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Foreword by David Perkins

— **Intellectual Character**

What It Is, Why It Matters,
and How to Get It



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Failing at Smart

Or What's an Education For?

 A few years ago, I attended a conference entitled “Teaching for Intelligence.” The conference had been an annual event for several years, bringing together leading educators interested in promoting and realizing a vision of education designed to bring out the best in all students’ thinking. This particular year, the school superintendent from the host city addressed the conference. Unfortunately, as he spoke, it became clear that he was unfamiliar with his audience and hadn’t given his opening comments much advance thought. He casually remarked that “Teaching for Intelligence” seemed like a rather vague title for a conference. “After all,” he remarked, “what else would we be teaching for?” His remaining comments were unremarkable, but this question, and the rhetorical way it was framed, has stuck with me.

What else would we be teaching for if not intelligence? It is a question I find worthy of considerable attention. Is teaching for intelligence, that is, teaching with the goal of making students smarter, such a cornerstone of our educational systems that we can take it for granted? Is it a goal that parents, students, teachers, and the rest of the community readily recognize and embrace? Is making students

smarter a mission that directs our work in schools in a substantive way? Or is there more fuzziness around our goals for education? Do we, as educators and citizens concerned with education, even know what we are teaching for? What other competing goals are capturing our attention?

In this chapter, I take up these questions to lay a foundation for what is to come in the rest of this book. Before we can examine the idea of intellectual character and what it might mean for teachers and learners to embrace it, we first need clarity on where we currently are with regard to our educational goals. What is it that most schools and teachers are, in fact, teaching for? Why? To what effect? By understanding where we stand now and how we got there, we can then take up the issue of what it is we should be teaching for. What kinds of goals and ideals do we need to shape education and the future of our children? Only once we identify them will we be in a position to explore how we can go about making those goals a reality in our schools.

WHERE ARE WE?

A Look at the Current State of Teaching

Karen White (a pseudonym) begins the year with textbook perfection.¹ She is a model of organization and classroom management, conveying a strong sense of authority and confidence as she guides students through the rules and procedures of the classroom. Posters on the wall proclaim the expectations of the classroom—be polite, be prompt, be prepared, and be productive—and Karen enforces these rules immediately, dealing with interruptions and recording tardiness in her grade book as needed. With a minute-by-minute schedule on the board, Karen carefully walks the class through her rules and expectations.

This focus on rules, expectations, and procedures dominates the first week of class, and Karen lets students know that there is no ambiguity or wiggle room within the parameters she has set. In these first days, Karen wants students to know that it is their efforts that shape their success in her class, what she calls earned success. To get this message across, Karen provides constant feedback on students' work performance, posting students' percentage grades beside the front door of the classroom on a weekly basis. For one student, the importance of work is driven home on the fourth day of school when Karen

informs him that she is missing two of his assignments and that he has a zero in her grade book. When the student protests that he just joined the class and that this is only his second day, Karen cheerfully replies that she knows and that she just wanted to let him know so that he could complete the work and turn it in. The student seems unclear about why this missed work is significant or why he should have to make it up.

Throughout her instruction during these first days, Karen continually and quite effectively communicates the importance of students doing their work. Although this is a worthwhile message, at times it seems to eclipse any effort students might make to develop understanding. The result is a classroom in which students complete work rather than learn. Although Karen mentions understanding, thinking, reflection, and metacognition (thinking about thinking) as important, students never engage in these practices in a way that imbues them with any meaning. When Karen asks students to write reflections, the focus is on reviewing the day's activities or recording one's feelings about those activities. Reading students' journals, Karen has the opportunity to challenge students' thinking and gently nudge it in a more substantive direction. However, Karen tends to be drawn more to the affective issues that students write about than to the content of their thinking. It is also difficult for Karen to substantively comment on the journals given the time she allots: she reads thirty-five journals in just ten minutes. As a result, her comments mostly take the form of acknowledgments or encouragement: "Great," "Interesting," "Nice." Thus, she acknowledges the effort but only superficially addresses the substance of students' reflection.

Although her teaching may seem extreme, even a stereotype, Karen is a real teacher with real students. Her teaching represents a picture of teaching practice that many will recognize and already embrace. I dare say that the superintendent who addressed attendees of the conference entitled "Teaching for Intelligence" probably would be content to populate his schools with teachers like Karen, as would many administrators and parents. In fact, Karen's methods are deemed so worthy of emulation by her colleagues and supervisors that she leads her district's program for new teachers and is sought after by teachers in training as a student teacher supervisor. Karen may not be your typical teacher; however, she represents what for many is the ideal. Although her teaching is neither state of the art nor status quo, it is considered the standard that many would have us achieve.

If you're not convinced that Karen's practice represents a model to which most teaching is pushed, take a look at Doug Tucker's situation. Doug is a new teacher, full of enthusiasm and dedication. Like Karen, he's interested in promoting students' thinking, but he's also trying to learn and follow the norms of teaching that Karen has already mastered. Consequently, Doug feels pressure to spend a lot of his first days reviewing school rules and going over class expectations. This takes the form of reading to students directly from the school handbook. This early emphasis on rules and discipline is a major focus for all teachers in the school, because the principal expects this consistency. In one class, a student even comments, "We've been doing this all day. We get it already." At times, the days spent going over these rules feel oppressive to me as an observer. What do students make of this preoccupation with discipline? Does this emphasis make them feel that they cannot be trusted? That they are among classmates who can't be trusted? That obeying the rules is the major thrust of school and more important than learning?

WHAT ARE WE TEACHING FOR?

Given that this is the vision many policymakers, parents, and teachers have of good teaching, what does such a model say about what we are teaching for? If Karen represents some kind of prototype of instructional efficiency, what is the aim of that efficiency? To be sure, Karen's and Doug's instruction provides their students with a lot. Their caring, cheerfulness, and good humor provide students with an approachable teacher who will support and nurture them in any adversity. Their consistency provides a smooth-running classroom in which students who want to participate can. And their textbook instruction provides students with the basic skills, a foundation, and often the confidence to continue in their studies. However, when we look behind this instruction to the messages it conveys to students about learning, another picture emerges. These types of teaching actions tell students that school and learning are basically dreary tasks that they must approach in a workmanlike manner. The overriding message is this: do the work, get the grade, and move on. Furthermore, students are told that teachers do not trust them to engage in the work of learning on their own, so they will carefully monitor the students' actions. This is teaching for complacency, for orderliness, for dependence, and for superficiality.

None of the classroom practices of teachers like Doug or Karen precludes the development of students' intelligence. Indeed, Doug does much to engage students in thinking, as we will see later. However, like the superintendent at the beginning of this chapter, these teachers might well assume that schooling naturally develops students' intelligence, that it makes them smarter. But does it? If we take what we might call smartness to be more than knowledge acquisition, to be about who we are as problem solvers and decision makers responding to novel situations, then the outlook for students getting smarter doesn't look good. These kinds of beginning-of-the-year teaching practices and the ones that follow from them do not contribute in any significant way to making students smarter. The emphasis these practices place on work, rather than developing understanding and engaging in thinking, makes it difficult for students to develop their intellectual skills, let alone any sense of inclination and motivation toward thinking and learning. Furthermore, teachers' spoon-feeding of discrete bits of knowledge impedes the development of students' awareness of opportunities for thinking. Without rich opportunities to develop one's ability, to sharpen awareness, and to enhance an inclination and motivation for thinking, it is difficult to get smarter.

The fact is that most schools today do not try to teach for intelligence. Rather than working to change who students are as thinkers and learners, schools for the most part work merely to fill them up with knowledge. Although some may see intelligence as a natural by-product of schooling, in reality the curriculum, instruction, and structure of schools do little to promote intelligence and may even impede it in some cases. When one considers the current emphasis on high-stakes testing and accountability, a more apt description of the mission of schools might be this: to promote the short-term retention of discrete and arcane bits of knowledge and skills. If you think this is too pessimistic a view, take a look at a current high school history, geography, science, or math exam. Chances are that most adults couldn't pass these tests without a refresher course. Those of us with a fair amount of education may recognize the questions as covering familiar terrain but still not know many of the answers offhand—can you still do a geometric proof? And yet, passing these kinds of exams within a few months of being presented with the material is taken as an indicator of mastery of the material, of meeting the standards. However, the only standards being met concern one's ability to do the memory work of school. These standards do not begin to capture who

students are becoming as thinkers and learners as a result of their schooling.

WHAT SHOULD WE BE TEACHING FOR?

If we were to ask Karen and Doug, or any teacher for that matter, what it is they are teaching for, we might very well be greeted by a puzzled expression and a response like this one: “What do you mean what am I teaching for? I’m teaching so that my students will do well on the state test in the spring. I’m teaching to my district’s proficiencies and standards. I’m trying to make sure kids are prepared for next year. I’m also working to get through the textbook. Is that what you mean by what I’m teaching for?”

Well, no. That’s not what I mean, and this confusion around the question of what “teaching for” means is part of the problem. In educational circles, we’ve come to mistake curriculums, textbooks, standards, objectives, and tests as ends in themselves rather than as means to an end. Where are these standards and objectives taking us? What is the vision they are pointing toward? What purpose do they serve?

By way of analogy, consider what is involved in taking a long car trip. We know that to get to our destination we have to drive a certain number of miles. Furthermore, we know that our driving has to meet certain standards of speed and safety as we progress on our way. However, when we get in the car, our excitement isn’t for the road or the driving regulations, it is for our destination. In fact, it is usually only by keeping our sights on our destination that we stay motivated to drive the many miles and maintain the imposed standards. If truth be told, in our excitement to reach our destination, we may even flaunt the standards a bit from time to time, taking some liberty with the speed limit perhaps. Saying that standards, textbooks, and tests are what we are teaching for is like saying the point of our driving is to cover miles of road safely within the posted speed limit. It is a trip without a destination; it is teaching without a reason. Both are ultimately empty and unsatisfying for the driver and the passengers alike.

When I ask, What is it that we are teaching for?, I’m trying to uncover the destination we are aiming toward and the goals we are striving for. What ideals guide us as we teach? This notion of ideals is at the very crux of the matter. Without ideals, we have nothing to aim for as teachers. We have no destination. Donald Arnstine (1995, pp. 22–23) captures well the importance of ideals to education: “Ideals

keep us going when the world seems oppressive and unrewarding. They embody our values, our hopes, our deepest beliefs. Specific enough to aim at, ideals are broad enough to allow some freedom of action. While often personal, ideals can be shared with others because their breadth has room for disagreement about the actions they imply. In this way ideals unite people in common efforts without dictating what their behavior must be. The openendedness of ideals makes it possible to share them, and thus makes possible distinctively human communities.”

Unlike standards, ideals can't be tested. We can't check them off or set a threshold of performance that must be met. However, ideals can do something that standards cannot: they can motivate, inspire, and direct our work. It is the difference between watching the road beneath our feet and keeping our sights on the mountain growing ever closer before us.

So what ideals are worth setting our sights on when it comes to education? What kinds of strivings are deserving of our time and energy? To answer that, we need to look at what an education can reasonably accomplish. When all is said and done, when the last test is taken, what will stay with a student from his or her education? Memories, certainly. Treasured experiences, positive relationships, meaningful interactions, yes. But what about the knowledge and skills teachers have worked so hard to impart? Surprisingly, we don't have much evidence that these have a very long shelf life (Arnstine, 1995; Semb & Ellis, 1994). So what sticks? What kind of learning lasts beyond a given year that we can grab hold of to guide our vision? I contend that what stays with us from our education are patterns: patterns of behavior, patterns of thinking, patterns of interaction. These patterns make up our character, specifically our intellectual character. Through our patterns of behavior, thinking, and interaction, we show what we are made of as thinkers and learners. Schools can do much to shape and influence these patterns. This is the kind of long-term vision we need for education: to be shapers of students' intellectual character.

MOVING FORWARD

So why are we failing at smart? Why aren't schools doing a better job not of imparting knowledge and helping students attain the standards but of helping students become better thinkers? First, we need

to recognize that it isn't merely a problem of not having the right materials or methods in place. We aren't just doing things the wrong way, which is not to say that new methods aren't needed. Indeed, much of this book is about exploring the successful methods and practices that teachers can use to nurture students' intellectual character. But new methods alone won't suffice. The root of the problem is that we are teaching the wrong thing. We don't have our sights set on providing students with an education that develops their intelligence. We've misplaced precisely the kind of ideal that can lead and motivate us. This book is about that ideal: the ideal of intellectual character.

What does it mean to teach for intellectual character? What does it look like in practice? How can we get started on the process, particularly given all the other demands placed on educators? These are the questions that have been at the heart of my work for the past seven years. They are also at the heart of this book. I've struggled with these questions as conceptual and theoretical issues, looking at them from psychological, sociological, and philosophical perspectives. I share this theoretical grounding in the first part of this book by way of defining just what I mean by intellectual character, what I think it includes, and how I think it develops. I've also explored these questions from a practical perspective by spending time in classrooms where teachers are, in fact, teaching for intellectual character. This research forms the bulk of this book, and for most readers, I suspect these pictures of actual classroom practice will be among the most engaging and useful aspects of this work.

There are somewhere in the neighborhood of 3.5 million teachers in the United States, most of whom teach multiple classes of students, creating well over 10 million classrooms for possible study.² I chose to focus the research for this book on just six. Why? What can an examination of only six classrooms hope to tell us about the development of intellectual character? Although large-scale educational surveys can be useful in spotting broad trends and identifying variables that appear to affect educational outcomes, more in-depth, close-to-the-classroom investigations serve to illuminate the specifics of teaching and learning. Rather than identifying a set of practices associated with a specific outcome, an inquiry based on the close study and description of a few specific cases helps us to better understand the nature of a particular phenomenon. As Eudora Welty (1979, p. 129)

has said and other authors have echoed, “One place comprehended can make us understand other places better.”

That is precisely the kind of understanding that I am after in this book: an understanding that can be useful in informing the practice of individual teachers, in helping policymakers consider the importance of intellectual character as an ideal, and in guiding future inquiry by other researchers. Unlike large-scale surveys or experimental research, case studies do not identify causal links or provide convincing evidence for choosing one approach, method, or program over another. Those readers interested in such hard numbers will have to look elsewhere. Case studies in general, and the particular research I present here, might be better compared to a geographic expedition. Such expeditions begin to map the terrain, pointing out both the obstacles and the wonders to help us better apprehend the landscape. The end result is not a set of directions that take you from point A to point B. The outcome is more akin to a topological map that identifies the most salient features of the terrain and highlights the routes others have taken. Consequently, the journeys undertaken using such a map will each be unique, reflecting as much the traveler’s interests and desires as the landscape’s features. As you begin your personal exploration of what it means to teach for intellectual character, I wish you an engaging and fruitful journey.

Rethinking Smart

The Idea of Intellectual Character

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alk into virtually any classroom and ask the students there who the smartest kid in the class is, and within seconds you are likely to get a set of convergent answers. So ingrained and universal are Western culture's notions of what constitutes "smart" that it makes little difference whether you enter a history class or a math class, an elementary school or a high school; any member of the class can quickly apply what we might call the smartness sieve to identify a particular member as being smart. Although who is considered smart may vary across contexts, the qualities being assessed tend to remain remarkably consistent.

Such consensus of assessment is due largely to the fact that the smartness sieve reflects a dominant cultural mind-set about the set of attributes and qualities that make up intelligence. Chief among these qualities tends to be one's knowledge and skill level. Within a school context, grades are used as a proxy for these qualities. Second, the ease with which one acquires new skills and knowledge, what Aristotle (1990, p. 122) termed a "quick wit," is considered a factor. We can boil this down to say that the smartness sieve entails an on-the-spot assessment and ranking of each individual's abilities, some general and some

specific, and of his or her speed of learning. We might call this the Jeopardy or game-show view of intelligence, in which the winners of the intelligence game are always fast with the facts.

These two qualities, ability and speed, reflect not only our everyday implicit theories of intelligence but the prevailing paradigm within the field of intelligence as well.¹ Throughout the ages, ability and speed have been recurring and dominant themes in Western notions of smartness, intelligence, and giftedness (Sternberg, 1990). Most modern theories of intelligence reflect this focus and tend to be centered around the identification of abilities. For instance, various theories of intelligence have emphasized the presence of general mental abilities, neural efficiency, cognitive processes, and specific skills for thinking and learning.² Even the most avant-garde theories of intelligence, such as Howard Gardner's theory of multiple intelligences (1983) or Daniel Goleman's notion of emotional intelligence (1995), are revolutionary chiefly in terms of which abilities they recognize as important. This focus on abilities has come to dominate the way we see the domain of intelligence: shaping the types of questions we ask about smartness, influencing how we seek to measure it, and determining how we try to develop it.³ We are so steeped in the paradigm of an abilities view of intelligence that we hardly notice it.

But this dominant notion of abilities is easily challenged if we allow ourselves to step out of the schoolhouse environment and leave behind the plethora of testing instruments, grades, and evaluations we have become so accustomed to accepting as evidence of intelligence. We can gain a new perspective and rethink what it means to be smart by simply asking ourselves a few focused questions: What does intelligence look like in action? What are the qualities of thought and characteristics of mind we expect to see when someone is acting intelligently? What are the patterns of behavior and attitudes that we associate with someone who acts smart?

These questions shift our attention from being smart to acting smart. They move us from accepting intelligence as a state of possession to considering intelligence in terms of various states of performance. Because these new questions are aimed at identifying what intelligence looks like in the world, rather than in the artificial world of school and testing, you are just as well equipped to ponder them and pose possible answers as I am. In fact, my experience in talking with parents, teachers, and students all over the world about what intelligence really looks like tells me that our respective answers to

these questions are likely to be quite similar. In this chapter, I invite you to ponder the above set of questions about intelligence and to rethink “smart” with me. In doing so, we’ll see how our answers can shape a new view of intelligence. In the remainder of the chapter, I’ll refine and sharpen this new vision of what it means to be smart, drawing on the work of a variety of critical thinkers, philosophers, and psychologists to identify some core attributes of intelligence in action. But first let’s take a brief look at why traditional notions of intelligence are insufficient for capturing what it means to be smart.

MISSING THE MARK WITH IQ

Our view of intelligence has been shaped largely by the use of testing instruments, such as IQ, used to sort and classify students. Because these tests do their job of identifying the haves and have-nots so well, we’ve come to believe that intelligence really is a bounded entity, measurable through a relatively small set of carefully identified questions. After all, scoring well on these tests certainly seems to indicate that one has the goods to do well in school. In fact, IQ scores have proven to be rather good predictors of one’s future success both in and out of school, an indication that the tests do in fact work. So where’s the problem?

What Does IQ Predict?

Generally speaking, IQ is an excellent predictor of performance on other similar measures of intelligence.⁴ IQ scores can predict scores on vocabulary tests, on the Scholastic Aptitude Test, and even on many of the nonstandardized tests students are likely to take on a regular basis in schools. Furthermore, these measures tend to be good predictors of overall occupational achievement, particularly when such achievement is tied to school performance. The problem with IQ tests as predictors begins to emerge when we look at performance outside of school. When we look at real-life day-to-day settings and contexts, is IQ still a good predictor of behavior? Does smart on the test mirror smart in the world? And what about the performance of the individual versus the group? Studies of IQ’s predictive ability consider group aggregates rather than individuals. When we look outside the

schoolhouse window to track the behavior of individuals in the world, we can begin to see that the picture of intelligence painted by IQ is a distorted one.⁵

In his book, *The Millionaire Mind*, Thomas Stanley (2000) attempted to understand what set the highly financially successful apart as a group. In the course of his interviews with these entrepreneurs and businesspeople, he discovered something interesting. A common trait among those he interviewed turned out to be their history of mediocre school and test performance. Rather than having a superior IQ, most interviewees reported being clearly middle range in their abilities. Furthermore, many of these individuals were told as children that they were not smart. Stanley reports, “During their formative years, some authority figure such as a teacher, parent, guidance counselor, employer, or aptitude-testing organization told them: *You are not intellectually gifted*” (p. 88).

We see this same thing all the time, not just in business but in many other arenas as well. Although some degree of IQ or school success seems important in the political arena, such early measures do not overly influence later career success. In fact, the populace is often wary of politicians who appear to be too bookish or school smart. Voters tend to have more confidence in what is often called street smarts and the ability to communicate effectively with a wide range of people. Artists, actors, and performers are another group in which success seems poorly predicted by IQ and school performance. Gary Sinise, known as a talented and versatile actor capable of totally embodying a role, as he did when portraying the sergeant in the movie *Forrest Gump*, made it out of high school only after attending an additional semester and being granted a D by a sympathetic history teacher.

Even Richard Herrnstein and Charles Murray (1994), staunch defenders of IQ as a predictor, present several examples of the failure of IQ to predict on-the-job performance in their controversial book, *The Bell Curve*, though they tend to downplay these instances. One such case is of marines in technical jobs, such as radio repairmen, automotive mechanics, and riflemen. Although the low-IQ workers scored lower than their high-IQ counterparts on tests of job knowledge, their performance on actual work samples was indistinguishable. To use Herrnstein and Murray’s words, this represents a case of “complete convergence” (p. 80), meaning that over time the cumulative effects of

experience and the initial advantages afforded by a high IQ converge. SAT scores represent another such case of convergence. These scores tend to be good predictors of performance in the first year of college, but their predictive power decreases as students' experience of being in college increases.

It is not that any of these individuals—entrepreneurs, political candidates, actors, artists, students, or marine technicians—aren't intelligent, only that abilities-based IQ measures fail to capture their intelligence adequately or predict their performance in the world. Being smart, the kind of inert intelligence measured by IQ and other kinds of aptitude tests, simply is not the same thing as acting smart.

Static Intelligence Versus Intelligence in Action

Looking at the questions or tasks on a typical measure of intelligence, we can begin to see why such measures fail to predict real-world performance. Most test items lack what Robert Sternberg (1985) calls "ecological validity" or real-world authenticity. There is a gap between the kinds of mental moves called for in the context of our everyday functioning and the thinking processes required for performance on the carefully circumscribed tasks of an intelligence test. The test items call for an extremely stripped-down version of mental functioning, often necessitating the exercise of discrete skills in a decontextualized setting. This gap between the demands of tests and the demands of the real world is a standard criticism of most intelligence tests and has led some critics to contend that test scores are highly influenced by one's test-taking competence and familiarity.⁶

The testing situation itself produces a similar kind of gap. Typically, in testing situations, people are relatively free from distractions; there is little else competing for their attention. In general, though certainly not always, test takers tend to be motivated to try their best, and performance requires isolated concentration in solving fairly well-defined and clearly articulated tasks. When these conditions are met, it is not unreasonable to assume that differences in test performance do in fact reflect differences in abilities being measured. Whether or not these abilities capture intelligence is debatable.⁷

In contrast to the content and context of abilities-based intelligence tests, our intelligent functioning in the world tends to be much messier. We routinely are required to screen out distractions, create

our own motivation, frame problems for ourselves, and marshal the requisite abilities needed to tackle, if not solve, the identified problem. The daily demands of intelligent behavior call for much more than a simple application of requested abilities, skills, and knowledge. It is little wonder then that performance under the artificial and controlled circumstances of a test would fail to predict our intellectual performance in the wild.

It might be argued quite reasonably that the problem lies not with the abilities-centered theories of intelligence themselves but with the decontextualization of those abilities so endemic to the measures designed to test intelligence. One could argue that what we really need are better tests, not a new way of looking at intelligence. What would the development of such a test require?

Problems that are more contextualized would certainly be in order, problems that require the pooling of abilities perhaps. But is this enough? In the world, we do not so much encounter problems directly as we encounter problematic situations. For instance, a test might require you to read a passage of text and ask you what evidence the author provides in support of her position. In this situation, the problem task is clearly defined. However, in the real world, the situation is not always so well delineated in terms of what action we must take. As we go about our daily lives, we are more likely to encounter the more open-ended and amorphous task of trying to understand a situation, such as what is really happening in Afghanistan, and must make a whole series of decisions about what specific aspects of the situation to focus on, which sources to consult, and how to balance perspectives, in addition to examining the supporting evidence in people's arguments. Within such situations, the actual problem or problems must be detected, framed, and understood. We might try to capture that in a test, but in doing so, it seems we have begun to transcend typical notions of ability. The kind of detection we are talking about here is more than recognition and identification; it involves spotting opportunities. We might call it an attitude of awareness or a sensitivity to occasions.

In the world, we also have to deal with motivational issues. Unfortunately, our abilities do not always automatically activate themselves when we face problem situations. For instance, when confronted with an anomaly or mysterious situation, we sometimes completely pass it over without giving it a second thought. It's not that we don't know

how to ask questions, probe the situation, or carry out some form of inquiry; it's just that for some reason or another, we aren't motivated to do so. However, in our most intellectually active moments, we engage our abilities fully and eagerly. Can we capture this motivational dimension of intelligent performance in a test? This becomes more difficult because it requires disentangling extrinsic, performance-oriented motivation (the desire to do well on the test to get a high score) from a more intrinsic, personally oriented form of motivation. But more to the point, this type of inclination is clearly a departure from what we normally think of as ability.

As this brief examination of real-world problem situations demonstrates, intelligent performance is not just an exercise of ability. It is more dispositional in nature in that we must activate our abilities and set them into motion. Dispositions concern not only what we can do, our abilities, but what we are actually likely to do, addressing the gap we often notice between our abilities and our actions. As John Dewey noted in his observations of the poor thinking of well-educated persons, "Knowledge of methods alone will not suffice; there must be the desire, the will to employ them. This desire is an affair of personal disposition" (1933, p. 30). This theme was picked up a half-century later in Steven Covey's popular book, *The Seven Habits of Highly Effective People* (1989). Covey talks about the inadequacy of training people in techniques while neglecting the development of the accompanying character traits.

BEYOND ABILITY

The Idea of Intellectual Character

The concept of intellectual character is an attempt to move out of the prevailing paradigm of abilities-based conceptions of intelligence. I use the term *intellectual character*, borrowed from my colleague Shari Tishman,⁸ as an umbrella term to cover those dispositions associated with good and productive thinking. In contrast to viewing intelligence as a set of capacities or even skills, the concept of intellectual character recognizes the role of attitude and affect in our everyday cognition and the importance of developed patterns of behavior. Intellectual character describes a set of dispositions that not only shape but also motivate intellectual behavior. We'll look more closely at just which dispositions seem most related to good thinking and intelligence a bit later in this chapter.

Intelligence as Characterological

This attitudinal and characterological dimension of thinking, although not captured in traditional theories of intelligence, is well represented in our everyday vocabulary of thinking. We regularly use words such as *curious, open-minded, decisive, systematic, skeptical, judicious, inquisitive, strategic, diligent, fair-minded, reflective, and deliberative* to describe intelligent individuals. In doing so, we seek to acknowledge not just an ability but the consistent deployment of that ability. In our vernacular, we recognize “the body of habits, of active dispositions which makes a man do what he does” (Dewey, 1933, p. 44).

We readily recognize the multidimensional nature of character, which includes attitudes, beliefs, habits, sensitivities, inclinations, and dispositions. Character also implies depth and permanence rather than fleeting states. Most importantly, we have a natural sense of character as an animator of actions.

Dispositions and Character

As an overarching construct, the notion of intellectual character can be understood only in terms of the thinking dispositions that give it shape and meaning. But before we turn our attention to trying to identify these specific dispositions, let me clarify my use of the term *disposition*. Nearly a century ago, Dewey struggled with this same task of finding a word to best express the underlying motivator and organizer of intelligent behavior: “But we need a word to express the kind of human activity which is influenced by prior activity and in that sense acquired; which contains within itself a certain ordering or systematization of minor elements of action; which is projective, dynamic in quality, ready for overt manifestation; and which is operative in some subdued subordinate form even when not obviously dominating activity. Habit even in its ordinary usage comes nearer to denoting these facts than any other word. If the facts are recognized we may also use the words attitude and disposition” (Dewey, 1922, p. 41).

As Dewey indicated, it is not immediately evident what word we should use to describe this internal motivator of a set of actions and responses to the world. Various alternatives come to mind: habits, dispositions, temperaments, passions, drives, desires, inclinations, and so on. No matter which word one chooses, there are bound to be difficulties with regards to the word’s usage and its various connotations.

The only thing to do is to acknowledge these potential tensions, stipulate our definition of a chosen term so as to delineate a construct, and move on. I do that now, providing references and notes for those interested in delving more deeply into this terrain.⁹

Like Dewey, I wish to invoke by the chosen term the volitional, acquired, and overarching nature of patterns of behavior. I feel the term *disposition* does this better than *habit* because we tend to understand a disposition as a tendency toward a general type of action. When we talk about someone having a friendly disposition, we understand that to mean that the person tends to approach situations in a certain way and to display a general set of actions we associate with friendliness. No one action is specified, but rather a whole range of related actions and responses may be evident. Dispositional behavior isn't automatic, though it does provide a gentle nudging that helps to bring out the behavior.

In contrast, the term *habit* often denotes a mindless and automatic response that is not readily controllable. Unlike *disposition*, *habit* tends to describe specific actions or behaviors, quite often those with a negative bent, and is thus less broad and descriptive of general behavioral trends. For instance, an individual might have the habit, or custom, of shaking hands when being introduced to someone. Because this gesture is rather ingrained and reflexive in nature, we tend not to infer from it too much about the person's general behavior or way of acting. On the positive side, the phrase *habits of mind* seems to have entered the vernacular of most educators and is widely recognized. Still, this phrase can mean a variety of things to those using it, ranging from ways of working and processing information to the set of values under which one operates.¹⁰

Of course, the term *disposition* is not without its own baggage. For example, philosophers drawing on the writings of Gilbert Ryle (1949) consider dispositions to be inherent capacities or properties of an object or person that must be brought forth by an external agent. The example they often use is that glass is brittle, but that brittleness is latent and only evident when the glass is struck by another object. Harvey Siegel (1997) expands on this notion of latent potential by arguing that dispositions are "counter-factual properties," which can exist as tendencies that need never be realized. This nonvolitional, nonacquired quality is clearly not what I wish to convey. In contrast, from the psychological perspective, dispositions tend to be seen as vol-

untary elicitors rather than automatic emitters of behavior (English & English, 1958). Thus, although the environment may prompt dispositions, dispositions represent a consciously controllable response rather than a completely unconscious or automatic response. However, some branches of psychology, such as personality or social psychology, tend to view dispositions as underlying traits, attitudes, or temperaments.¹¹ From these perspectives, the acquired nature we are after is not well represented.

Acknowledging the inherent tensions and confusions associated with our choice of an appropriate word, I offer the following stipulated definition of the construct of thinking dispositions to move us forward in our discussion: thinking dispositions represent characteristics that animate, motivate, and direct our abilities toward good and productive thinking and are recognized in the patterns of our frequently exhibited, voluntary behavior.¹² Dispositions not only direct our strategic abilities but they help activate relevant content knowledge as well, bringing that knowledge to the forefront to better illuminate the situation at hand. Unlike desire, dispositions are accompanied by behavior and thus assume the requisite ability to carry out that behavior. In contrast to habitual routines, dispositions invoke a general class of responses rather than specific actions. Collectively, the presence and force of these dispositions make up our intellectual character. As Dewey noted, “[Common sense] understands the body of habits, of active dispositions which makes a man do what he does” (1933, p. 44).

WHICH DISPOSITIONS?

If one’s intellectual character is shaped by the thinking dispositions one possesses, which dispositions are most important to cultivate and nurture? If the goal is intelligent behavior in the world, which dispositions can best motivate thinking that is reasonably flexible, reflective, and productive in achieving its ends or goals with regard to making decisions, solving problems, or developing understanding?¹³ Before we examine lists that the various perspectives of philosophy, educational psychology, and practice propose, take a minute to consider your own feelings about the dispositions that support good and effective thinking. Jot down your own ideas of the characteristics, dispositions, or general attitudes that you feel a good thinker possesses.

Once you've brainstormed a list of candidate dispositions, select the ones you believe are the top four or five supporting thinking that is productive and effective in achieving its desired ends.

If you are like most people, you may have initially included some dispositions not directly related to intelligent behavior but well prized and encouraged within school settings or the broader culture. For example, perseverance is often one of the primary characteristics that teachers and parents want children to develop. It is a highly valued trait, but is it a characteristic directly related to thinking? Perseverance is a trait valued in all kinds of contexts, such as completing a job, dealing with adversity, or achieving one's goals. It can be useful in problem-solving situations as well, but does it always constitute an approach to good thinking? We all know that there are times when it is more fruitful to abandon ideas or approaches rather than stick doggedly by them. For instance, I often try to solve formatting problems when using word processing or layout programs even though experience has taught me that I can better spend my time leaving that task alone for the moment. These kinds of issues regarding thinking and action make it challenging to arrive at a list of true dispositions for thinking, but the issues are important to consider nonetheless.

Strictly speaking, a thinking disposition, at least the positive ones we are trying to cultivate, should always lead toward better and more powerful thinking. If the candidate disposition is something whose value can only be determined situationally, it becomes more of a heuristic or useful back-pocket strategy than a thinking disposition. An example might be planning backward from an identified end goal or brainstorming possibilities or options. These are potentially useful types of thinking but only in specific situations. By contrast, something like open-mindedness is more broadly applicable. Of course, one still must employ some judgment in its application; you don't want students to be so open that they can never make a decision! The important point here is that dispositions generally have broad applicability rather than being confined to a narrow set of situations. At the same time, the application shouldn't be too diffuse. If the proposed disposition has broad application outside the range of thinking, it may be an attribute of general rather than intellectual character. Attributes such as honesty, integrity, civility, and cooperativeness would be some examples.

Our task then is to identify candidate dispositions of the correct grain size, that is, large enough that they specify a range of behavior

and small enough that they fit within the general domain of thinking. With our criteria of what we are looking for in a thinking disposition in place, let us examine what others have put forth as key thinking dispositions.

Dispositions from a Philosophical Perspective

Within the critical-thinking domain of philosophy, Peter and Noreen Facione and Robert Ennis have all formulated lists of thinking dispositions, and Richard Paul has developed a list of intellectual virtues and passions (see Table 2.1).¹⁴ The Faciones (Facione, Facione, & Sanchez, 1991), working with a cross-disciplinary panel of scholars, propose an overall disposition toward critical thinking that consists of seven subdispositions (listed in column one of Table 2.1). Not all of the terms are immediately understandable, and some—such as maturity and critical-thinking self-confidence—don't implicate any specific thinking-related actions. Ennis's list for the ideal critical thinker (1991) totals twelve dispositions.¹⁵ However, in seeking to address shortcomings and criticism of critical-thinking programs, Ennis winds up including several nonthinking dispositions, such as "to take a position." We also find maxims, "to try to be well informed," and outright directives, "to use one's critical thinking abilities," which tend to make his list a set of useful rules of thumb rather than true thinking dispositions. Likewise, Paul (1991, 1993), in seeking to reflect both the affective and moral dimension of critical thinking, proposes traits—such as intellectual empathy or sense of justice—that might not strictly be concerned with facilitating productive thinking.

Dispositions from the Perspective of Education

Of course, lists of thinking habits or dispositions are not solely the jurisdiction of philosophers. Several groups of educators have developed such lists as well. These individuals tend to draw on philosophical theory, psychological research, and educational practice. Table 2.2 presents three such lists. In developing their list, Perkins, Jay, and Tishman (1993) set themselves four criteria for a thinking disposition; it must be individually necessary to a conception of good thinking, collectively comprehensive, normatively appropriate in that it fits with cultural intuitions about good thinking, and functionally

Faciones and Sanchez: Seven Subdispositions of a Critical Thinker	Ennis: Twelve Dispositions of the Ideal Critical Thinker	Paul: Thirteen Virtues and Passions
1. Inquisitiveness 2. Open-mindedness 3. Systematicity 4. Analyticity 5. Truth seeking 6. Critical-thinking self-confidence 7. Maturity	1. To be clear about intended meanings 2. To determine and main- tain focus 3. To take the total situation into account 4. To seek and offer reasons 5. To try to be well informed 6. To look for alternatives 7. To seek precision as required 8. To be aware of one's own beliefs 9. To be open-minded 10. To withhold judgment when evidence is insufficient 11. To take a position 12. To use one's critical- thinking abilities	1. Passion for clarity, accu- racy, fair-mindedness 2. Fervor for getting to the bottom of things 3. Sympathetic listening to opposing views 4. Drive to seek out evidence 5. Aversion to contradiction, sloppy thinking, incon- sistent use of standards 6. Devotion to truth 7. Intellectual courage 8. Intellectual humility 9. Intellectual empathy 10. Intellectual integrity 11. Intellectual perseverance 12. Faith in reason 13. Intellectual sense of justice

Table 2.1. Dispositional Lists from the Philosophical Perspective.

Sources: Facione, Facione, and Sanchez (1991); Ennis (1991); Paul (1991, 1993).

balanced so as to create a supportive network. Although not all of the meanings for the list's terms are self-evident, the list does capture much of the breadth of thinking while maintaining focus on the big picture. Drawing on the work of psychologists and philosophers, Robert Marzano (1992) identifies four habits supporting creative thinking, five additional mental habits related to self-regulated thinking and learning, and six critical-thinking habits.¹⁶ Art Costa and Bena Kallick (2000), whose work has done much to popularize this field, have assembled a whopping list of sixteen habits of mind, while stressing that even a list of this length is not complete. In their writings, they indicate that the items on the list "begin with the individual and move out to the entire community" (p. xiii). In doing so, they include some traits that aren't necessarily focused on thinking, such as finding humor or responding with wonderment and awe.

Perkins, Jay, and Tishman: Seven Thinking Dispositions	Marzano: Fifteen Habits of Creative, Self-Regulated, and Critical Learning and Thinking	Costa and Kallick: Sixteen Habits of Mind
<ol style="list-style-type: none"> 1. To be broad and adventurous 2. Toward sustained intellectual curiosity 3. To clarify and seek understanding 4. To plan and be strategic 5. To be intellectually careful 6. To seek and evaluate reasons 7. To be metacognitive 	<ol style="list-style-type: none"> 1. Engaging intensely in tasks even when answers or solutions aren't immediately apparent 2. Pushing the limits of your knowledge and abilities 3. Generating, trusting, and maintaining your own standards of evaluation 4. Generating new ways of viewing a situation outside the boundaries of standard conventions 5. Being aware of your own thinking 6. Planning 7. Being aware of necessary resources 8. Being sensitive to feedback 9. Evaluating the effectiveness of your actions 10. Being accurate and seeking accuracy 11. Being clear and seeking clarity 12. Being open-minded 13. Restraining impulsivity 14. Taking a position when the situation warrants it 15. Being sensitive to others' feelings and level of knowledge 	<ol style="list-style-type: none"> 1. Persisting 2. Managing impulsivity 3. Listening with understanding and empathy 4. Thinking flexibly 5. Thinking about thinking (metacognition) 6. Striving for accuracy 7. Questioning and posing problems 8. Applying past knowledge to new situations 9. Thinking and communicating with clarity and precision 10. Gathering data through all senses 11. Creating, imagining, innovating 12. Responding with wonderment and awe 13. Taking responsible risks 14. Finding humor 15. Thinking interdependently 16. Remaining open to continuous learning

Table 2.2. Dispositional Lists from the Perspective of Educational Practice.

Sources: Perkins, Jay, and Tishman (1993); Marzano (1992); Costa and Kallick (2000).

Central Park East Secondary School (CPESS) and Project 2061 (see Table 2.3) have also developed habits-of-mind lists to inform curriculum and instruction. Without making any claims about the list's comprehensiveness, CPESS's list of five habits of mind certainly have worked well to guide instruction and have withstood the test of time at that school.¹⁷ As a policy document, *Project 2061: Science for All Americans* (AAAS, 1989) seeks to provide a national direction for science curricula. It identifies seven scientific habits of mind that the project authors feel reflect a systematic application of highly regarded everyday values.

As our cursory examination of these lists of thinking dispositions indicates, developing an ideal list is no easy task. It is often difficult to keep the list focused solely on thinking and not to veer off into other values.¹⁸ Likewise, it can be challenging to identify dispositions that are of an appropriate grain size to be useful without being too limiting. Finally, there is the thorny task of coming up with language that is expressive, evocative, and understandable. I've tried to point out a few of the preceding lists' troubling features without being overly critical. My intent in presenting the lists is not to present a critique but to map the terrain of the field, examine some of the challenges, and then look for the broad areas of agreement that seem to emerge in these lists. Let us now turn our attention to identifying those commonalities.

An Integrated Perspective

In comparing these eight lists, I am struck most by the large degree of overlap. All the lists show a general concern with promoting creativ-

CPESS Five Habits of Mind	Project 2061: Seven Habits of Mind
1. Evidence: How do we know? 2. Viewpoint: Who's speaking? 3. Connections: What causes what? 4. Supposition: How might things be difference? 5. Meaningfulness: What's the point; why does it matter?	1. Integrity 2. Diligence 3. Fairness 4. Curiosity 5. Openness to new ideas 6. Skepticism 7. Imagination

Table 2.3. Dispositional Lists from the Curricular Perspective.

Sources: Meier (1995); American Association for the Advancement of Science (1989).

ity, encouraging curiosity, and developing deep understanding. In seeking to synthesize these eight lists, six broad categories of dispositions emerge for me. We might further group these dispositions into three overarching categories. The following list displays each of the categories:

1. *Creative thinking: looking out, up, around, and about*
 - Open-minded
 - Curious
2. *Reflective thinking: looking within*
 - Metacognitive
3. *Critical thinking: looking at, through, and in between*
 - Seeking truth and understanding
 - Strategic
 - Skeptical

The six dispositions in this list capture the breadth of thinking by incorporating dimensions of creative, reflective, and critical thinking. At the same time, they don't go too far afield in their scope. In choosing the terms themselves, I've tried to stick with the simplest and most accessible language. However, this certainly doesn't mean that some of the terms themselves aren't open to interpretation. Finally, I've tried to select terms that are broad enough so that a variety of subordinate behaviors might be implicated. What I haven't tried to do in this list is to create a perfect or master list of dispositions. Rather, my intent was to create a useful and tractable list to guide us in thinking about intellectual character. In the remainder of this chapter, I'll elaborate a bit more about what each of the six dispositions contributes to smart behavior and good thinking, and then I'll examine how dispositions affect our performance in the world in Chapter Three.

THE DISPOSITION TO BE OPEN-MINDED. Open-mindedness works against narrowness and rigidity, two common pitfalls in thinking. We tend to accept things as they come to us, allowing our minds to stay in a comfortable groove rather than challenging the way things are. For example, if you had asked someone a few years ago what a computer looked like, that person would most likely have described a box-like contraption similar to a TV set. Then, along came the iMac with

its sleek curvature and transparent colored shell. Someone was able to open up his or her, and consequently our, view of things. As this example suggests, being open-minded is not about mere acceptance of new ideas or others' positions; it implies being flexible, willing to consider and try out new ideas, generating alternative options and explanations, and looking beyond the given and expected. The openness implicit in the term suggests an active rather than a passive process. A subordinate disposition that fits here would be what is known as perspective taking: looking at things from different perspectives, attitudinally as well as physically, is a tool for opening up one's mind.

THE DISPOSITION TO BE CURIOUS. Curiosity propels us to explore our world, to ask questions about it, and to wonder at it. The curiosity of young children is renowned, as they set out to find their way in their new surroundings. Intellectual curiosity builds on this innate curiosity but goes beyond mere wonder and delight in the new and exciting. Intellectual curiosity involves finding the interesting and puzzling in the everyday, the mundane, and the ordinary, as well as in the unexpected. It acts as an engine for thinking. It fuels our interest and helps us to generate questions and pose problems. Most importantly, it gives us something to think about. Curiosity isn't an end in itself but the beginning of a process of discovery or problem solving. We value curiosity for where it can take us. One of my favorite traveling companions is extremely curious. I value her company on a trip because of what she finds to show me, despite the fact that she has never visited our destination before. Her curiosity is infectious. It stems from being able to look for the unexpected, to actively compare and contrast situations, and to probe the anomalies that emerge. In contrast, the uncurious mind passively accepts all the input it receives rather than experiencing it with the freshness of an unseasoned traveler.

THE DISPOSITION TO BE METACOGNITIVE. Metacognition, or thinking about one's thinking, is a field unto itself, rich in its own body of literature. Research on the thinking of experts and effective learners has shown that these individuals tend to actively monitor, regulate, evaluate, and direct their thinking. Anyone who has ever taught reading to young children has seen the metacognitive process at work in good

readers and dormant in poor readers. Good readers monitor their understanding as they go along and redirect their actions accordingly, whereas poor readers don't. They may read the words on the page without evaluating their understanding of the words as they go along. As a math teacher, I once had a student who struggled in algebra, and her parents expressed their concern. I told the parents I wasn't very worried about the girl because she was so good at monitoring her understanding and then acting accordingly. That is, when she didn't understand, she thought about what was tripping her up and then asked directed questions to clear up her confusion. It was true that math wasn't very intuitive for her, but she went on to do very well in high school and college math classes because she had the tools she needed to develop her understanding.

THE DISPOSITION TO BE SEEKING TRUTH AND UNDERSTANDING. We all are interested in truth and understanding, but truth and understanding can't be handed to someone—though at times we educators may act as if they were ours to deliver. Truth and understanding must be developed actively through certain mental moves, one of which is reasoning based on the evidence we are able to uncover. In part, this reasoning involves weighing the evidence, considering its validity, looking for links between bits of evidence to build up a theory, and then testing the theory by looking at counterevidence and alternative explanations. This kind of thinking takes a person deeper into the topic at hand. In many schools and classrooms, it has become fashionable to solicit students' opinions, beliefs, and ideas on various topics as a way of engaging them with the topic. Unfortunately, this practice doesn't really engage them in thinking. However, by asking students why they think what they do or what is behind their beliefs or opinions, we can begin to engage them in a search for truth and understanding.

As with truth, our understanding is facilitated by examining things more closely. Helpful mental moves include looking for connections, exploring applications and consequences, pushing ideas to the limits, pulling ideas apart, contrasting one idea with another, and building explanations. It is through these and other processes that we build up our understanding and arrive at closer approximations of the truth. No single process or set of processes is a guarantor of our success, however.

THE DISPOSITION TO BE STRATEGIC. At the heart of being strategic is the notion that we are planful, anticipatory, methodical, and careful in our thinking. Rather than merely letting situations, our thinking, or our problem solving unfold, we organize and direct those endeavors. We devise plans of attack and set goals for ourselves. We consider our options and choose tactics to best meet our goals, without losing sight of the fact that we will have to monitor and reassess all strategies from time to time. Being strategic is basically a move toward efficiency. We know that many, though not all, situations can benefit from assessment and planning from the beginning. Our task and our thinking become clearer when we clarify our goals and consider ways to reach them. Of course, this planning can take very different forms. For example, author John Irving (1998) has said that he spends a year just thinking and developing a story before he sits down to write. When he does start writing, he has a clear vision of the entire book before him. Of course, not everyone writes this way, but most authors report having some method for planning out their writing to assure that it doesn't become aimless and unwieldy.

THE DISPOSITION TO BE SKEPTICAL. The word *skeptical* has a bit of a negative connotation. I've chosen it because it appears widely in the lists we have looked at, and people tend to know what it means. A less loaded but also less clear word might be *probing*. Being skeptical means probing below the surface of things, looking for proof and evidence, and not accepting things at face value. It needn't mean being suspicious, doubtful, or critical. Being skeptical allows us to follow others' reasoning and examine it carefully so that we can be critically discerning consumers of ideas. Media watchdogs who monitor news shows, advertisements, and politics are good examples of people who exercise this disposition. Being skeptical helps our thinking by forcing us to take an active stance toward new information rather than accept it passively. For example, being skeptical begins when we consider new information in light of our experience and knowledge base to see whether we should accommodate the information. This kind of skepticism becomes increasingly important as we must sort through more and more information.

 **Key Ideas for Developing Intellectual Character****RETHINKING SMART**

- *Conventional View of Smart.* The dominance of testing, grades, and IQ instruments has distorted our view of what it means to be smart. These measures value knowledge and speed disproportionately and view intelligence as something that rests inside the individual.
- *New View of Smart.* Intelligent action in the world is what counts most. Ability is only a part of performance. Of equal importance are the spotting of occasions for the use of those abilities and the inclination to put those abilities into play. We recognize smartness in the patterns of one's exhibited behavior over time.
- *Intellectual Character.* An overarching term to describe a set of dispositions that not only shape but also motivate intellectual behavior. Character implies a consistent deployment of abilities so that patterns of behavior are established over time. Character builds on beliefs, attitudes, temperaments, and tendencies but is also developable and must be nurtured by the environment.
- *Dispositions.* Acquired patterns of behavior that are under one's control and will as opposed to being automatically activated. Dispositions are overarching sets of behaviors, not just single specific behaviors. They are dynamic and idiosyncratic in their contextualized deployment rather than prescribed actions to be rigidly carried out. More than desire and will, dispositions must be coupled with the requisite ability. Dispositions motivate, activate, and direct our abilities.
- *Which Dispositions?* Curiosity, open-mindedness, metacognition, the seeking of truth and understanding, strategic thinking, and skepticism do a good job of capturing the depth and breadth of good thinking. However, they are by no means a definitive list of thinking dispositions.