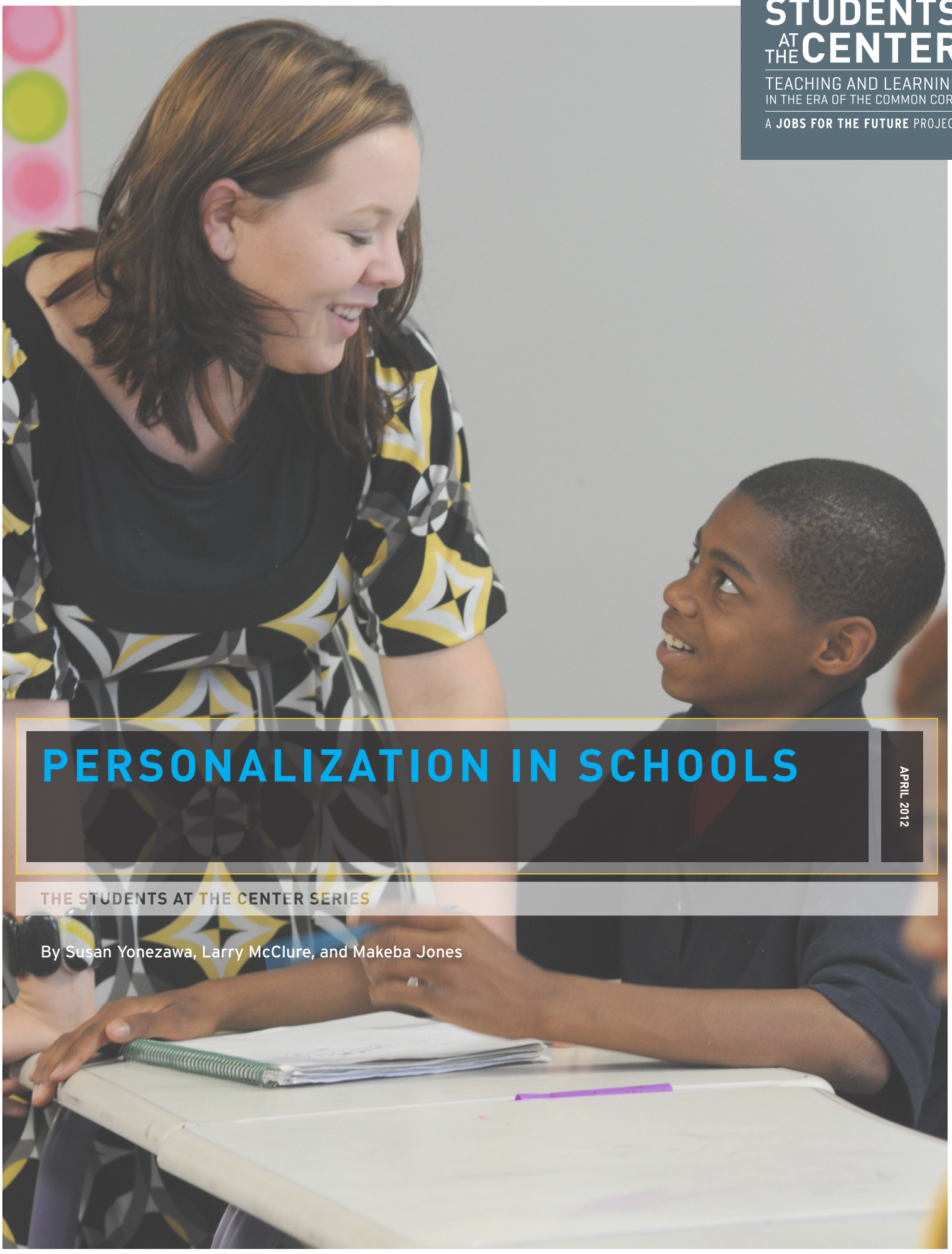

STUDENTS AT THE CENTER

TEACHING AND LEARNING IN THE ERA OF THE COMMON CORE

A **JOBS FOR THE FUTURE** PROJECT

PERSONALIZATION IN SCHOOLS

APRIL 2012

THE STUDENTS AT THE CENTER SERIES

By Susan Yonezawa, Larry McClure, and Makeba Jones

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

Jobs for the Future

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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 high school level 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 $210 million in grants.

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INTRODUCTION

Thoughtful educators personalize schools in various ways every day. These acts range from small gestures, such as greeting students by name in the hallway or displaying student work on their walls, to weightier steps, such as offering extra academic help or checking in about serious family problems. Some set up tutoring programs, peer mentorships, or specialized clubs after school. Others design internships with local businesses to help young people explore career interests. Teachers, counselors, and administrators who take on such tasks aim to connect with their students and help build strong communities within schools and classrooms. They believe that making these efforts to develop relationships with youth will help them recognize and respond to the individual interests and needs of each student.

Despite the best of intentions, however, most efforts to personalize schools fall short of their potential to make a significant difference in the lives of millions of young people across the United States. Despite much hard work, too often it is individual teachers, acting individually, who are promoting improved personalization. There is no doubt that their actions can and will continue to positively influence the lives of their students, but the impact will remain limited until improving personalization moves beyond the level of the individual teacher (or school) and becomes the sustained goal of a widespread organizational effort.

The personalization movement is intended as an antidote to the widespread feelings of anonymity, irrelevance, and disengagement that students report, especially in large, urban high schools. Two findings from the High School Survey of Student Engagement suggest the pervasiveness of those feelings (Yazzie-Mintz 2010). Of the 300,000 students surveyed from 2006 to 2009, two out of three respondents reported being bored at least once every day in class; if faced with a choice, only 64 percent of students would choose to go to the high school they currently attend.

There is a tremendous personal and societal loss associated with these feelings and the resulting failure to thrive academically. The dire consequence of the status quo is that almost one-third of U.S. high school students fail to graduate, with a disproportionate number of dropouts coming from low-income households who attend urban high schools (Education Week 2011). Personalizing schools can help stem this loss by engaging students and making schools not only relevant, but places where they can feed "their hunger for support and connection" (Yazzie-Mintz 2010).

We examine the concept, application, and effectiveness of formal attempts to personalize secondary education in the United States. For our purposes, personalization refers to the web of positive relationships cultivated among adults and youth in classrooms, schools, and communities that promotes learning by helping students feel competent in and connected to the world. The idea is that educators get to know their students well—not just their abilities and learning styles but also their interests and motivations—and they use this insight to design more effective individualized instruction and guidance. But these relationships must be reciprocal: Students must also come to know their educators, to trust them and respect them. Young people need to feel comfortable being honest about themselves and accepting adult input. While some might contend that personalization runs counter to the push for common national standards to help students develop 21st-century skills, we believe that it actually helps educators to help students master these critical skills.

Personalization is so central to student-centered learning that some consider the terms synonymous. Indeed, personalization is critical to creating student-centered practices. However, we treat personalization

on its own because the history of personalization is longer, the evidence for pursuing it comes from sources different than those usually used to justify student-centered approaches to learning, and it focuses more decidedly on the relational nature of reform than student-centered approaches inherently do. One way to capture this is to think of student-centered learning as a set of educational practices, policies, and supports that matter in building strong, capable, engaged learners, while personalization is the network of highways, channels, streets, and pathways that connect individuals engaged in these practices. Through personalization, educators and students can better engage meaningfully with one another, and student-centered practices can occur and be sustained over time.

Teacher-student relationships remain central to personalization and lie at the heart of a variety of reforms intended to support youth as students and emerging adults. Some of these reforms are couched in terms of school culture or are directed at creating a college-going culture in schools serving large numbers of students who have not historically attended college. That said, most efforts to foster strong relationships and personalize schools focus on new, smaller organizational structures and programs that make it easier for teachers and students to spend time together—individually and in small groups—and to get to know one another. These range from advisory programs and small learning communities within large schools to autonomous small schools, and even to wraparound reforms that encompass entire neighborhoods. Often such personalization efforts are blended—for example, converting a comprehensive high school to small schools and introducing an advisory period as part of an overall approach.

The point is that by increasing the amount of time educators spend with each of their students, it is believed that the chances of adults and youth crafting more constructive relationships should greatly improve. Through these new relationships, teachers can forge new roles with students—as mentors, counselors, instructional coaches—and more easily and accurately individualize their pedagogy, curricula, and assessments of students' instructional needs.

Take for example a teacher in a new smaller high school. Ideally, this teacher would be teaching fewer students per day due to either smaller class sizes or a reduced teaching load made possible by a schedule built around longer and fewer teaching blocks each day. He or she might also lead an advisory course with 20 or 25 students in it, with the charge of getting to know each student individually regarding their academic strengths and their socio-emotional needs as adolescents. The teacher might tutor regularly after school or run at least one extracurricular activity developed specifically to connect with students around a personal area of interest (e.g., drawing, chess, hiking, music). The teacher might keep his or her advisees for several years, seeing them through until graduation (or even beyond). If a student gets in some sort of academic or behavioral trouble, the teacher might easily walk down the hall (because of the school's small size) to discuss the matter with other teachers and compare notes, records, and even prior assignments completed as they pool their knowledge formally and informally to better serve the student collectively.

Related Paper in the *Students at the Center* Series[1]

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

In the pages that follow, we assess the research evidence on personalization as relationships, particularly within secondary school improvement efforts. The concept of personalization in the research literature has been defined broadly. This broad definition is not by design but simply a function of the wide variety of academic disciplines (e.g., education, psychology, sociology) and the need to craft research

Think of student-centered learning as a set of educational practices, policies, and supports that matter in building strong, capable, engaged learners, while personalization is the network of highways, channels, streets, and pathways that connect individuals engaged in these practices.

questions that address a manageable portion of a far-reaching concept. Because personalization has been viewed more as a concept employed in many venues and less as a concrete and cohesive "reform," per se, the preponderance of the evidence is anecdotal. There is a great deal of practitioner-oriented literature intended to help educators learn strategies for enacting various programs or specific approaches to increase personalization in schools. This descriptive literature abounds and typically reports that personalizing efforts make students feel more comfortable in schools and classrooms. While this is extremely useful with regard to the nuts and bolts of implementation, it is less helpful in assessing the impact of personalization-oriented reforms qualitatively and quantitatively.

We also look at the interaction of the social, political, and economic contexts in which teacher-student relationships are embedded. We reviewed a wide variety of literature in psychology, sociology, and education, placing a priority on literature that expressly addresses personalization or relationships between youth and adults, focuses on secondary school students, and also focuses on reform efforts that have been widely embraced (or at least discussed) in the United States over the past three decades. Studies of school reforms incorporating personalization are especially helpful: These reforms serve as concrete manifestations of personalization as enacted.

We also looked specifically for research addressing personalization and relationships as they relate to low-income and minority young people. We were careful to highlight research that was peer-reviewed or otherwise judged methodologically sound, whether it was published in formal academic venues or from think tanks or research centers. The purpose of this approach was to provide enough literature for understanding the role of personalization, rather than to conduct an exhaustive review.

As we examined the research literature, we asked five critical questions:

- What are the historical antecedents of personalization as we know it today?
- What is the evidence that relationships between adolescents and educators matter? For which outcomes do they matter most?
- What interventions have educators implemented to increase the quality and density of adult-youth relationships in classrooms, secondary schools, and adjacent communities?
- What is the research evidence that reform efforts to personalize secondary schools—both structurally and instructionally—matter to the lives of young people, particularly low-income, minority youth?
- What are the next steps for increasing personalization in secondary schools?

A BRIEF HISTORY OF PERSONALIZATION

The personalization of education is generally thought of as a contemporary approach, though some believe the basic tenets can be traced back hundreds of years. Jean-Jacques Rousseau in the 1700s and John Dewey in the first half of the 1900s are two major educational philosophers often credited as the forefathers of personalization. In *Emile, or On Education*, Rousseau argued that schooling should build on students' individual capacities and choices in order to capitalize on their inherent motivations. Instructionally, he disagreed with the singular curriculum and pedagogical approaches of his day and advocated for a more tailored approach. Two hundred years later, Dewey promoted the idea of building on students' interests and incorporating outside experiences into education in order to meet students' individual needs (Dewey 1902).

A growing push for school reform in the 1950s and 1960s drew more attention to students' individual interests and needs—as reformers worried about education's role in national security and superiority, and in remedying longstanding racial inequalities (Tyack & Cuban 1995). Open education, new math, individualized instruction, and other reforms dominated, and discussions centered on instructional practices (Dinkmeyer 1969). For instance, in 1972, Donald Tosti and N. Paul Harmon designed a research study to define individualized instruction as the frequency with which teachers adjusted their practice to individual students' aspirations and needs. Debates abounded over how much student choice versus government agenda should influence curricula (Torkelson 1972). Educators weighed the pros and cons of students' interests and needs on the one hand and the benefits to the nation of a standardized curriculum and assessment on the other. Robert Davis (1972), for example, argued that decisions of whether or not to encourage academic individualization should be based on three criteria: the cognitive structure of the individual; cultural push of society; and the complexity of the learning task.

More recently, many see the work of Theodore Sizer as the beginnings of the current personalization movement. Sizer and his colleagues at the Coalition of Essential Schools called for tighter connections between adults and youth and more academic focus as a way out of our educational quagmire. Sizer launched CES in 1984 as a widespread movement of secondary schools that would put the student at the center of teaching practice. Increasing personalization through the enhancement of adult-youth relationships was an essential component. Indeed, personalization was one of nine (later ten) "Common Principles" that the organization articulated and endorsed for redesigning schools. Specifically, CES leadership called for schools that adopted its principles to "personalize" by reducing student-teacher ratios to 80-to-1. About 1,200 schools signed on to work in their own ways toward more student-centered approaches to learning. CES's efforts were part of the renewed urgency spurred by *A Nation at Risk* (1983) and the disappointment of reforms tried during the 1960s and 1970s increasingly directed attention to the failings of large, urban secondary schools (Goldberg & Harvey 1983; Powell, Farrar, & Cohen 1985; Sizer 1984). Critics and reformers speculated that students would become more successful if schools and classrooms were smaller, more attentive, and more instructionally focused.

The Coalition of Essential Schools and other reform models focused on improving teacher-student relationships attracted major financial support in the early 1990s. In 1993, the Annenberg Foundation gave an unprecedented $500 million *Challenge to the Nation* gift to fund reforms in 18 districts, including small school reform in New York City. The Annenberg Foundation also provided critical

Credible research emerged regarding the positive academic and social effects of a more personalized approach to education. At the secondary level specifically, personalization efforts took a variety of forms.

funding for CES. Meanwhile, as part of an effort toward middle school transformation in the early 1990s, Carnegie Corporation of New York directed substantial resources to make junior high schools into middle schools—a friendlier and more developmentally appropriate model that fostered stronger teacher-student connections.

Over the next decade, credible research emerged regarding the positive academic and social effects of a more personalized approach to education. At the secondary level specifically, personalization efforts took a variety of forms, including advisory programs, whole-school reform models (Datnow et al. 2003), smaller class sizes (Mosteller 1995; Mosteller, Light, & Sachs 1996), smaller schools (Lee, Bryk, & Smith 1993a, 1993b; Lee & Smith 1993, 1995, 1996, 1997; Lee, Smith, & Croninger 1997), and reformed, autonomous small schools (Conchas 2006; Conchas & Rodriguez 2008; Darling-Hammond, Ancess, & Ort 2002; Wasley, Hampel, & Clark 1997). These reforms marked significant investments of money, time, and energy by educators who were intent on trying to restructure secondary schools in ways that enabled teachers to spend more time with individual students and develop closer, more productive relationships.

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THE CHARACTERISTICS AND IMPACTS OF POSITIVE TEACHER-STUDENT RELATIONSHIPS

The kinds of relationships that teachers manage to create with their students are often studied for their impact (or lack of it) on all sorts of student populations—English language learners, immigrants, racial minorities, low-income students, the gifted, the college bound. Moreover, the impact of teacher-student relationships on students is measured within a number of domains: academic, social, behavioral, and emotional. A growing body of work suggests that positive teacher-student relationships can help buffer students against a host of problems, from disengagement in a specific academic subject to engaging in risky social behaviors such as smoking or alcohol abuse.

Before exploring the impact of positive teacher-student relationships in more detail, it is critical to explore what characterizes a positive connection between educators and youth. Those who study teacher-student relationships generally agree that high-quality relationships have elevated levels of warmth and low levels of conflict, while low-quality relationships have the reverse effect (Birch & Ladd 1998; Pianta 1999; Pianta & Nimetz 1991). Warmth is evidenced by teacher interest, high expectations for student achievement, praise, and willingness to listen to students, among other characteristics. Conflict is evidenced by coercive disciplinary practices, unwillingness to incorporate student choice, and low expectations for student achievement, among other features.

The difficulty with this body of literature is that the vast majority of teacher-student relationship studies have focused on the elementary level (O'Connor, Dearling, & Collins 2010). Far fewer studies exist of student-teacher relationships at the secondary level. We speculate that this is due to a research emphasis on developmental characteristics as children move from home to school, a greater interest in the role of peers in the adolescent years, and an erroneous belief that the relationship between students and teachers becomes prgressively less central as students approach adulthood.

However, the research on secondary students, while less robust, suggests that the quality of the student-teacher relationship remains critical to high school youth, even if its nature is quite different than that experienced by young children. For example, secondary students both prefer and expect to work harder for teachers who balance control with a caring, high-expectation approach (Thijs & Verkuyten 2009). Christi Bergin and David Bergin (2009) reviewed a broad spectrum of research on secondary school students and teacher attachment. They found that warm, positive interactions that are characterized by teachers' responsiveness, provision of student choice, and avoidance of coercive discipline promote student-teacher attachment, and that improved attachment is associated with higher standardized test scores, increased academic motivation, and fewer retentions or special education referrals.

The accompanying paper by Barbara Cervone and Kathleen Cushman on the nature of everyday teaching in six student-centered schools reiterates these conclusions.[2] They found that several practices stand out for their contributions to strong relationships with students, including "norms of trust, respect, and inclusiveness" and "easy contact between teachers and students." Knowing students well means knowing the "whole child"—including family backgrounds and the personal "narratives" students bring to school. This typically involves reaching out to parents or other close relatives—both to engage them as partners in the young person's education and to help teachers develop a "finely tuned" sense of each individual student.

THE BENEFITS OF POSITIVE TEACHER-STUDENT RELATIONSHIPS

Research shows a wide range of benefits from positive teacher-student relationships, including academic, social, and emotional advantages, for example, those found by Bergin and Bergin (2009). Productive teacher-student relationships also can help buffer young people from the inevitable social and emotional challenges of pivotal points in their educational trajectories. For example, difficult youth transitions from middle school to high school can be eased when youth are better attached to their teachers.

Good evidence exists that students connected with teachers are less likely to become delinquent or to engage in other deviant behaviors (Liljeberg et al. 2011). Such connections protect against academic disengagement (Green et al. 2008). Moreover, the positive outcomes are far reaching. Adolescents who feel like teachers are fair and caring are less likely to smoke, drink alcohol, engage in sexual intercourse, or be involved in weapon-related violence. Positive teacher-student connections even protect youth from substance abuse (McNeely & Falci 2004; McNeely, Nonnemaker, & Blum 2002). In general, positive student-teacher relationships and resulting school connectedness discourage antisocial behavior and promote pro-social behavior (Felson et al. 1994).

Positive student-teacher relationships also help students struggling in specific subject areas. For instance, Carol Midgley, Harriet Feldlaufer, and Jacquelynne Eccles (1989) discovered that, after controlling for students' initial mathematics performance and interest, students in classrooms with high levels of personalization (across the transition from elementary to middle school) saw only small decrements in their perceptions of mathematics. Their excitement for the subject and willingness to engage in the material remained high when compared with students remaining in or moving to classrooms with low levels of personalization. Moreover, students who move from low- to high-support classrooms improve their beliefs about mathematics (self-efficacy and enjoyment), suggesting a reengagement with the subject matter directly associated with student-teacher relationships.

For poor and minority students, research suggests that teacher-student relationships are even more important. For instance, Dawn Decker, Daria Dona, and Sandra Christenson (2007) studied African-American children and found that improved perceptions of their relationships with teachers were predictive of decreasing referrals for disciplinary action and suspensions, improved socio-emotional functioning, increased competence in social skills, better school engagement, and early literacy skills. Gillian Green and her colleagues (2008) found similar outcomes for Latin-American immigrant youth.

Qualitative research on students' perspectives supports the larger body of research regarding student-teacher relationships. When asked directly, students often report that the attributes of teachers they most appreciate are teacher care, valuing of student choice, and flexibility (Rubin & Silva 2003; Shultz & Cook-Sather 2001; Wilson & Corbett 2001). Students also perceive teachers who have high expectations of students as "good" teachers (Jones & Yonezawa 2002).

From the teachers' perspective as well, high-quality, effective teacher-student relationships can be rewarding. In his seminal work on teachers' lives, Dan Lortie (1975) found that teachers thrive when they receive emotional gratification from students. Teachers report greater passion for their students, for teaching, and for their content area when they know their students as individuals, take a personal interest in them, and set high expectations for them (Gentry, Steenbergen-Hu, & Choi 2011).

» **Adolescents who feel like teachers are fair and caring are less likely to smoke, drink alcohol, engage in sexual intercourse, or be involved in weapon-related violence. In general, positive student-teacher relationships and resulting school connectedness discourage antisocial behavior and promote pro-social behavior.**

Despite this large payoff, research suggests that secondary teachers, in particular, often struggle to create high-quality connections with young people (Hargreaves 2000). This is due in part to the structural regularities of secondary schools with their traditional disciplinary focus, 55-minute periods, and highly structured curricula driven in part by outside forces—such as state content standards, college admissions requirements, high school exit exams, and federal funding. All of these forces shape how much freedom teachers have to tailor curricula and instruction to meet individual students' needs (Talbert 2010). This struggle is further complicated by the fact that secondary teachers, unlike their elementary counterparts, are dealing with adolescents and emerging adults who are more physically and emotionally independent than young children. As part of normal development, adolescents broker changes in the power dynamic between themselves and the adults in their lives—especially in domains viewed by youth as matters of personal choice—and tend to be more sensitive to issues of control compared to young children (Goossens 2006; Jensen-Arnett 2004, 1997; Smetana, Camione-Barr, & Metzer 2006).

HOW PERSONALIZATION CAN MATTER, PARTICULARLY FOR LOW-INCOME AND MINORITY YOUTH

Drawing on scholarship in sociology, education, and psychology, Fred Newmann's (1992) research on student engagement is helpful in understanding how personalization can particularly benefit low-income and minority youth, a disproportionate number of whom become alienated and disengaged in high school and drop out. His findings are informative because they provide a bridge between research on motivation and research on instruction and engagement. Newmann helps identify interpersonal and instructional features of the teacher-student-curriculum relationship that are essential. This helps us understand how unmotivated or disengaged students might be served best by school and classroom environments that purposefully develop students' feelings of competency and sense of school membership, as well as environments that offer opportunities to engage in authentic schoolwork. This demands higher-order thinking and in-depth understanding, and makes a connection to students' lives beyond school, providing a sense that what they are learning actually matters.

Eric Toshalis and Michael Nakkula make the case that while not all young people need to be engaged to be motivated (some find such motivation from their family, goals, etc.), for many students, engagement might serve as a prerequisite to motivation. What promotes student engagement? Essential, according to Newmann and his colleagues, are educators' high expectations—a steadfast belief in students' competency or potential for competency. Negative teacher perceptions of students—that they are dumb or slow, for example—can powerfully influence previously marginalized students' feelings about their academic competency and about education's role, if any, in their lives (Jones & Yonezawa 2002). Such low expectations or perceived mistreatment from teachers can hamper teacher-student relationships and, therefore, student engagement. Conversely, educators who use teacher-student relationships to create classroom environments that foster feelings of competency—particularly among students who have been marginalized for any number of reasons (e.g., life experiences, previous experiences at school)—can invigorate students who were previously disengaged.

Related Paper in the *Students at the Center* Series[3]

Motivation, Engagement, and Student Voice, by Eric Toshalis and Michael J. Nakkula.

series

» Such low expectations or perceived mistreatment from teachers can hamper teacher-student relationships and, therefore, student engagement. Conversely, educators who use teacher-student relationships to create classroom environments that foster feelings of competency—particularly among students who have been marginalized for any number of reasons—can invigorate students who were previously disengaged.

Newmann goes further, however: He argues that while students need to feel that educators believe in them and that they are capable of learning, students also need to feel intimately connected to others beyond their classrooms, at the broader school level. The development of a sense of school membership—the feeling students have that they belong to a larger school community that believes in them and is oriented toward their success—is critical. Such membership is fostered by efforts to create circumstances in which students can identify with their schools and feel accepted. Key are efforts to foster students' relationships with a range of school adults (e.g., teachers, counselors, administrators, coaches, security staff) whom kids perceive as fair, caring, and having a genuine interest in nurturing their success through academic and social supports (Smerdon 2002).

An unmotivated or disengaged student can also be drawn into schooling through the right kind of schoolwork. A drill-and-kill, stand-and-deliver, high-stakes-assessment-driven curriculum is unlikely to get us there. Rather, schoolwork must speak to students by allowing them to engage deeply in subject matter and construct authentic understandings of knowledge relevant to their lives and communities (Newmann 1996). In this way, Newmann echoes Rousseau and Dewey who believed that students should both have choice within their curriculum and opportunities to link their education to life in the outside world. Contrary to a curricular focus on teaching and assessing for content knowledge, authentic schoolwork places student meaning-making at the center. Teachers who know their students give them opportunities to "use their minds well" in ways that scaffold them toward higher-order thinking. Drawing on individual students' skills, interests, and choices, they require students to manipulate and transform discrete information into synthesized understandings that have applicability to the larger community (Newmann & Wehlage 1993).

As Newmann reminds us, this is most likely accomplished when educator-student relationships are woven into daily classroom life and instructional practices, and honor students' desire to do work that is meaningful and relevant to their outside lives.

Some might see this approach as implementing personalization in reverse. Rather than beginning with cultivating relationships, it suggests beginning with instruction: First ask students to do schoolwork that is meaningful, relevant to their lives, and connected in some way to the world outside of school, then they will be more engaged and more likely to trust that their teachers care about their learning and success (Newmann 1996; Sisserson et al. 2002).

This idea of beginning with instruction to foster teacher-student relationships has gained some traction, as evidenced by social science research on engagement and the creation of communities of practice for low-income, minority youth. For example, in a study of African-American male high school students, Na'ilah Nasir and Victoria Hand (2008) argue that student engagement is greater on the basketball court (during practice) than in the mathematics classroom—not just because students have more interest in basketball than mathematics. Rather, what coaches/instructors ask students to do in each setting differs markedly. According to the researchers, students are given variable "access to the domain" in each setting. In basketball practice, coaches expect students will learn the act of playing basketball and afford students access to playing the game. This access changes not just students' skill levels in dribbling, shooting jump shots, or defending the hoop; it changes their identities. They become basketball players.

Such transformations are rarely accomplished in content-area coursework in secondary schools. Students do not often begin to see themselves as writers, historians, or mathematicians. Yet Nasir and Hand, similar to Newmann, would argue that it is the instructional practices rather than the surrounding structures per se that reshape the relationships between students and instructors and between students and the curriculum.

INTERVENTIONS TO INCREASE PERSONALIZATION IN SECONDARY SCHOOLS

Increasing personalization in schools as a strategy for increasing students' academic achievement and social development is a longstanding goal of educational reform, both structurally and instructionally. Over the past three decades, we have seen a resurgence of efforts to restructure secondary schools in ways that enable teachers to spend more time with individual students over a longer period of their high school careers.

These efforts—some benefitting from significant resources—have involved everything from reducing the number of students in classrooms to creating programs that connect teachers to students in innovative ways: as counselors, advisors, or coaches.[4] They have engaged educators in the creation of programs within schools—small learning communities, schools within schools, and magnet programs, for example. More extreme versions have involved the creation of whole new schools, such as charters, small autonomous schools, and early college models. While versions of these secondary reform approaches have coexisted for decades, what they share is a focus on improving the connection between teacher and student in order to help adults create more educationally responsive environments.

series

Related Paper in the *Students at the Center* Series[5]

***Changing School District Practices*, by Ben Levin, Amanda Datnow, and Nathalie Carrier.**

Which versions of secondary reforms get embraced and how well they are supported are influenced greatly by local political will and financial support. How people interpret the problems of poor secondary school achievement, low student engagement, or untoward behavior shapes their responses. Educators and policymakers who adopt a more malleable understanding of intelligence, motivation, and engagement are often more willing to invest in costly technical changes to provide additional academic and socio-emotional scaffolding for students, particularly those from low-income communities. Conversely, those who adopt a more meritocratic or fixed intelligence viewpoint of students appear less likely to believe that additional supports, including a more personalized approach to education, would result in increased student success (Oakes et al. 1996).

What has resulted is a sporadic implementation of personalization-oriented school change. Some systems have inserted a single intervention into a few schools while others have gone full steam ahead with whole-school reforms (e.g., small schooling). Rarely are school reform models that tout improved teacher-student relationships tried, assessed, and subsequently accepted or rejected solely or even primarily based on objective data—the extent to which they improve personalization and academic outcomes for students.

Over the past two decades in particular, political will combined with significant financial resources from large foundations—most notably the Bill & Melinda Gates Foundation—has slowly turned educators' attention toward large-scale technical implementations of reforms that embrace more personalized relationships between teachers and students, as well as more personalized instructional practices. These programs have ranged from building up advisory programs across thousands of secondary schools nationwide to the small school reform movement (which often encompasses advisory programs). These efforts can be found in dozens of large, urban districts across the United States. While these are not "new" reforms per se, they reflect an intention to bring personalization, and thus academic achievement, to scale.

The widespread use of reforms (e.g., advisory, small schools) tells us that some amount of "scale" has been achieved. For example, small schools (on which much research has been conducted) have been embraced by dozens of large districts, including Oakland, Boston, Chicago, Los Angeles, San Diego, Milwaukee, Chattanooga, New York City, and additional districts in Texas, Georgia, Montana, Ohio, and Virginia—and this is not an exhaustive list. How well those reforms are holding up within the current economic recession is another story entirely. Many small schools have been dismantled, consolidated, or frozen due to funding constraints (e.g., in Oakland, Seattle, San Diego, Vermont, Chicago, and Los Angeles, among others).

Taking personalization reforms to scale over the past decade also has prompted a re-prioritizing of school change efforts. While the ultimate goal remained reshaping teacher-student relationships and instruction—and thereby increasing student achievement and engagement—much attention and significant resources have been invested in altering school structures that surround relationships (e.g., buildings, grade-span, class scheduling). Contrary to Newmann's call to begin with instruction to improve relationships between teachers and students, reformers assumed that changing classroom and school structures would enhance teachers' efforts to create tighter, more supportive relationships with students. They believed that more supportive teacher-student relationships would automatically translate into better instructional practices and improved student achievement.

IS THERE RESEARCH EVIDENCE THAT EFFORTS TO PERSONALIZE SECONDARY SCHOOLS MATTER?

What is the research evidence on whether changing school structures improves teacher-student relationships and, in turn, raises academic achievement in secondary schools? What do we really know about how well these types of reforms are working for youth, particularly low-income and minority adolescents? To answer those questions, we examine the research evidence on three structural reforms meant to increase personalization through improved teacher-student relationships in secondary schools: advisory programs; grade-span alternatives; and small schools. Our goal is not to provide an exhaustive list of programs secondary schools adopt to personalize their campuses. Rather, these interventions are examples of common technical strategies schools are using and the relative strengths and weaknesses of the evidence underlying them.

ADVISORY PROGRAMS: WEAK EVIDENCE FOR A WIDESPREAD REFORM TO IMPROVE TEACHER-STUDENT RELATIONSHIPS

The most common approach to personalization in schools is creating advisory programs, which now exist in thousands of secondary schools across the country, with wide variation in school-to-school implementation. Although advisories can be designed to be small communities within larger school structures, more often they are single classrooms of students who are loosely connected with one another and within which students can receive one-on-one support from the advisory teacher. Advisory teachers are often asked to serve as quasi-counselors, providing tutoring and in-class advice on such matters as course schedules and the postsecondary transition (e.g., college applications, senior exhibitions). This is the more common form of advisory: teachers and students are expected to relate on a one-to-one basis within the time allotted.

Sometimes advisories primarily serve as academic support structures. For instance, in a national study of mixed-income, racially diverse schools attempting to eliminate tracking, one school regularly used advisory programs to provide struggling students with a double-dose of exposure to college-preparatory English and mathematics courses (Oakes et al. 1996). In other cases, advisory programs are seen as counseling and mentoring vehicles (Epstein & MacIver 1991). However, at its core, advisory often is meant to be the one place where students feel they have at least one school advocate. Advisory teachers are to get to know their charges over a long period

of time and become the person their students go to for advice and support regarding academics, social and emotional needs, and postsecondary information (ESR 2010).

Advisory programs appeal to school administrators because of their formal yet flexible structure. Such programs are low cost and relatively easy to set up. However, teachers can view advisory programs with suspicion and as efforts to force counseling duties onto them. This can produce some teacher resistance, which may result in weak implementation—for example, when teachers use advisory as an extended silent reading period or a time to let students "take a break." Secondary school teachers can resent advisory programs and view them as additional preparation periods, which they see as detracting from their contractual duties (Ayres 1994; Cole 1994).

The idea that advisory is counseling in disguise is not far afield. The Institute for Student Achievement uses the term *distributive counseling*™ to describe a key piece of the advisory program that they encourage schools to adopt. In their model, the function of counselors, who are often assigned more students than they can effectively serve, is handed over to teachers and other school adults, who use the advisory program to provide social, academic, and postsecondary advisement to a small group of students over time. Similarly, Educators for Social Responsibility has long championed advisory programs in schools that are built around students' needs for engaging with teachers outside of core subject areas to consider topics of college and career readiness, life skills, and overall youth development. ESR trains thousands of teachers each year to become better prepared advisors by increasing teachers' counseling skills.

The research base on advisory programs mirrors that on personalization in general. That is, many studies have documented different forms of advisory programs and how to implement them (Gewertz 2007; Makkonen 2004; ESR 2010). Indeed, there are well-documented qualitative studies regarding what strong advisory programs in action look like, how they have been implemented, and whether they are sustainable. Yet no experimental or quasi-experimental peer-reviewed studies have specifically addressed the effectiveness of advisory programs (Galassi, Gulledge, & Cox 1997). No studies directly link advisory programs to quantitative gains in standardized test scores—the "coin of the realm" in educational evaluation today. This failure to link programs to outcomes may be because the studies are resource intensive or require significant foresight during implementation or because the approach appears to have "face validity."

One recent study—on advisory programs implemented as part of the small-school reforms in the San Diego Unified School District—examined the relationship among students' perceptions of advisory programs, personalization at the schools as a whole, and academic achievement (McClure, Yonezawa, & Jones 2010). While there was a positive correlation between students' positive perceptions of a personalized school environment (within 14 small schools) and students' academic achievement, the opposite was true with the advisory program. That is, when students reported liking advisory more, their academic achievement was lower. The authors explain this finding in several ways. Perhaps the advisory programs across the 14 small schools are too varied in focus to result in concrete correlation with standardized test scores in English and grade point averages (the two outcome measures that the researchers gathered for comparison). Or perhaps the advisory programs are enjoyed best by struggling students who, despite the comfort they find within advisory, still cannot perform better academically for a host of reasons unknown to us. Regardless, this study reflects the mixed results of advisory research in general and the variation in implementation of this popular school structure.

We suspect that advisories may be worth pursuing as avenues to personalize schools because they are relatively low cost and have become fairly accepted in schools over the past two decades. However, maximizing the usefulness of advisory practices will remain challenging without additional research and development. Practitioners need information on how to develop well-functioning and effective advisory programs for their specific student populations. They also need thoughtful professional development to implement such practices across their systems and schools and at the individual teacher level. The best use of the field's resources would be to couple these two needs in the design of studies that both test

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professional development approaches to improve advisory and exam processes, and that look at outcomes of advisory structures and practices for particular populations (e.g., low-income, minority, underperforming).

ALTERNATIVE GRADE SPANS: CONVINCING EVIDENCE THAT COHORT MODELS AND INCREASING TEACHERS' TIME TO CONNECT WITH STUDENTS MIGHT MATTER

Another popular attempt to personalize schools by way of structural reform has been the reconfiguration of the middle grades transition. Although most students still begin middle school in the sixth or seventh grade and high school in the ninth grade, an increasing number of districts are creating K-8 or 5-8 schools as alternative pathways to high school. The idea is to reduce the number of transitions students undergo from kindergarten through the twelfth grade and to increase the number of years students attend a given school, such as four years at middle school instead of two or three (MacIver & MacIver 2006). Proponents argue that fewer transitions would enable adults to better connect with youth in the schools by increasing the amount of time that cohorts remain together. This reform also has the benefit of costing little or nothing, which is particularly attractive to educators given today's budgetary concerns.

Research on school transitions and mobility suggests that students, particularly low-income, urban youth, have increased difficulty with traditional K-12 transitions. These difficulties include lower academic achievement and increased dropout rates (Epstein 1990; DeJong & Craig 2002; Seidman et al. 1994). The difficulties are particularly pronounced for minority students (Wampler, Munsch, & Adams 2002). New grade-span configurations could be tremendously beneficial to such students. A recent study of such alternative grade-span assignments in New York City used pooled longitudinal data on students who registered for grades 4 through 8 in 1995-96 and 2001-02 (Schwartz et al. 2011). By tracking each student over the grade span and into various configurations, the researchers assessed which configurations produced the best outcomes. They found that changing schools less often and transitioning students to middle school earlier (in the fifth grade) produces greater academic gains. The researchers speculate that these positive outcomes are driven by greater opportunity for more personalized relationships between adults and youth.

Research on these programs suggests that they may work for some students. But the degree to which they succeed and for whom remains inconclusive. More research must be conducted before we can confidently conclude that such reforms make a substantial difference across various groups of students.

Proponents argue that fewer transitions would enable adults to better connect with youth in the schools by increasing the amount of time that cohorts remain together. This reform also has the benefit of costing little or nothing.

SMALL-SCHOOL REFORM: NEW EVIDENCE FOR A PROMISING APPROACH TO EFFECTIVE PERSONALIZED WHOLE-SCHOOL CHANGE

Small schools are meant to build up and enrich the connections of multiple adults to individual students. The small schools reform movement emerged from a body of solid research suggesting smaller schools post better academic results, particularly for low-income students of color.[6] Efforts at small-school reform vary in name, formulation, and scope but typically come in two main forms: start-ups, which are brand-new, small schools; and conversions, which are formerly large comprehensive high schools broken down into small learning communities or multiple small high schools at the same physical site.

Small-school educational reforms have been influenced heavily by educators and researchers who have advocated for educational systems that nest students in structures built with personalization in mind. These people include Deborah Meier and her former colleagues at Central Park East, Sizer and the Coalition of Essential Schools, Nel Noddings through her work on caring, Milbrey McLaughlin and Anthony Bryk through their work on trust, Kathleen Cotton and her focus on school size and school climate, the work of the Collaborative for Academic, Social, and Emotional Learning on social emotional learning, Linda Darling-Hammond and the School Redesign Network, and Valerie Lee with her analysis on school size.

Philanthropic investment in the small-schools strategy has been staggering. In 1993, the Annenberg Challenge made an unprecedented $500 million investment in the nation's schools, with $25 million designated to create 100 new small schools in New York City alone. Subsequently, in 2002, $60 million came from Carnegie Corporation of New York through the Schools for a New Society Initiative across nine districts; in 2001, Carnegie and the Bill & Melinda Gates Foundations contributed $30 million to the New Century High School initiative in New York City, and then $21 million in the Chicago Public Schools in 2006. In 2010, the U.S. Department of Education awarded nearly $100 million to 28 high schools ($52.2 million) and 29 states and districts ($46.6 million) in the form of small learning communities grants as part of its High School Graduation Initiatives. The Gates Foundation, in particular, has been a major player in the formation of these new small high schools, spending nearly $1 billion in large and mid-sized cities across the country, including, among others, Boston, Chattanooga, Chicago, Houston, Los Angeles, New York City, Oakland, and San Diego (American Institutes for Research & SRI International 2003). Indeed, the Gates Foundation has invested over $150 million to close low-performing high schools and open new small schools in New York City alone.

Small schools mark an important shift in thinking and practice regarding efforts to personalize high schools beyond individual student-teacher relationships. As opposed to advisory programs, for example, small schools operate from an institutional assumption that students need to be served in a multilayered environment where many adults and students can form connections among one another to provide academic, social, and emotional support—and where cohorts of students are small enough for educators to provide more individualized instruction (IESP 2001). Programs like advisory or alternative grade spans are sometimes incorporated as a feature of small schools but are frequently no longer seen as primary means for personalization (Darling-Hammond 2002).

Teacher-to-teacher collaboration, another hallmark of small schooling, ideally impacts students' experiences. Small schools try to develop cultures in which teachers collaborate regularly and openly around students' needs. Professional development and teacher collaboration time ideally are worked into the school day, with teachers engaged in data analyses, lesson study, lesson planning, and discussions of specific interventions needed to remediate and accelerate their students (Small Schools Project 2004).

The research literature has examined small schools thoroughly. For example, studies have examined the kinds of courses and extracurricular activities small schools offer (Barker & Gump 1964; Lindsay 1982) and their impact on important student outcomes such as dropout rates (Darling-Hammond, Ancess, & Ort 2002; IESP 2001; Lee & Burkham

2003; Pittman & Haughwout 1987) or mastery of mathematical concepts (Wyse, Keesler, & Schneider 2008). Researchers have also examined the effects of small schools on subpopulations by race, gender, achievement, and community (e.g., urban, suburban).

Small schools appear particularly advantageous (compared to large, urban high schools) for low-income, minority youth (Darling-Hammond et al. 2002; Fowler & Walberg 1991; IESP 2001; Kahne et al. 2008). But much of this literature fails to control for student self-selection. That is, the studies do not account for which students opted into small schools while other students were left behind (Ready & Lee 2008).

Most recent are two MDRC reports on a longitudinal, quasi-experimental study examining the New York City small schools (Bloom, Thompson, & Unterman 2010; Bloom & Unterman 2012). This study, the most significant on small schooling thus far, provides concrete evidence that going small—when the schools are startups, nonselective, and entered by choice—has substantial effects on academic achievement. By taking advantage of the naturally occurring lottery system in the choice program implemented for 80,000 students in New York City, the researchers found that enrolling in a small school of one's choice rather than a comprehensive high school "markedly improves graduation rates for a large population of low-income, disadvantaged students of color" (Bloom & Unterman 2012). It also significantly closes the achievement gap between low- and middle-income students, and specifically for low-income African-American males. According to a 2010 report on the study, small schools of choice enrollees were nearly 11 percentage points more likely to earn 10 or more credits during their first year (ninth grade) of high school, nearly 8 percentage points less likely to fail one or more core subjects, and 10 percentage points more likely to be on track to graduate in four years (Bloom, Thompson, & Unterman 2010). These positive effects were retained (give or take a percentage point or two) over three years in high school. According to the 2012 report, which covered two cohorts followed for four years and through graduation, the small schools graduated 8.6 percentage points more students (67.9 percent vs. 59.3 percent). Moreover, improvement was found for students eligible for free/reduced-price lunch (11.2 percentage point effect) as well as for other students (a 6.9 percentage point effect) (Bloom & Unterman 2012).

The significance of this study cannot be overstated. As noted earlier, an overriding problem with early work on the effects of small-school reform was an inability to control for student choice. Did small schools perform better because they simply attracted a differently resourced or talented group of young people than did comprehensive schools? By forcing all students to choose, and then by placing students in their preferred schools via a lottery system, New York City schools could be studied without these inherent confounds. Of course, as the authors acknowledge, the MDRC studies have their limitations. Notably, the researchers were unable thus far to examine classroom practices. Consequently, they do not know which features of the small schools and specifically what kinds of alterations (if any) in classroom practice matter most or how the schools' evolution might affect student achievement. Finally, they do not know if the statistically significant positive outcomes will continue with subsequent cohorts of students or how successful the students who graduate will be at accessing, entering, and completing postsecondary education.

POTENTIAL UNINTENDED CONSEQUENCES OF SMALL-SCHOOL REFORMS

Some researchers have expressed concern that small-school reform alone may have the unintended consequence of restricting the helpful networks youth can access (Hammack 2008). The idea is that small-school reform could unintentionally limit youth exposure to a wide range of adults. Smaller schools have fewer adults, and that means low-income students may have less access to the knowledge and experience adults can provide.

For low-income students, social science has long suggested that their connections to "more knowledgeable others" can be essential conduits to otherwise inaccessible information and resources. Mark Granovetter (1973) referred to this phenomenon as the "strength of weak ties"—the connections that individuals had with one another to bridge their unlike and non-overlapping personal and professional social networks. He theorized that it is through these weak ties that low-income students in particular could become more aware of non-redundant information—new opportunities, cultural approaches, and resources to which they otherwise might not be exposed.

In fact, research on social networks of youth in poverty and immigrant youth reveals that their kinship networks are often much less knowledgeable about college and career information than those of middle- and upper-income youth. Low-income youth, therefore, need greater exposure to network connections that can inform them and help them to navigate postsecondary life and perhaps even introduce them to middle-class culture and lifestyles in order to help their transition to college or careers (Stanton-Salazar 2010). Small schools may improve the strength of students' connections with some adults, but they may also restrict the number of overall connections students have access to and, consequently, the amount of information they can tap for future use.

Indeed, two of us, Yonezawa and Jones, are working on a Gates Foundation-funded study by the University of California ACCORD multi-campus research unit. This nearly $8 million study, *The Pathways to Postsecondary Project*, examines low-income youth as they transition from secondary to postsecondary education. Although we are in the middle of this five-year study, some of our colleagues have found already that for low-income youth in particular, strong relationships with employers and coaches provide key postsecondary information and encouragement (Feliciano 2010). More specifically, Cynthia Feliciano, who examined the longitudinal ADD Health dataset, found that low-income young adults who indicated that their mentors were employers or coaches while in high school were significantly more likely to attend and complete a two-year postsecondary degree compared to similarly aged students who indicated their mentor was a teacher. Whether or not reducing the size of schools low-income students attend increases these kinds of mentoring relationships for youth or decreases them is hard to tell. Some might argue that the intensification of smaller environments could make adults more likely to act as mentors for students they have gotten to know well.

THE CHALLENGES OF PERSONALIZING INSTRUCTION: WHAT ARE THE NEXT STEPS?

Reformers, funders, and researchers have long believed that personalization in the form of tighter teacher-student relationships would result in improved achievement, and with good reason, as we have argued. However, less attention has been paid to the actual classroom work that sits squarely between changing whole-school structures and student performance. It was always the intent of these reforms to foster closer adult-student relationships in order to help teachers and students know and trust each other—specifically in order to maximize student engagement and learning. However, the reforms did not always penetrate the classroom. Often lost in the myriad challenges of implementing structural change was the critical goal of instructional change.[7] Yet, increasingly, we suspect that healthy relationships matter most when they are used as a conduit for enhancing student engagement and curricular mastery.

In some cases, scaling up reforms may have had the unintended consequence of directing attention away from instructional practices and toward larger schoolwide structures meant to support and enhance learning (Klem & Connell 2004; Steinberg & Allen 2002). Surely the technical efforts to foster personalization through implementing reforms such as advisories or small schools have made the abstract concept more real for many educators. Once researchers started talking about improving teacher-student relationships and the value of doing so, concrete strategies and structures for educators could be put in place to mark that they were doing it. Educators have had a more tangible sense of how to enact personalization at the high school level. Instituting an advisory period, changing a class schedule, or creating a small school are doable and scalable approaches to personalization. Moreover, researchers find it easier to study concrete structural changes attempted by schools and districts compared to studying interpersonal relationships or the complex phenomenon of large-scale instructional change.

What we face now, as a field, is a preponderance of evidence that structural changes in secondary education are important but insufficient to creating more personalized instruction. Altering instruction has proven to be, in many ways, far more difficult than creating new advisory programs, altering grade configurations, or even creating whole new schools. Researchers and educators often lament how even within much larger structural reforms, such as alternative grade spans or small schooling, curricula and pedagogy are rarely tailored to the needs of individual students (Lee & Ready 2007; Mitchell et al. 2005; Rhoades et al. 2005; Supovitz & Christman 2003).

Very few studies examine whether curricula and instruction in small schools differ from those in larger institutions, and whether those instructional differences affect achievement. One recent study examined the Gates Foundation's investment in small-school startups and conversions across 100 schools nationwide (Shear et al. 2008). The researchers,

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who analyzed over 900 tenth-grade English and mathematics assignments gathered in small high schools and comprehensive schools, found that students attending small schools report a greater degree of relevance to real-world connections in their assignments in English and mathematics compared to what students studying in the comprehensive high school curriculum report. Although the results are stronger in English classrooms than in mathematics classrooms, both are statistically significant. A higher rate of student choice in assignments was also reported among the small-school startups. Classroom observations at a select number of schools bolstered these findings. Yet even with this extensive body of information, data limitations prevented Linda Shear and her colleagues from making connections to student achievement.

THE QUEST TO PERSONALIZE EDUCATION FOR ALL STUDENTS

As enthusiasm for creating more personalized educational structures has waned over the past five years, new reforms are emerging to increase the personalization and individualization of education for youth. These trends, as yet unproven, are garnering attention and resources that make them worthy of examination. In particular, educators and funders are attending more to content and teaching as primary vehicles for change. The Gates Foundation's new stated goal in its K-12 initiatives is to make U.S. classrooms "world class" by identifying measures of effective teaching. Because our goal here is not to delve deeply into what constitutes effective student-centered instructional practices per se, we focus instead on what the field of secondary school improvement is engaged in to reshape curricula and instruction in secondary education with an eye toward personalization.

CAREERS AS CURRICULUM

There is renewed interest in personalizing instruction for students by connecting curricula and pedagogy with students' career interests. Career academies have a long history and far precede small-school reform (Stern, Dayton, & Raby 1992). However, this renewed interest reflects educators' attempts to do what Rousseau, Dewey, and Newmann suggested long ago: focus on student choice and real-world application to engage students and personalize learning. Of course, the current historic rise in the cost of postsecondary education and the simultaneously high unemployment rates also make folks wonder if we need to think more carefully about how secondary education can best prepare students for postsecondary employment.

The Career Academy Support Network at the University of California, Berkeley is a longstanding network that supports secondary schools and districts with efforts to reform high schools by starting with revamping course offerings, curricula, and pedagogical practices with a career focus. A 40-year-old organization, CASN is supported by funding from the legislature, which initially provided such funding in 1984 after a successful pilot project with 10 California high schools. Since then, CASN has supported hundreds of California high schools that mount career academy programs within larger high school offerings. In a 2009-10 publication, CASN reports supporting 467 active career academy programs, with an average of 111 students each. Although CASN uses self-report data from the schools in its network to assess their effectiveness, the results are promising, with 10-percent higher high school graduation rates for students who participated in career academy programs compared to statewide averages.

Indeed, efforts to replace small schools and/or schools within a school with career and technical education pathways, or to infuse such academy features into comprehensive and small high schools, are increasingly popular. The rising costs of college, the increasingly competitive nature of postsecondary admission, the low postsecondary completion rates for low-income youth, and the economic recession have convinced many legislators, educators, students, and families that returning a vocational education option to high schools may be a good idea for many students.

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MULTIPLE PATHWAYS AND WORK-LINKED LEARNING

The Pathways to Prosperity Project at the Harvard Graduate School of Education is another such project that champions new concepts such as dual enrollment, college and career readiness, and work-linked learning (Symonds, Schwartz, & Ferguson 2011). Such initiatives are helping revive vocational education as a viable option for helping educators individualize curricula for young people in ways that match their future occupational and economic interests. These efforts are predicated on the belief that adolescents need not only a rigorous curriculum but also to have additional help in their transition to adulthood. Workplace internships, career and college mentoring, and programs within these initiatives help students transition into certificate and credential programs in their latter years of high school. These are all increasingly effective ways of personalizing education for many young people for whom a single-track, college preparatory system does not appear to work.

Critics of these approaches warn that the dangers of reestablishing vocational education pathways may have an unintended consequence: recreating tracking systems (or as they put it, "educational caste systems"), which relegate low-income and minority students to career pathways programs in high school while white and Asian middle- and upper-middle-income students take traditional college preparatory coursework (Education Trust 2011).

THE TECHNOLOGICAL EXPLOSION

Educators are beginning to explore technological advances for incorporation into the classroom. A growing body of work is emerging to create and to study the explosion of online instructional services being provided in the K-16 arena, specifically at the secondary level. Proponents of online and blended instructional support services tout technology as having the potential to revolutionize instruction. They claim it will provide teachers and students with the tools to individualize curricula, pedagogy, and assessments at the same time that it could increase engagement and decrease costs (Peterson & Bond 2004). Imagine classrooms where every student has an iPad on which he or she can download textual, video, and graphic information on a given topic, in effect building his or her own personalized "textbook." Students would have the freedom to control their own learning unfettered by the boundaries of walls, bell schedules, grade levels, or geography. Rather than simply relying on a predetermined book selected by a distant district committee and assigned by a teacher, students could become more active creators of their learning environment in a way previously thought impossible on a large scale (New Media Consortium 2011).

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

For more information on technology in education, see *Curricular Opportunities in the Digital Age*, by David H. Rose and Jenna W. Gravel.

There is significant potential for technology to alter the landscape of individualized instruction specifically and secondary education in general within the United States. However, there are hints in emerging bodies of research that warrant concern. The most frequent, and perhaps worrisome, critique is that of inequitable access to technology in impoverished communities. Poor kids just do not have the same access to high-speed Internet, adequate hardware, up-to-date software, tech support, and technologically savvy adults compared to their more affluent peers.

Moreover, the research on the positive effects of online and hybrid learning is inconclusive at best and mixed at worse. Some studies suggest that online and, in particular, blended approaches are no different in the academic achievement results they produce (Russell 1999). Other studies suggest that online education may result in more academic gains for students than face-to-face instruction alone (Means et al. 2010). Still other studies caution that online learning can be detrimental to nontraditional students in particular (Xu & Jaggars 2011).

The newness of this body of work using today's technological advances (compared to those from even a few years ago) forces us into a wait-and-see mode. Most problematic is that this body of research has typically focused on higher education's implementation of technology in coursework, with far fewer studies examining implementation in secondary schools.

MASTERY-BASED INSTRUCTION

Competency or mastery-based instruction is being revived within conversations about technological advances and the promise of a more individualized educational plan for students. For decades, educators have believed that seat-time requirements were old-fashioned but were limited on ideas for getting around them because of the challenges of secondary school structures and the limitations of teachers who would have to juggle students at multiple places in the curriculum. The advent of high-speed Internet in schools as well as individualized and portable Internet-accessible hardware in classrooms (iPods, iPads, Macbooks) and education-based software or apps could make it possible for students to be more frequently and individually assessed and encouraged to progress at their own pace as they show what they know.

The image here is of teachers facilitating the learning of a classroom of students who are all working at different levels within a given content area. Schools could matriculate students according to mastery rather than seat time or lesson completion. While teachers would still have content-area expertise, the transmission of such content would be less determined by the teacher lecturing or designing the curriculum. Rather the teacher would be both coach and evaluator, ensuring that the students are accessing and mastering the necessary skills and knowledge. In this version of schooling, secondary schools could move students into postsecondary programs when they are ready, with students enrolling in postsecondary institutions (traditional or trade) earlier if they are ready earlier while others might take additional time to learn key concepts and skills necessary for them to succeed in postsecondary education.

COMMUNITY SCHOOLS

The growing understanding of poverty and the ill effects it has on the ability of our most at-risk students to succeed academically has reinvigorated efforts to build intensive support networks around impoverished youth and their communities. These efforts are intended to personalize education and better meet students' needs. Sometimes referred to as the "community schools movement," wraparound reforms have reemerged and call for increasing student academic achievement by intensifying relationships across multiple domains of young people's lives. These domains include, among other things, home life, peer circles, work, churches, and schools. The assumption in this model is that the overall health and well-being of young people are influenced by family and peer domains as well as by the socioeconomic circumstances that frame their lives. Community schools have been proposed as a solution to breaking cycles of poverty that claim generations of families. Providing youth from low-income backgrounds with a range of social, health, academic, and economic supports and resources can increase the likelihood of academic success, high school graduation, and hopefully, a postsecondary credential or certificate that leads to prosperous and gainful employment.

The idea behind community schools is less about altering curricula and instruction and more about bolstering school partnerships with local social and health services agencies to create a network of relationships aimed at supporting *pathways of success* for youth. Nurses, social workers, preschool teachers,

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psychologists, and community leaders, for example, become advocates for youth alongside teachers and administrators. Interactions with a wide array of adult advocates strengthen personalization for students. Adolescents are nested in caring relationships with adults who work inside and outside the school, and who can help them in all areas of their life. Resources for food, clothing, housing, day care, parenting, and physical and mental health go far in improving their quality of life. Moreover, wraparound resources prepare young people to be ready to learn and succeed in school.

The Harlem Children's Zone in New York City represents a recent example of a comprehensive effort to support academic success and disrupt the cycle of poverty through wraparound services. Serving a 100-block radius in Harlem, HCZ is a collaborative network of social services, health services, charter schools, and academic supports aimed at the entire life cycle, from cradle to college and beyond (Tough 2008). All resources are readily available in the community. Poverty prevention and intervention are dominant in early childhood programs. Residents, including teenage parents, can participate in parenting classes or prenatal care, and explore options for day care while they go to school or work. Pre-K programs are offered to increase children's readiness to enter school on a strong academic footing. In the evenings, on weekends, and during summer months, schools and local community centers serve as places for academic enrichment for children and youth through education and arts programs. Adult education classes are also available through these community sites.

Wraparound services are integrated into the Promise Academy Charter Schools, the K-12 academic program of the HCZ. The elementary and middle schools opened in 2004, and the high school began in 2008 with its first freshman class. The schools have a longer school day and longer year, and they offer students an array of afterschool academic programs and enrichment activities. Students also receive healthy meals in school and medical services.

Information produced by the HCZ publicizes academic gains for students on state assessments. However, without outside evaluation from researchers, we do not have reliable and verifiable information on how Harlem students are fairing academically or how, if at all, their instructional program differs from more traditional approaches to teaching and learning. We do know that the HCZ did not see any improvement in student achievement until several years after launching the initiative, according to HCZ President and CEO Geoffrey Canada (Tough 2009).

Researchers need to assess the extent to which wraparound initiatives such as the HCZ do, in fact, help students succeed in school and beyond. Academic improvement is a challenging task, to be sure, but efforts to increase overall quality of life should not be dismissed because test scores are low. For students from socioeconomically disadvantaged backgrounds, personalization across many life domains may indeed increase their chances of engagement in learning and success in school.

CONCLUSION

One of the major points we have argued in this paper is that more evidence for personalization—as defined primarily by the development of relationships between adults (namely teachers) and students—is warranted. We know through a fairly robust body of literature that personalization as characterized by improved and trusting relationships with teachers helps students learn and live more successfully on a range of measures.

Unfortunately, we have less convincing evidence that the interventions and reforms tried by educators to build up and support such relationships between teachers and students have been wholly successful. Of course, there is tremendous variance in the strength of evaluations of personalization-oriented reforms. MDRC's study suggesting positive effects on small schools in New York City is notable for its strength and conclusiveness. More research is certainly needed to add to that study and help the field understand both what personalization interventions are worth scaling up, and for which populations of students.

The newest renditions of educators' efforts to personalize schooling appear to take to heart the need for focusing more intensely on curricula and instruction as an avenue to improved relationships between educators and students, rather than simply an end point. It appears the field is becoming re-convinced that 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. Moreover, we are still attending to the needs of our most impoverished and at-risk youth through more holistic approaches of community schooling that attempt to envelope youth in a blanket of caring adults inside and outside of schools.

Perhaps the greatest immediate concern is the resource-intensive nature of the personalization efforts and the outlook for maintaining such investments. Vast sums of outside money have been poured into small schooling and wraparound communities. More is being invested at a rapid pace in technology and the creation of career-based pathways in secondary schools. Once again, we seem to be headed down an understudied path toward personalization without the necessary evidence to feel confident that these are the right avenues to pursue.

Moreover, researchers and educators rightfully worry that these efforts may not be sustainable when foundation funds eventually run dry. In the current economic downturn, financial and political support from state and local district officials has dwindled significantly for any reforms—including small schools—that are more costly to start and sustain. It is indeed unfortunate that going small has come of age during one of the worst economic meltdowns since the Great Depression. Just as reformers and educators have become convinced that secondary schools need to be more intimate, connected, and coordinated

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for youth, governments and districts have severely curtailed funding for reforms. Indeed, budget cuts are eliminating entire school days, not just day-to-day services or additional reforms, leading critics to claim that we can ill afford many personalization-oriented reforms at this time or in the near future.

Economists studying the costs of small secondary schools have pointed out that prior research, which suggests that small schools are inherently more expensive than comprehensive high schools, may be incorrect if we account for outputs as well as inputs. Recent studies suggest that the most expensive types of small schools are those that continue to offer comprehensive coursework. They establish that thematic schools, which offer fewer types of college-preparatory courses (e.g., fewer advanced placement or foreign language courses) but provide a focused, thematic curriculum tend to be the least expensive and have the highest success rates with some of the most challenging student populations (Stiefel et al. 2009).

Given the better record of small schools, particularly themed small schools, in graduating students, we must become better at estimating true costs. How different might the conversation be if we asked how much it costs to educate a student to graduation rather than asking how much it costs to run a school? Would our funding formulas change? What personalization-oriented reforms would become more or less attractive and sustainable?

Setting the economic realities of the present day aside, a larger challenge remains: how best to personalize educational services for youth. The next step is to develop a more convincing and nuanced body of research and practice on efforts to personalize secondary education. This requires a closer examination of educational environments—and in particular teaching and learning—both inside and outside traditional school and classroom contexts. Our charge is to better understand the ways in which educators and students interact to make classroom, school, and community settings in which youth learn and live engaging places.

ENDNOTES

[1] See series paper: http://www.studentsatthecenter.org/papers/teachers-work

[2] See *Teachers at Work—Six Exemplars of Everyday Practice*, by Barbara Cervone and Kathleen Cushman. http://www.studentsatthecenter.org/papers/teachers-work

[3] See series paper: http://www.studentsatthecenter.org/papers/motivation-engagement-and-student-voice

[4] For more information on teacher roles, see "Teacher Roles in Student-centered Environments" in *Teachers at Work—Six Exemplars of Everyday Practice*, by Barbara Cervone and Kathleen Cushman. http://www.studentsatthecenter.org/papers/teachers-work

[5] See series paper: http://www.studentsatthecenter.org/papers/changing-school-district-practices

[6] See Leithwood & Janzi (2009) for a comprehensive review of school size effects.

[7] For more information on the challenges of structural change, see *Changing School District Practices*, by Ben Levin, Amanda Datnow, and Nathalie Carrier. http://www.studentsatthecenter.org/papers/changing-school-district-practices

[8] See series paper: http://studentsatthecenter.org/papers/curricular-opportunities-digital-age

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