Multiple Intelligences: Its Tensions and Possibilities

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This article explores the tensions between Howard Gardner's theory of multiple intelligences and current educational policies emphasizing standardized and predictable outcomes. The article situates Gardner's theory within the historical interests among psychometricians in identifying those core processes that constitute human intelligence. Gardner's theory of multiple intelligences provides a significant contrast to the models of mind that have traditionally been used to understand how people think and make intelligent choices. The pursuit of a single G factor is contrasted with an array of specific intelligences in Gardner's conception. The implications of Gardner's view for education pertain to the cultivation of the various ways in which humans reflect intelligently and the implicit recommendation that individual proclivities, interests, and intelligences be cultivated. Such an approach to schooling would yield differences among the outcomes for children whose intelligences differed. It is this orientation to the aims of education that conflicts dramatically with a standards-driven approach to school improvement.

In this article, I focus on the fit between Howard Gardner's (1983) theory of multiple intelligences and current efforts at school reform. In focusing on multiple intelligences I have no intention of appraising its scientific validity. What I am interested in is the promise of its practical educational consequences, especially in light of today's dominant orientation to educational policy. Is the concept of multiple intelligences compatible with today's policy agenda for the reform of American schools? Can it survive in most schools when we are so preoccupied with the escalation of test scores on so narrow a band of attainment targets? Does a conception of mind that valorizes multiple ways of knowing need an approach to assessment that reflects those multiple ways of knowing? These and related questions provide the focus for my remarks.

As we all know, the concept of multiple intelligences represents an effort to reframe our conception of intelligence, a concept that historically has been both reified and singularized. In our efforts to pin down intelligence we have looked for what is essential and material. There is good reason for

this reification. Psychometricians are not noted for their interest in measuring the ephemeral. Their desire is to nail down those enduring mental factors that collectively constitute human intelligence. Conceptions of intelligence rooted in the idea that it comes in varieties or that it is responsive to cultural conditions or that it is socially constructed are often regarded as distractions that complicate efforts to get to the heart of the matter, namely, to find and measure the essential intellectual core that every individual possesses. Historically, those pursuing the measurement of intelligence have sought not so much context sensitive measures of performance but, rather, enduring essences. Gardner's (1983) theory of multiple intelligences makes problematic both aspirations. First, intelligence for Gardner is not singular, it comes in varieties. Second, he recognizes that intelligences develop within contexts in which different modes of thinking have different currency values. To paraphrase Plato, what is honored in a culture will be promoted there. The kind of intelligence a culture prizes influences its development.

The idea that people can function in highly intelligent ways in some domains and not as well in others argues for a kind of factor analytic approach to the study of intelligence. What one looks for in such an approach are abilities that are clustered in specific domains. What one seeks first is the recognition of such diversity and, second, the relationship between performances in these different domains.

In addition to the idea that intelligence comes in varieties and is sensitive to cultural conditions, each of Gardner's intelligences is believed to have a different developmental history and is located in different parts of the brain. In short, there is an amalgamation of both the biological and the behavioral in Gardner's efforts to provide support for his theory of human intelligence.

Whether or not these locations and developmental histories are as identifiable as Gardner (1983) suggests they are, it is, as I said, the educational implications of his views that interest me the most. What would it mean for a school to take multiple intelligences seriously? How would such a school be organized? What would it value? What would it expect regarding student performance? What would its curricula look like? How would teaching take place and what would teaching ability itself mean in a view that acknowledged differences in the ways in which teachers might be smart? In short, what does Gardner's theory mean for schooling?

It is in the sphere of the school that the ramifications of Gardner's (1983) ideas are both most neglected and most promising. If one of the important aims of education is the cultivation of the student's unique capacities, then acknowledging differences in the ways in which children and adolescents are smart would, one might think, be of extraordinary importance. This recognition has implications for curriculum. No longer would a one size fits

all curriculum be regarded as an option. Individualization would not simply reside in the pace at which all children moved through the same track toward the same goals; children would be offered the opportunity to pursue studies that suited the kind of intelligence that they possessed in abundance. They would have an opportunity to play to their strengths.

One could argue, of course, that just the opposite tack should be taken. One could argue that it is the areas in which students are least strong that the school should pay the most attention to. This latter view, if embraced, would lean toward a kind of homogenization of outcome. What one wants schools to accomplish—differentiation or homogenization—would tend to influence which approach would be emphasized. For me, within reasonable limits, the cultivation of human intelligence in those domains in which individuals have proclivities and interests is an important educational aspiration, but it is difficult to pursue such an aspiration in an educational policy climate that is driven by anxieties about school performance.

For me there is something intuitively right about recognizing that people differ in the ways in which they function best. There is something socially right about the idea that children and adolescents should be given an opportunity to shine in classrooms in which their particular strengths can be nurtured and made public. In both of these ideas, equity, educationally speaking, requires more than having the opportunity to cross the school's threshold; it includes having opportunities once that threshold is crossed to find a setting that is sensitive and responsive to the forms of intelligence individuals possess.

As attractive as such an aspiration might be, it is not the kind of aim that currently drives our schools. We are much more concerned with standardization and homogenization than with the cultivation of variance in a group's performance. Our anxieties about the performance of our students in our schools lead to remedies that stress uniformity of content, uniformity of assessment procedure, uniformity of outcome. We seek such uniformity because we believe that when we have it we will be in a position to compare at a meaningful level the performance of schools. If schools use different curricula or differentiate programs for students on the basis of their distinctive intelligences, the ability to make meaningful comparisons across students, classrooms, schools, and school districts is compromised. Again, uniformity makes comparability possible, and common tests provide the data through which such comparisons can be made.

Virtually all of the homogenizing practices I have mentioned are built on ideas born in the Enlightenment and actualized most dramatically during the Industrial Revolution. Order and standardization were important virtues in both; we like a tidy universe, especially one that is efficient. In America at present we currently have a replay of what historian Raymond Callahan (1962) called education and the cult of efficiency. The efficiency movement in education took place in the first quarter of the last century, but that movement is now a part of our history and we are not noted for our historical memory. Thus, there is an irony at work in our current efforts at school improvement. On the one hand, scholars are increasingly recognizing not only the diversity of intelligences individuals possess but also the variety of forms of representation through which what they feel and know can be displayed. The study of such diversity and its intelligent promotion is an important aspiration for those seeking to move away from single source conceptions of knowledge or intelligence.

On the other hand, while this movement is in play, there is a strong policy push to keep practices and outcomes in line, to replay the efficiency movement if not in every detail, in spirit. For example, some approaches to the teaching of reading not only tell teachers what students should say after a question is posed to them but also prescribe to teachers the way in which those questions should be raised. The general aim of such approaches—what could be called the decontextualization of procedure—symptomizes a loss of faith in the professional competence of teachers.

What all of this adds up to is that increasingly our schools are operating within a policy culture that has been technicized. Such a culture leaves little space for professional innovation. All too often the teacher becomes a handmaiden to the tests whose scores provide the basis on which teachers, schools, and students will be judged. Thus the irony of a conception of multiple intelligences that acknowledges, and indeed embraces, the cultivation of diversity in schools while schools are driven by policies that provide increasingly little space to pursue the vision that multiple intelligences adumbrates.

It is not only current educational policy that complicates the use of the concept of multiple intelligences in schools and classrooms; it is our embedded assumptions about how schools should operate. It is what Barbara Benham Tye (2000) calls "the deep structure of schools" that causes difficulties. This is what I mean.

In the mid-19th century in Boston, Massachusetts, the first graded school was born. The idea of organizing students in relation to their ages became increasingly important as the school population increased. With the creation of the graded school came assumptions about the organization of curriculum content and the specification of expectations for student performance at each of the grade levels. Thus, in an age-graded system, the kind of system that is used in almost all schools in the United States today, the not so tacit conception of the high-performing school is associated with the efficient movement of students from one grade level to the next according to a timeline that spans 9.5 or 10 months. Students are expected to master certain material and to demonstrate their mastery to be promoted to the next grade. The efficient movement from grade level to grade level

ultimately imagines a population of students, a cohort as it were, moving flawlessly, or as it used to be said errorlessly, from one learning activity to another until the population, en bloc, arrives at the destination specified at the outset of the journey.

It was this image, the image of a curricular journey that starts with the first step that Franklin Bobbitt (1924), long regarded as the father of curriculum theory, employed in describing what the curriculum was intended to do and how it was intended to function in what was, at that time, the modern school. In this view of the structure and culture of schooling, homogeneity of performance is regarded as a virtue as long as students attain the goals specified. Bobbitt was among the first to come up with a list of intended objectives. In his book, *How to Make a Curriculum*, Bobbitt outlined 700 such specified objectives. The behavioral objectives movement of the 1960s and 1970s was a more technologically refined echo of Bobbitt's work and the current standards movement in education is a looser specification of the work that Robert Mager (1962), Jim Popham (1973), and others promoted in the 1960s and 1970s.

At this moment we are participating in a tradition that places a premium on the uniform attainment of prespecified goals. It is a tradition of schooling that seeks uniformity of outcome as an ideal. Variance in student performance is a problem. Hitting the target or, as more recently referred to, achieving criterion-referenced attainment is what constitutes success. Multiple intelligences, however, praises another ideal. With multiple intelligences variance in student performance is considered a virtue, not a vice. In what sense is variance a virtue in the performance of students? The argument I would make is this.

If one concedes that children come into the world with different intellegences, aptitudes, or proclivities or develop interests that differ from one another during the course of their early maturation, it is not unreasonable to expect that students whose aptitudes are particularly strong, say in mathematics, will move farther and faster in learning that subject than students whose aptitudes are strongest in, say, the use of language or in any of the arts. In this scenario, students whose aptitudes are in language or in the arts will move farther and faster in those fields than students who have high math aptitudes but not so high language or arts aptitudes. In math students will have increased levels of attainment each year, and the gap between their performance and the performance of students who are less inclined in mathematics and whose aptitudes are not as strong in that field will get larger. Thus, if you look at the performance of students in different areas and if we had a theory of instruction and of curriculum that made it possible to provide the ideal program to maximize performance for each student in each curriculum area, the rate of learning would differ significantly from student to student depending on the subject being addressed. In fact, with a curriculum that was built around the conception of multiple intelligences, it might even be the case that some areas of study would not be entertained at all for some students in order for them to devote the time to study in areas for which the student had particular proclivities. A conception of multiple intelligences employed as a guide to curriculum policy would undermine any approach built on the idea that a single type of program was suitable for everyone. One size does not fit all if one embraces the notion of multiple intelligences as a basis for making curriculum policy.

Thus, it might be said that given a multiple intelligences framework, good schools increase individual differences; they do not reduce them. This notion that effective schools increase variance or individual differences among students is, as I suggested, quite at odds with a view of education that regards it as a train taking a load of students down the same track toward the same destination and arriving at that destination at essentially the same point in time. That is the general model that now guides our efforts at reform.

In addition, the tests that are used are standardized tests that often have little to do with the kinds of problems or situations students will encounter in life outside of school. Thus, the content validity of the tests, when one considers the domains in which students will need to make decisions, is essentially problematic. What we have done is to have developed a system of hurdles that are school bound. This school boundedness impedes the test's predictive validity regarding out of school life tasks. The tasks and content they provide have little association with the so-called real world. For many scholars who care about meaningfulness and utility in education, the scores students achieve or fail to achieve on such tests have less than optimum significance. For many scholars, from an educational perspective such outcomes are only of marginal importance.

There is another particular kind of bind that multiple intelligences finds itself in, a bind related to the public's desire to know how well their students are doing. It has to do with our competitive ethos. We live in a culture that competes for rewards. Concerns about a child's ability to compete are assuaged by many parents by providing their children with tutorials and other forms of assistance that they believe will give them an academic edge in school. Indeed, in Philadelphia, we have something called Prenatal U, an institution designed to increase the intellect of yet to be born children by having mothers use audio loud speakers on their tummies that convey information to the yet unborn child. Now there might be something advantageous about this practice; I surely do not know. However, it represents a concern that parents have about giving their prenatal child a competitive advantage. Some parents seem to be guided by the maxim that you're never too young to learn. I mention these practices because they symbolize, indeed they symptomize, our competitive orientation. Competition is motivating and so there is some virtue to setting up a competitive system. At the same time, when the system narrowly defines the domains of performance in which students will be judged, those whose forms of intelligence reside in domains the school marginalizes or neglects are basically out of luck. Our evaluation procedures not only reflect but also define what we will pay attention to and encourage. At present they promote standardization in curriculum, conservatism in teaching, and predictability in outcome. All of this is in the service of comparison.

Comparisons simplify assessment. But as we know simplification can deny complexity and the denial of complexity in education as in politics can signal the beginning of tyranny. In fact, I would go even so far as to say that the more personalized, differentiated, and complex the assessment becomes—that is, the more it reveals what is truly distinctive about what students experience, how they go about their work, what they learn from doing it—the more difficult it will be to make meaningful comparisons among children. Comparisons work well when the variables are the same across individuals or populations. Once idiosyncratic features are taken into account comparisons become increasingly irrelevant.

But can noncomparative data be used in ways that will satisfy our competitive inclinations? Can a conception of mind that celebrates differences in the way we know, feel, and imagine function in a culture that wants to know the relative position of its progeny at any particular point in time? Another way to put is, Can incommensurability among outcomes survive in a competitive American culture today?

There is also another consideration regarding the conditions that need to be addressed if the concept of multiple intelligences is to be generally operable in our culture. There would need to be, it seems to me, much more acknowledgment of the genuine value and social significance of different kinds of work and accomplishments than there is now. To provide an example close to my heart, as long as the arts are assigned a marginal place in the hierarchy of importance in school, achievement in the arts will play second fiddle to achievement in what is thought of as more cognitive accomplishments. And when performance on the so-called more cognitive accomplishments influence admission decisions to selective universities, the problem is further exacerbated. Is it realistic to expect the paradigm shift I am alluding to in our attitudes toward human accomplishment? Can someone who, as they say, works with his or her hands ever be regarded as highly as someone as someone who works with his or her head?

What I am getting at here is what in schools is related to the larger cultural values and pragmatic interests of the American public. The American public believes that calculus is more important for students than being able to read or to write poetry insightfully. The American public believes that the study of physics is of greater intellectual value than skilled performance on the violin or on the dance floor.

The descriptor that I used, "more important," needs explanation. I do not believe that parents believe that calculus is likely to be more practically useful or personally satisfying than reading or writing poetry. What I do believe is that the public accurately assesses the academic exchange value of an *A* in calculus as contrasted with an *A* in poetry. Put another way, given the aspiration to be socially and economically upwardly mobile, the American public makes the appropriate choice. As a result, the concept of multiple intelligences and the theory behind it swim upstream in American school culture.

We come to this particular AERA session to inquire in and to celebrate an important idea in our understanding of the human mind. The understanding that is promoted by Gardner's concept is, from my perspective, about 180 degrees away from the form of technical rationality that is pressing on American schools today. We come each year to the AERA annual meeting to reflect critically and speculatively about our ideas. That is as it should be, but at the same time we should remember that the world of practice, the world that school superintendents inhabit, the world that teachers and principals occupy, seems to move in a different orbit. Regarding the use of multiple intelligences in schools, I acknowledge that in some cases there is a trickle-down effect. I wish the trickle would turn into a stream. I wish the stream would turn into a river. But most of all I wish the concept represented a change in view regarding the mission of schools. What I am trying to point out is that change and, more important, improvement in our schools require more than new ideas about mind; they require new ideas about what schools might become. At a practical level they also require a change in the political infrastructure affecting schools. By political infrastructure I speak of those gates of passage that are expressed in the rites of passage defined by high school graduation and university admission requirements. But even more, as I have suggested, change and improvement require a fundamental shift in our attitudes toward human achievement.

I hope we can broaden the spheres in which human achievement can be displayed in our schools and even come to honor performance in these spheres as much as forms of human achievement that are now considered first rank. That at least is my aspiration. Your guess is as good as mine as to whether or not this aspiration can become a reality, but, then again, ideals are always out of reach.

Let me conclude my remarks by asking where all of this leaves us with respect to the future of multiple intelligences in our schools. I believe it leaves us with an important vision of what we can try to accomplish. What I have focused on is the tension between the policy press and deep structure of our schools and the tacit values embedded in multiple intelligences. This hyperrationalized policy press both reflects and creates an educationally problematic competitive climate for all concerned. Can the culture of our culture be changed? And can schools play a role in trying to do so? Maybe, but whether we can succeed or not we have in the idea of multiple intelligences not only a theory but more importantly a generous image of the varieties of human capacity. Howard Gardner has done what I believe many scholars long to do: He has given us a new frame for reflecting on the nature of mind and has made visible some distant stars worth reaching for. That, my friends, is no trivial accomplishment. I believe it is a contribution worth celebrating.

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