5. What Can Schools Do to Motivate Students?

This is the fifth in a series of six papers from the Center on Education Policy exploring issues related to students' motivation to learn. The first paper provides the general context for the topic and background information on theories and dimensions of motivation. The major findings from all six papers are summarized in the CEP report Student Motivation—An Overlooked Piece of School Reform.

While past papers in this series have examined broad strategies to improve academic motivation that could be implemented across a school, district, or state, this paper focuses specifically on changes within individual schools that hold promise for increasing student engagement.

Schools play an important role in student motivation by picking up where parents leave off or stepping in when parents are unable or reluctant to be actively engaged. The organization of the school itself can be important, studies show. The size of the student body, methods of grouping students, school and class schedules, and school climate can all have an effect on engagement. Teachers themselves can affect motivation through their interactions with students, their assignments and tests, and their classroom climate. Aspects of school organization can also affect students' relationships with their peers and with administrators and teachers in ways that encourage or discourage motivation.

How Does What Happens Inside a School Affect Motivation?

While some parents take an active role in their children's education, others leave it up to schools and teachers to cultivate academic motivation from reluctant students. Are there strategies that can make this task easier or more effective?

It is helpful to think back to the four dimensions of motivation discussed in the first paper in this series and consider how the inner working of a school can shape each of those dimensions.

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Competence: What steps can teachers take to help students feel more competent? How does teaching style affect students' feelings of competency?

Autonomy/control*:* How does teaching style affect students' perception of control and autonomy? How can programs specifically targeting at-risk students help those students to regain a feeling of control over their education?

Interest/value: How does the way a school day is structured increase or decrease student interest? What strategies can teachers use in the classroom to bring more interest and value to the subject matter? What types of programs can help at-risk students better understand the value of their education?

Relatedness: How does the way a school is organized affect relationships among students and between students and faculty? How can a student body be organized to create stronger and more beneficial social bonds? How can the design of a school help or hurt the relationships between students and faculty? What can teachers do to foster more effective relationships with students?

Schools' efforts to influence student motivation can be grouped into three major categories: programs that specifically target students most "at risk" of losing motivation, efforts that focus on the role of teachers and other school staff as motivators, and attention to the design and structure of the school itself.

Targeted Intervention Programs

Some schools have created programs to increase motivation for a certain group of students. These programs are targeted on students who are most likely to lose motivation but differ in the ways in which they *identify* those students. Many of the programs target potential dropouts because they see dropping out of school as the ultimate loss of motivation. If potential dropouts can be identified early, the thinking goes, then the school can attempt to reinvigorate their academic motivation before they are lost from the system for good. Other programs see a decrease in attendance or a failure to complete schoolwork as indicators that students are losing motivation. Kathleen Kennedy Manzo, a research scientist at John Hopkins University, estimates that about 40% of the students who completely lose motivation and drop out could have been pinpointed in 6th grade. It's important to start identifying such students early in their academic careers, she argues, because programs aimed at high schoolers often come too late. Loss of motivation can begin at an early age; unless it's addressed, it compounds itself (Manzo, 2008).

What these programs have in common is their attempt to identify warning signs of a decline in academic motivation, identify students exhibiting those indicators, and target them before their motivational levels decline even more. There are probably thousands of programs like this across the country, but the examples described below are intended to

give the reader a general idea of the strategies being implemented by schools in a variety of states and contexts.

Targeting dropouts

- ***Ohio.*** A statewide dropout prevention program targeted "at risk" male students in their freshman year of high school. To be considered at risk, students must have displayed one of four factors: failing two core classes in 8th grade, being suspended, having a poor attendance record, or being overage. Once identified, the students were assigned a "personal motivator," who met with them bimonthly to provide encouragement and ensure they were on track to earn their credits. Students were also able to participate in special extracurricular activities. Each participating school had a state-funded coordinator and a "graduation action team," consisting of community leaders, teachers, parents, clergy, and others, who would meet to monitor students' progress. After the first year of the program, grade promotion and attendance rates increased, at some schools quite dramatically, and suspension rates decreased (Hoke, 2008; Stephens, 2008).

- ***Durham, North Carolina.*** The Durham school district has initiated similar interventions to try to prevent "academic withdrawal." School administrators have increased home visits for students with poor attendance, reduced suspension rates through alternative discipline, partnered with social support agencies in the community to provide students with services, and created extra academic and recreation programs for after-school hours. The district has also retrained counselors to preemptively identify students who need support or motivation, rather than waiting for the students to ask for help; the district pays special attention to students who display indicators such as academic difficulty or low attendance. In the past few years, the district has seen a reduction in its dropout rate, which is now below the state average, suggesting the early intervention program is working (Manzo, 2008).

Alternative pathways

Some schools are providing different learning environment or structures to re-engage students who have lost motivation in the traditional school environment.

- ***Performance Learning Centers (PLCs)***. Schools in several states have created PLCs, a model developed by the Communities in Schools network. These centers consist of fewer than 100 students in four to five "classrooms," in which students use computers to progress through an online curriculum comparable in length and content to traditional textbook-based classes. Students must take tests at the end of each lesson, module, and class, and must score at least an 80% in order to progress. Teachers provide assistance and direction and facilitate the 10-40% of coursework that is not done online, including presentations and one-on-one meetings. PLCs are not considered credit-recovery programs but rather a comprehensive alternative to a traditional school, combining the ideas of a small classroom and technology use. PLCs target the most challenged students—those with poor attendance, academic difficulty, social

issues, or low motivation. Most students arrive in 10th or 11th grade but read on at least an 8th grade level (Kronholz, 2011). In Virginia, 96% of PLC students passed the state end-of-course math exam, 97% passed the reading exam, 90% passed biology, and all students passed the writing exam. There is no way to know how many students would have completely lost motivation and dropped out had they remained in their traditional schools. Anecdotally, many students report that the immediate feedback offered by the online curriculum is rewarding, and the ability to take practice tests and progress only after mastering the material relieves anxiety and fear of failure. Students also report more interest in their studies, as they can progress at their own pace and feel more comfortable repeating a unit if they don't understand the content. For students who complete the curriculum early, internships or trade programs are available (Kronholz, 2011).

- ***Early College High School***. This is another alternative traditional schools. Unlike dual credit programs, Early College High Schools target students who are most at risk of dropping out of high school. The schools are small and usually located on a college campus. College-level course work is introduced in 9th grade and blended into the regular curriculum. Supports including mentoring, tutoring, and counselors. Students have the option to earn either an associate's degree or up to 60 hours of college credit on top of their high school diploma. The theory is that by targeting students who might otherwise be lost in high school or in the transition to college, these programs can reduce the number of dropouts. In addition, they increase motivation by making the path to college more clear through alignment of coursework. Value and interest are increased by the accelerated coursework, and the support systems and college-going culture foster relatedness and competence. Results from the 21 Early College High Schools in Texas have been promising, with attendance rates over 90% and grade-to-grade promotion rates of 90% (Texas Early College High School, 2011).

Failure to complete schoolwork

Some students lose motivation when they become overwhelmed by their schoolwork; they can't keep up, fall further behind, and eventually give up.

- ***Glenpool Middle School.*** This middle school in Glenpool, Oklahoma, instituted a program called ZAP, or Zeros Aren't Permitted. The principal noticed that many students were failing to graduate because they had too many incomplete assignments; this also caused them to fall behind in the course material and avoid class, worsening the problem. Under the ZAP program, students who arrive with incomplete homework assignments are sent to complete mandatory makeup work during their lunch period. After three months, students had completed over 1,000 makeup assignments. Rather than a punishment, the school views the program as a way to improve students' grades, attendance, and understanding of the material. By preventing students from feeling that they are losing control of their academic responsibilities and digging themselves into a deeper and deeper hole, administrators hope to prevent a loss of motivation (Vance, 2008).

Attendance

- ***Baltimore***. Officials in the Baltimore school district decided that the best way to identify students most at risk of dropping out was by preventing low attendance, which they hoped would decrease the likelihood that students would lose motivation and drop out. They instituted a "rapid response strategy" to increase attendance, engagement, and graduation rates. The strategy first calls for identifying *why* a particular student is missing school and then responding with an appropriate intervention. This system of differentiated solutions includes strategies such as meetings with a school support team and parents, special activities to increase students' interest and feeling of belonging, home visits, a personal mentor, a daily wake-up call, the involvement of service providers if necessary, and in some cases a court truancy hearing. The percentage of "chronically absent" students decreased by 5% between 2007 and 2009, the graduation rate increased by 6% between 2006 and 2009, and the number of students who dropped out was cut in half (Sundius & Fothergill, 2010).

Teachers as Motivators

While almost all teachers believe they can affect student learning, they express much more frustration about their ability to affect student motivation (Hardré & Sullivan, 2009). Whether it's because they simply have too many students and responsibilities to juggle, they are dealing with students who have social or emotional challenges that make them likely to disengage from school, or they simply don't know what strategies to use to motivate students, teachers often convey a feeling of aggravation or hopelessness when confronted with disinterested students. At the same time, research has shown that teachers can play a crucial role in engaging students academically.

What has research found thus far?

We have all been in classes that we simply thought were boring, whether because the topic was of no personal interest, the material was confusing, or the instruction was not engaging to our unique learning style. Classroom instruction is important, and how an instructor approaches a topic can determine whether students are engaged. Research suggests several strategies teachers can use to more closely align their instruction with motivational theory, which implies that if teachers can find ways to spur feelings of competence, autonomy, interest, and relatedness, students should respond with increased motivation. Similarly, if teachers can encourage a mastery-based mindset and discourage a performance-based mindset, as defined in the first paper in this series, students are more likely to be motivated and confident. Teachers can affect these motivational factors through the ways in which they interact with students, the strategies they use to address low motivation, their use of classroom assessments, and the strength and type of relationships they foster with students.

In a 1997 study, Kathryn Wentzel noted that "communicating expectations that students' behavior will reflect their best intentions and abilities should teach students to attribute

their behavior to internal, controllable causes. Providing opportunities for autonomous decision making and democratic interaction styles should foster the development of positive beliefs about personal autonomy and competence. Finally, nurturance and approval should promote the development of positive feelings of self-worth" (p. 417). According to a National Research Council report (2004), research shows that teachers can increase student motivation by encouraging students to do their best; this is especially true for low-income students, who report feeling a much lower rate of academic pressure than their affluent peers. Teachers can also increase motivation by setting high expectations for homework completion, attendance, behavior, and academic performance; facilitating student choice in the classroom wherever possible to facilitate autonomy "within the context of clear expectations" (p. 48); requiring high-order thinking, innovative strategy use, and collaborative, participatory-based lessons; and providing opportunities for students to address conceptual misunderstandings or difficulties before they lose interest.

Below we summarize a sampling of research on two major aspects of teachers as motivators: how teachers practice their profession, including the strategies they use, their interactions with students, and their teaching styles; and how teachers can catalyze motivational support for their students from other sources, such as parents. Real-world examples of exceptional teacher outreach strategies are offered at the end of this section.

How teachers teach

- ***Teacher perceptions.*** Researchers Hardré and Sullivan (2009) examined how teachers' own perceptions of and ideas about motivation affected their ability to motivate students. They surveyed 96 teachers who taught a variety of subject areas in 15 public high schools in a Southwestern state. Survey results showed that the teachers who were most effective at diagnosing and improving student motivation were those who focused on internal characteristics. These teachers "attribute effectively influencing student motivation to focusing on their interpersonal relatedness with students, and on links between education and things that students value, both now and into their futures" (p. 12). In other words, these teachers encourage relatedness and interest. Teachers whose instructional styles encouraged autonomy were also more effective motivators, while those who reported a more controlling style were less effective motivators. Not surprisingly, teachers who were better at recognizing low motivation were also better at increasing it. Teachers' beliefs about motivational causes did predict how motivational their classroom environments were; teachers who believed that student motivation was fixed at a certain level had less supportive classrooms than teachers who adopted the internally-focused beliefs described above (Hardré & Sullivan, 2009).

- ***Professional development.*** In a 1998 study, Stipek and colleagues asked 24 elementary school teachers to participate in a professional development program designed to help them increase their emphasis on effort, mastery, and understanding; encourage more student autonomy; and create a psychologically safer environment. The teachers who underwent the most intensive training were able to more accurately judge students' motivation and were more in tune with their students' motivational beliefs. Teachers who emphasized mastery and understanding rather than grades and performance,

embraced the belief that effort would bring success, and encouraged students to take on risks and challenges ultimately had students who were more engaged, performed better, had higher self-confidence about their abilities, and were less concerned about their performance. Perhaps the most important finding of this study is that professional development, when done effectively, can have a lasting impact on teachers' classroom style in regards to fostering student motivation. The authors note that their study is limited to one group of math teachers but believe that it could be scaled up (Stipek et al., 1998).

- The attitudes teachers communicate to their students can have an effect on students' motivation. Wentzel (1997) found that the degree to which a student perceived his or her teacher as "caring" strongly affected that student's motivation. This held true even when the student's level of psychological stress and beliefs about control were accounted for and when their previous motivation and achievement levels were controlled for. Students described caring teachers as "demonstrating democratic interaction styles, developing expectations for student behavior in light of individual differences, modeling a 'caring' attitude toward their own work, and providing constructive feedback" (Wentzel, 1997, p. 411).

- Similarly, teacher expectations for students' educational attainment can strongly impact student motivation, according to a study by Sciarra & Ambrosino (2011). The study combined data from the 2002-2006 National Educational Longitudinal Study done by the U.S. Department of Education with self-administered surveys for 5,353 students. The researchers found that as parents' and teachers' expectations rose from not expecting a student to complete high school to expecting that student to attend a two-year institution, the chances of a student never having enrolled in postsecondary education decreased dramatically. The correlation was most noticeable, however, when teachers had high expectations. The authors hypothesize that this may be because students find it easier to ignore or minimize parental expectations but pay more heed to what teachers expect academically.

Teachers as outreach facilitators

While teachers' primary role is in the classroom, teachers also play a secondary role as communication facilitators. As discussed in the fourth paper in this series, research has shown time and time again that parental involvement is linked to higher academic motivation for students. However, some parents may feel intimidated about reaching out to school administrators, may feel they have no role in their child's education, or may have constraints on their time that prevent them from becoming involved. Therefore, teachers can play an important role in reaching out to parents and encouraging their involvement in students' education. There are different means of facilitating this communication and involvement, and the context of the school and community may dictate which are most appropriate. Teachers can also improve student motivation by helping to educate parents about strategies to use at home that will improve academic achievement and engagement.

- The U.S. Department of Education recognizes the importance of parent-teacher communication in education. In its *Survival Guide for New Teachers*, the Department suggests that teachers encourage parents to support learning at home, volunteer to help in the classroom, ensure that homework is completed, and help organize field trips (U.S. Department of Education, 2004). Such interactions could foster competence, interest, and relatedness in students, helping them to become more motivated.

- The National PTA and the Harvard Family Research Project recommend that teacher education programs include training on family engagement. They suggest some core elements necessary to effective teacher preparation, including professional standards and development of the skills teachers need to effectively engage parents and evaluations of how well teachers communication with families (Caspe, Lopez, Chu, & Weiss, 2011).

- Although broad strategies like those suggested by the Department of Education may be sufficient in the majority of schools, some community contexts require additional measures—especially in cases where parents work long hours, don't speak English, or don't understand how they can become involved. At the Urban Assembly School for Applied Mathematics and Science in the South Bronx, principal Ken Baum instituted home visits in which teachers "canvassed neighborhoods in small groups to meet the incoming students and their families on their own turf" (Santos, 2011, p. 1), meeting each of the incoming 6th graders' families. The school serves mostly low-income, immigrant families, many of whom are not used to such direct outreach from schools. Baum claims these visits set the tone for the next seven years the students will spend in the school, which stresses a climate of high expectations, including college attendance (Santos, 2011).

- In a more extreme example, a small district in rural Idaho passed a new teacher payment plan that bases teachers' merit pay on how much they are able to involve parents. Seventy percent of teacher's bonuses are based directly on whether or not parents attend high school parent-teacher conferences; for teachers to receive the maximum bonus amount, more than 40% of parents must attend the conferences. That goal was exceeded during the past round of conferences (Associated Press, 2011).

Although reaching out to families may seem less of a priority than some other responsibilities that teachers must fulfill, facilitating communication with parents and guardians is key to improving student motivation and achievement. If teachers can find ways to involve parents in their children's education, it will likely have a positive effect on motivation. And while teachers can take many steps inside the classroom to help engage their students, at the end of the day, students return home to their families. Instructing parents on how they can continue that work at home will benefit students, parents, and teachers alike.

Reorganizing the School Itself

Various ideas have been proposed over the past decades about the ideal way to organize a school. Each aspect of a school—including school and classroom size, schedules, and the division of students into grades or other groups—has been scrutinized in the hopes of raising achievement levels. Middle schools and high schools especially have been the subjects of experiments in manipulating school design, as research has shown that these are the years when students tend to lose motivation (National Research Council, 2004).

Small schools

In the past few decades, much research has been conducted studying the effects of "small" secondary schools, which generally educate fewer than 1,000 students and in some cases just a few hundred students (National Research Council, 2004). The idea behind the small schools movement was that many middle and high schools had become large, impersonal places where it was too easy for students to have poor attendance, disengage from academics, and drop out of school without anyone noticing. The small schools movement has been particularly popular in large urban schools where these problems are most pronounced.

In order to engage and motivate students, it was thought that a small, personal atmosphere would be more effective. If teachers and students know each other and communicate frequently, feelings of relatedness and social support are increased, expectations are clearer, and help is more readily available, increasing feelings of control. Teachers are more apt to spot a student losing interest or competence and address the problem before it worsens. For these reasons, it is thought that small schools increase student motivation (Darling-Hammond, Ancess, & Wichterle Ort, 2002). Research generally supports this hypothesis; several studies have shown that when other factors are equal, students in smaller schools achieve at higher rates, are less likely to drop out or commit violent acts, feel more positive about school, and are more likely to engage in school activities (Darling-Hammond, Ancess, & Wichterle Ort, 2002).

Research has shown that these benefits may have an even greater effect on disadvantaged students, that small schools have greater achievement equity between minority groups, and that low-income and minority students have much higher rates of academic engagement in smaller schools than do their peers in larger schools (Darling-Hammond, Ancess, & Wichterle Ort, 2002; National Research Council, 2004). In fact, one study found that the more economically disadvantaged a community is, the greater the effect smaller schools have on student achievement (National Research Council, 2004).

At the same time, however, there seems to be an ideal window of school size. The National Research Council (2004) found that schools with between 300 and 900 students performed the best and theorized that schools smaller than 300 students may suffer from limited resources and reduced class offerings. In fact, while acknowledging that small schools have shown promising results, researchers stress that there are still factors more important than size. The small schools that produce the best results also have strong curriculum

aligned with high standards, useful assessments of teachers and students, effective pedagogy, and frequent communication with students and families (National Research Council, 2004). Therefore, "smallness by itself is not likely to promote greater engagement. More likely a small number of students makes it easier to implement policies and create the kind of climate that studies suggest are conducive to high levels of engagement" (p. 116).

Student schedules

In addition to addressing the size of the school itself, other reforms have reduced the number of adults with whom each student interacts (and likewise the number of students with whom each adult interacts) in order to create stronger and more beneficial relationships. Two popular ideas in this vein include block scheduling and "looping." In a block schedule, courses are longer, usually 90 minutes, and are sometimes team-taught by teachers from different subject areas. This approach is intended to enrich students' understanding of the material to increase competence, foster interdisciplinary connections and project-based learning to increase interest; it also allows for more individualized curriculum to improve student engagement (National Research Council, 2004). "Looping" is the practice of one team of teachers working with a specific group of students for at least two years, following the students as they progress through grades. This is done to create more stable and personalized bonds between students within the group and between students and teachers. The hope is that stronger social bonds will foster relatedness and allow teachers to more quickly identify struggling students, helping them to regain feelings of competence and control before they lose motivation.

Schools within schools

The "school within a school" movement has tried to combine the most effective practices gleaned from these other reforms. In this model, a larger school population is divided into smaller learning cohorts, which can be grouped by age, subject, or vocational interest. By dividing the student body into smaller groups, techniques like block scheduling and looping are easier to implement. In addition, a school within a school has many of the same theoretical benefits as a small school, as teachers and students get to know each other better, can tailor learning more directly to their interests, and feel a greater sense of belonging and responsibility to their school. While the body of research is limited, it has generally been found that students in these smaller learning groups experience better attitudes towards school and increased achievement. In a study of a school within a school in Kansas City, researchers found that students in the program had improved test scores, attendance, and grades after four years (Robinson-Lewis, 1991). A similar program for at-risk student in New York City showed increased rates of attendance and responsiveness (Eichenstein, 1994).

Ancillary programs

In addition to the size and organization of schools, another aspect to consider is the schools' role in addressing students' non-academic needs. While the primary focus of school is academics, and the primary focus of these papers is academic motivation, some

non-academic factors can influence student's performance in school. For example, emotional problems, violence or other issues at home, health problems, malnutrition, poverty, homelessness, and a myriad of other challenges can prevent students from fully engaging in academics. But effective counseling about the challenges students face can lead to increased achievement, attendance, feelings of self-esteem, confidence and perseverance, and improved classroom behavior (National Research Council, 2004). A student who no longer has to deal with drug or alcohol addiction, hunger, the provision of health care for family members, or other extraneous responsibilities can instead be more engaged in academics.

Some have suggested that in the absence of a better solution, schools should step into the role, not of supplying these services, but at least providing a centralized place where students can learn about and contact various support service providers. Schools that have attempted to do this have not found it easy. As the authors of the National Research Council report put it, the patchwork arrangement of services that most schools have been able to put together on limited funding means that "services available vary tremendously from school to school, and are typically unstable and poorly coordinated. Moreover, problems are dealt with in isolation when in reality, most are highly interrelated" (National Research Council, 2004, p. 155). And since a school's central mission and use of funds must always focus on academics, it is asking a lot of already overstretched faculty members to take on these extra roles. The National Research Council authors propose a model in which each student in a school has at least one adult with whom they regularly communicate and who can refer the student to the appropriate specialists (social workers, nurses, etc.) if they need assistance. The council also advocates training all staff members to effectively monitor the emotional and social states of their students instead of relying on a few specialists to do this job. Lastly, they propose that schools be closely linked to the surrounding network of service and support providers, including hospitals, social centers, and community organizations, and keep in frequent communication with those organizations so it is less likely for a student who needs help to go unaided.

Similar ideas have been proposed by others as well. One label for this type of environment is "wraparound," so named because it addresses the whole context in which a student exists. Schools that implement a wraparound approach serve as communication centers linking various support networks from throughout the community, determining which services a student might need, and coordinating delivery of those serves between involved providers. In many cases, schools offer supplemental services, such as out-of-school learning time or after-school extended learning programs, that are sometimes considered a type of "wraparound." Additionally, a large body of research suggests school-community relationships can have a strong impact on student motivation; communities that offer learning resources, social supports, and opportunities for growth will produce more motivated students (National Research Council, 2004).

What Are Some Examples of Programs?

Below is a sampling of real-world applications of the theories discussed above. This is not meant to be an exhaustive list but rather to illustrate how schools have put these ideas into practice.

School size

- ***Small schools.*** In 2000, the Bill and Melinda Gates Foundation funded a program to break up large schools across the country into thousands of smaller schools. Five years into this project, the Foundation hired researchers to analyze the outcomes of their work. Unfortunately, results were mostly negative. While the Gates-funded schools seemed to offer a welcoming atmosphere and saw increased attendance and graduation rates, student achievement in reading and math generally declined or stagnated. Officials reflected that the project was perhaps carried out too fast and with too much focus on simply creating smaller schools without taking the time to reassess aspects like curriculum or pedagogy. Tom Vander Ark, former executive director of education for the Foundation acknowledged that the foundation initially placed too much credence in just making schools smaller but eventually came to understand the importance of focusing on what happens in the classroom. 'Today we are much more explicit about the curriculum,"' he said (cited in Greene & Symonds, 2006, p. 3). Indeed, the Foundation is applying the lessons it has learned to new school projects in New York and San Diego, with promising preliminary results. However, many disparate aspects of the school must be addressed while maintaining positive relationships with the students and community. "The transition from the old, big schools to the small schools has been more complicated than we expected," Vander Ark said (Greene & Symonds, 2006, p. 4).

- ***Factors in addition to size.*** While many studies of small schools have found promising results, such as the 2002 study by Linda Darling-Hammond, Jacqueline Ancess, and Susanna Wichterle Ort of the Coalition Campus School Project in New York, it is important to remember that it is not the *size* of the school alone that contributes to student success. "Not all small schools are successful. Those that incorporate fewer personalizing features and less ambitious instruction produce fewer benefits" (Darling-Hammond, Ancess & Wichterle Ort, 2002, p. 642). While "increased attendance and reductions in misbehavior are common early outcomes in efforts to downsize schools," these gains will not be sustained unless the reduction in size is paired with other effective reforms (p. 646).

School environment

- ***Student-centered learning.*** A study of the Chicago Public Schools found significant, consistent effects correlated with those schools that researchers designated as having highly student-centric learning environments. These environments were defined by the study as schools where teachers exhibited both personal concern and high

academic expectations for their students, classrooms were neat, other students were on task, and students felt safe. In such schools, regardless of student and community income-level or racial makeup, students reported fewer instances of tardiness or truancy, fewer absences, more time spent doing homework, more participation in school activities, and more engagement. The characteristics of a student-centric learning environment seem to contribute to increased student engagement and academic motivation. (Bender Sebring et al., 1998).

School structure

- ***School teams.*** Springman Middle School, part of Glenview School District #34 in Illinois, is located in an upper middle class suburb north of Chicago (Schools to Watch, 2010). Springman's students are arranged in "teams," incorporating the school within a school concept. Students are grouped in a team with approximately 100 other students from their grade level. Each team "is a microcosm of the entire school population and is balanced among academic abilities, learning styles, needs, cultures and genders" (Schools to Watch, 2010, p. 2). Each is assigned a name and theme that fosters a unique identity. Each team is also assigned a set of teachers, including one for each core academic subject, and a social worker who is shared with one other team. Springman makes use of the looping idea, so that the entire team of teachers to which students are assigned in 7th grade follows them to 8th grade as one unit. Springman also employs a flexible block schedule, making it possible to incorporate more project-based and interdisciplinary learning and allowing teachers to address social issues, teambuilding, time management, and study skills. This model clearly addresses three dimensions of motivation by developing interest, autonomy, and relatedness.

- ***Urban Prep Academies***. This is a network of three all-boys charter high schools located in some of the poorest and most violent neighborhoods in inner-city Chicago. Opened in 2006 and the only entirely African American male high school in Chicago, every graduating senior for three years in a row has been accepted to college (Ahmed-Ullah, 2012). Like Springman, the schools also incorporate the school within a school model, though to a lesser extent than at Springman—an example of how the idea can be adapted to school and student needs. At Urban Prep schools, students are assigned to a "pride" of 20 students, which is a support group they will belong to for their entire four years at the school. Each pride also has an individual mentor, giving students a more personalized system of support within the larger school. Prides compete against each other for the best attendance, GPA, and adherence to the discipline code (Dierks, 2009). While the prides meet every day, it is not as strict an interpretation of the school within a school model as the teams at Springman, which function almost as self-contained schools. Still, the Urban Prep model gives students a sense of community and builds relationships.

- ***EdVisions***. This organization was created in 2000 with a grant from the Gates Foundation and has since helped to establish over 40 secondary schools nationwide. EdVisions attempts to increase students' academic motivation by designing schools that

address three fundamental dimensions of motivation: autonomy, belongingness (relatedness), and competence. To achieve this, the schools incorporate project-based learning; personalized learning plans that consider each student's goals, interests, and strengths; assessments that combine high expectations, opportunities to improve before final grading, and multiple testing methods; and a "democratic culture" defined by schools of 200 students or less, which are further broken down into advisory groups of fewer than 20 students, a student governing board, and strong student support networks. In this way, the EdVisions model incorporates the small schools theory, the school within a school approach, and block scheduling models, but does not neglect curriculum, standards, and pedagogy as important accompaniments to effective school structure (Newell & Van Ryzin, 2007). Survey results from 2004 showed that students' perceptions of autonomy, sense of belonging, and a mastery-oriented mindset were higher in EdVisions schools than in traditional public schools. EdVisions students also showed higher levels of engagement and were more hopeful than their peers. EdVisions students had significantly higher perceptions of teacher support and autonomy, higher levels of engagement, and slightly higher perceptions of peer support over a three-year period than did their demographically similar peers in nearby traditional schools. EdVisions students also experienced increases in math and reading scores in each of the three years at all EdVisions campuses with available data (Newell & Van Ryzin, 2007).

Wraparound services

- ***Communities in schools.*** While there are many examples of schools implementing the wraparound model and many more offering some sort of social support, one interesting and widespread program is Communities in Schools (CIS), which works within public school systems to "determin[e] student needs and [establish] relationships with local businesses, social service agencies, health care providers, and parent and volunteer organizations to provide needed resources" (Communities in Schools, 2011). The organization's goal is to relieve outsides stresses and help negate secondary concerns and pressures facing students, so that they can instead concentrate on academics. In light of the research on motivation and on wraparound services, it makes sense that students who feel less pressured by outside worries can focus more directly on academics. Additionally, the services provided by CIS play into the four factors of motivation: tutoring can increase feelings of competence; counselors and mentors increase relatedness; job shadowing and service learning spur interest; and college visits and counseling may increase students' feelings of control over their futures.

  Outcomes of the CIS model so far have been promising. A study done by ICF International, a leading social science evaluation firm, examined data from 1,766 CIS sites around the country, compared results from 602 CIS sites with those from similar non-CIS schools, and studied 573 students using three randomized trials. The researchers found a small but consistent increase in math scores and mixed results in reading across grade levels, but an increase in 9th grade GPA for students receiving CIS services. CIS schools also showed increased attendance, especially in high school; lower rates of grade-repeating; higher rates of credit completion and graduation; and lower dropout rates in high school—and these results were for the students considered most

at-risk, those in a "level 2" CIS school. Students who had received CIS services for two years or more showed more favorable outcomes than those who had one year of services, suggesting that the benefits may compound over time (ICF International, 2010). On the other hand, the study also noted that successful CIS sites "are characterized by greater levels of support from [principals, school boards, parents, and students] compared to partial implementers. This support . . . translates into positive effects on attendance, math, and reading" (ICF International, 2010, p. 7). In other words, such reforms have to be implemented in the proper context in order to be most effective.

What Do These Findings Suggest about Changing Schools as a Way to Motivate Students?

Real-world evidence seems to support the findings from research. Making certain changes to school organization and structure has been shown to have a positive effect on student engagement and motivation. The EdVisions model, the Urban Prep Academies, Communities in Schools, and the New York Schools Project all showed evidence of increasing student motivation through increased attendance, grades, engagement, or other measures. Other models that are focused on student learning, such as Springman Middle School's team-based block scheduling and looping and the Chicago schools' attempt to improve school climate, also appear to increase students' engagement and academic success.

It is important to remember, however, that none of these reforms appears to work in isolation; in each example of real-world success discussed above, a change to school organization was paired with other reform initiatives linked to curriculum, pedagogy, assessment, or social services. Therefore, as the Gates Foundation experienced with its small-school project, it is unlikely that any of these reforms would be as successful in isolation. In fact, it is difficult to discern the effectiveness of any one of these strategies because they are typically part of a larger school reform movement. "Consequently, it is impossible to untangle the effects of any particular organizational feature. As a package, however, they seem to have considerable value" (National Research Council, 2004, p. 107).

Of course, each school is a unique blend of student and faculty characteristics, building climate, leadership style, and community context. No strategy is guaranteed to work, and a strategy that works in one school may not be as effective in another. Still, the theories of researchers and findings from the field point to the following cross-cutting features of promising programs that make changes in schools and teaching as a way to increase student motivation:

School-based programs

- Several programs have sought to identify the characteristics of unmotivated students and target services on particular students with these characteristics. Examples include

programs focused on preventing dropouts among students at risk, boosting attendance among chronically truant students, or encouraging homework completion among students who are falling behind.

- Some effective programs use differentiated solutions for individual students, depending on the causes of and severity of their motivational problems. For example, students who are chronically truant may need individual motivational meetings, home visits, or support services, while students who have trouble staying motivated in traditional classrooms may require different types of assistance, such as behavior counseling or study skills training.

Teachers as motivators

- All faculty can be trained to recognize students with social, emotional, or developmental challenges that affect motivation, rather than waiting for students to ask for help or depending on only one faculty member to identify struggling students.

- For teachers to be most effective at motivating, professional development programs targeting certain skills may be helpful. For example, some programs have focused on ways to help teachers foster autonomy, emphasize mastery over performance, or create an environment where students are willing to take on risks and challenges without fear of failure.

- Student motivation seems to benefit from teachers who hold high expectations for all students while maintaining a caring and democratic climate in the classroom.

- Informing teachers about the importance of parent involvement and training teachers in ways to effectively engage families can be helpful in improving student motivation

School design, structure and organization

- Strategies to improve students' academic achievement and engagement by creating smaller schools out of larger schools, establishing schools within schools, or implementing block scheduling or looping have met with mixed success. The most effective programs combine these types of changes in school design with strong curriculum and instruction, teacher training, attention to school climate, positive faculty-student relationships, and other key elements.

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