8
DISPOSITIONAL CHARACTERISTICS

Having discussed the value of listening and motivation, we can now turn our attention to the final major component in this new pedagogy: habits of mind. Again, each of these three major components—listening, motivation, and habits of mind—is developmentally scaffolded and linked, and each is an interrelated part of the approach to composing that we are theorizing here.

It is essential to the development and design of any pedagogy to look beyond our own classrooms and our own discipline to consider transfer of knowledge and the kind of learning that will be of value to students in broader contexts and situations. Research related to critical thinking and the development of writing expertise suggests that intellectual and dispositional "habits of mind" may be more valuable to students, especially in the long run, than knowledge about traditional subjects at the center of most writing instruction, including the thesis statement, MLA format, and even essays themselves. Readers may be surprised to learn, for example, that Tim, the student Anne Beaufort tracks through his college career and into his professional life in *College Writing and Beyond*, never uses thesis statements, MLA format, or even essays as an engineer. (He uses bullet points instead.) These habits of mind, as we know, include dispositional characteristics like curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and metacognition.

I would like to see us bring these important habits of mind to the center of our teaching practice. A classroom focused on listening and empathy, for example, is designed to help build curiosity, openness, and engagement. A focus on reflection is designed to help build flexibility, metacognitive skills, and responsibility ("Judgments derived from the reflective thinking process remain open to further scrutiny, evaluation, and reformulation; as such, reflective judgments are open to self-correction" [King and Kitchener 1994, 8]). Attention to motivational factors in the classroom actively seeks to help nurture persistence,

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engagement, and creativity. This is another way that the pedagogy we are theorizing has been designed to be responsive to—and congruent with—landmark scholarship and research.

As a profession we need to foreground these essential habits of mind in every writing class we teach. In addition to building these habits of mind into the pedagogy we use in the classroom, we can also use these habits of mind to help students respond proactively to challenges and difficulties throughout the semester. These habits of mind communicate to students some of the most important things we have to say to them about reading, writing, and thinking—and about the academic enterprise in general, in all classrooms and courses, regardless of discipline or grade level. We can also help students understand that an impressive and growing body of scholarship and research suggests that these dispositional characteristics transfer to other contexts and will be of great value to them across their entire life span. Here we will be intentionally building the kind of "sideways learning" environment championed by Ellen Langer, one that privileges mindfulness in a number of important ways: (1) openness to novelty; (2) alertness to distinction; (3) sensitivity to different contexts; (4) implicit, if not explicit, awareness of multiple perspectives; and (5) orientation in the present (Langer 1997, 22–23).

COSTA AND KALLICK

Perhaps the best place to begin our discussion of this subject is with Costa and Kallick's foundational work on "habits of mind" (2008, 2009, 2013). As they note in their preface to *Learning and Leading with Habits of Mind*, "We want students to appreciate the value of and to develop the propensity for skillful problem solving using a repertoire of mindful strategies applied in a variety of settings. So we came to call these dispositions Habits of Mind, indicating that the behaviors require a discipline of the mind that is practiced so it becomes a habitual way of working toward more thoughtful, intelligent action" (2008, xvii). Note here the language of "mindfulness" being used to discuss critical thinking and mature problem solving. Costa and Kallick's work has been ongoing since 1982, producing a body of scholarship that has been widely embraced among educators, cognitive psychologists, learning theorists, and teachers. As they note,

> Vast research on effective thinking, successful people, and intelligent behavior by Ames (1997), Carnegie and Stynes (2006), Ennis (1991), Feuerstein, Rand, Hoffman, and Miller (1980), Freeley (as reported in Strugatch, 2004), Glatthorn and Baron (1991), Goleman (1995), Perkins (1991), Sternberg (1984), and Waugh (2005) suggests that effective thinkers and peak performers have identifiable characteristics. These characteristics have been identified in successful people in all walks of life: lawyers, mechanics, teachers, entrepreneurs, salespeople, physicians, athletes, entertainers, leaders, parents, scientists, artists, teachers, and mathematicians. (Costa and Kallick 2008, 16)

Costa and Kallick have identified sixteen characteristics or "habits of mind" that they regard as essential for students. They are:

- Persisting
- Managing Impulsivity
- Listening With Understanding and Empathy
- Thinking Flexibly
- Thinking About Thinking (Metacognition)
- Striving For Accuracy
- Questioning and Posing Problems
- Applying Past Knowledge to New Situations
- Thinking and Communicating with Clarity and Precision
- Gathering Data through All Senses
- Creating, Imagining, Innovating
- Responding with Wonderment and Awe
- Taking Responsible Risks
- Finding Humor
- Thinking Interdependently
- Remaining Open to Continuous Learning (Costa and Kallick 2008, xx–38)

Costa and Kallick suggest that these habits of mind are broad, enduring intellectual and dispositional skills that can be nurtured in classrooms and then used across a student's lifespan (Costa and Kallick 2008, xvii), equipping them for adult challenges and uncertainties. This work supports the pedagogy we are theorizing in a number of ways. Many of these habits of mind are built around or designed to encourage listening, empathy, and reflection. These include (in addition to "listening with understanding and empathy") "thinking flexibly," "thinking interdependently," and "remaining open to continuous learning." Other habits of mind including "persisting," "managing impulsivity," and "thinking about thinking (metacognition)" also support the discourse of mindfulness we are attempting to promote.

It should be noted that Costa and Kallick situate their work on habits of mind in opposition to traditional, reductive approaches to accountability, testing, and teaching and learning: "Educational outcomes in traditional settings focus on how many answers a student knows. When we

teach the Habits of Mind, we are interested also in how students behave when they don't know an answer. . . . We are interested in enhancing the ways students *produce* knowledge rather than how they merely *reproduce* it" (Costa and Kallick 2008, 16). This is a vitally important distinction. Significantly, and perhaps not surprisingly, they note that a focus on habits of mind in the classroom would require "a shift toward a broader conception of educational outcomes and how they are cultivated, assessed, and communicated" (xviii).

"THINKING DISPOSITIONS"

Other thinkers have made similar claims about critical thinking and these kinds of habits of mind and intelligent behaviors. Tishman, Perkins, and Jay, for example, in *The Thinking Classroom: Learning and Teaching in a Culture of Thinking*, suggest that "thinking dispositions" are at the heart of what we call "good thinking." These "dispositions," they note, help us put good thinking into practice, help make us aware of our own thinking patterns, give us a better understanding of what good thinking is, and help us cultivate habits that lead to good thinking (Tishman, Perkins, and Jay 1994, 42–43):

> Thinking dispositions are abiding tendencies toward distinct patterns of thinking behaviors. Just as we can talk about a person's tendency to be friendly or to work hard, we can talk about someone's tendency to be curious or systematic or persistent in their thinking. Good thinkers are disposed to explore, to question, to probe new areas, to seek clarity, to think critically and carefully, to consider different perspective, to organize their thinking, and so on. (39–40)

As writing teachers, we should be keenly interested in these conclusions and others like them. Tishman, Perkins, and Jay identify five dispositions that they regard as essential for mature intellectual work and the production of good thinking:

1. The disposition to be curious and questioning
2. The disposition to think broadly and adventurously
3. The disposition to reason clearly and carefully
4. The disposition to organize one's thinking
5. The disposition to give thinking time (Tishman, Perkins, and Jay 1994, 41–42)

Note that these "dispositions" are similar to those we discussed in the literature related to critical thinking and transfer of knowledge earlier.

Scholars in this field have also identified a list of "affective dispositions of critical thinking" that are similar to Costa and Kallick's habits of mind. These include:

- open-mindedness regarding divergent world views
- flexibility in considering alternatives and opinions
- understanding of the opinions of other people
- honesty in facing one's own biases, prejudices, stereotypes, egocentric or sociocentric tendencies
- prudence in suspending, making or altering judgments
- willingness to reconsider and revise views where honest reflection suggests that change is warranted (Facione 1990, 25)

We have some very good reasons, then, to develop curriculum designed to nurture and develop these important habits of mind.

Significant recent work on transfer of knowledge also suggests that dispositional characteristics are essential to the "broad transfer" of knowledge (Bereiter 1995, 24–25), as we have seen. Both Langer as well as Salomon and Globerson privilege a quality that they call "mindfulness," a habit of mind that can be characterized as an "attentive, nonautomatic, and volitional" disposition to learning and thinking (Marini and Genereaux 1995, 8). Bereiter, in his important essay, "A Dispositional View of Transfer," suggests that this kind of focus in the classroom is very likely to yield positive results:

> Although the intelligent behavior of the dairy truck loader cannot be expected to transfer to, let us say, behaving intelligently as a restaurant waiter, it may be that there are certain dispositions of mindfulness and willingness to learn that will assist one in learning to act intelligently in any situation. If schooling could inculcate those transferable dispositions, it would justify the higher hopes that have been invested in it, hopes that have seemed to be demolished by the research on transfer and on the situatedness of cognitive skills. (Bereiter 1995, 30)

Bereiter also suggests that transfer of knowledge is perhaps most productively theorized in terms of broad ways of engaging the world and thinking about knowledge and problem solving. In discussing a 5th-grade science classroom activity that focused on gravity, for example, Bereiter notes that the lesson is designed to do more than simply help students understand gravity and that the direction "down" is relative and not an absolute:

> Will the gravitational principle transfer to other situations? Even more strongly than before, it can be argued that transfer of the principle will depend on how well the principle is understood, and that instead of

> being concerned about transfer the teacher ought to be concerned about understanding. If the students understand gravity only as "what holds us on the earth," the concept will not be much good for explaining anything else, whereas if they actually grasp the notion that it is an attractive force between any two bodies in the universe, it has broad potential for making sense of the world (Bereiter 1992). But what does transfer of disposition mean in the science learning case? The students described in the vignette were not simply receiving a lesson about gravity. They were engaged in a group effort at sense-making that the teacher guided in a scientific direction. They were led to question common sense assumptions and everyday meanings of terms like *down*. They were led to strive for explanations that provided coherent accounts of all the facts, which philosophers of science take to be the hallmark of scientific thinking (Thagard 1989). So it is this disposition to think scientifically that we might hope would transfer to other situations. In other words, we do not want students to think scientifically only in science class, but to do so in their daily lives, when there are puzzling facts to be accounted for. Will they think scientifically when there is no teacher to guide them, and when the surrounding milieu may encourage uncritical belief or superficial explanation? (Bereiter 1995, 23)

The questions Bereiter asks here are essential ones for anyone interested in helping students become better readers, writers, and thinkers. Obviously, curriculum in writing classes should be carefully designed to nurture these kinds of dispositional qualities. These habits of mind would, following Bereiter, help students think carefully not only in school, but also in their daily lives, at work, at home, and with their families and in their communities. Such dispositions would also empower students to think carefully when there is no teacher to guide them, and when the surrounding milieu may, indeed, encourage uncritical belief, automatic kinds of thinking, or superficial explanations. This is one way as a discipline that we can help students move beyond routine, automatic, and largely unexamined ways of looking at the world and engaging complex problems. It would also provide us with effective ways to nurture what Sam Wineburg calls "the invaluable mental power which we call judgment" (Wineburg 2001, 5).

There has been some very important work related to this kind of "automatic" thinking in the fields of social and cognitive psychology. John Bargh, for example, in his landmark essay "The Automaticity of Everyday Life," has demonstrated that much of our thinking is done uncritically, automatically, and (alas) "nonconsciously" (see also Bargh and Chartrand 1999). Daniel Kahneman, in his book, *Thinking, Fast and Slow*, suggests much the same thing. Kahneman suggests that we each have two processing systems, one that is intuitive, fast, nonrational,

and often unreliable, and another that is much more deliberate, reflective, and "effortful" (Kahneman 2011, 408)—that is to say, much slower but also more likely to produce consistently better results. Kahneman defines human cognition in ways that are dauntingly complex, but for our purposes here it seems clear that a pedagogy that privileges listening, empathy, and reflection would help students to "slow down" (417), resist cognitive biases, stereotypes, and automatic kinds of thinking, and ultimately produce better thinking. Ellen Langer makes a similar point in her book *Mindfulness*.

Finally, a recent essay by David Perkins and Gavriel Salomon, influential scholars in the field of transfer of knowledge, updates and supports many of the claims we have been discussing concerning the importance of dispositional characteristics and habits of mind. Perkins and Salomon theorize transfer of knowledge as a complex cognitive activity and suggest that transfer "benefits from motivational and dispositional drivers" (Perkins and Salomon 2012, 248). Perkins and Salomon note that dispositional and motivational aspects related to transfer of knowledge are drawing increased attention from scholars in the field of educational psychology, and their work suggests that a growing interest is developing about the importance of these qualities for both student learning and the development of educational pedagogy. They suggest, in fact, that this research will require us to shift our "mind-set about the nature of knowledge and learning" (248). They summarize their current thinking about transfer of knowledge this way:

> So, are we ready to teach for transfer? Perhaps not completely. There is still both the matter of the three bridges of detect, elect, and connect and relatedly the role of motivations and dispositions in transfer. Teaching for transfer ideally not only prepares the learner to figure out how what's been learned connects to new situations but also to detect the opportunities and elect to pursue them. Unfortunately, detect and elect pose major challenges of their own, even more so "in the wild," away from focusing and motivating laboratory or classroom contexts.
>
> As to detect, recall how the clutter of events in another context, comfort with the messages one is hearing even though they have flaws, or functional fixedness and mental set can mask potential transfers. Patterns of instruction that encourage reflective mindful processing (high-road processing as we called it before) *not just in the classroom but beyond* can be expected to increase rates of detection. Indeed, all the authors champion in one way or another the cause of motivated reflective mindful processing. Their visions of good learning seem likely to cultivate broad dispositional characteristics such as mindfulness (Langer 1989), need for cognition (Cacioppo & Petty 1982), need for validity more than quick cognitive closure (Kruglanski & Webster 1996), and

incremental versus entity stances toward intellectual challenge (Dweck 1975, 2000).

As to elect, recall how strong rival habitual responses and urgent counter-motives, or also total indifference to a theme, can preempt potential transfers. Intellectual understanding alone is not likely to save the day when such interference is involved. To add to previous examples, consider Zimbardo's (2006) students who abused their fellow students despite humane principles they must have held, or the observations of Darley and Latane (1968) about the indifference of bystanders who fail to apply simple principles of helping a person in need. Called for are patterns of instruction that change the emotional and motivational landscape through such means as re-imagining scenarios, cultivating empathy, and role-playing, as for instance in some school programs addressing sexual behavior and school violence (e.g. Reyna, et al., 2005). More broadly, Bereiter (1995) urges cultivating general dispositions that motivate transfer, mentioning moral dispositions such as respect for human life and thinking dispositions such as a scientific approach to natural phenomena. (Perkins and Salomon 2012, 253–54)

Note that many of the key points that Perkins and Salomon stress in this summative account of transfer research include qualities we have identified as important for the pedagogy we are theorizing here. These include reflection, motivation, dispositional characteristics, and empathy. Of utmost importance for our purposes here is the suggestion that "patterns of instruction that encourage reflective mindful processing (high-road processing as we called it before) *not just in the classroom but beyond* can be expected to increase rates of detection." The pedagogy we are theorizing—one that privileges listening, empathy, and reflection—establishes this goal as one of its primary learning outcomes.

"A FRAMEWORK FOR COLLEGE SUCCESS"

Closer to home, the WPA/NCTE/NWP document, "A Framework for College Success" represents our profession's best current thinking on the subject of college readiness and teaching composition. The framers of this document were obviously aware of this important work related to transfer of knowledge, critical thinking, the nature of writing expertise, and habits of mind. As we have seen, this document identifies eight "habits of mind" as essential for success in college:

- Curiosity—the desire to know more about the world.
- Openness—the willingness to consider new ways of being and thinking in the world.
- Engagement—a sense of investment and involvement in learning.

- Creativity—the ability to use novel approaches for generating, investigating, and representing ideas.
- Persistence—the ability to sustain interest in and attention to short- and long-term projects.
- Responsibility—the ability to take ownership of one's actions and understand the consequences of those actions for oneself and others.
- Flexibility—the ability to adapt to situations, expectations, or demands.
- Metacognition—the ability to reflect on one's own thinking as well as on the individual and cultural processes used to structure knowledge.

Although this document also acknowledges the importance of rhetorical knowledge, critical thinking, writing processes, knowledge of conventions, and the ability to compose in multiple environments, the most interesting, unexpected, and perhaps even revolutionary aspect of this document is this focus on "habits of mind." These qualities may well be more vital to college success than SAT scores or recommended high school course sequences or even rhetorical knowledge and knowledge of writing conventions, which are mentioned later in the document (and are, of course, also important). This list communicates to students some of the most significant things we have to say to them about writing, about success in school, and about the ways one may choose to understand and live in the world.

Curiosity and Openness

For example, there are few qualities more essential to success in college as a writer than curiosity and openness. These habits of mind make learning possible. Students come to a liberal arts college, after all, not only to earn credentials and train for a career but also to open themselves up to a grand enterprise of exploration and discovery (Astin 1993; Astin 1997; Hirst 1973). We might also say that, ideally, students come to a liberal arts college to become more truly awake and alive. ("'Then are you a teacher?' the student persisted. 'No, I am not a teacher.' 'Then what are you?' asked the student, exasperated. 'I am awake,' the Buddha replied.") Curiosity and openness make this kind of powerfully transformative learning possible. They are the primary drivers that enable us to productively engage the "chaos" of real meaning making, to borrow a phrase from Ann Bertoff. They are also the wellsprings of intrinsic motivation, where passion and engagement begin. They are essential to any kind of success in college and vital for writers at all grade levels.

Creativity

Creativity is another extraordinarily important human capacity that has been routinely overlooked and undervalued in recent discussions of academic rigor, curricular alignment, and the teaching of writing. There is considerable theoretical support for moving creativity to the center of our discussions of college readiness, school reform, and the teaching of writing. Here we are following Csikszentmihalyi's important work:

> To achieve the kind of world we consider human, some people had to dare to break the thrall of tradition. Next, they had to find ways of recording those new ideas or procedures that improved on what went before. Finally, they had to find ways of transmitting the new knowledge to the generations to come. Those who were involved in this process we call creative. What we call culture, or those parts of our selves that we internalized from the social environment, is their creation. (Csikszentmihalyi 1996, 317)

Creativity is very highly valued in the business community, in the sciences, and in the global marketplace, and it is often valued above other, more traditional types of academic skills (Friedman and Mandelbaum 2011, 133–52; Peterson and Seligman 2004, 109–23; Sternberg and Lubart 1995). Langer has suggested, in fact, that "'creativity' and 'mindfulness' may be two ways of looking at many of the same qualities of mind" (Langer 1989, 129). Despite this, pedagogy and curriculum in writing classes often end up focusing only on a narrow range of analytical thinking skills, typically defined as "critical thinking," and a very narrow range of writing activities, as we have seen, mostly focused on argumentative writing.

Robert Sternberg, one of the preeminent scholars on the subject of intelligence, has recently suggested that any understanding of intelligence must also include our capacity for creativity (Sternberg 2007; see also Sternberg 1999). Ken Robinson, a scholar in the field of education and creativity, makes this point even more bluntly: "Creativity is the greatest gift of human intelligence. The more complex the world becomes, the more creative we need to be to meet its challenges" (Csikszentmihalyi 1996; Kaufman and Sternberg 2006; Kaufman and Sternberg 2010; Robinson 2011, xiii; see also Gardner 1993; Gardner 2006, 3–24; Ravitch 2010; Sacks 1999; Sahlberg 2011).

We know that creativity will be increasingly important in the competitive global marketplace. Clearly, creativity should be intentionally and systematically nurtured throughout a student's academic career and especially in writing classes.

To that end, I'd like to propose that we replace the phrase "critical thinking" in our literature with the phrase "creative and critical thinking." All good thinking is also creative in some way—in math, in the sciences, in business, and in writing classes. It's vitally important that we acknowledge this essential human capacity in our scholarship and official statements and that we actively seek ways to nurture it in our classrooms.

Accountability

Engagement, responsibility, and persistence" are also essential for success in the writing classroom, of course, and in most other areas of life as well. We have heard so many pronouncements in recent years about "holding teachers more accountable for student performance" that many citizens outside the nonacademic community appear to believe that this is all anyone needs to know about teaching and learning. (As William James noted, "There's nothing so absurd that if you repeat it often enough, people will believe it.") What's missing from this conversation are equally impassioned calls to *hold students and parents accountable for student performance as well.* After all, shouldn't students be encouraged to take responsibility for their own learning? Isn't this much better than constantly theorizing and positioning students as if they are only passive spectators, helpless before the grand sweep of their own learning and their own lives?

When we look at the high schools that we know—with their learning centers, writing centers, counseling centers, advisement programs, basic writing and basic math curriculum, computer labs, peer tutors, and reference librarian staffs—don't we see institutions doing everything they possibly can to help students succeed? For the student who needs it and has the desire to find it, help is almost always available. This is an issue complicated in complex ways by race and class, of course (Haskins and Sawhill 2009; Massey 2007; Rothstein 2004; Sullivan 2005; Tough 2012). Global economics might also be said to play a role here as well, especially in terms of the changing American workplace and the catastrophic loss of blue-collar jobs (mostly in manufacturing) that pay a living wage. This has had a devastating effect on families and communities, and thus on student learning across America, especially in poor communities (Duncan and Murnane 2011; Wilson 1996). Nonetheless, we ultimately empower and enable students when we require them to take responsibility for their own learning, for their own choices, and for their own successes and failures. Here we are following the work of Albert Bandura (1997) on agency and self-efficacy.

Humility

Noble has humble as its root.

—Lao Tzu

One disposition we might consider adding to the habits of mind list is humility. Humility opens us up to difference, to ideas, and to others in powerfully positive ways. It also provides students with an extremely valuable general disposition toward the world, intellectual work, and the production of meaning and value in their lives.

For inspiration and direction we might follow Sam Wineburg's work on teaching history, which we have already discussed. Mature historical thinking, Wineburg suggests, "is an act that engages the heart" and begins to embrace "a humility before the narrowness of our contemporary experience and an openness before the expanse of the history of the species" (Wineburg 2001, 22):

> Coming to know others, whether they live on the other side of the tracks or the other side of the millennium, requires the education of our sensibilities. This is what history, when taught well, gives us practice in doing. Paradoxically, what allows us to come to know others is our distrust in our capacity to know them, a skepticism about the extraordinary sense-making abilities that allows us to construct the world around us.
>
> A skepticism toward the products of the mind can sometimes slide into cynicism and solipsism. But this need not be the case. The awareness that the contradictions we see in others may tell us more about ourselves is the seed of intellectual clarity. It is an understanding that counters narcissism. For the narcissist sees the world—both the past and the present—in his own image. Mature historical knowing teaches us to do the opposite: to go beyond our own image, to go beyond our lived life, and to go beyond the fleeting moment in human history into which we have been born. History educates ("leads outward" in the Latin) in the deepest sense. Of the subjects in the secular curriculum, it is the best at teaching those virtues once reserved for theology—humility in the face of our limited ability to know, and awe in the face of the expanse of human history. (Wineburg 2001, 23–24)

The model of historical thinking that Wineburg advances here foregrounds caution and respect for uncertainty and indeterminacy as among its primary values. There is much that student writers can gain from embracing such an outlook as a primary value and orientation in the writing classroom. A pedagogy focused on listening, empathy, and reflection and built around ill-structured problems actively seeks to encourage this kind of "humility in the face of our limited ability to know, and awe in the face of the expanse of human history."

"Grit"

A fascinating body of research is also developing around issues related to character and student achievement, and this work also supports a focus on habits of mind and dispositional characteristics. This is work that all writing teachers should be familiar with. Angela Lee Duckworth's work on "grit"—a personal quality that includes self-discipline, perseverance, and passion—for example, strongly supports a pedagogical focus on dispositional characteristics in the writing classroom. An important early research study by Duckworth and Martin Seligman (2005) found that character traits like passion and perseverance were more important to academic success than IQ or "smarts" (as the title of this famous study suggests: "Self-Discipline Outdoes IQ Predicting Academic Performance in Adolescents"). Duckworth and her colleagues have come to define grit as self-discipline and perseverance, but it also includes passion as well: "We define grit as perseverance and passion for long-term goals. Grit entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress" (Duckworth, Peterson, Matthews, and Kelly 2007, 1087–88).

As Peter Doskoch notes in an essay about Duckworth's research, grit is not simply a matter of just working hard. There appears to be an important element of joyfulness in this quality as well: "That quality Duckworth finds so intriguing has little to do with clenched teeth. Rather, it's a force of motivation so luminous that, as mathematician Andrew Wiles found, it constantly renews itself" (Doskoch 2005, 8).

As Duckworth and Eskreis-Winkler note, the implications of this research on our understanding of human achievement and development are just beginning to be recognized and understood:

> Our research suggests that prodigious talent is no guarantee of grit. In fact, in most samples, grit and talent are either orthogonal or slightly negatively correlated. To the extent that talented people are, on average, less gritty, individuals who are both extremely talented and extremely gritty should be particularly rare. Indeed, objective measures of achievement are typically log-normal in distribution; the most accomplished scientists, novelists, artists and entrepreneurs are dramatically more successful than what would be expected were achievement distributed in a normal bell curve. A hypothesis we aim to test in future research is that talented individuals, for whom learning and advancement come easily, have fewer opportunities (or, more aptly, necessities) to develop a resilient approach to failure and setbacks.
>
> In our cross-sectional analyses, grit increases monotonically throughout adulthood. One possibility is that people have a growing appreciation of the efficacy of effort as they age. Alternatively, consistent with the literature on identity formation, it may be that the value of specializing

> versus exploring diverse pursuits shifts as we age. Early in life, it may make more sense to privilege exploration over specialization. Until we develop a solid understanding of our own inherent interests and abilities, it may make sense to hold off on committing to lifelong goals. Later in development, it may be increasingly adaptive to stay with a particular vocational (or avocational) pursuit, especially since division of labor in our modern economy tends to reward specialization. (Duckworth and Eskreis-Winkler 2013)

This important body of research strongly supports a focus on habits of mind in the classroom.

Peterson and Seligman's book, *Character Strengths and Virtues*, offers additional support for this kind of curricular focus on character traits. As Peterson and Seligman note in their introduction,

> The classification of strengths presented in this book is intended to reclaim the study of character and virtue as legitimate topics of psychological inquiry and informed societal discourse. By providing ways of talking about character strengths and measuring them across the life span, this classification will start to make possible a science of human strengths that goes beyond armchair philosophy and political rhetoric. We believe that good character can be cultivated, but to do so, we need conceptual and empirical tools to craft and evaluate interventions. (Peterson and Seligman 2004, 3)

Paul Tough's (2012) book, *How Children Succeed: Grit, Curiosity, and the Hidden Power of Character,* provides additional support for a curricular focus on dispositional characteristics. Roy F. Baumeister and John Tierney's *Willpower: Rediscovering the Greatest Human Strength,* which focuses on the power of self-regulation, does as well. The work of researchers like Walter Mischel, popular writers like Geoff Colvin, and others we might mention here lend support to this approach as well. As Ron Ritchhart notes in his book, *Intellectual Character,* "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" (Ritchhart 2002, 7).

The work we do to nurture these kinds of dispositional characteristics may, in the long run, prove to be more important than anything we might teach students in writing classes about thesis statements, essay structure, and MLA format.

CLASSROOM APPLICATIONS

Scholarship and research provide us, then, with compelling reasons to embrace these habits of mind and to actively nurture them in our classrooms. This can be accomplished in many ways. In one classroom

strategy that Tishman, Perkins, and Jay highlight, for example, a science teacher developed an interactive classroom activity that allowed students to recreate Darwin's fascinating intellectual journey as he struggled to make sense of what he found on the Galapagos Islands during his historic voyage aboard *The Beagle.* This arduous intellectual work, of course, eventually produced Darwin's theory of evolution. After participating in a series of activities that put students on the Galapagos Islands with Darwin confronting what appeared to be insoluble mysteries, and after recreating some of Darwin's thinking processes as a class, the teacher then asked students to identify the key elements of Darwin's "good thinking." Here is the list they came up with:

- Don't give up
- Ask lots of questions
- Generate multiple ideas and explanations
- Be critical
- Don't stop too soon (Tishman, Perkins, and Jay 1994, 47)

This list is an excellent example of a pedagogical entry point to begin talking about "good thinking" with a class. These are habits of mind that are likely to transfer to almost any situation or context because these dispositions are not context-, discipline-, or field-dependent. These are habits of mind that all good thinkers and writers need to produce strong work, regardless of field, occupation, or discipline. In terms of the pedagogy we are discussing here, a classroom focused on ill-structured problems, for example, actively seeks to develop these characteristics because the intellectual work is challenging, easy answers are not available, and the assignment has been designed with the expectation that in order to be successful students will need to not give up, ask lots of questions, generate multiple ideas and explanations, be critical, and not stop too soon. A focus on motivation helps build passion, perseverance, and grit so that this important work can be accomplished.

CHARACTER

Overall, we have much to gain from encouraging students in our writing classes to think about the nature of writing expertise in ways that focus not on standardized test scores or particular curricular achievements and skill sets but on dispositional qualities, character traits, and habits of mind. If we can help students develop habits of mind like curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, humility, grit, and metacognition, then very good things will happen.

Our profession has a great deal to gain from moving these habits of mind to the center of our curriculum. There is a growing consensus, as we have seen, that these dispositional characteristics are vitally important in all sorts of ways for students. One way we can effectively nurture such dispositions is by adopting a pedagogy that privileges listening, empathy, and reflection as its central values and attending carefully to nurturing intrinsic motivation. Such a pedagogy would help develop these essential habits of mind, and would also provide our profession with a strong, research-based theoretical model for seeking ways in our classrooms to help nurture these essential dispositional characteristics at every grade level and across institutional boundaries.

9

AN OPEN LETTER TO FIRST-YEAR HIGH SCHOOL STUDENTS

THE "EXPECTATIONS GAP"

As we know, and as any number of important recent reports make clear, college readiness has become the single most urgently discussed concern in our profession. The Common Core Standards were developed and adopted nationwide in response to this problem. As our discipline has engaged this work, we have come to understand how poorly we have managed curricular alignment between our high schools and colleges and how much confusion still remains about what college readiness means.

Being ready for college means a lot of different things—all of them complex, all of them interrelated, and all of them essential. In fact, to describe someone as being "ready for college" is to describe a person who has often painstakingly, and almost always intentionally, developed an extensive variety of distinct proficiencies, habits of mind, and personal values related to the world and to the academic enterprise. Regardless of how good a high school may be, without systematic engagement and particular kinds of long-term preparation by high school students, college readiness will continue to be elusive and worrisome national problem.

To help promote better understanding of college readiness, I have composed the following open letter addressed to first-year high school students. I have included here everything that I think might be useful to high school students thinking about college. I have tried to narrow down what I know about succeeding in college into a few pages of practical advice. Although I have addressed this letter to first-year high school students specifically, the advice here is designed to be useful to any student who plans or hopes to attend college. I use this letter in my basic writing and reading classes, and students have found it very useful (and often very surprising: there's so much expected of them!). I have also developed a handy checklist for students (which follows the open letter)

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