn, especially in their early years. Consider the following story: Over-stressed due to the Vietnam War and Civil Rights confrontations, President Lyndon Baines Johnson was weary when the meeting of a blue ribbon educational reform convened in his office. As the panel spoke his head dropped, his eyes closed, and sleep overwhelmed him. At that point the panel's chairman, a distinguished professor from MIT, stood up and declared loudly, "Mr. President, we have a plan for the elimination of baseball in North America." At that point Johnson sat bolt upright, not believing what he had heard. The professor continued by putting forth a curriculum whose progression was determined entirely by testing.

- Fifth grade: take field trips to games with tests given on observations
- Sixth grade: study the rules of the game
- Seventh grade: learn about the history of baseball and key biographies
- Eighth grade: practice statistics, the computation of batting averages and pitching percentages
- Ninth grade: draw the geometry of the base paths and calculate the ricochet of balls hit off the green wall at Fenway Park in Boston
- Tenth grade: study baseball physics, calculating trajectory and velocity
- Eleventh grade: explore baseball economics, choosing an agent, negotiating contracts
- Twelfth grade: arrive at a grand synthesis—culminating in a major exam on all materials from grades five through eleven

The final test in grade twelve would be given to those who had passed all the previous tests. Some might pass, but not enough to field a team. "Through this testing method, Mr. President," the professor concluded with a flourish, "we would eliminate baseball as a national pastime." The professor had made his point, and a shaken President Johnson remained alert for the rest of the meeting.

This story points out the deadly effect testing can have on children's learning. Are we risking the same demoralization when we teach young children mathematics, biology, and history in order to assess them in this manner? Is there another way that still honors uniquely human qualities?

Alternatives to High-Stakes Testing

There are many alternatives to high-stakes testing that educators can use in order to assess achievement in subject matter. Many of these approaches ensure greater retention of material and a more lively process, one that activates enthusiasm for learning rather than subjecting children to undue stress—which many teachers report is a growing problem among children subjected to mandated testing.

Alternative assessment techniques vary depending on the educational level or developmental phase of the children and the teacher's learning goals. Educational assessment should be used only for finding out the extent to which specific learning goals have been attained.[17] Also, each developmental phase of childhood requires different techniques and approaches. For example, to assess children's kinesthetic abilities during preschool years, we would observe how they engage their motor skills:

- Can they balance themselves while walking on a balance beam or climbing a tree?
- Are they able to skip?
- Can they walk backward in a straight line?
- How do they place their foot on the ground? Heel first; flatfooted; just the toes?

Assessment in early childhood should consider the physical development of young children as essential to their later artistic and academic learning. Gross motor skills need to be developed before fine motor skills. Social interactions, imaginative play, and tranquility essentially replace academic assessment at this age. Observations of children give rise in a teacher to intuitive insights that can be used for the design of movement exercises—for instance, in eurythmy,[18] games, and gymnastics—to help remedy academic problems. Exercises in Spacial Dynamics[19] involving orientation to direction (up/down, left/right, forward/backward) may be worked on rhythmically. All of this helps to center the child so that more focused learning can take place. Indeed, recent studies on the development of intelligence of young children suggest that "dramatic play" provides one of the most effective techniques for improving their "executive function" (EF) score, a measure of cognitive growth that is fast overtaking the traditional intelligence quotient (IQ) test as a reliable predictor of children's intellectual strengths and development. This new research demonstrates statistically that skills measured by EF, rather than those measured by IQ, lead to greater success later on in academic subjects such as grammar and arithmetic, and that EF scores can be improved through exercises such as those provided by dramatic play.[20]

With elementary age children the teacher observes their emotional constitution by being awake to the following:

- How do they shake hands in the morning when they are greeted? Can they speak a clear greeting? Do they make eye contact?
- When the lesson of the previous day is reviewed, are they accurate in their recapitulation? Can they draw forth the essential points that were learned in the previous day's lesson?
- How do they apply and hold their concentration?
- How do they engage in artistic projects? Which topics do they focus on in the composition of their artwork? Do they have difficulty finishing their projects?
- Are they able to enter into the character of other personalities while engaged in drama and are they able to step out of a role with equanimity?

When the teacher observes these qualities of emotional intelligence in the children, she activates her own imagination that allows her to bring assistance and attention to the children, once again so that they can find a center. When a teacher is unable to correct an emotional or cognitive imbalance in children, then he or she needs to meet with specialists capable of assisting him/her through special lessons.

An awareness of "multiple intelligences," for instance as described by Howard Gardner, also guides a teacher's educational methods and assessment process. Lessons consist of visual, auditory, and experiential components; assessment is based on multiple modes of student learning as a way to track a student's strengths and weaknesses within differing learning styles, such as visual, auditory, or kinesthetic. Auditory learners, for instance, internalize history most effectively through stories they hear; visual learners

through the illustrations they see; and kinesthetic learners through enacting the story.

Students need to learn traditional subject matter, but, in being questioned, are better served the more they are presented with questions for which there are "open answers." Whereas multiple-choice high-stakes tests inculcate in students the assumption that there is one and only one correct answer to any given problem, open-ended questions encourage a plurality of responses. These can begin with a math lesson in first grade. For example, when we ask: "What is 12?" many correct answers are possible:

A teacher's task is not to pour in material but to draw out students' nascent capacities.

12 = 6 + 6
12 = 11 + 1
12 = 3 + 4 +5
12 = 1 + 2 + 3 + 3 + 2 + 1

From the beginning, children learn that a question can have many correct answers, and that not all answers are correct.

Students can write and illustrate notebooks to strengthen auditory recognition and subject retention. They can prepare portfolios and make class presentations, which enhance their ability to speak confidently and articulately in public. There are so many alternative ways for teachers to assess their students' actual educational growth besides high-stakes testing, and the few examples offered here ask for the full involvement of the children.

As children arrive at puberty and enter into the turbulent phase called adolescence, an entirely different set of observations is called for to support intellectual development. Now we concentrate primarily on their forces of thinking. Students have reached the stage of development—roughly around twelve years old—when cause and effect become active in their cognitive experience.

Now the teacher must work with the students' ability to think flexibly. Students need to learn not to become caught in fixed or rigid ideas; instead, they must become more rigorous in their pursuit of truth. Fluidity and movement are important as different forms of thinking (such as analytic, causal, teleological, and synthetic) are exercised through appropriate coursework. For example, the study of geometry accentuates logical powers while the study of biology works with teleological and causal thinking. Students at this age must be able to command different forms of thinking. Multi-layered thinking, far from inducing confusion and vagueness, requires ever greater levels of mental discipline and rigor.

How can we evaluate students at this age?

- Are their memories precise and active when a teacher asks for a recapitulation of the essence from the previous day's lessons?
- Do they extend knowledge beyond activities in the classroom and make this evident in their papers and projects?
- Are they able to integrate information, linking different fields of knowledge?
- Are they capable of translating ideas into action? Can they define a task, invent a procedure to accomplish it, and carry it through to completion?
- Are they able to take material learned in one subject and apply it to another?

The following list of guided activities opens the door for alternative assessment:

- Team projects with class presentation
- Research papers
- Oral exams and thesis writing
- Science and history fairs with community participation in which students describe their efforts and answer questions
- Projects presented at a public gathering of parents and friends of a school
- Drama: remembering and reciting lines, and emulating prescribed movements on stage
- Sports: practicing confident hand-eye coordination, fluidity of movement, and team-building

Observation of these activities allows a team of teachers to work with forces of inspiration to help and guide students past obstacles. Note that for the adolescent years, during which development becomes more individualized, correct assess-

ment requires a group of teachers because different perspectives are crucial in determining appropriate courses of action.

While these examples are only a few of many possibilities, they are fundamental to successfully assessing the essential development of each student. Assessment that furthers student progress and thereby fulfills the real mission of education requires the full engagement of the teacher or team of teachers involved with the student. This approach fosters the healthy development of the student and builds hope in the student's heart of future improvement. High-stakes testing cannot come anywhere near helping in this essential educational task.

We fully recognize that alternative forms of assessment can be effective only when class sizes are held to manageable numbers. This individualization of educational experience, especially for younger children, occurs when students learn in small groups of less than forty students and where teachers are truly dedicated to the success of their students. In such a setting teaching is more than simply a job and a teacher is more than a coach who trains students for test days.

The Ultimate Test

Ultimately, as mentioned previously, a teacher who tests her children is testing herself. Children fail quizzes and need to make up inadequate work, but as they become older they become increasingly responsible for their own learning. When our children are left behind, however, we need to turn to the teachers who are responsible for shepherding them through their childhood. We need a culture in our schools that proclaims that there shall be "No Teacher Left Behind."

This does not mean that teachers should be rewarded according to the performance of their children, for this introduces unhealthy dynamics into education. But it does mean that, for students to succeed, their teachers need to be on an unending path of self-development, one that includes self-assessment. Practically, this entails that, before teachers administer tests to their students, they need to submit themselves to self and peer review, asking: How am I doing? Only then can they administer tests to their classes. Even these tests will have the primary purpose not of testing students' comprehension but rather of helping teachers evaluate the effectiveness of their own teaching.

In the final analysis, educational reform is the task of a school's circle of educators, not of a government's house of legislators. Teachers need to be charged with the task of studying their students, deepening their expertise, and developing appropriate methodology as a result. They can then set appropriate educational policies based on freedom and cultural pluralism. The task of the government is not to guarantee equal schooling for everyone; rather it is to guarantee equal *access* to the kinds of education that parents believe right for their children.

Endnotes

1. These authors and teachers are all active within Waldorf schools and institutes, members of an international independent educational movement with more than 1,000 schools and teacher training centers worldwide that do not participate in high-stakes testing. They are also concerned with the welfare of all children.
2. The year before NCLB went into effect, states spent $423 million on standardized tests. During the 2007–2008 school year, that amount increased to almost $1.1 billion. And the windfall goes largely to five (soon to be four) testing companies. The cost of funding NCLB programs over a six-year period (2002–2008), authorized by law, has a cumulative gap of $70.9 billion. Including President Bush's budget for 2009, that expense will become $85.7 billion.
3. See, for example, Sharon L. Nichols and David C. Berliner, *Collateral Damage: How High-Stakes Testing Corrupts America's Schools*, Cambridge, MA: Harvard Education Press, 2007.
4. Diane Ravitch, *National Standards in American Education: A Citizen's Guide*, 1995, p. 25.
5. The Department of Education's new policy does not exempt any students from the assessments required under NCLB, including those with disabilities. NCLB requires annual testing of all students in grades 3 through 8. In addition, high school students must be assessed once during grades 10–12. Students must be tested in reading/language arts and math. Beginning in school year 2007–2008, all students must also be assessed in science once during grades 3–5, once during grades 6–9, and once during grades 10–12.

6. "An education policy that traumatizes children, destroys the desire to learn, and corrupts the purposes for learning should be eliminated, not reformed," from "Schools Matter," http://schoolsmat ter.blogspot.com/2006/03/where-are-mental-and-social-health.html. Also, stories from each state are online at www.nea.orglesealnclbstories-lstates.html. Finally, Reggie Clark, a middle school robotics teacher, said that under NCLB, students "are not really even thinking. They are just remembering certain skills." "Discouraging Words," Posted January 11, 2008, by NEA Editor.
7. In a study of 271,000 Texas public high school students, Rice University researchers found that the state's accountability system, the model for NCLB, "has succeeded wildly… in producing more dropouts … disproportionately minority student dropouts." See http://www.utexas.edu/news/2008/02/18/education_accountability/.
8. See also Nichols and Berliner: "By restricting the education of our young people and substituting for it training for performing well on high-stakes examinations, we are turning America into a nation of test-takers, abandoning our heritage as a nation of thinkers, dreamers, and doers."
9. See the white paper, "Why Are We Doing This to Our Children?" at www.waldorfresearchinstitute.org.
10. See report from the Missouri Association of School Psychologists, http://www.maspweb.org/nclb.html. The National Association of School Psychologists recognizes that, when high stakes are attached to test scores, there is greater potential for misuse of data and negative consequences (such as): The impact on student mental health.
11. "When 'failing' the test means failing the grade, failing to graduate, or even lesser consequences such as attending summer school or loss of certain privileges, students may experience long-term anxiety, low self esteem, depression, etc. At a more systemic level, class-wide and building-wide testing can put students, teachers and administrators at risk for anxiety and other forms of emotional distress. These consequences can impact not only test-taking but also learning and motivation." National Association of School Psychiatrists, http://www.naspweb.org/nclb.html.
12. Plato, *Meno*, trans. W.K.C. Guthrie, in *The Collected Dialogues of Plato*, ed. Edith Hamilton and Huntington Cairns, Bollingen Series LXXXI (Princeton: Princeton University Press, 1973).
13. This differentiation of society into three distinct but deeply interrelated spheres of activity is further elaborated by Rudolf Steiner in several books and many lectures on the theme of social reforms. See, for instance, Rudolf Steiner, *Towards Social Renewal* (London: Rudolf Steiner Press, 2000).
14. Donald Campbell, "Assessing the Impact of Planned Social Change," in *Social Research and Public Policies: the Dartmouth/OECD Conference*. Ed. Gene Lyons. Hanover, N.H.: Public Affairs Center, Dartmouth College, 1975.
15. Thomas Jefferson to William Roscoe, 1820. ME 15:303.
16. In *Counseling Today*, May 2008, Angela Kennedy reports on a presentation of American Counseling member Susan Eaves who said, "Low emotional intelligence (or EQ, as opposed to IQ) and the surge of self-centeredness in the children are products of our culture [which] puts too much emphasis on academic [testing] and not enough on emotional development.… Emotional intelligence is one of the most important predictors of success in life." Emotional intelligence develops a host of traits—impulse control, delayed gratification, ability to resolve conflict, cooperation, self-motivation, and most important empathy. "Empathy is the one trait that will put an end to all cruelty, violence, aggression, and bullying in our children."
17. See Paul Zachos, "Discovering the True Nature of Educational Assessment," *Research Bulletin,* IX, #2, Research Institute for Waldorf Education, 2004, pp. 9–12.
18. Eurythmy is a form of artistic movement to speech and music and is a core course in Waldorf schools.
19. Spacial Dynamics is a study and discipline of enhancing the growing human being's relationship to his or her body and surrounding space through appropriate movements and gestures. This subject is also used in Waldorf schools.
20. Wray Herbert, "Is EF the New IQ?" *Newsweek,* June 4, 2008, http://www.newsweek.com/id/ 139885.

David Mitchell *is the Chairman of Publications for the Association of Waldorf Schools of North America (AWSNA) and is Co-Director of the Research Institute for Waldorf Education. A past member of the U.S. Department of Education's Private School Leadership Committee, he received his BA Hons., from the University of Massachusetts, and did post graduate study at Emerson College in England, at the University of Heidelberg in Germany, and the University of Oslo in Norway. He has been a Waldorf teacher for 38 years—as a class teacher for grades 1–8, as a high school teacher of life sciences, and as an adjunct professor in education at Antioch University. In 1997 he was selected as one of the top two teachers in Colorado and presented a financial award by the Amgen Corporation. He has authored and co-authored numerous books and articles on education and is a strong supporter of childhood. He currently resides in Boulder, Colorado.*

Douglas Gerwin *is Director of the Center for Anthroposophy, Chair of its Waldorf High School Teacher Education Program, and Co-Director of the Research Institute for Waldorf Education. A Waldorf graduate himself, Dr. Gerwin received his BA Hons. from the University of Sussex in the U.K. and his PhD from the University of Dallas in the U.S. For the past 30 years he has taught at university and high school levels subjects ranging from biology and history to German and music. He is editor of four books related to Waldorf education as well as author of various articles on adolescence and the Waldorf curriculum. Most recently he co-authored* Survey of Waldorf Graduates, *the first comprehensive look at how North American Waldorf graduates fare in college and beyond. He currently resides in Amherst, Massachusetts.*

Ernst Schuberth *is the founder of a private college in Mannheim, Germany, for Waldorf teacher training. He studied mathematics, physics, philosophy, and educational science at the University of Bonn in Germany. He worked in Switzerland at the Goetheanum's Institute for mathematics and physics where he also received his Waldorf teacher training. He received his PhD at the University of Tübingen and was a professor of mathematics at the University of Bielefeld. In 1990 he was invited by the Romanian government to start a teacher training program in Bucharest, Romania. He has also taught at Herzen University in St. Petersburg, Russia, and at the Rudolf Steiner College in Sacramento, California. He currently lives in Mannheim, Germany.*

Michael Mancini *is a National Board for Professional Teaching Standards (NBPTS) certified teacher. He helped to found the East Bay Waldorf High School, oversaw curriculum at the Kamehameha School in Hawaii, and taught for many years at both the elementary and secondary levels at Waldorf and independent schools in Hawaii and California. He earned his BA in English Literature from Colorado College and his MEd in Standards-Based Education from National University. He was awarded certification from the highly rigorous National Board for Professional Teaching Standards (NBPTS) and attended The Principles Center at Harvard Graduate School of Education. He has also received extensive teacher training in Waldorf education at Rudolf Steiner College. He is currently the administrator of Haleakala Waldorf School. He lives in Kula on the island of Maui in Hawaii.*

Hansjörg Hofrichter *is the Administrator of the Waldorf Schools Fellowship in Germany (Bund) and Director of the Waldorf Foundation. He is an executive member of the Bund's Education Research Group. He is a graduate of the first Waldorf school in Stuttgart, Germany. With a university degree and state certification in science and mathematics, Mr. Hofrichter taught math and chemistry for 30 years at the Rudolf Steiner School in Nuremberg. He is editor of the booklet* Waldorf – The Story behind the Name *as well as author of various articles in the educational magazine* Erziehungskunst. *He lives in Stuttgart, Germany.*