STUDENTS
AT THE
CENTER

TEACHING AND LEARNING
IN THE ERA OF THE COMMON CORE

A **JOBS FOR THE FUTURE** PROJECT

MOTIVATION, ENGAGEMENT, AND STUDENT VOICE

APRIL 2012

THE STUDENTS AT THE CENTER SERIES

By Eric Toshalis and Michael J. Nakkula

EDITORS' INTRODUCTION TO THE STUDENTS AT THE CENTER SERIES

Students at the Center explores the role that student-centered approaches can play to deepen learning and prepare young people to meet the demands and engage the opportunities of the 21st century. *Students at the Center* synthesizes existing research on key components of student-centered approaches to learning. The papers that launch this project renew attention to the importance of engaging each student in acquiring the skills, knowledge, and expertise needed for success in college and a career. Student-centered approaches to learning, while recognizing that learning is a social activity, pay particular attention to the importance of customizing education to respond to each student's needs and interests, making use of new tools for doing so.

The broad application of student-centered approaches to learning has much in common with other education reform movements including closing the achievement gaps and providing equitable access to a high-quality education, especially for underserved youth. Student-centered approaches also align with emerging work to attain the promise and meet the demands of the Common Core State Standards.

However, critical and distinct elements of student-centered approaches to learning challenge the current schooling and education paradigm:

> Embracing the student's experience and learning theory as the starting point of education;

> Harnessing the full range of learning experiences at all times of the day, week, and year;

> Expanding and reshaping the role of the educator; and

> Determining progression based upon mastery.

Despite growing interest in student-centered approaches to learning, educators have few places to which they can turn for a comprehensive accounting of the key components of this emerging field. With funding from the Nellie Mae Education Foundation, Jobs for the Future asked nine noted research teams to synthesize existing research in order to build the knowledge base for student-centered approaches to learning and make the findings more widely available.

The topic of this paper, as with each in the series, was selected to foster a deeper, more cohesive, research-based understanding of one or more core elements of student-centered approaches to learning. The authors in this series: synthesize and analyze existing research in their areas; identify what is known and where gaps remain related to student-centered approaches to learning; and discuss implications, opportunities, and challenges for education stakeholders who put students at the center. The authors were asked to consider the above definition of student-centered approaches, but were also encouraged to add, subtract, or critique it as they wished.

The authors were not asked explicitly to address the Common Core State Standards. Nevertheless, the research proceeded as discussions of the Common Core were unfolding, and several papers draw connections with that work. The thinking, learning, and teaching required for all students to reach the promised outcomes of the Common Core provide a backdrop for this project. The introductory essay looks across this paper and its companion pieces to lift up the key findings and implications for a new phase in the country's quest to raise achievement levels for all young people.

The nine research papers are loosely organized around three major areas of inquiry—learning theory; applying student-centered approaches; and scaling student-centered learning—although many of the papers necessarily cross more than one area:

1. **LEARNING THEORY:** What does foundational and emerging research, particularly in the cognitive and behavioral sciences, tell us about how students learn and about what motivates them to learn?
   Mind, Brain, and Education
   Christina Hinton, Kurt W. Fischer, Catherine Glennon
   Motivation, Engagement, and Student Voice
   Eric Toshalis, Michael J. Nakkula

2. **APPLYING STUDENT-CENTERED APPROACHES:** How are student-centered approaches to learning implemented? What is the nature of teaching in student-centered learning environments? How can students who are underrepresented in postsecondary education be engaged earlier and perform well in the math and reading activities that scaffold learning? How are advances in technology customizing curriculum and changing modes of learning to meet the needs of each student?

Teachers at Work—Six Exemplars of Everyday Practice
Barbara Cervone, Kathleen Cushman

Literacy Practices for African-American Male Adolescents
Alfred W. Tatum

Latino/a and Black Students and Mathematics
Rochelle Gutierrez, Sonya E. Irving

Curricular Opportunities in the Digital Age
David H. Rose, Jenna W. Gravel

3. **SCALING UP STUDENT-CENTERED APPROACHES TO LEARNING:** How have schools sought to increase personalization and with what outcomes for learning? What is the relationship between assessment and student-centered approaches? What can districts do to support student-centered approaches to learning?

Personalization in Schools
Susan Yonezawa, Larry McClure, Makeba Jones

Assessing Learning
Heidi Andrade, Kristen Huff, Georgia Brooke

Changing School District Practices
Ben Levin, Amanda Datnow, Nathalie Carrier

A number of distinguished researchers and practitioners serve as advisors to *Students at the Center* including Scott Evenbeck, founding president of the New Community College, City University of New York; Charles Fadel, Visiting Scholar, Harvard Graduate School of Education, MIT ESG/IAP, and Wharton/Penn CLO; Ronald Ferguson, Senior Lecturer in Education and Public Policy, Harvard Graduate School of Education and the Harvard Kennedy School; Louis Gomez, Professor and the John D. and Catherine T. MacArthur Foundation Chair in Digital Media and Learning, Graduate School of Education and Information Studies, UCLA; Susan Moore Johnson, Professor and the Jerome T. Murphy Professor of Education, Harvard Graduate School of Education; Jim Liebman, Simon H. Rifkind Professor of Law, Columbia University School of Law; Miren Uriarte, Professor, College of Public and Community Service, University of Massachusetts, Boston; and Arthur VanderVeen, Vice President, Business Strategy and Development at Compass Learning.

To download the papers, introductory essay, executive summaries, and additional resources, please visit the project website: www.studentsatthecenter.org.

Over the coming months, Jobs for the Future and the Nellie Mae Education Foundation will craft opportunities to engage a broad audience in the conversation sparked by these papers. We look forward to building a shared understanding and language with you for this important undertaking.

Nancy Hoffman, Adria Steinberg, Rebecca Wolfe (signatures)

Nancy Hoffman, Adria Steinberg, Rebecca Wolfe

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Jobs for the Future identifies, develops, and promotes education and workforce strategies that expand opportunity for youth and adults who are struggling to advance in America today. In more than 200 communities across 43 states, JFF improves the pathways leading from high school to college to family-sustaining careers.

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The **Nellie Mae Education Foundation** is the largest charitable organization in New England that focuses exclusively on education. The Foundation supports the promotion and integration of student-centered approaches to learning at the middle and high school levels across New England. To elevate student-centered approaches, the Foundation utilizes a strategy that focuses on: developing and enhancing models of practice; reshaping education policies; increasing the body of evidenced-based knowledge about student-centered approaches and increasing public understanding and demand for high-quality educational experiences. The Foundation's initiative and strategy areas are: District Level Systems Change; State Level Systems Change; Research and Development; and Public Understanding. Since 1998, the Foundation has distributed over $110 million in grants.

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INTRODUCTION

I f you spend enough time in middle and high school classrooms, you are almost certain to come away with the following observation: Teachers work exceedingly hard to convince their students that the day's lessons are worthy of their attention and effort. Using strategies ranging from inspiration to coercion, they are forever attempting to motivate their students to achieve and to persuade them to engage in the work and fun of the classroom. Sometimes these techniques work beautifully and the classroom is alive with exploration and discovery; at other times, the techniques fall short and students tune out, disengage, and ultimately fail.

Though the reasons for these successes and challenges are widely debated, practitioners, scholars, and policymakers all agree that if students are sufficiently motivated to achieve and adequately engaged in classroom learning, their chances of succeeding academically are greatly enhanced. However, figuring out what actually motivates students to achieve and determining what influences their decisions to engage in class can be difficult, especially for teachers as they confront today's class sizes, pacing calendars, and standardized assessments. These challenges create pressure to homogenize one's pedagogy by "teaching to the middle" or lumping all students together as if all their motivations and desires were the same.

Concerned about how to balance standardized mandates with the unique needs of each student, teachers rightfully ask:

> How might I understand the variety of my students' motivations to learn, and how might I address each of their different ways of engaging in class?

> Conversely, how should I understand my students' occasional lack of motivation and academic engagement?

> Given the diversity of students in my classroom and the unique ways each one learns, how can I provide a range of growth opportunities that motivate and engage my students, both collectively and individually?

To help educators respond to such questions, we provide a tour through enduring and cutting-edge research on achievement motivation, school engagement, and student voice. We review the knowledge base in these fields to highlight the general concepts and specific strategies that promote academic achievement, and to show, in particular, how a focus on student voice in student-centered learning contexts can enhance growth opportunities in the cognitive, behavioral, and social-emotional domains. Throughout the paper, we focus on the role that demographic differences play in shaping adolescent students' motivations, their decisions to engage, and their particular need for voice in the classroom.

FRAMING OUR WORK

Our review and analysis of the literature on motivation, engagement, and student voice occur in an educational context marked by a focus on reform and standardization. From the No Child Left Behind legislation to its reiteration in the Race to the Top initiatives, the national dialogue on public education over the last decade has been characterized by the need to improve our schools, elevate student achievement, and hold accountable those educators and institutions that fail to meet expectations. From a research perspective, however, the current reliance on high-stakes standardized tests as the sole assessment of student achievement and teacher efficacy and, ostensibly, as a primary motivator of individual and institutional performance has come under fire (see, for example: Amrein & Berliner 2002; Brown 2010;

Crocco & Costigan 2006; Crocco & Costigan 2007; Ellis 2008; Gay 2007; Mintrop & Sunderman 2009; Murillo & Flores 2002; Selwyn 2007; Smith & Garrison 2005; Watanabe 2008). Obsessed with measuring adequate yearly progress, we sometimes forget the importance of cultivating the immeasurables—such as a love for learning, a passion for inquiry, and a zeal for creative expression. Furthermore, the contemporary national dialogue about how to reform our schools is often guided by assumptions that are out of sync with what we know about how students learn and why they choose to do so. Consequently, we write out of deep concern that the movement to raise standards may fail if teachers are not supported to understand the connections among motivation, engagement, and student voice.

When we dig beneath the surface of high-stakes standardization strategies to the real adolescents below, we find young people striving and struggling to make a life for themselves, an authentic life capable of surmounting challenges and accessing supports in their everyday world. A life that makes sense *to them* in *their* world—this is what motivation, engagement, and student voice address. Consequently, our perspective on these three bodies of literature is that they share a common basis central to student-centered approaches to learning: the experience of human agency. Human agency, or simply "agency" as we refer to it here, captures the initiative and capacity to act in a desired direction or toward desired goals.

Note the importance of desire in this definition. We are motivated by desire; we engage out of a desire to do so; and, if fortunate enough, we voice our desired wishes and intentions. Desire is a powerful human instinct, and it is very much at the center of the literature we address in this paper. At the same time, the power of desire is often lost or buried in the jargon of mainstream academic discourse. One of our goals is to excavate desire from the layers of jargon heaped upon it. We believe the concept of agency can serve to hold and clarify the core of our analyses.

Although we primarily approach motivation, engagement, and student voice sequentially, we see the three constructs as fundamentally interrelated. Each is built around or represents various experiences of human emotion, rationality or cognition, behavior or action, and socialization processes. For example, one can be motivated to learn based on feelings of inspiration or fear. That motivation can result in or be a product of opportunities to engage deeply in school, which in turn can create or be a result of students voicing their opinions on key aspects of their educational interests. As such chains of events evolve, students come to think differently about their educational possibilities. As these thoughts become reinforced or contradicted, behavioral actions (including further school engagement) are socialized accordingly. In short, thoughts, feelings, behaviors, and socialization processes inform the nature of motivation, engagement, and student voice in ways that are difficult to disentangle. Our sequential approach to the literature is less an effort to do the disentangling and more an attempt to articulate the contributing parts.

As readers work through this paper, we encourage thinking ahead about the connections between motivation and engagement, even as one grapples with the specifics of motivation theory. Please think also about how student voice is linked with motivation and engagement as both an artifact of these phenomena and as a means of promoting them. In other words, we encourage thinking less about one-way causal relationships among these concepts and more about the interrelatedness among them. And finally, please think with us about the contributions that motivation, engagement, and student voice make to the experience of human agency. If education is, at least in part, intended to help students effectively act upon their strongest interests and deepest desires, then we need a clearer understanding of how to cultivate that sense of agency.

» **The movement to raise standards may fail if teachers are not supported to understand the connections among motivation, engagement, and student voice.**

ACHIEVEMENT MOTIVATION AND STUDENT-CENTERED LEARNING

The research on achievement motivation is nothing if not complex, and, on the surface, seemingly filled with contradictions. Studies routinely demonstrate that reductive notions about motivation, or simplistic cause-and-effect models of it, seldom survive outside of neatly managed laboratory environments. Classrooms, schools, and teacher-student relationships are influenced by a multitude of factors, to say nothing of peer relationships, social contexts, family dynamics, neighborhood conditions, etc. With multiple cart/horse conundrums and chicken/egg paradoxes that can confuse the researcher and practitioner alike, it is important to think of the factors affecting motivation less as linear, input-output models and more as webs of causality.

As an illustration, imagine a teacher consulting the research literature in an attempt to answer this question: Should I try to motivate students by appealing to their individual interests and goals, or would it be better to change outside influences—for example, the way I teach and how I organize my classroom? As we will see, the short answer is: yes, both, and in some cases, neither. Another teacher asks: Which approaches tend to motivate students the most: rewards and punishments, praise, increased opportunities for closeness with teachers, greater autonomy, or more peer interaction? The best research-informed response is likely: it depends.

By picturing the factors that influence achievement motivation in a web of causality, we acknowledge that students exist within a dynamic ecology—it shapes them, and they shape it. To reduce our unit of analysis to the student alone is to miss the fact that he is a product of and contributor to his environment. Likewise, to consider only the context while ignoring the individual student's unique set of capabilities, desires, and emotions is to miss the proverbial forest for the trees. What is clear in all these muddied waters is that knowing the individual student well enough to see how the web of causality functions to motivate him to achieve is crucial to teaching that student well. At its core, this is what student-centered learning is all about.

WHERE THEY COME FROM, WHAT THEY BRING: MOTIVATION IN SOCIAL CONTEXT

If we think of the motivational web of causality in terms of individual and environmental interconnections, we need to understand what we can about the social worlds our students come from, and how those worlds influence our efforts in the classroom. Some students enter schools that have consistently supported academic achievement, instilled the joy of learning, and modeled the benefits of school success. Such students tend to be ready for what their teachers offer; we might think of them as being pre-motivated to achieve. These students may have observed that school works well for people

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they know and trust; have experienced support and encouragement from parents, teachers, and school officials; feel safe when attending school; associate what they learn in class with future success; and feel welcomed and validated by adults and peers at school. More often than not, these students' cultures, beliefs, and backgrounds are represented in their school's personnel and in its curricula, behavioral expectations, and institutional values, which reinforce positive self-images and expand opportunities.

Other students enter school with a markedly different outlook. Their social contexts create conditions that can marginalize and mark them as different or "other." Whether it is the student's race, linguistic heritage, immigration status, socioeconomic class, sexuality, or other cultural factors working alone or in combination, the messages received from society often tell the student that she is outside the mainstream. Setting foot on a school campus, the student may confront a context in which faculty and staff rarely look or speak like her, curricula seldom reflect her ways of knowing or her people's history, behavioral expectations do not respect her ways of interacting, and the espoused or implicit values of the school may conflict with what she has learned at home. To be motivated to succeed in such a context is often a challenge, as is mustering the energy to stay engaged within it. For students like these, the predisposition to be unmotivated and to disengage from teacher-directed activity may be strong.

As these examples illustrate, social context or location can critically inform the level of motivation students possess, the extent of engagement they commit to academic activity, and the degree to which they feel they have a voice in any of it. The result is a complex dynamic in which differently located students take different pathways toward achievement. As discussed in the accompanying paper on cognitive science, neural pathways are built whenever we learn something. The pathways that get used the most and connect to the greatest number of related pathways become the guiding tendencies in our ways of thinking, which in turn shape subsequent learning. The plasticity of our brains enables us to build knowledge rather than merely record it, and our brain's adaptability enables us to rebuild, refurbish, reinforce, and even dismantle already constructed pathways when conditions call for it.

The same is also true for social pathways. Like neural pathways, social pathways influence how we receive and make meaning of information, which in turn shapes our decision making in response to different contexts. For those whose social pathways take them into experiences of confirmation and validation at school, where ample opportunities are provided to see and value the ways school is preparing them for a future they desire, the need for new motivation to engage academically may be low. Pre-motivated to achieve, these students may not require teachers to draw them into lessons, convince them of an activity's value, or inspire them to "do their best" precisely because they already believe that school works for them. However, for those whose social pathways lead to frequent experiences of alienation and marginalization at school, the need to be engaged personally and socially may come before they develop any substantive motivation to achieve academically. Students who have grown disconnected from school and who are leery of its intentions may not possess the necessary motivations to achieve.[2] Starting with an alienated orientation, such students may wait for educators to draw them in, to feel invited, needed, interested, and even inspired before motivation rises to a level that propels achievement-oriented activity. For these students, engagement may need to precede motivation.

These comparisons illustrate several key aspects of motivation and its relationship to engagement. First, no single motivational pathway or type of engagement guarantees academic achievement—each student is a unique blend of individual stories and needs, each differently positioned to have their story heard and their needs expressed. To productively appeal to those individual needs, customized approaches that differentiate instruction tend to work better than homogenizing catch-all techniques (Lawrence-Brown 2004; Santamaria 2009; Sapon-Shevin, Zigmond, & Baker 2002). Second, motivation and engagement vary depending on the student and his situation. Some students need engagement to be motivated, while others are motivated regardless

of being engaged. Third, students' psychological connection to school affects motivation levels and participatory behaviors. Feeling welcomed into, included in, and validated by school can exert a profound effect on a student's capacity to engage and his efforts to achieve.

MOTIVATING GROWTH IN INTELLIGENCE

Fortunately, contextual precursors serve as dynamic contributors to motivation rather than as determinants of it. A repeated finding from research on motivation is that context shapes but does not determine academic outcomes. Many studies support the conclusion that achievement motivation is highly malleable and not fixed to underlying conditions (Murphy & Alexander 2000). Simply stated, motivation is better understood as an alterable state than a permanent trait; it is highly susceptible to modification as conditions vary. Students build motivational beliefs in relationship to a domain (e.g., math class, biology, P.E., language arts), then use these beliefs to orient themselves in new learning. Such beliefs are malleable even though the skills learned in a particular domain may not be transferrable to other domains (Fischer & Rose 1998; Fischer 1980).

Since motivation emerges as the individual responds to and prepares for the environment, when the individual or the environment changes, so too does motivation. This ongoing dynamic highlights

a key point for educators: Given that achievement motivation is malleable, it should not be used as a category to sort or track students. Grouping the so-called "unmotivated students" together and sequestering them from the supposedly motivated students is likely to exacerbate existing motivational dispositions. A more student-centered approach would be to ascertain what motivates individual students to achieve in a particular class and then enlist the students' help in identifying other factors that might elevate their motivation, factors that may include changes to the context or changes to the individual's beliefs and behaviors.

The relationship between student beliefs and achievement motivation has been a rich topic of investigation over the last few decades, and much of what has been discovered holds important implications for classroom educators. To understand how beliefs and motivation interact, researchers often examine students' views of intelligence and how they believe it is attained. Researchers now largely agree "that even though there may be individual differences in biological aptitudes for learning certain kinds of things (music, social skills, and so on), most of functional intelligence is learnable and hence also teachable" (Bransford et al. 2005).

Students often conceive of intelligence in ways that align with this research consensus. Guided by teachers or parents familiar with this idea, they believe intelligence is a dynamic phenomenon, subject to incremental changes based on how hard one works at something and how well one might be supported to do it. Studies by Carol Dweck and others have

shown that if a particular student believes intelligence is largely a matter of effort, then that student is likely to be more motivated to exert effort, attempt difficult academic tasks, and persist despite setbacks, confusion, and even failure (Dweck 1999; Grant & Dweck 2003; Kamins & Dweck 1999; Mangels et al. 2006). However, if a student believes intelligence is a fixed entity (i.e., a stable "aptitude" determined at birth and resistant to external influence), then difficulty with a particular activity (e.g., math) is more likely to be interpreted as evidence of lack of intelligence in that domain (e.g., "I'm just stupid at math"). These students frequently expect less of themselves, underrate the importance of effort, and overrate how much help they need from others.

Summarizing this research, Po Bronson and Ashley Merryman (2009) note that even very capable and high-functioning students give up when they encounter a difficult task if they believe it is a function of ability rather than effort. As Carol Dweck puts it, "You might think that students who were highly skilled would be the ones who relish a challenge and persevere in the face of setbacks. Instead, many of these students are the most worried about failure, and the most likely to question their ability and to wilt when they hit obstacles" (1999). Consequently, students' tendencies to persist or quit when faced with challenging academic work largely depend on beliefs about their own abilities, and that is as true for high-achieving students as it is for those who are struggling. Regardless of their achievement level, the motivation to try is enhanced if the student believes (or is taught to believe) that she can acquire new skills and improve on existing ones through focus and effort.

This research informs how teachers should and should not use praise to motivate students. To be student centered and conversant with research on motivation is to realize that blanket statements about students' inherent smartness may actually function

as disincentives. We have seen time and again that when faced with a student who seems frustrated or confused, performs below capabilities, or lacks confidence, the teacher will tell that student that she is "smart." The presumption is that a student who believes this will not be intimidated by new academic challenges.[3]

However, if underneath this encouraging label the students' internal appraisals of their own "smartness" do not match what the teacher declares, then two logical conclusions may emerge in the students' minds: 1) "I am having difficulty not because of my effort or the level of support I am receiving, but because my smartness is not sufficient to understand the material"; and 2) "Because my teacher still thinks I am 'smart' even with these difficulties, it is clear to me that the teacher does not understand me or my situation, so asking for further help or sharing my confusion will likely do me no good." What research on motivation and intelligence beliefs shows us is that a crucial component in being learner-centered is to help students learn to persist, to associate their achievement with their effort (not their smartness). This means refraining from the use of hollow praise about intelligence and instead reinforcing the belief that trying will produce increases in proficiency. Accordingly, praise is best applied when it is specific to a skill or talent the student is developing. "Your writing has really improved, Maria. I can see your hard work paying off here." "Abdul, your algebra test scores have gone up quite a bit in the last several weeks. Have you been studying more?"

In a paradoxical twist, praise sometimes can be most effective when it is depersonalized. When teachers say, "I'm so proud of you," it can work well as a motivator as long as the student seeks the teacher's esteem (sometimes they do not) and the teacher remains in the student's life (which is rarely the case after 3:00 p.m. or after June). When motivators depend on the teacher's proximity and the quality of

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the relationship between the teacher and student, their effects can disappear when the teacher's role is diminished. Forms of praise aimed at enhancing student self-esteem can condition the student to desire if not expect others' admiration (Kohn 1994), be perceived as an invitation to self-centeredness (Damon 1995), and displace motivations that might otherwise originate in the student's self-appraisals (Hwang & Tobin 1997; Moeller 1994).

Indeed, to grow more dependent on others' positive appraisals than on one's own internally generated sense of accomplishment is a recipe for constant disappointment in life. Asking questions like "How do you feel about your level of achievement on this assignment, Roberto?" or "Why do you think you performed in this manner on this test, Julie?" will help students articulate their own theories about their success. The teacher can follow up with statements like, "Well, I hope that you feel good about what you've done here because I can see how hard you've been working and the results are clear to me. What do you think?"

THE SHIFT FROM BEHAVIORISM TO CONSTRUCTIVISM IN MOTIVATION RESEARCH

Knowing that we need to emphasize effort over esteem is helpful, but it still leaves us with critical questions about how to carry out that emphasis.

Motivation research has evolved, with each era changing the way educators view students and how they best learn. James Appleton, Sandra Christenson, and Michael Furlong (2008) discern three historical phases in which researchers have successively framed the student as:

> A machine attempting to meet basic needs (behavioral tradition);

> A decision maker weighing the likelihood of attainment and value of an outcome (cognitive tradition); and

> A creator of meaning considering the value and purpose of pursuing goals (constructivist tradition).

Others would argue, as we will in more detail below, that student voice may be understood as a fourth phase. This is because voice-based teaching frames the student not just as a creator of meaning but also as stakeholder and change agent. Seen as a vital, indispensable actor in the shaping of school learning contexts, students are understood to be motivated by ethics of care, contribution, and compassion, along with understandable needs for self-satisfaction (Daniels & Arapostathis 2005; Fielding 2001; Heyman 2008; Mitra 2004). Schools and classrooms built on this theoretical foundation necessarily develop markedly different programs and approaches than those based on the belief that students are quasi-machines.

Taken as a whole, these phases in motivation research roughly coincide with an important shift in

educational theory—the move from behaviorist to constructivist orientations. Constructivism observes that the human mind generates knowledge rather than absorbs it (Matthews 2003; Prawat 1996; Wittrock 1992). Our minds constantly perceive, classify, sort, and connect new information to prior learning at speeds and levels of complexity even today's fastest microprocessors cannot match. Learning occurs when new information, experiences, ideas, or relationships interact with our preexisting systems of knowledge, forcing our minds to build new networks of understanding to accommodate it. What it means to "understand" in the constructivist tradition is to construct something new, to make a neural and epistemological link between what was previously known and what was most recently learned. This frames learners as meaning-makers, not just meaning-receivers, and it positions teachers as co-constructors of knowledge, not just transmitters of data.

Contrast this with behaviorist orientations toward learning, which are concerned less with internal processes and more with observable behavior (Freiberg & Brophy 1999). Analyzing actions rather than thoughts, behaviorists seek to explain the individual's decision making in terms of a stimulus-response causality. In this context, motivation is typically reduced to the individual's attempt to satisfy immediate needs or desires, and rewards and punishments are used to induce the motivation to pursue desired ends and reduce the motivation to carry out undesirable behavior.

Innumerable classroom management techniques draw from this behaviorist framework. Behaviorism has been criticized for providing little room for either free will or complicating processes such as memory, reflection, emotional reaction, and relational negotiation (Egan 2002; Kincheloe & Steinberg 1996;

Kohn 1996), and because the effects of "carrots and sticks" are often far more pronounced in the short term than in the long term. The truth is that students and teachers alike are motivated to act due to internal processes and external contexts, and the reduction or elimination of one or the other makes little practical sense if we are interested in understanding the full range of human motivation as it impacts learning.

EXTRINSIC VS. INTRINSIC MOTIVATION

Extrinsic motivators primarily have been understood within a behaviorist framework. Specific stimuli external to the self (e.g., social expectations, rewards, praise, punishments, threats, risks) are believed to produce specific predictable outcomes. In education, the shift away from behaviorist explanations of human behavior toward more constructivist ones coincides with the growth in the belief that the best and most potent motivators are intrinsic to the student: they are held internally and valued by the individual at the level of feelings and desires, whether expressed to others or not. Research has demonstrated that students' motivations tend to be stronger, more resilient, and more easily sustained when they emerge from internally held goals rather than from externally applied coercion (Eccles & Wigfield 2002; Ryan & Deci 2000; Ryan & Deci 2001), but research has also shown that the distinction between intrinsic and extrinsic forms of motivation is often unclear to the learner. If one considers thoughts, emotions, relationships, hopes, desires, and any number of internal processes that are influenced by the environment, the distinction between what is intrinsic or extrinsic may be meaningless, or at least not very useful to the teacher.

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For the purposes of student-centered learning approaches, the relationship between extrinsic and intrinsic motivators might best be viewed as a transitional process. Lev Vygotsky (1978) was instrumental in highlighting the false dichotomy between external supports and internal attributes, including intelligence and personality development. From this perspective, what a person comes to hold and experience as internal begins through and is modified continuously by interactions with the environment.

Our own thinking emerges from what Vygotsky calls a "sociocultural mind." The more a student is exposed to a teacher's (and others') thinking, the more that student's thoughts are influenced. This connection does not imply that the teacher's and student's thoughts become one and the same, but rather that the student's innermost thoughts and beliefs are a synthesis of his interactions with others. The transition from extrinsic to intrinsic motivation works similarly. External motivators are provided by important people in students' lives. Their beliefs and values and the quality of those relationships shape the importance of those motivators. The more deeply students can connect with the people and larger contexts (e.g., schools) providing external motivation, the more likely it is that they gradually will internalize those motivators as their own. If on the other hand, the external motivators are applied in a de-contextualized manner, outside of meaningful relationships and important contexts, they are likely to remain extrinsic and less influential. In other words, extrinsic motivation rarely becomes internalized outside of meaningful, supportive relationships.

SELF-DETERMINATION THEORY

Recent research on self-determination as a contributing factor in the development of achievement motivation calls into question any presumed boundary between intrinsic and extrinsic motivation. Challenging decades of classroom practices designed to appeal solely to students' internally held motivations to do their best on academic tasks, self-determination theory "acknowledges that the catalyst for behavior in many

situations (commonly in education) is external to oneself," and it contends that "external expectations can be internalized, integrated, and result in highly autonomous functioning" (Appleton, Christenson, & Furlong 2008).

Because education is at least partly designed to help students learn subject areas and accept social mores imposed by others, it is critical that educators understand how students might move from mere compliance to forms of self-regulated cooperation that satisfy both the student's and society's needs. According to research by Richard Ryan and Edward Deci (2000), students experience varying levels of motivation that often depend on the extent to which they feel their actions are or will be self-determined. The key contributors to feeling self-determined are experiences of competence, autonomy, and relatedness. When students feel like they can do what is being asked of them with some level of facility (competence), when they feel like they have some control over how an activity is conducted (autonomy), and when they feel meaningfully connected to those around them while doing it (relatedness), students are understood to be self-determined. The more often these self-determining experiences occur, the higher and more durable the motivation tends to be. While expectations expressed by teachers, parents, administrators, or peers may still require (or request that) individual students do something they might not ordinarily do, self-determination theory is concerned not with the intent of the directive but with the extent to which individuals internalize and integrate the expectations of others.

Students with a perceived "locus of causality" that is more internal than external tend to have a higher psychological investment in the activity, and intrinsic and extrinsic motivations become more integrated. Considering that adolescents are developing a sense of identity and more complex thinking ability, it makes sense that they would feel more motivated by activities in which they get a chance to direct some or most of the decision making (Miller 1989).

To make sense of the range of possible self-determining experiences students might have in the classroom, Deci and Ryan (2000) describe a continuum in which heteronomy (subordination, subjection, or coercion) lies at one end, and autonomy

(independence, self-sufficiency, self-rule) lies at the other. Figure 1 is an adaptation of their continuum.

Moving from left to right in Figure 1, increasing levels of self-determination give rise to greater integration of the students' own sense of purpose and desire with what may be required of them by outside forces. For teachers working to facilitate a student-centered learning environment, self-determination theory provides strong support for practices that increase opportunities for students to experience autonomy. Student-centered classrooms that capitalize on the power of self-determination can substantially enhance achievement motivation.

EXPECTANCY-VALUE THEORY

The more students are determined to pursue self-selected goals, the more likely it is that those goals will be accompanied by expectations of success in areas that matter most to them. From the activities children run to first when released for recess, to the topic a student chooses for a class report, to the careers we select as adults, we choose to participate in those arenas about which we care most deeply and in which we can expect to succeed. This observation is at the core of expectancy-value research. It argues that we are motivated to devote energy to those activities in which we expect to succeed, and we subsequently tend to value those activities over others.

FIGURE 1
ADAPTATION OF CONTINUUM

Student's Experience	Heteronomy ← – – – – – – – – – – – – – – – – – – → Autonomy					
Type of Self-determination	Amotivation	External Regulation	Introjection	Identification	Integration	Intristic Motivation
Characteristics	Lack of intention; low perceived competence; low perceived relevance	Compliance; emerging salience of rewards or punishments	Ego involvement; focus largely on approval from others	Conscious valuing of activity; self endorsement of goals	Congruence of goals; some continued prioritizing of self-set goals	Interest, enjoyment, and inherent satisfaction; synthesis of goals
Perceived Locus of Causality	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal

Adapted from figure 1 on p. 61 of Ryan, R.M. & Deci, E.L. 2000. "Self-determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-being." *American Psychologist.* Vol. 55, No. 1.

Students' expectations play a key role in determining how confident they are that they can succeed in attaining a targeted goal; such expectations also play a role in their decisions about whether to stick with something or give up when difficulty is encountered (Wigfield & Eccles 2002). Studies have shown that the level of motivation generated by individuals depends in part on how they answer two internal questions:

> What reasonable expectation do I have that I will succeed at this activity?

> How much do I value this activity or its results compared with other things I might be doing?

The first question concerns the student's perceived competence, his comfort in that context, and the level of support he anticipates receiving. Expectancy-value theory suggests that students routinely calculate their chances of success by considering a host of variables that they believe will affect their ability to achieve (Eccles & Wigfield 1995; Eccles et al. 1983). Some of those variables are internally assessed (e.g., one's skill level), and others are outward-looking (e.g., the extent to which circumstances will support the individual's potential to do well). This has enormous implications for the classroom since a teacher's encouragement and management of the learning community greatly influence students' calculations of probable success.

The second question concerns both the student's evaluation of the activity's merits and rewards and the student's ability to ignore distractions. Expectancy-value theory suggests that when asked to complete an academic task, students frequently conduct a sort of cost-benefit analysis by surveying what other demands and desires might be competing with the current one, and then directing attention and energy toward those that offer the greatest return. Issues of impulse control and delayed gratification are important here, as are the student's personal goals and the relevance of the activity to both current and future desires and aspirations.

When it comes to evaluating their own skills in a particular domain (e.g., math, language arts, sports), students' perceived competence is as much a matter of belief as it is performance. If students believe they are good at something, they tend to do well at it and choose it over other opportunities. As Allan Wigfield and Jacquelynne Eccles (2002) note, "Even during

the very early elementary grades children appear to have distinct beliefs about what they are *good* at and what they *value* in different domains." In fact, even though students may have experienced difficulty in a domain, if they believe they will do well they tend to do so and will continue to prefer that domain over others. This self-fulfilling prophecy propels continued domain-specific success and can help build students' resiliency as they experience frustrations or challenges within that domain.

Race and gender are key social contributors to the value students place on multiple aspects of school-related performance (Connell 1996; Connell, Spencer, & Aber 1994; Davidson 1996; Ferguson 2000; Fine & Zane 1989; Graham 1994; Suárez-Orozco & Qin-Hilliard 2004; Suárez-Orozco, Pimentel, & Martin 2009; Wiggan 2008). As noted, the varying social pathways that lead students to school can strongly influence the motivation to achieve. Those who travel social pathways marked by alienating experiences at school will be more likely to disengage and may even be motivated to fail. These pathways are laid out in response to injurious social hierarchies based on ethnicity, gender, immigration status, linguistic heritage, race, sexual orientation, socioeconomic class, etc. Immersed in cultural stereotypes about which group is expected to do better than others in this domain or that one, students forever confront messages about expectations (Smith & Hung 2008). When those messages are internalized such that self-evaluations or beliefs about one's inherent competencies begin to reflect the stereotypes, they can be difficult to undo even in the face of contrary evidence.

In the case of gendered notions about the domains in which boys or girls are presumed to shine, the impact of stereotypes has been shown to distort self-concepts and motivations in the stereotypic direction. That is, boys who believe that boys are better in math are more likely to have positive competence beliefs in math, whereas girls who believe that girls are better in reading and writing are more likely to have positive competence beliefs in language arts (Wigfield & Eccles 2002). An important insight from this research is that there is no difference between boys and girls when it comes to the relationship between competence beliefs and performance; the links are as strong for girls as for boys. However, because the sexes possess

different levels of competence beliefs in particular activities, performance differences in those activities often reflect these beliefs (Wigfield & Eccles 2002).

In this sense, cultural expectations shape social pathways, which in turn shape competence beliefs, and these beliefs often influence performances in ways that reinforce stereotypes. While this process may seem like a vicious cycle, it is crucial to recognize that each step is susceptible to teachable moments that can shift beliefs and assumptions toward more positive and productive ends both for the individual and for the collective. Teachers could not be better positioned to affect that process.

Race and ethnicity, like gender, can affect the value that students place on certain school domains. Again, social pathways bend and twist differently depending on one's social location, and such turns afford different views and experiences on the way to learning activity. The formation of an identity as a "good student" may be a challenge for many marginalized children and adolescents who must take social pathways that include conflicts between mainstream values and those of their home culture, confrontations with racist prejudicial attitudes, and limited access to academically or professionally high-achieving adults in their group who could serve as role models.

Multiple studies have characterized the impact of cultural stereotypes on students' appraisals of their competence and potential. When those stereotypes are negative, students face the possibility that their individual performance may confirm the collective stereotype, which in turn produces performance anxiety. Whether this anxiety distracts the student from the task at hand or exacts energy normally available for concentration and effort, it makes it difficult to devote full attention to learning. This "stereotype threat" affects not only competence beliefs but also motivation levels and identification with school (Aronson et al. 2004; Osborne 2007; Smith & Hung 2008; Steele 1997). To protect their self-esteem, some students "dis-identify" with academic achievement, which, of course, leads to a concurrent devaluing of academic work.

As evidence of this dis-identification, Jason Osborne (1997) found that academic self-concept predicts self-esteem in white students far more than it does in African Americans. This suggests that for some black students, feeling good about oneself may have little to do with success experiences in school. When motivation levels drop to the extent that they allow or even encourage the individual to dis-identify with school (particularly when inequity, discrimination, and failure experiences in classrooms are the cause), student achievement will likely drop as well (Finn 1989; Taylor et al. 1994).

In the application of scholarship on motivational beliefs to classroom practices, a common misconception is that rigor and support are mutually exclusive. Research suggests this could not be further from the truth. In one study involving 30,000 middle school students from 304 Chicago public schools, researchers found that students' perceived level of support for learning from teachers, parents, peers, and the community, in and of itself, did not have a measurable effect on student learning. Curiously, the study also showed that "academic press" (a combination of the teachers' and students' perception that the academic environment was challenging) also did not lead to measurable increases in learning. Importantly, it was the combination of academic press and social support for learning that led to substantial increases in actual learning.

This suggests that teachers should not force a choice between being supportive or being demanding when seeking to motivate their students; they should find the right blend that works best for each individual student. Motivating students to apply themselves in the classroom requires knowing them, knowing their beliefs and anxieties, recognizing the different social pathways they may have taken to arrive in the classroom, and customizing approaches that are responsive to each student's individual zones of proximal development—all student-centered basics—but it does not require making things easy for them or dumbing things down. In fact, being both supportive and demanding seems to be the ideal.

UNDERSTANDING STUDENTS' APPARENT MOTIVATION TO FAIL

To create truly student-centered learning opportunities—especially for students whose school experiences have been more negative than positive—it is crucial that teachers learn what might be motivating an individual's failure and how that student's context shapes the emergence of that behavior. Nearly 20 years ago, Eccles and her colleagues (1993) examined structural causes for diminished student motivation and engagement as children progressed from elementary to junior high, and from junior high to high school. Their findings helped support a national movement to reform junior high schools into middle schools so that they better reflect the unique developmental needs of students transitioning from primary to secondary school.

The basic thrust of Eccles and her colleagues' analysis was that the educational environments in junior high and high school were out of sync with the typical developmental needs of adolescents. Moving from the elementary context in which a longstanding relationship with a single teacher and a small cohort of peers in a self-contained classroom was the norm, and into the junior high environment with its multi-period days, half-dozen or more teachers, hundreds or thousands of peers, and curricula divided into distinct content areas signified what became known as the "stage-environment fit" problem. This research demonstrated the downsides of large, impersonal comprehensive secondary schools for adolescents who still need relational connection with teachers, opportunities for identity experimentation experienced through play and socialization, and structured time and encouragement to delve into those questions and problems that will prepare them for adult ways of thinking. Eccles and her colleagues' assertion that motivation varies with the fit between the educational context and student developmental needs helped researchers and practitioners envision the institutional causes of student disengagement and de-motivation. Though nearly two decades old, this research tradition continues to highlight the necessity of examining structural issues as we look for ways to explain student de-motivation.

One response to student-perceived barriers to learning—structural and otherwise—is the withholding of effort. Rather than repeatedly trying and failing, students may display what researchers call avoidance behaviors in the classroom. Seeking to shield themselves from the possibility of being perceived as incapable, incompetent, or simply dumb, students often withdraw effort, avoid asking questions, or refrain from requesting help with academic tasks (Turner et al. 2002). Teachers run the risk of misunderstanding these avoidance behaviors as simple laziness, evidence of the student's general devaluation of school, a lack of desire for intellectual work (e.g., the fallacious claim that "they don't want to learn"), or a sign of poor or problematic support for education in the home or community. Deploying such deficit-oriented interpretations as a way of making sense of their students' reticence to ask for help—rather than viewing the behavior as evidence of confusion, insecurity, or discomfort with the learning environment—squanders crucial opportunities for elevating achievement motivation.

It is important to note that patterns in avoidance behaviors seem to affect various subgroups differently. Allison Ryan, Paul Pintrich, and Carol Midgley (2001) identify "that the need for help is most threatening to low-achieving students." Likewise, according to Midgley, Eccles, and Harriet Feldlaufer (1989), "High-achieving students, because they are performing well, may be able to sustain their motivation and continue to value academics [whereas] low-achieving students, because their performance

does not provide an incentive, may be particularly sensitive to the characteristics of their teachers."

Findings like these highlight how important it is to consider "help seeking, not just as an academic self-regulatory strategy, but also as a social interaction with others" (Ryan, Pintrich, & Midgley 2001). Understood in this way, achievement motivation is the product of school structures, relationships, and social interactions, not just an internal process. Students who are encouraged to take risks, to view mistakes as opportunities for learning, and to understand the need for help as an indicator of a growing mind will likely experience school as opportunity rather than threat. In an environment in which they *consistently* feel protected from others' judgments and prepared to overcome their own insecurities, the motivation to achieve has the opportunity to flourish.

On the other hand, researchers have also examined how social interactions and societal messages conspire to de-motivate students. The phenomenon of stereotype threat chronicled above illustrates the anxieties, distractions, and maladaptive strategies that can result when learners confront the stereotype that their performance will adhere to expectations of low ability. In this case, the cultural context compels students to devote significant energy to managing these perceptions and compensating for them, leaving diminished cognitive and emotional capacities to tackle academic challenges.

Similarly, in her study of Chicano/a or Latino/a students, Angela Valenzuela (1999) found that schools required many youth to check their identities, cultures, languages, and values at the door. To be taken seriously and fully included by teachers, administrators, and many of their peers, the students in Valenzuela's study felt they had to strip from their identities the very aspects that made them unique. Whether it was pride for their Mexican heritage, the Spanish accent with which they spoke, the clothes, make-up, or hairstyles they wore, or even the way they interacted with peers, they were made to feel "other." The price of admission into the parts of the school where the full benefits of learning and growing were afforded was to withhold their Mexican-ness and assimilate into the mainstream. Unable to bring their full authentic selves into the classroom, these students had to "subtract" intellectual, cultural,

linguistic, social, and psychological resources from their psyches, in a sense, forcing them to come to school expressing only a fraction of themselves.

This practice of "subtractive schooling" is understood to cause students to lose motivation to achieve, to disengage from school, to fracture identities into mutually exclusive academic and authentic halves, and to diminish expectations for later success in life.[4] Made to feel as though academic success hinges on being inauthentic precisely during the developmental era in which authenticity in identity is so crucial, many students choose "to be real" over being studious. That some schools would impose this motivational conundrum on students suggests again how important it is for educators to consider each individual student's motivations to achieve and to approach cultural differences not as impediments to overcome but as resources that will enhance every student's learning.

Perhaps the most dominant explanation for de-motivation due to racial/ethnic differences is what has come to be known as the "oppositional culture" theory. Originated by Signithia Fordham and John Ogbu (1986), this theory states that to understand the causes of and disparities in student motivation and performance, we must consider the history of racial discrimination in the United States.[6] Proponents of this theory argue that deeply engrained experiences of colonization, slavery, and racial oppression have a powerful ongoing effect on motivations to achieve in state-sponsored classrooms for those students with deep roots in this history, namely African-American, Native-American, and various Latino/a groups of students. These caste-like or what Ogbu terms "involuntary minorities" often do poorly in school because they equate schooling with forced cultural assimilation and therefore actively resist it. Ogbu contends that in such circumstances, a student of color who performs well risks having his behavior conflated with "acting white," which may threaten connections with peers, family, and his home culture.

To manage this threat and to continue to construct an identity that feels authentic, Ogbu theorized that some students construct "oppositional identities" in which a primary motivation is to resist the expectations, directives, and requests of educators and institutions perceived to be aligned with assimilative agendas.

Even though this theory is widely accepted, repeated, and applied in schools, it has little to no basis in rigorous research.[7] Compared to Fordham and Ogbu's original study of eight students in a predominantly black high school in Washington, DC, scores of much larger and more rigorous studies in various fields (educational psychology, critical ethnography, sociology, anthropology, and economics) have attempted to repeat the original findings. Summarizing those studies, John Diamond (2006) concludes, "To date, there is no conclusive evidence that such negative peer pressure is prevalent among black students or unique to their peer groups."

In fact, there is pervasive quantitative and qualitative evidence that black students (and other students of color previously grouped as involuntary minorities) value education and are motivated to succeed in school in proportions equal to and in some cases greater than whites (see, for example: Ainsworth-Darnell & Downey 1998; Carter 2005; Chin & Phillips 2005; Diamond 2006; Foley 2004; Ford, Grantham, & Whiting 2008; Foster 2004; Fryer & Torelli 2010; Goto 1997; Horvat & Lewis 2003; Horvat & O'Connor 2006). Furthermore, Dorinda Carter's (2008) research suggests that some African-American students develop what she calls "critical race achievement ideologies": they bundle their achievement beliefs, attitudes, and self-definitions in a way that builds motivational resilience despite being in racially challenging school contexts. In studies like these, the cause of students' de-motivating impulses is often understood to be the school's or the teachers' incapacity to understand students' needs, not the students' rejection of the value of education.

Related Paper in the *Students at the Center* Series[8]

For information on enacting student-centered learning practices in the context of race and gender, see *Literacy Practices for African-American Male Adolescents*, by Alfred W. Tatum.

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series

For learning to be truly student centered, classroom activities and teacher-student relationships must attend to the cultural and political contexts in which that learning occurs. Instead of trying to teach in a vacuum by shutting out influences from the world outside, teachers can breathe life into lessons and elevate student motivation by integrating individual, neighborhood, regional, and world circumstances that can make the content areas feel real. If this is done in a way that allows each student to recognize that the curriculum (and the teacher) represents her, the student's motivation to achieve will align with her motivation to become authentic, leading to a truly student-centered learning experience.

» **The cause of students' de-motivating impulses is often understood to be the school's or the teachers' incapacity to understand students' needs, not the students' rejection of the value of education.**

ENGAGEMENT: STUDENT-CENTERED APPROACHES TO LEARNING IN ACTION

Student engagement is generally understood to be the primary mechanism that enables motivational processes to contribute to learning and development (Furrer & Skinner 2003). Stated another way, engaging is what students do when they move from being motivated to actively learning. We define engagement here as the range of activities a learner employs to generate—sometimes consciously, other times unconsciously—the interest, focus, and attention required to build new knowledge or skills. Though the concept is generally understood as an umbrella term for an array of behaviors, and the research literature is replete with debates about which of engagement's subcomponents possess the most explanatory power, overall agreement regarding several key aspects of school engagement does exist.

Researchers have identified multiple subdimensions that combine in various ways to produce behaviors teachers would commonly recognize as "engagement."[9] These sub-dimensions can be summarized as follows:

> **Academic engagement:** Time on task, problems attempted, credits earned toward graduation, homework completion;

> **Behavioral engagement:** Attendance, classroom participation, question-posing and question-answering, extracurricular involvement;

> **Cognitive engagement:** Self-regulation, learning goals, perceived relevance of schoolwork to future endeavors, value of the knowledge or skill to be learned; and

> **Psychological engagement:** Feelings of identification or belonging, relationships with teachers and peers, experiences of autonomy.

These four areas are largely accepted as apt descriptors of engagement, though they may be named or subdivided differently. For our purposes,

knowing that students' engagement behaviors contain each of these elements will be useful when considering how to respond to them in a student-centered way.

Because of its central role in the learner's transition from the thinking and feeling of motivation to the growing and connecting of learning, researchers have spent decades analyzing the effects of engagement, how it functions, and how best to facilitate it in schools. Engagement consistently has been found to be a robust predictor of student performance and behavior in the classroom (Klem & Connell 2004), an antidote to student alienation (Fredericks, Blumenfeld, & Paris 2004), and a precursor to long-term academic achievement and eventual completion of school (Connell, Spencer, & Aber 1994). Students engaged in school are more likely to earn higher grades (Goodenow 1993) and test scores (Willingham, Pollack, & Lewis 2002), have better attendance (Klem & Connell 2004), and have lower dropout rates (Ekstrom et al. 1986). In contrast, students who demonstrate low levels of engagement are more likely to suffer long-term adverse consequences that include disruptive behavior in class, absenteeism, and withdrawing from school (Archambault, Janosz, & Pagani 2009; Rodríguez & Conchas 2009; Rumberger 2010). Because of this, engagement is considered the primary phenomenon for predicting and understanding dropout (Appleton, Christenson, & Furlong 2008).

Looking at behaviors inside the classroom, Adena Klem and James Connell (2004) found that engaged students pay more attention, tend to look more interested, and act with more persistence in the face of challenges than their more disengaged peers. Appleton and his colleagues (2008) noted a cyclical "rich-get-richer" pattern in engagement research: those who decide to engage in one context find it easier, more pleasurable, and more desirable
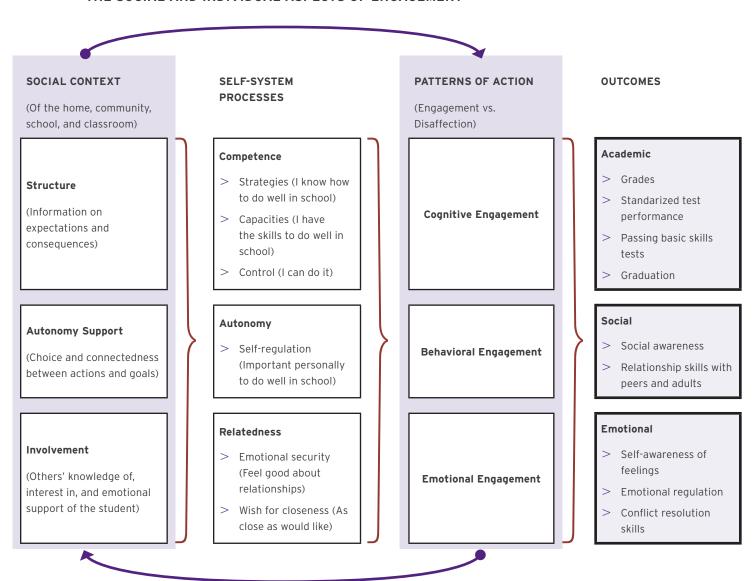
to engage further in that context (and possibly others) at a later time. This suggests that if students receive proper encouragement, their initial engaging behaviors will gather momentum and grow, which can lead to increasingly greater achievement.

Engagement may serve as a critical social signal as well. Scanning the classroom to see if their efforts are producing success in their students, teachers are ever on the lookout for signs that students are engaging in the activities they have constructed for them. When students demonstrate their engagement through on-task behaviors, questions, or completed work, they often elicit reciprocal engaging reactions from teachers. In fact, research has demonstrated that when students are engaged, their teachers tend to provide them with more motivational support and assistance (Furrer & Skinner 2003; Skinner & Belmont 1993; Skinner, Kindermann, & Furrer 2009). This fosters further engagement and increased teacher reciprocation, thereby adding credence to the "rich-get-richer" cycle noted above.

Figure 2 positions the concept of engagement as both a product of social contexts and individual experiences and as a predictor of crucial academic,

FIGURE 2
THE SOCIAL AND INDIVIDUAL ASPECTS OF ENGAGEMENT

SOCIAL CONTEXT

(Of the home, community, school, and classroom)

Structure

(Information on expectations and consequences)

Autonomy Support

(Choice and connectedness between actions and goals)

Involvement

(Others' knowledge of, interest in, and emotional support of the student)

SELF-SYSTEM PROCESSES

Competence

> Strategies (I know how to do well in school)
> Capacities (I have the skills to do well in school)
> Control (I can do it)

Autonomy

> Self-regulation (Important personally to do well in school)

Relatedness

> Emotional security (Feel good about relationships)
> Wish for closeness (As close as would like)

PATTERNS OF ACTION

(Engagement vs. Disaffection)

Cognitive Engagement

Behavioral Engagement

Emotional Engagement

OUTCOMES

Academic

> Grades
> Standarized test performance
> Passing basic skills tests
> Graduation

Social

> Social awareness
> Relationship skills with peers and adults

Emotional

> Self-awareness of feelings
> Emotional regulation
> Conflict resolution skills

From p. 380 of Appleton, J.J., Christenson, S.L., & Furlong, M.J. 2008. "Student Engagement with School: Critical Conceptual and Methodological Issues of the Construct." *Psychology in the Schools*. Vol. 45, No. 5.

social, and emotional outcomes. Conceived in this way, engagement is a decisive turning point in the web of causality that links individual students' experiences to their behaviors in school and beyond. At the far left of Figure 2, the social context sets the stage for student decision making and provides unique pathways to learning that depend on family, peers, culture, life events, and teachers. Contexts that combine structure, support, and experiences of autonomy, in which guided exploration and safe experimentation can occur, are likely to promote a balanced sense of independence and rootedness. Self-system processes can then intervene to provide students with an internal assessment of their abilities, self-sufficiency, and connections to others.

As is suggested by the motivation research chronicled earlier in this paper, these internal and external forces are forever interacting. It is within that social/psychological interactivity that the decision to engage occurs. If students experience the two phases preceding engagement as mostly encouraging and positive, they will tend to make the decision to engage; if those experiences have been frustrating or harmful, they may tend to disengage. As the model depicts with the looping arrow back to the left, the more students experience rewards and satisfactions associated with their engagement, and the more their contexts and internal processes support the continuation of that engagement, the more they will tend to choose actions that lead to positive academic, social, and emotional results.

This cycle of engagement combines social contexts and internal processes in ways that can strengthen the motivation to achieve or weaken it depending on the quality of the experiences in that cycle. As we will see, the ability to positively affect a student's decision to engage is an essential aspect of student-centered learning.

SELF-REGULATION THEORY

Self-regulation theory provides an especially student-centered perspective on the various dimensions of engagement. Whereas self-determination theory addresses students' perceptions of their level of autonomy, competence, and relatedness in a given activity, self-regulation theory is concerned with what students *do* to generate and sustain their engagement. It begins with the recognition that students are active participants in their own learning, which echoes constructivists' observations that we build rather than absorb knowledge. To be self-regulated is to be goal-directed and demonstrate control over and responsibility for one's focus and effort when engaged in learning activity.

Cognitively, "self-regulated learners plan, set goals, organize, self-monitor, and self-evaluate at various points during the process [of building new knowledge or skills]. These processes enable [students] to be self-aware, knowledgeable, and decisive in their approach to learning" (Zimmerman 1990). From the teacher's perspective, self-regulated learners tend to be self-starters who show effort and persistence during learning, who "seek out advice, information, and places where they are most likely to learn" (Zimmerman 1990).

Self-regulated learners also are capable of monitoring the effectiveness of their learning strategies and reacting to what they notice by changing their behavior. For example, a student who is reading a short story in preparation for a class discussion on authors' uses of symbols notices that she has read the last several paragraphs only cursorily. In a moment of self-feedback, she asks herself what those paragraphs were about and, coming up with nothing, reminds herself to go back and reread the portions she glossed. In this case, she regulated her own learning to better promote her understanding of the content, and she did so outside any interventions from the teacher.

>> **The ability to positively affect a student's decision to engage is an essential aspect of student-centered learning.**

Self-regulation is also a social phenomenon that shapes collective engagement. Studies examining children's and adolescents' relationship-building capacities have identified perspective-taking as a crucial skill to develop if individuals are to make and sustain friendships with others (Selman 1980; Selman 2003; Selman, Levitt, & Schultz 1997). Self-regulation in group work can be an exercise not just in goal-setting and time-monitoring but also in considering other's perspectives and levels of engagement and then taking responsibility for one's role in influencing such things. Successful groups become "metacognitively aware that they needed to regroup, monitor carefully what was going on in the group, and frequently go back to the instructions so that the focus and structure of the task were clear to all the group members" (Boekaerts 2011). Thus, self-regulation is also a way for individuals to collaboratively monitor and reflect on their level of support for healthy group-based, classroom, and schoolwide engagement.

Despite all this, one might ask: "Why do students need to regulate their engagement at all? Shouldn't they always be ready and eager to learn?" While it may be confusing if not frustrating to observe students who cannot or will not self-regulate their engagement in learning activity, an honest appraisal of any of our own self-regulating histories will likely indicate that we all struggle to stay focused, remain on task, do the hard work of learning new things. For example, have you read this entire paper in a single sitting, thinking only of what it says and not anything else for the entire time? If so, that behavior is far more atypical than the learner who reads for a spell, gets distracted or conjures tangents that are explored for brief while, then returns to the text and the thinking required to make sense of it (possibly repeatedly) until learning goals are met. Getting up for a cup of tea or a phone call or to check one's email may detract from one's learning for some period, but it is our self-regulating strategies that get us back in that chair and focused.

What teachers need to recognize is that students are human and have to decide to learn first, then muster the necessary techniques to keep at it until progress has been made. If learning were always and only fun and offered an endless supply of immediately gratifying experiences, the need for self-regulation would be nil. But since learning typically requires time, vigilance, and effort, all learners need to find ways to sustain it.

That students learn best when they self-regulate is clear. So, what motivates the learner to choose and begin to use a specific self-regulation strategy? Self-regulation tends to flourish when students are motivated by a sense of competence in a specific domain and perhaps in general (see, for example: Boekaerts 2011; Winne 2005; Zimmerman 1990). In other words, when students feel confident they can succeed, they tend to marshal the techniques they need to get the job done. Conversely, when students imagine they will not be able to accomplish something, they more easily surrender to distractions, barriers, excuses, and frustration.

Imagine a student being asked to enter a spelling bee, join a debate team, or try out for the soccer team. In each case, as the student prepares for that activity, he will likely rate his chances of success by judging both his level of performance capacity relative to others and features of the environment that may affect her odds of succeeding. He may ask: "Do I have what it takes to succeed here?" "Does this environment offer the safety and support I need to engage?" This analysis produces in the student a temporary and malleable verdict about his capacity to do well, and that verdict then shapes the student's use of the available strategies. Self-regulation is therefore the product of one's motivations, self-appraisals, environmental evaluations, and level of skill in staying focused. In an effort to elevate motivation and engagement in student-centered learning contexts, the good news is that self-regulation is among the more teachable skill sets we have.

» **If learning were always and only fun and offered an endless supply of immediately gratifying experiences, the need for self-regulation would be nil. But since learning typically requires time, vigilance, and effort, all learners need to find ways to sustain it.**

Like anything, self-regulation is learned and developed in relationship to others and to one's environment. Given the proper supports, some students build an impressive toolbox of self-regulatory strategies that enables them to stay focused and build knowledge and skills in both academic and nonacademic domains. Surveying dozens of studies, Monique Boekaerts (2011) lists an assortment of these self-regulated learning strategies: regulating attention, monitoring content, eliciting content, planning ahead, self-praising, help-seeking, task (re)structuring, self-consequating, and dealing with distracters. And Barry Zimmerman (1990) presents this list: self-evaluation, organization and transformation, goal-setting and planning, information seeking, record keeping, self-monitoring, environmental structuring, giving self-consequences, rehearsing and memorizing, seeking social assistance, and reviewing. Both lists reinforce the observation that students are the primary agents in their own learning, actively selecting from a host of strategies to best orient their minds toward academic work, sustaining that attention in order to build new knowledge, then reflecting on their learning to see how they might improve the next time.

Sometimes, however, students may not have access to enough teachers, mentors, peers, or family members who can demonstrate the self-regulatory strategies that promote academic success. Whether this is due to their family situation, the quality of their teachers, or the fact that they are tracked into lower-level classes where high-achieving and skillfully self-regulating peers are nowhere to be found, some students do not get exposed to models of self-regulating behavior. To begin to remedy these discrepancies, teachers may need to carefully consider how self-regulation can be developed. Describing Zimmerman's work, Wigfield and Eccles (2002) theorize four developmental steps in building self-regulatory skills:

> **Observation:** Watching someone who is already skilled at self-regulation;

> **Emulation:** Modeling one's behavior after the expert;

> **Self-control:** Regulating behavior on one's own in relatively simple and structured settings; and

> **Self-regulated:** Adapting and controlling one's own behavior under a range of conditions and circumstances.

Once learners progress to the fourth stage, it is often their own choice rather than the requests of demands from others that determines whether they act in self-regulated ways. In such circumstances, the range of strategies available to the individual is larger and more self-driven than at previous stages and, as a consequence, the student is likely to be more easily and consistently engaged when proper motivations exist. As a reminder, however, without motivation to begin engaging and stay engaged, no number of available strategies will compensate for the lack of will. One has to want it in order to stick with it.

These four phases depict what a skilled self-regulated learner does to engage, but clearly not all learners possess such capacities. Zimmerman (1998) is careful to show how "naïve self-regulators" tend to engage as well. These students often set vague or distant goals (e.g., to be a good student, to learn about chemistry, to graduate) and have lower levels of both interest in the activity and beliefs about their self-efficacy. With foundations like these, students who possess less evolved self-regulatory skills commence learning activities already compromised in their ability to plan where they are going and why they want to get there. When it comes to actually doing the task, naïve self-regulators often stray from their original goals and have difficulty monitoring their own progress. In a classroom context, these students are easily distracted, since the goals they have set for themselves are too ambiguous to achieve and too remote from the current moment to fulfill. Consequently, naïve self-regulators may be prone to the immediate gratifications associated with off-task peer socialization, trips to the pencil sharpener, and under-the-desk texting to friends down the hall. When the activity is over, naïve self-regulators typically avoid self-evaluation if they can, but if pressed to do so are more likely to attribute their lack of achievement to aptitude rather than their use of strategies or the amount of effort they expended.

If such self-regulatory behaviors persist, the prospects for academic success are grim. Luckily, self-regulation is highly teachable, especially when approaches are customized to match individual student's needs. Teaching naïve, novice, competent,

and expert students how to build on the self-regulatory strategies they have developed can elevate students' content learning (Cleary & Zimmerman 2004), writing (Zimmerman & Bandura 1994), time management (Stoeger & Ziegler 2008), and athletic performance (Cleary, Keating, & Zimmerman 2006). For these reasons, showing students how to exercise "the muscle between their ears" may be far more beneficial to them in the long term than any of the content we hope they learn along the way.

Given the constructivist, social, and interactional nature of teaching and learning, it may be helpful to think of self-regulation more as *co*-regulation. The impulse to devote energy to an activity and to maintain one's focus on it is surely felt internally, but the student is always responding to encouragements and criticisms from the outside too. Individuals are usually quite receptive to expert guidance when they are motivated to succeed in a domain within the expert's purview. Teachers, coaches, mentors, and counselors all help students self-regulate in subtle and not-so-subtle ways. "Johnny, do you need to sit somewhere else to complete this worksheet so you're not distracted by your friends?" "Janie, how do you plan to organize your time over the next three weeks to make sure you are ready to present a complete project that represents your best work?" In these examples, the educator is guiding the student into the development and use of a self-regulatory strategy, one that suggests the "self" in self-regulation may be too individualistic in the classroom context.

Similar to our own concept of "co-authoring" in which educators participate in the construction of adolescent identities, co-regulation underscores the necessity to see the learning moment as relational (Nakkula & Toshalis's 2006). Applied in a student-centered classroom, it also suggests that greater benefits are to be gained from collaborative activities than from more didactic ones. For example, rather than modeling followed by independent practice, joint teacher-student problem solving lessons would likely provide far greater opportunities for students to access more experienced ways of regulating one's engagement. In joint problem solving, there is more co-doing with students than doing for and watching over them. This opens up possibilities for students to internalize the self-regulatory strategies they see their teachers employ.

Few people have all or even most of these strategies at their disposal. Many students have difficulty engaging even when they want to. For those students especially, it may be necessary to teach self-regulation skills explicitly—to show them how we all manage our engagement in learning activity and to give them a greater assortment of tools the next time they try. What if middle school educators taught an "Introduction to Your Mind, Part 1" class that was later revisited in high school with the companion "Part 2"? What if those classes incorporated insights and activities from learning theory, cognitive science, brain research, and educational psychology to acquaint students with their own brains and the supports and strategies necessary to help them develop? Such an intervention would be pointedly student centered in that it would arm students with the knowledge they need to self-regulate, advocate for themselves, and educate their teachers about the ways they learn best.

TURNING DOWN THE NOISE TO TURN UP THE LEARNING

Self-regulation is arguably more important today than ever before. With the daily deluge of media, the glut of information at our fingertips, and the ubiquity of digital devices pumping out music, video, text, and games, it is no wonder that distraction is an issue

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for many youth (and adults). The need to develop self-regulatory focusing and "noise cancelling" skills may be indispensible for students in the 21st century. Claims from youth that they can drive while talking on the phone, or that they can simultaneously and successfully listen to music, text their friends, talk on the phone, download a video, and update a Facebook page while they do their homework should be rejected. Recent research reveals that our brains are indeed capable of doing many things simultaneously as long as those things are not complex and the costs of committing errors is low. For example, we can walk and chew gum at the same time and those activities do not overtax the brain because both "skills" were learned by us long ago and are now directed almost unconsciously by the more automatic but far less sophisticated parts of the brain. But if the activity requires complex thinking, our brains must focus if we are to do it well.

If the individual concentrates on one thing at a time (and especially if extended time is allotted to do that work), the brain is capable of using its full capacity to undertake complex tasks. However, when the individual attempts to switch rapidly back and forth between competing activities—multitasking—the brain is limited in its capacity to do those activities well. The parts of the prefrontal cortex responsible for controlling impulses, weighing opinions, constructing arguments, making meaning, and solving problems are incredibly complex but also quite slow in comparison to the more primal parts of the brain responsible for quick reactions, unconscious habits, and the "fight or flight" response. We can process many things simultaneously in the simpler but more primitive parts of the brain than in the complex but slower prefrontal cortex, but we do so in a simpler, more primitive manner. For example, when a student is writing an essay but is also allowing text messages to be received and sent, that behavior forces the brain to switch back and forth between deeper conceptual thinking and quick reacting. This

produces a bottleneck in cerebral functioning since the student's brain is not adept at processing both deep thinking and quick responding simultaneously. To fix this bottleneck, the brain attempts to open the constriction by allowing the faster parts of the brain to do the calculating, but this comes at a cost: faster means simpler, more reactionary, and far less complex thinking (Dux et al. 2006). In short, multitasking hinders the deepest forms of engagement our brains need to learn and express complex things.

In an era in which access to ever-increasing digital bandwidth is the hallmark of a well-connected individual, educators may sometimes have to reduce rather than expand their students' access to technology. Faced with the noise of myriad digital distractions and their threats to productivity and cognitive complexity, teachers need to understand that classroom engagement is as much about selective disengagement—unplugging, as it were—as it is about the decision to focus attention and apply effort. If opportunities to reduce distraction and sustain focus are not provided (or enforced) for children and adolescents, the phenomenon of "continuous partial attention" (Stone 2007) associated with chronic multitasking can literally rewire the brain in ways that make higher-order thinking, impulse control, and focus difficult.

To access the most sophisticated parts of their brains, students require the elimination of competing disruptions either through self-generated strategies of regulation or outside restrictions via teacher (and parent) monitoring. When educators and learners can clear away distractions, students' deeper thinking can occur, at which point the ability to concentrate, delve, contrast, question, critique, create, reformulate, and solve can emerge. Helping students to experience their own minds in this way is one of the most powerful contributions we can make to their development and learning. Ultimately, the core of student-centered engagement is engaging deeply with one's own thinking.

HOW STUDENT VOICE CAN ELEVATE MOTIVATION AND ENGAGEMENT

Like motivation and engagement, student voice is a broad term describing a range of activities that can occur in and out of school. It can be understood as expression, performance, and creativity and as co-constructing the teaching/learning dynamic. It can also be understood as self-determined goal-setting or simply as agency. Paraphrasing Dana Mitra (2009), we use the term student voice activities to refer to those pedagogies in which youth have the opportunity to influence decisions that will shape their lives and those of their peers either in or outside of school settings.

Whereas most curricula and pedagogy seek to change the student in some way, either through the accumulation of new knowledge, the shifting of perspectives, or the alteration of behaviors, student voice activities and programs position students as the agents of change. In this way, student voice is about agency. At its core, student voice is the antithesis of depersonalized, standardized, and homogenized educational experiences because it begins and ends with the thoughts, feelings, visions, and actions of the students themselves. This makes student voice profoundly student centered.

Because the concept of "student voice" is more general than specific, it is helpful to unpack what researchers and practitioners have meant when they have employed the term. One way of doing this is to categorize the array of student voice approaches based on how the students are viewed. Michael Fielding (2001) does this when he identifies how four

different types of student-voice-oriented programs position students as either: data sources, active respondents, co-researchers, or full independent researchers. Another way to categorize the range of student voice activities is to parse them into two types: those that are adult-driven and those that are youth-driven (Larson, Walker, & Pearce 2005). Each way of framing the students produces a different set of assumptions and decisions about how student voice activities will be conducted.

Rather than recount how researchers have parsed and subdivided the field, it is perhaps most important to characterize what unites these disparate approaches. Overall, student voice programs demonstrate a commitment to the facilitation of student agency and to the creation of policies, practices, and programs that revolve around the students' interests and needs. In this era of standardization and the Common Core, the practice of elevating student voice might seem countercultural, but given the importance of agency, autonomy, and self-regulation in student learning, it is really rather commonsensical.

To help make sense of the field, we have produced our own typology. Presented as a spectrum, Figure 3 displays the range of student-voice-oriented activities. As one moves in the figure from left to right, students' roles, responsibilities, and decision-making authority grow. On the left side, student voice activity is limited to youth speaking their minds; on the right, students may be directing collective actions of both peers and adults. Likewise, students tend to be viewed as data

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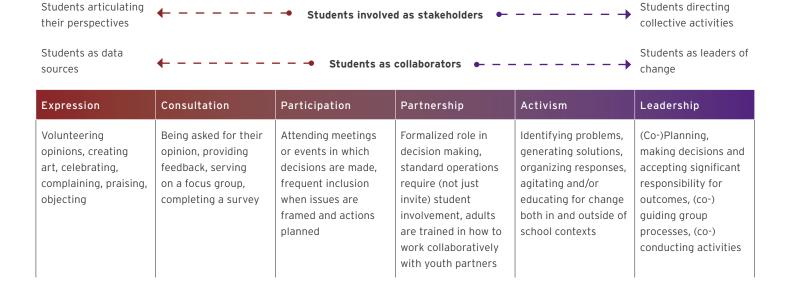
sources on the left side but are more often seen as leaders of change on the right. The middle areas are where activities blend these orientations in ways that recognize students as stakeholders while providing opportunities for them to collaborate with, but not yet lead, adults to achieve specific goals. The headers (e.g., expression, consultation) signify what students do at each level. Moving from left to right, their voices are more included, formalized, and empowered. This corresponds to the shading on the bottom ramp in which the expectations of adults and students gradually transform depending on the position.

At the left side of the student voice spectrum, students are provided with opportunities to express themselves. Whether those opportunities involve sharing opinions, creating art, performing theater, signing petitions, or even publishing op-ed pieces in

the local paper, the point is that students are given public outlets for their perspectives. When those opportunities are not formalized and students' perspectives are not incorporated in any substantive way, these examples of student voice tend to be expressions only. When students are asked for their opinion or invited to provide feedback on some aspect of their school or community, they are understood to be functioning as consultants. When adults want to know what youth think in order to inform later decision making, they may use surveys, focus groups, or informal conversations to gauge adolescents' perspectives.

Consulted more than empowered, these are still examples of student voice because they provide youth with a chance to formally declare their opinions about something in the hope they will be considered

FIGURE 3
THE SPECTRUM OF STUDENT VOICE ORIENTED ACTIVITY

| Students articulating their perspectives | ← — — — — — | **Students involved as stakeholders** | — — — — → | Students directing collective activities |

| Students as data sources | ← — — — — — | **Students as collaborators** | — — — — → | Students as leaders of change |

Expression	Consultation	Participation	Partnership	Activism	Leadership
Volunteering opinions, creating art, celebrating, complaining, praising, objecting	Being asked for their opinion, providing feedback, serving on a focus group, completing a survey	Attending meetings or events in which decisions are made, frequent inclusion when issues are framed and actions planned	Formalized role in decision making, standard operations require (not just invite) student involvement, adults are trained in how to work collaboratively with youth partners	Identifying problems, generating solutions, organizing responses, agitating and/or educating for change both in and outside of school contexts	(Co-)Planning, making decisions and accepting significant responsibility for outcomes, (co-) guiding group processes, (co-) conducting activities

Most student voice activity in schools/classrooms resides at this end of the spectrum.

The need for adults to share authority, demonstrate trust, protect against co-optation, learn from students, and handle disagreement **increases** from left to right.

Students' influence, responsibility, and decision-making roles **increase** from left to right.

when decisions are made. Teachers may do this by distributing anonymous course evaluations to students to see how their methods and curricula are being received, and schools may consult students via surveys or focus group interviews to assess the school climate, get students' views on a particular aspect of the way things are (or might be) done, or inform an upcoming determination to be made by the adults. In none of these cases do the students exercise any decision-making power per se, only the power to make their voices heard. This in itself is a departure from normal operating procedures and can help a great deal in making classrooms and schools more student centered.

Despite students' lack of formal institutional power during activities restricted to expression and consultation, these remain important examples of student voice because they highlight the fact that students are indeed authorities on educational practices. By the time they become seniors, high school students have devoted over 12,000 hours of seat time to observing classroom decision making. You can bet they have opinions about what they have received! To have the opportunity to say what they think and then be heard by others can help lead students to an awareness of being included and valued as a member of that community. In fact, researchers have found, "When students believe that they are valued for their perspectives and respected, they begin to develop a sense of ownership and attachment to the organization in which they are involved" (Mitra 2009). Similarly, when students are "able to talk about [their] experiences of learning in school and [have their] account taken seriously [it] offers students . . . a stronger sense of membership . . . a stronger sense of respect and self-worth . . . a stronger sense of self-as-learner . . . [and] a stronger sense of agency" (Rudduck, Demetriou, & Pedder 2003).

Educators who openly discuss teaching and learning with students and invite them to provide critical feedback on instruction, curricula, assessments, classroom management, and school climate are tapping those students as a resource. As Mitra (2009) points out, "Students possess unique knowledge and perspectives about their schools that adults cannot fully replicate [and they] have access to information and relationships that teachers and administrators do not, such as providing a bridge between the school and families reluctant to interact with school personnel, including first-generation immigrant families." In this sense, allowing for youth expression and eliciting their consultation is a prerequisite for student-centered learning since the development of personalized modes of teaching depends on knowing each person's context, needs, proclivities, and perspectives. Promoting student voice can be of enormous benefit to the teacher's craft as well. When teachers open space for voice in the classroom, a unique window into what the student thinks and feels about her learning also opens. When student voice is facilitated, the teacher can observe how the student is making sense of things and where that student wants to go with that knowledge. Such information is invaluable to the teacher designing instruction to meet individual needs.

Related Paper in the *Students at the Center* Series[10]

For information on designing instruction to meet individual needs, see *Personalization in Schools*, by Susan Yonezawa, Larry McClure, and Makeba Jones.

series

In the middle of the spectrum, participation and partnership emerge as students' influence and responsibility increase. These forms of student voice are often evident in school or district reform efforts, particularly when research captures students' understanding of current practices and policies. When

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students are involved as mere data points, that is more consultation, but if they are involved in research at the level of question generation or decisions about the phenomena to be studied, then student voice begins to look more like participation. Given that real change typically requires participation by and buy-in from all stakeholders, scholars have found considerable evidence that the creation of more formalized roles for students in school improvement leads to better, more sustainable outcomes (see, for example: Fielding 2007b; Flutter & Rudduck 2004; Mitra 2003; Mitra 2008; Osberg, Pope, & Galloway 2006; Rubin & Silva 2003; Smyth 2006; SooHoo 1993). Benjamin Levin (2000) concludes that school reform "cannot succeed and should not proceed without much more direct involvement of students in all its aspects."

Student voice activities become partnerships when youth have formal and regular opportunities to advocate for changes they desire and then collaborate with adults during implementation. Many studies of successful student voice programs have uncovered a common misconception that an increase in youth leadership means that adults must simply "get out of the way" (Mitra 2009). This is neither true nor desirable. Adult-youth partnerships consist of spaces and activities in which participants develop a collective vision for their work and distribute meaningful roles for each youth and adult member, with shared responsibility for decisions and accountability for group outcomes (Mitra 2005). Adults still guide and coach these partnerships, but in doing so, youth are understood to be indispensable rather than auxiliary in the work. Students' unique knowledge of and position within the system are valued, so much so that authority and responsibility for decisions are shared among youth and adult participants.

Whether youth serve as researchers (Camino 2000; Colatos & Morrell 2003; Kincheloe 2007), evaluators (Rudduck, Demetriou, & Pedder 2003; Yonezawa & Jones 2007; Zeldin, O'Connor, & Camino 2006), or program designers (Cook-Sather 2006; Rudduck & Flutter 2004; Silva 2003), numerous studies make it clear that partnering with students can greatly enhance the success of school reform efforts and lead to gains in youth development (Mitra & Gross 2009; Mitra 2004). In fact, one study found that

when students are involved in evaluating programs, conducting research as part of school reform efforts, or investigating issues in their communities, they experience growth in identity exploration, self-confidence, social capital, social competencies, civic competencies, research skills, critical thinking skills, and problem-solving skills (Zeldin O'Connor, & Camino 2006). It's hard to envision a more positive set of outcomes for a single educational activity!

To effect systemic change in schools, students sometimes organize and apply pressure from the outside too. This type of student voice is perhaps best understood as activism. Occurring within community-based organizations or in neighborhood or regional collectives, these activities typically center around a set of issues youth seek to change, sometimes within schools and other times in the community. Students' roles in these groups vary greatly, depending on the organization's goals, the level of adult guidance, and the actions of the collective. In general, youth are instrumental in identifying concerns, mobilizing others, and building campaigns to achieve objectives. Studies of youth activism have demonstrated its positive impact on youth civic engagement, adult attitudes about teens, and community well-being (see, for example: Cushman 2000; Eccles & Gootman 2002; Ginwright & James 2002; Ginwright 2006; Kirshner 2009; Kirshner, Strobel, & Fernández 2003; Warren, Mira, & Nikundiwe 2008). What distinguishes activist models is the way youth are understood as the agents of change, not just as informational resources.

At the far right of Figure 3, youth are understood as leaders. Programs that prepare students to lead tend to view youth as problem solvers, with the skills and insights communities require in order to move forward (Camino & Zeldin 2002; Osberg, Pope, & Galloway 2006). This form of student voice activity involves what Fielding (2006) calls a "radical collegiality" and what Philip Woods and Peter Gronn (2009) label "distributed leadership," in which appropriate supports and growth opportunities are integrated with incremental increases in influence, responsibility, and decision-making authority as adults and youth work alongside one another to affect change.

What makes this form of student voice activity different from all others is that students are the leaders. They convene meetings, direct actions,

write proposals, design websites, and recruit peers. As with the other forms of student voice, adults are often highly involved as mentors, guides, and resource providers, but when it comes to making most decisions, the students (eventually) take charge. Reed Larson, Kathrin Walker, and Nickki Pearce (2005) found that some organizations "provide a gradual progression for youth to move from adult-driven to youth-driven activities as [students] develop the necessary skills. In addition, some youth-driven programs start with a period of training in which adults teach youth leadership skills to use as adults step back into a supportive role."

While some might claim that student government at the high school level is a perfect example of this sort of leadership, Mitra (2009) points out that most associated student bodies "exercise little power, focus primarily on social activities, and do not represent a cross-section of the school. In fact, a nationwide study of communities found no instances where student governments engaged in formal problem solving related to either the 'school's academic program or social-emotional climate,'" areas of concern that are far more important in terms of achievement and socio-emotional well-being than a well-planned homecoming or prom.

By way of comparison, Shepherd Zeldin (2004) studied several community-based programs in which students and adults shared governance responsibilities and found that when student leadership is part of the program, youth show deeper commitment to their communities, greater self-confidence, increased ability to take on governance roles and responsibilities, and a strengthened sense of organizational commitment. The skills and community connections the youth formed yielded college recommendations, internship offers, job opportunities, college application advice, speaking engagements, references for employment applications, and financial consultations, leading one youth participant to remark that "doors I didn't even know existed are now open" (2004).

AGENCY: WHY STUDENT VOICE IS MOTIVATING AND ENGAGING

In many ways, student voice is an ideal application of motivation and engagement research. Studies that reveal intelligence to be the incremental outcome of one's efforts help us see the importance of individual control in the development of one's abilities. Cognitive research illuminates the constructive nature of learning: Students create knowledge more than just absorb it, which helps us understand why students want to do things that enhance that feeling of creation. Research on self-determination shows us that motivation levels tend to be much higher when students perceive the locus of causality to be more internal than external. Studies of expectancy-value, stereotype threat, and competence beliefs demonstrate that students devote more energy to one activity over others not because that activity is easy or because it guarantees success, but because they believe it has value and they understand their performance as a growth opportunity rather than an indication of their worth. Likewise, students tend not to choose avoidance behaviors and maladaptive strategies when alienating experiences are minimized. And studies of self-regulation illustrate that the student's internal focusing processes play a crucial role in engagement and the capacity to complete difficult academic work. In each of these fields of research, it is the student's individual decision making and autonomous actions that directly affect academic performance. That agency, it turns out, is one of the chief reasons student voice is so powerful.

Understood as the capacity to act in a way that produces meaningful change in oneself or the environment, agency is the key to student voice. Time and again, research has shown that the more educators give students choice, control, challenge, and collaborative opportunities, the more motivation and engagement are likely to rise. The enhancement of agency has been linked to a variety of important educational outcomes, including: elevated achievement levels in marginalized student populations (Borjian & Padilla 2010; Gilligan 1993; Noguera & Wing 2006; Rodríguez 2008; Wren 1997), greater classroom participation (Garcia et al. 1995; Rudduck & Flutter 2000), enhanced school reform

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efforts (Fielding 2001; Mitra 2003; Mitra 2004), better self-reflection and preparation for improvement in struggling students (Leachman & Victor 2003), and decreases in behavioral problems (Freiberg & Lamb 2009).

Furthermore, recent studies on bullying in public secondary schools suggest that bystanders are far more likely to intervene on behalf of a victim when they feel their actions will have an effect. They tend not to intervene, and therefore tacitly allow the bullying to persist, when they do not perceive that they possess the agency to make a difference.[11] This suggests that providing opportunities for students to experience agency creates not just better environments for motivation and engagement but may also make schools and communities safer.

Though schools can be among the strictest, most regimented, and least flexible places a community creates for its youth, student voice activities (when done right) blend agency and support in ways that can counteract the sometimes stifling institutional atmospheres in which learning is supposed to occur. From a cognitive developmental perspective, agency is experienced when the executive functions of the prefrontal cortex (e.g., planning, decision making, evaluating) are used to shape outcomes in one's life or in the lives of others. Less of that activity occurs when students are placed in highly prescribed situations, but it can flourish when students have the structures, supports, and freedoms to explore and invent things on terms that are at least partly constructed by them. When school products and processes are predetermined and drill-and-kill worksheets are the work of learning, it is not surprising that students choose other outlets for their creativity and agency.

We say we want students to develop higher executive functions, but we cannot expect them to do so unless we give them a chance to practice functioning at those levels on a regular basis. After all, you cannot teach someone how to swim if you never let that person get in the water! The research on the effects of student voice initiatives demonstrates that they are often ideal venues for students to expand their competencies—including physical, intellectual, psychological, emotional, and social skills—and that they facilitate the development of the social and cultural capital students need to apply new skills to real-world situations (Mitra 2009).

From self-determination theory, we know that experiences of competence, relatedness, and autonomy are critical for developing a sense of wellness in the individual. Scaffolding challenges in the classroom so that students experience incremental success and managing the classroom to create a learning community that supports meaningful connections among students and teachers can go a long way toward building self-determination. Frequently, however, teachers are compelled to focus their efforts on lesson planning, assessment, and classroom management, which can overemphasize the development of academic competence and social relatedness at the expense of individual autonomy. Even if these experiences of competence and relatedness are optimal, without autonomy students may feel more controlled than in control, and this can reduce their desire to participate in classroom activities. Again, this is why student voice activities are so powerful.

Though each student takes a different social pathway to arrive in class ready to learn, the chance of identifying with school and choosing to participate in it is directly linked to experiences of agency. To

function as a stakeholder in one's school is to be trusted to take ownership of the place, not just occupy it. We see this when elementary students who finish their work get "free time" to pursue their own interests or "play" at pre-set stations designed to teach specific skills. In fact, much of the philosophies and practices in the Montessori, Waldorf, and Reggio Emilia schools are based on the belief that students possess the self-righting behaviors and decision-making capacities to create rich learning experiences for themselves, with teachers serving largely as facilitators and resource-suppliers. While "free time" may be less evident at the secondary level, there are still many types of student-driven activity—for example, when students become peer mediators, organize restorative justice programs, design school reform efforts, evaluate teachers, and advocate for community change. That middle and high school students are often highly motivated and engaged in such contexts suggests the power of autonomy and agency to inspire academic achievement and stimulate lifelong learning.

From a developmental perspective, adolescent identity and cognitive development depend on experiences of imitation, experimentation, adaptation, and invention. By trying on different identities in a complex process that integrates messages from family, peers, other adults, culture, and any number of other influences, youth construct possibilities for themselves, projections of who they are and believe they will become. Being given opportunities to do constructive work among similarly experimenting peers and caring adults can help adolescents fully appreciate the range of possibilities in front of them, especially when they are able to shape the environment in which that growth occurs. After all, it is difficult to feel responsible when you have no agency. To have a voice in how an activity is carried out or in how the meaning specific to that activity is constructed can greatly enhance students' motivation

to engage precisely because they are allowed to invent their environment as they simultaneously invent themselves.

That students are drawn to places where voice is encouraged and agency is granted is clear: watch where students hang out at any school when they have a choice about where to go. Inevitably, they congregate where they can express themselves; talk about their ideas, dreams, and fears; critique what may not be right; and consider worlds that may be better than the one they are inheriting. Whether that spot is on the quad far away from direct adult supervision; in the chess club where the knights, pawns, and bishops become the terrain on which conversations about power ensue; in the drama club where characters, skits, and costumes explain life decisions; or in that one teacher's classroom where students come to eat their lunch because they get to talk about "cool stuff"; adolescents have a way of finding opportunities for voice and making spaces for agency.

Educators committed to student-centered learning recognize this by looking for ways to incorporate choice, expression, and self-determination in classroom activity. One objective in doing this is to elevate academic achievement, of course, but another is to immerse students in the possibilities of their own minds, to let them see and feel what they can do with their own thinking when they become motivated and get engaged. This immersion is an end in itself. To be captured by one's work—driven if not thrilled by it—can be life-altering for adolescents in search of meaning, identity, and trajectories toward fulfilling adulthood.

CONDITIONS FOR SUCCESS

As clear as the benefits are, implementing student voice is no easy task. The research literature is replete with challenges, pitfalls, and ill-conceived

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strategies too numerous to cover in detail here. Suffice it to say that difficulties can emerge from a variety of situations, among them: the need to alter traditional structures, practices, beliefs, and values to allow student voice to flourish (McQuillan 2005); the dangers of co-opting student voices rather than learning from them (Fielding 2004; Fielding 2007a); the tricky business of cultivating "respectful disagreement" between youth and adults (Denner, Meyer, & Bean 2005); the challenges associated with "surface compliance" (Rudduck & Fielding 2006); and time limits, levels of administrative support, worries about teachers losing power, the authenticity of voices, and whether full inclusion of all voices is being achieved (Rudduck 2007).

In each of these cases, the threat of relegating student voice activity to mere tokenism is ever present, which is why, as in all good teaching, a clear set of objectives and a coordinated plan that outlines roles, responsibilities, and resources is paramount. To that end, Margaret Libby, Matt Rosen, and Maureen Sedonaen (2005) highlight the importance of providing organizational pathways for leadership development, the necessity of advance preparation by youth and adults, the need to moderate program intensity depending on the skill level of participants, and the difficulty of sustaining youth-adult partnerships in a resource-scarce environment.[12]

Shawn Ginwright (2005) found that in doing intergenerational work on confronting and overcoming racism, adults needed to be emotionally, politically, and procedurally prepared to listen in ways that would help them work through their own self-defeating internalized racial attitudes. In these studies and more, there is widespread agreement that developing a baseline of trust, creating meaningful but equal roles among youth and adults, and providing ongoing professional development for all involved parties is the bare minimum if student voice activities are to succeed (Mitra 2007).[13]

STUDENT VOICE IS STUDENT-CENTERED LEARNING

To learn something deeply, students need to internalize it and make it their own. To be able to use that learning and influence issues that matter to them, students need to participate substantively: They need to practice leading in contexts that provide autonomy, agency, and the personalized attention of caring adults. Therefore, student voice activities revolve around the development and application of individual students' skills, ideas, and connections to others, which make the learning inspired in such programs profoundly student centered.

As the research demonstrates, students need to learn content in ways that inspire contribution and critique as much as, if not more than, collective compliance. With agency as its defining feature, student voice activities sometimes place a high priority on facilitating students' unique self-generated expressions and actions over educators' and schools' needs for predictability and efficiency. In this era of the Common Core, in which curricula are standardized and assessments are normed to a perceived majority of students, student voice activities stand out for their undeniable utility in orienting educators toward customized practices that meet specific students' needs. In short, they remind us that the system exists for the students, not the other way around.

To be student centered in this time of hyper-standardization is, in many respects, to be countercultural. Customizing educational interventions to address the individual needs of individual students serves to highlight the differences among our students—and among us—and this often threatens the efficiency of a system strapped for funds and short on popular esteem. Accordingly, being student centered in teaching and using student voice to direct at least some of the activity in schools may require educators, administrators, and policymakers to advocate for a reform agenda that challenges current standardizing practices. In doing so, it is crucial that educational resources be allocated in ways that maximize impact, especially when time and money are at a premium. We believe the research chronicled here suggests how that impact might best be achieved and why a greater commitment to the practices that enhance motivation, engagement, and student voice may be needed.

As we move toward the articulation of a Common Core, it is important to use the findings above to inform our practices. When we do this, however, we often confront an apparent tension: the supposed opposition between standardization and individualization. Though they are often framed as polarities, the truth is that two can be integrated quite well in student-centered approaches. If Common Core standards are used to guide the scope, sequence, and timing of curricula, the teacher is still empowered to customize those curricula to make sure each individual student's needs remain at the center of classroom learning. We believe the research

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suggests that the clarifying and streamlining aspects of standardization can (and should) be implemented without sacrificing the personalization and local, if not individual responsiveness we know are key to student centered learning. After all, if we believe that schools too often make students feel anonymous and powerless, disengaged and alienated, then it is crucial that any reforms seek to ameliorate rather than exacerbate these conditions. Practically speaking, this may mean that those familiar with the research on motivation, engagement, and student voice use their own agency to ensure that standardization does not preclude individualization. Indeed, strong student centered teaching demonstrates that the two are anything but mutually exclusive.

CONCLUSION

Motivation, engagement, and voice are the trifecta of student-centered learning. Without motivation, there is no *push* to learn; without engagement there is no *way* to learn; and without voice, there is no *authenticity* in the learning. For students to create new knowledge, succeed academically, and develop into healthy adults, they require each of these experiences.

The same may be said for teachers. Student-centered learning is sometimes misunderstood either as pandering to students or as a practice that makes the teacher irrelevant. These notions could not be further from the truth. In many ways, student-centered approaches to learning make the classroom far more rigorous and the teacher all the more indispensible. The practice of recognizing each student's unique set of social pathways and academic abilities and then individualizing classroom activities to match them—even approximately—depends on healthy, well-adjusted, skilled educators who integrate key findings from research into their practices. To teach student-centered learning well, teachers need experiences that mirror the ones research suggests they provide for their students. Teachers too need to feel competent, related, autonomous, and authentic, and they need to develop self-regulatory skills that sustain focus and compassion despite the inevitable challenges classroom teaching presents. Consequently, to build student-centered classrooms we need to build schools and school cultures that are *teacher* centered.

series

Absent growth opportunities and peer networks that sustain teachers' motivation, engagement, and voice, it is likely teachers will avoid student-centered techniques and regress to far easier, far less productive "stand and deliver" sorts of pedagogies. This implicates policymakers and administrators in the support for student-centered practices in today's classrooms. Legislators, mayors, board members, superintendents, and principals need to be accountable for the creation of rich learning environments for teachers as well as students, but all indications are that the current fixation on punitive high-stakes tests works contrary to that aim. Applying what we know about how students learn best to how teachers learn best will help us create institutional pathways that motivate and engage rather than threaten and punish.

In the end, if we understand teaching to be a creative profession and the classroom to be a learning community invested in building knowledge, then we might best understand teachers as the "chief learners" in classrooms. Experimentation, exploration, investigation—these are the activities the student-centered learning teacher can share with students. This will open opportunities for teachers to show how

» **Good teaching—teaching that is engaging, filled with high expectations, and that gives students a chance to feel a sense of belonging as well as become competent in a relevant area of study—may be an important pathway to personalization and engagement.**

they learn, to demonstrate how they self-regulate, to explain how they are motivated, and to illustrate how they make meaning of content. When students gain access to the chief learner's way of motivating, engaging, and expressing himself, they can begin to see how their own thinking, emotions, and experiences shape their learning.

From this, a reciprocity can emerge in which teachers' abilities to learn about their individual students' needs are enhanced by students' abilities to teach their teachers how they learn best. With chief learners and associate learners all motivated and engaged in learning from one another, the practice of student-centered learning becomes wholly inclusive because everyone is a student. The rewards of learning and teaching in such an environment are hard to overestimate.

ENDNOTES

1 See series paper: www.studentsatthecenter.org/papers/mind-brain-and-education

2 To be fair, some schools and educators may not possess the sophistication or commitment to remedy this.

3 For insights into how smartness claims function culturally, see Hatt (2007) and Hatt-Echeverria (2006).

4 This subject was later researched and further developed by Garza & Crawford (2005); Hatt-Echeverria (2006); Menken & Kleyn (2010); Valenzuela (2002); and Worthy et al. (2003).

5 See series paper: www.studentsatthecenter.org/papers/latino-and-black-students-mathematics

6 This was recapitulated, primarily by Ogbu, (1978; 1988; 1990a; 1990b; 2004; 2008) in the decades that followed.

7 This theory has often been used by politicians—including then-Senator Obama in his keynote address to the 2004 Democratic National Convention. He referenced the need to "eradicate the slander that says a black youth with a book is acting white."

8 See series paper: www.studentsatthecenter.org/papers/http://www.studentsatthecenter.org/papers/literacy-practices

9 For an exhaustive survey of the sub-dimensions identified in research, see Appleton, Christenson, & Furlong (2008).

10 See series paper: http://www.studentsatthecenter.org/papers/personalization-schools.

11 For a full explanation of this important work, see Feigenberg et al. (2008) and Gini et al. (2008).

12 To help educators overcome these pitfalls, Fielding (2001) has developed a list of principles and values necessary to conduct teacher-student partnerships in charting school reform (p. 132) and has created a checklist of questions adults need to be able to answer to effectively collaborate with youth (p. 134-135).

13 Further resources can be found at the *Students at the Center* website: http://www.studentsatthecenter.org

14 See series paper: http://www.studentsatthecenter.org/papers/teachers-work

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