

How to Produce a High-Achieving Child

By Deanna Kuhn

Frantic parents trying to ensure that their children can maintain an edge throughout their school careers have become a fixture of today's society. But Ms. Kuhn suggests that we are focusing on the wrong side of the equation. Instead of dwelling on what students bring with them to school, we should be considering whether school offers children and young adults sufficiently meaningful experiences to motivate them.

ANY LINGERING pleasant associations parents might entertain in connection with their children's schooling are increasingly being edged out by anxiety. Have I done all I can to ensure my child is on the right track? Perhaps even ahead of the pack? Did I arrange the best summer activities? The right social connections? Or have my efforts been too little or, worse, too late? Is my child already in danger of being "left behind"?

Especially poignant is the fact that in many cases the children of parents harboring these anxieties are no more than a few years old. And these anxieties are not particular to social class. They lurk in the minds of parents from one end of the socioeconomic continuum to the other. Among parents at the high end, "average" has become a disappointing outcome, and a large proportion of parents — and their children along with them — are destined to find themselves disappointed.

It is worrying, then, that recent research appears to justify this parental angst. The NICHD Early Child Care Research Network offers this summary in a recent report: "The early childhood years are increasingly seen as a crucial period for the growth and consolidation of important . . . skills necessary for successful school transition and later academic functioning. Major individual differences in these skills emerge well before children arrive at school."¹

A recent study by Angela Duckworth and Martin Seligman, published in a major academic journal and noted in the *Washington Post*, supports this conclusion. **[[AUTHOR: DO DUCKWORTH AND SELIGMAN ACTUALLY SAY THAT SELF-DISCIPLINE CAN BE TRACED BACK TO EARLY CHILDHOOD? IF NOT, IT DOESN'T SEEM**

CORRECT TO SAY THAT THEIR STUDY SUPPORTS THE NICHD CONCLUSION.]] Their study claims that the personal trait of “self-discipline” is the most powerful determinant of young adolescents’ academic achievement.² The authors asked teens to choose between receiving \$1 immediately or \$2 next week. Better students were more likely to opt for the \$2. Even more notable, related studies have suggested that this ability to delay gratification can be identified in preschoolers and remains stable at least into adolescence. Similarly, Stanford psychologist Carol Dweck reports that people show stability from early childhood on in their beliefs about ability (that it is fixed or can be developed), and she claims that this characteristic significantly affects academic performance.³

Is a child’s fate determined even before his or her school career has begun? Or are there reasons to doubt that the race to success is won or lost in these earliest years? Among the reasons for doubt is the fact that the formulas for success that focus on traits students bring with them to school leave unexamined the other half of this transaction: what the setting offers the student.

This latter component is critical because it is the student (at any age) who makes what meaning he or she can out of the school experience. We can interpret educational settings only through the lens of how students experience them. And in the end, it is students themselves who select what and when they want to learn. By early adolescence, they begin wanting reasons for investing time and effort in any activity, and they begin to exercise greater autonomy in deciding what is worthwhile.

HOW I’M DOING VERSUS WHAT I’M DOING

Why do some children come to value the activities they are asked to engage in at school while others do not? The answer seems likely to lie in the meaning they are able to attribute to these activities. How do children go about constructing authentic meaning out of what they do in school? And is such productive meaning-making critical to academic achievement?

The extensive research on psychological factors affecting school performance contains few answers to these questions. The reason is that most research has been focused not on what children think about school activities but rather on what they think about their own abilities and standing with respect to schoolwork. Only as a secondary effect have researchers considered how these self-evaluation factors affect the val-

ue students assign to academic activities themselves.

Thus Dweck reports that whether a student has a performance orientation toward school (believing that ability is fixed) or a learning orientation (believing that ability can be developed) does not predict self-esteem in elementary school but does predict self-esteem by the beginning of junior high school.⁴ Self-esteem has been found to decline at this time, especially for girls and for those with a performance orientation. So does professed interest in academic subjects.⁵ The causal scenario is not hard to imagine. A performance orientation heightens fear that one's incompetence may be exposed, especially once a young person has experienced failure. An unflattering evaluation lowers self-esteem, and as a self-protective mechanism, the value attached to the activity is reduced. "I'm not interested in it" is more protective of self-esteem than "I'm no good at it."

To the extent that a student is ego-involved rather than task-involved, academic activities come to serve primarily as occasions for evaluating one's competence relative to others.⁶ In addition to the danger this orientation poses to children's vulnerable self-esteem, it has a further serious downside. With attention focused on evaluating *how* one is doing relative to others, little attention is left to contemplate *what* one is doing. Every occasion becomes an occasion for social comparison, and the results of these comparisons dictate whether one will continue to invest in and value the activity that is the basis for comparison. Highly privileged, pressured children, especially, feel that they can afford to invest time and effort only in those activities at which they excel. Just when children and adolescents might ideally explore and expand their interests, they begin instead to narrow them.

Suppose, instead, we were able to redirect students' attention to the meanings they attach to their schoolwork, rather than to their ability. What do we know about such meanings? Very little, it turns out.⁷ Neither parents nor teachers often elicit children's ideas about why it is they study what they study. It's considered enough that the adults in charge have a sound rationale for what they ask children to do and for the goals these activities will meet. But what evidence we do have suggests that students' understanding is not all we might like it to be. When I asked one young teen whether the world history he was studying would be of value to him in the future, he replied, "Only if you were trying to impress somebody in a conversation." Perhaps we shouldn't be surprised, for the value of much of what students do in school is not immediately apparent — least of all to students themselves.

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With increasing age, students do become more likely to question what they are asked to do — a fact that New York City Mayor Michael Bloomberg seems to have overlooked. The mayor has declared creation of “a public education system second to none” as a mission of his second term. If he is to fulfill this mission, he and his associates are going to have to think deeply about what makes a school successful.

Following promising improvements in fourth-graders’ test scores in response to a tough new no-automatic-promotion policy, Mayor Bloomberg has extended the policy to students in middle schools and high schools. But in so doing, he neglects an important difference between younger and older children. By the preteen years, children have become less pliable and eager to please adults and so less likely to accept parents’ and teachers’ admonitions that they must work hard in school or suffer negative consequences. They may become skeptical of the message they’ve been given that school is the path to success and begin to ask themselves, “What’s the point? Why are we doing these things?”

In a society increasingly divided into haves and have-nots, it is the youths in the latter group who most often lack answers. Indeed, they might eventually stop asking questions and simply give up on making sense of much of what their elders ask them to do. Their basic literacy skills are likely to have plateaued at this point, and these young people are sizing up what else it is they’re supposed to be getting out of school. Close personal relationships with teachers have largely been sacrificed in the transition from elementary to departmentalized junior high schools, and the students’ self-esteem has become even more fragile.⁸ If students are going to work any harder, they’ll need to find a reason. Complying with the goals adults have for them won’t do. For these at-risk youths — who are the primary targets of Mayor Bloomberg’s (and many others’) effort — the most likely effect of not being promoted is confirmation of a growing sense that “whatever education is about, it’s not for me.”

Socially advantaged children, in striking contrast, soon develop a ready answer to the “Why are we doing this?” question: to get into a top college. And the competition to do so is stiff enough that they have little time to ponder *why* they’re studying what they study (“Will I ever need to know this?”). They’ve accepted that this is what you need to do to get into college and that getting into college is the path to success. Once there, they’ll continue working to fulfill a

set of requirements of others' making. And again, the point is to get a degree, and then start a life.

When they do get out into the real world, privileged youths encounter a world in which a markedly different set of norms prevails. All that is done is done for a purpose, most often monetary, and to achieve their purposes people must interact. Both of these characteristics of adult work life — its purposeful and collaborative nature — are largely absent during the school years that precede them. And so, especially in a tight, no-nonsense economy, even the most privileged young people often have a hard time making the transition from school to the working world of adults.

MAKING SCHOOL MAKE SENSE

Perhaps one key to the puzzle of academic motivation is to make school make sense, not just to those who structure our school systems or rely on them to educate their children, but to the young people for whom they are designed. Certainly, children's developing self-understanding and the influence of family and community on their development deserve examination, but so does school itself — in particular, the meaning children make of it.

How can we increase the likelihood that school will make sense to students? I suggest two ways. One is to center the curriculum on educational activities whose purpose and value are readily apparent to those who partake in them.⁹ This means to a large extent focusing education on intellectual tools — the ones I stress are inquiry and argument — whose purpose and value are easily recognized and whose broad utility and power are evident. Second, and closely related, we need to make schooling more connected to the adult life it is intended to prepare students for.¹⁰ We cannot predict exactly what students will need to know in the 21st century, but we can help them develop the intellectual skills that will enable them to construct this knowledge. Both efforts would serve the haves and have-nots equally well.

Students need to experience for themselves the value of the intellectual activities they engage in and the intellectual tools they acquire. They should become able to make use of them for their own purposes and to see the fruits of their labors, recognizing that intellectual skills, such as inquiry and argument, give them a most productive path for answering questions, solving problems, resolving conflicts, and participating in a democratic society. These are achievements that come about only as the endpoint of a long developmental course, one in which the student is the key player, the meaning-maker. Students do not learn the

power of inquiry and argument merely by being told.

Before saying more about how such objectives might be met, I should note that developing sound intellectual motivation depends on students' own intellectual development. This does not mean children are at the mercy of fate, with only some happening to be born to parents who will give them the right recipe to ensure their intellectual development. Rather, the intellectual development of concern here requires only intellectual engagement, and it can take a variety of forms. It is development that is not concentrated in the first few years of life and is within the potential of all children.

Such development encompasses not only the capacity for meaning-making in general, but the ability to make meaning out of one's own life — to find a purpose and to identify goals that can influence actions. We do know that the requisite self-awareness and self-management — what cognitive psychologists are more likely to refer to as self-regulation or “executive control” — do increase in the years between middle childhood and mid-adolescence.¹¹

This development is critical because self-regulation is necessary if students are to become active in their own learning and to develop and pursue their own goals.¹² By the time children enter adolescence, they have more discretion than before over how they will spend their time and energy. They are likely to have become more aware of, and highly judgmental about, their own performance. And so their interests will begin to narrow as they make judgments about what they're good at and what they're not good at. And they will have considerable freedom to act on these judgments.

If we want the young people navigating the challenges of this period to decide that the life of the mind is something they are disposed to pursue, we need to consider what they take an intellectual life to be. What is knowledge, and why would one want to invest the effort to acquire it? Researchers studying cognitive development have identified a predictable sequence in students' ideas about the nature of knowledge and knowing, one worth taking into consideration in seeking to understand their academic motivations.¹³

Early in their school lives, children are uniformly naive objectivists. In elementary school, children regard knowledge as something that exists out in the world, independent of the knower. If you and I disagree, it's simply a matter of accessing the information that will determine which of us is right and which wrong. To these young absolutists, there are no shades of gray.

By some time during adolescence, though, fueled by the troubling discovery that reasonable people — even experts — disagree, most young people undergo a dramatic shift and come to embrace, at least for a time, a radical relativism with regard to knowledge and knowing. In a word, everyone is now right. If no one knows for certain, everyone must be accorded the right to believe as he or she chooses. Like pieces of clothing, beliefs are the personal possessions of the believer and not to be questioned. The subjective knower thus enters the equation but eclipses the objective known. Moreover, because everyone has a right to individual beliefs, one belief cannot be said to be any more right than another. Tolerance for multiple views is equated with the impossibility of discriminating among them.

Only some young people will make the transition to the next level of development, one in which the subjective and objective components of knowledge are coordinated. They come to understand that, although all have a right to their own views, some views are nonetheless more right than others, to the extent that they are better supported by evidence. Justification for a belief becomes more than personal preference. The adolescent “whatever” is no longer the automatic response to every assertion. There are now legitimate discriminations and choices to be made.

Until students reach this level of understanding, their motivation for intellectual pursuits remains on shaky ground. If facts can be ascertained with certainty and if they are readily available to anyone who seeks them, as the absolutist conceives, or if any claim is as valid as any other, as the relativist conceives, there is little point in expending the mental effort that intellectual inquiry and the evaluation of claims entail. Only at the third, “evaluativist” level of epistemological understanding are thinking and reason recognized as essential to support beliefs and actions. Thinking enables us to make informed choices between conflicting claims, and understanding this fact leads students to value thinking and to be willing to expend the serious effort it requires.

By the time students reach college, differences in their levels of epistemological understanding correlate with how they process new information and also serve to predict academic achievement.¹⁴ **[[AUTHOR: YOU HAD PERRY (FORMS OF INT. DEVEL. IN THE COLLEGE YEARS) AS PART OF PREVIOUS NOTE. SHOULD IT BE CITED HERE INSTEAD?]]** While they are still in high school, students’ levels of epistemological understanding predict the degree to which they have identified future academic and career plans and goals. Those who have

reached an evaluativist level of understanding are more likely to have specific plans and goals than are those who remain relativists or absolutists.¹⁵

When looking at the connection between intellectual development and intellectual values, it is interesting to make comparisons across cultural and sub-cultural groups. Ironically, Asian and Asian American students, despite their reputation for academic achievement, do not show accelerated development of epistemological understanding or intellectual values. My associates and I have asked questions such as the following of middle-schoolers and high-schoolers and their parents in several American communities; in Israel; in Cyprus; and in Japanese, Korean, Korean American, and Taiwanese American communities: “Many social issues, like the death penalty, gun control, or medical care, are pretty much matters of personal opinion, and there is no basis for saying that one person’s opinion is any better than another’s. So there’s not much point in people having discussions about these kinds of issues. Do you strongly agree, sort of agree, or disagree? (If disagree) What do you think?” A majority of American parents and teens disagreed with such statements, claiming that it was worthwhile to discuss these issues. The percentages of those who disagreed among the Asian and Asian American groups ranged from 0% to a high of 38%.¹⁶

These findings are perhaps not entirely surprising. The Asian distaste for disagreement and desire to maintain harmony are well known — a cultural stereotype almost. Should these values be cause for concern? “To each his own” and “Live and let live” are stances we arguably need more of in every part of the world.

Yet there is a less apparent but real cost. When asked hypothetical questions about two discrepant views (e.g., whether one musical composition could be judged better than another or one scientific theory more correct than another), Asian and Asian American respondents more often espoused the absolutist belief in certain knowledge that would yield a single right answer or the relativist position that one alternative cannot be judged any more right than the other and that disagreeing parties have a right to their respective views. Thus tolerance and indiscriminability are equated.

Asian education experts in high-performing nations like Singapore have begun to ask themselves whether the development of the skills and disposition to engage ideas and examine them critically (and creatively) has been shortchanged in their education systems. Perhaps developing these skills is an important part of what it means to become educated. The best

thinking is very often collaborative rather than solitary. But collaborative intellectual engagement comes with what may be a high cost from the Asian perspective — the risk of at least temporarily sacrificing agreement and harmony.

HOW DO WE HELP CHILDREN BUY INTO EDUCATION?

Parents can push and pull their children to bring home those A's, but in the end, it is the children who need to find sound reasons for wanting to do so. And the most important thing we can do to help them find those reasons may be to make school an endeavor that makes sense. In early adolescence, as children acquire more freedom to choose how to invest their time and energy and as their skills in self-management increase, cognitive support for achievement motivation becomes crucial. Affective factors should not be eliminated from the equation.¹⁷ But it is arguably the cognitive factors — both within the child and within the setting — that have not been given sufficient attention. For too long we have relied on much the same curriculum for secondary schools that these students' parents and grandparents plodded their way through, and we have simply expected today's students to recognize how it meets their needs.

Prominent among such cognitive factors is students' own intellectual development. The intellectual development that occurs in the second decade of life — not just during those early years that receive the lion's share of attention — is enormously important. The die is far from cast in the first years of life. One of the most important things adults can do for older children may be to make sure that their school experience is the kind that they can readily make sense of instead of having to depend on reassurances from teachers or parents that "this is what you need to know." Such efforts are surely as important in promoting a child's future success as anything a parent does, or fails to do, in the early years.

What makes school experiences easy for students to make meaning of? It's entirely possible to engage secondary students in highly educational activities whose purpose and value become apparent in the process of engaging in them — activities that do not require young people to accept adult pronouncements about the "need to know." As one concrete example, suppose high school students were asked to work together to investigate one of the problems plaguing their city, say, a scarcity of potable water. **[[AUTHOR: "POTABLE WATER" SEEMS TO**

WORK HERE AS A CONCRETE TOPIC.]] They would examine causes and potential solutions and in so doing research how other cities, past and present, had dealt with the matter. They would appreciate both what they were doing and why. In the process, they would learn a good deal and learn how to learn — both individually and collaboratively. They would be less likely to ask, “Why do we need to know this?”

They might also escape the norm that prevails in school culture: sit down, be quiet, and wait for instructions. I was struck to learn from my son who graduated this past year from the U.S. Air Force Academy about one bit of educational wisdom that has evolved there. Cadets are being prepared to assume a certain kind of well-delineated leadership role. As part of their education, inside the classroom and out, they are taught not to seek or await instructions (as one might suppose at a military academy), but instead to approach any new situation by identifying the problem and then proceeding to make themselves useful in addressing it. In a word, figure out what needs to be done and get to work doing it.

Problem-based learning is far from new — it can be traced back to John Dewey — and modern evidence for its effectiveness continues to accumulate. The intellectual skills that develop when engaging in problem-based learning aren’t tapped by multiple-choice tests. We need new kinds of assessments. Some might lament the diminished command of knowledge measured by conventional tests that students would forgo in pursuing problem-based learning. But if we asked any college to choose between an applicant well versed in biological or historical knowledge and one well versed in analytical thinking, there would be little contest. Colleges are presumptuous enough to believe they can readily impart knowledge. It is students who have learned to use their minds well that they seek. Yet, for now, selective colleges have no choice but to make their increasingly fine admission discriminations primarily on the basis of how well applicants have mastered traditional high school subject matter.

For some time it has been unclear whose needs even well-functioning middle and high schools are serving. And, of course, it’s quite possible that they are serving no one’s needs very well — not those of young people or those of their future employers or those of institutions of higher learning.

As we continue to pour more effort and resources into schools that aren’t working, perhaps the time is finally here to make real change, rather than to simply “get tougher” about what we’ve already been doing for so long. The “raising standards” approach re-

flected in Mayor Bloomberg's "no-automatic-promotion" policies and in the myriad regulations of No Child Left Behind represent more of the same. In response to the provocative claim Bill Gates made last year to a coalition of state governors that American high schools were obsolete, the governors responded by pledging to adopt "higher standards, more rigorous courses, and tougher examinations." Same ol', same ol'.

We need to be clearer about just where we'd like all the children we're not going to leave behind to be headed. Setting our sights on even one objective might take us a long way. Let's give students in our secondary schools good reasons — ones that readily make sense to them — to invest themselves in school. That means thinking carefully about what we ask them to do there and making sure that it makes sense — to them and to us.

1. NICHD Early Child Care Research Network, "Multiple Pathways to Early Academic Achievement," *Harvard Educational Review*, vol. 74, 2004, p. _?_. **[[AUTHOR: PAGE REF. FOR QUOTE IN TEXT, PLEASE.]]**

2. Angela Duckworth and Martin Seligman, "Self-Discipline Outdoes I.Q. in Predicting Academic Performance of Adolescents," *Psychological Science*, vol. 16, 2005, pp. 939-44.

3. Carol Dweck, "The Development of Ability Conceptions," in Allan Wigfield and Jacquelynne S. Eccles eds., *Development of Achievement Motivation* (San Diego: Academic Press, 2002), pp. _?_. **[[PAGE NUMBERS OF DWECK'S CHAPTER?]]**.

4. Ibid.

5. Allan Wigfield et al., "Development of Achievement Motivation," in N_?_ **[[FULL FIRST NAME?]]** Eisenberg, ed., *Handbook of Child Psychology, Vol. 3: Social Development*, 6th ed. (Hoboken, N.J.: Wiley, 2006); **[[PAGE NUMBERS?]]** and Allan Wigfield and A. Laurel Wagner, "Competence, Motivation, and Identity Development During Adolescence," in Andrew J. Elliot and Carol S. Dweck, eds., *Handbook of Competence and Motivation* (New York: Guilford Press, 2005). **[[PAGE NUMBERS?]]**

6. John G. Nicholls, *The Competitive Ethos and Democratic Education* (Cambridge, Mass.: Harvard University Press, 1989).

7. Janine Bempechat and Eleanor Drago-Severson, "Cross-National Differences in Academic Achievement: Beyond Etic Conceptions of Children's Understandings," *Review of Educational Research*, vol. 69, 1999, pp. 287-314.

8. Wigfield et al., op. cit.

9. Deanna Kuhn, *Education for Thinking* (Cambridge, Mass.: Harvard University Press, 2005).

10. John Anderson et al., "Perspectives on Learning, Thinking, and Activity," *Educational Researcher*, May 2000, pp. 11-13.

11. Deanna Kuhn, "Do Cognitive Changes Accompany Developments in the Adolescent Brain?," *Perspectives on Psychological Science*, March 2006, pp. 59-67.

12. Barry J. Zimmerman, "A Social Cognitive View of Self-Regulated Learning," *Journal of Educational Psychology*, September 1989, pp. 329-39; and Albert Bandura, *Self-Efficacy: The Exercise of Control* (New York: Freeman, 1994).

13. William Perry, *Forms of Intellectual and Ethical Development in the College Years* (New York: Holt, Rinehart & Winston, 1970); Barbara K. Hofer and Paul R. Pintrich, "The Development of Epistemological Theories: Beliefs About Knowledge and Knowing and Their Relation

to Learning,” *Review of Educational Research*, Spring 1997, pp. 88-140; and Deanna Kuhn and Sam Franklin, “The Second Decade: What Develops (and How)?,” in Deanna Kuhn and Robert S. Siegler, eds., *Handbook of Child Psychology, Vol. 2: Cognition, Perception, and Language*, 6th ed. (Hoboken N.J.: Wiley, 2006), pp. --. **[[AUTHOR: INCLUSIVE PAGE REFS. FOR CHAPTER, PLEASE.]]**

14. Lucia Mason and Pietro Boscolo, “Role of Epistemological Understanding and Interest in Interpreting a Controversy and in Topic-Specific Belief Change,” *Contemporary Educational Psychology*, April 2004, pp. 103-28; Michael Weinstock, Y?_ Neuman, and A?_ Glassner, “Identification of Informal Reasoning Fallacies as a Function of Epistemological Level, Grade Level, and Cognitive Ability,” *Journal of Educational Psychology*, in press **[[AUTHOR: FIRST NAMES AND INCLUSIVE PAGE REFS. IF IT HAS APPEARED.]]**; and Michelle M. Buehl and Patricia A. Alexander, “Motivation and Performance Differences in Students’ Domain-Specific Epistemological Belief Profiles,” *American Educational Research Journal*, vol. 42, 2005, pp. 697-726.

15. Sari Locker, “Influences of Adolescents’ Developing Epistemological Understanding and Theories of Intelligence on Their Aspirations” (Doctoral dissertation, Teachers College, Columbia University, 2006). Interestingly, high school-aged students who believed ability is fixed were more likely than those who believed it is developed to have made the transition to evaluativist thinking and to have specific future plans. Those who believed that ability develops over time were more likely to remain open with respect to possibilities for their personal futures. **[[AUTHOR: DOES PRECEDING SENTENCE CAPTURE WHAT YOU SAY IN “NOTE 1” WITHOUT USING NEW TERMS?]]**

16. Deanna Kuhn and Seung-Ho Park, “Epistemological Understanding and the Development of Intellectual Values,” *International Journal of Educational Research*, vol. 43, 2005, pp. 111-24. **[[AUTHOR: THIS PAPER IN SAME JOURNAL APPEARS TO HAVE BEEN PUBLISHED. IS IT CORRECT CITATION? 2005 OR 2006?]]**

17. Suzanne Hidi and Judith M. Harackiewicz, “Motivating the Academically Unmotivated: A Critical Issue for the 21st Century,” *Review of Educational Research*, Summer 2000, pp. 151-79. **■**