

# PART 1

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## CHANGING CLASSROOMS



# Chapter 2

## Building Capacity for Positive Youth Development in Secondary School Classrooms: Changing Teachers' Interactions With Students

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In schools, the classroom is the most proximal and powerful setting for influencing youth outcomes, and within classrooms, students' social and instructional interactions with teachers either produce or inhibit achievement and behavioral/emotional health to the extent that they engage and motivate youth. There is overwhelming evidence that the capacity of classrooms to function in this development-promoting role is low and at best extremely uneven, thus the need for theory and approaches for how to change (improve) the capacity of classrooms (e.g., social and instructional interactions between students and teachers) is considerable. Our central thesis is that motivation-producing interactions with teachers (how we are defining capacity for classroom settings) can be improved by an intervention that increases teachers' knowledge of adolescent development and provides them with ongoing, pragmatic support and feedback to apply that knowledge in classrooms on a daily basis.

### Underperformance of the Classroom Setting as a Context for Youth Development

There is little question that academic achievement, personal well-being, and civic-related outcomes for adolescents are in dire need of improvement and enhancement (Carbonaro & Gamoran, 2002; National Center for Education

Statistics [NCES], 2003a). Students spend one-quarter of their waking hours in schools, most of it in classrooms, yet for all of the resources devoted to schooling, the capacity of secondary classrooms as settings for positive youth development is sorely lacking. Social and task-related disengagement and alienation reported by adolescents result from classroom experiences that are disconnected from youths' developmental needs (Crosnoe, 2000; Dornbusch, Glasgow, & Lin, 1996; Eccles, Lord, & Midgley, 1991). Youth describe school experiences as irrelevant and lacking appropriate and meaningful challenges. These patterns are exacerbated dramatically for youth attending schools in low-income communities, rural communities, large schools, and for those with histories of poor achievement or problem behavior (e.g., Crosnoe, 2001; Eccles, Lord, Roeser, Barber, & Jozefowicz, 1997).

Even more disconcerting is recent evidence from observational studies of large samples of fifth grade classrooms, that the nature and quality of the instructional and social supports actually offered to early adolescents in classrooms is generally low, and even lower for the groups noted above (Pianta, Belsky, Houts, Morrison, & the NICHD ECCRN, 2007). Moreover, findings from studies of large and diverse samples of middle schools demonstrate quite clearly that competitive, standards-driven instruction in de-contextualized skills and knowledge contributes directly to this sense of alienation and disengagement (Eccles et al., 1997; Shouse, 1996). Engagement in school begins to decline early in adolescence and by entry into high school this decline is pronounced to the point where more than half of high school students from all types of schools report that they do not take their school or their studies seriously (Marks, 2000; Steinberg, Brown, & Dornbusch, 1996). Further, adolescents bring their peers along with them: doing well in school switches from being a positively valued behavior among peers in childhood to a somewhat negatively valued behavior by mid-adolescence. Yet, engagement and intrinsic motivation become pivotal in adolescence, as students at this age have not only the means to withdraw energy from educational pursuits but also the ability to drop out altogether (National Research Council [NRC], 2004).

With regard to achievement outcomes, there is recent evidence that middle and high school youth are underperforming and that performance gaps related to culture, race, and income are not closing despite years of rhetoric and attention (NCES, 2003b). For example, more than 5 years into educational reform under No Child Left Behind (NCLB), roughly 40% of poor or African American eighth graders in Virginia perform below standards for reading achievement and the corresponding rates of failure for youth in the District of Columbia are close to 80% (Aratani, 2006). These rates of failure in reading, a central focus of reform under NCLB emphasized in schools' attempts to meet state standards, reflect a fundamental misunderstanding of the mechanisms by which students are engaged by schooling and the need to reconceptualize and redesign how we support teachers. Consider a second

outcome of reform, the dropout rate. Fewer than 60% of ninth graders in certain demographic groups (NCES, 2003b) actually graduate 4 years later. Yet for 10 years decreasing the dropout rate has been a singular focus of most secondary schools and the average *annual* dropout rate remains near 10% and ranges up to almost 30% for recently immigrated Latinos. These recent findings make strikingly clear that the high school classroom as a setting for youth development is fundamentally broken. Put another way, it does not appear to us that the central problem in school reform is curriculum, school/class size, or outcomes assessment, but rather how teachers are supported to implement instruction and form positive relationships with students that engage and motivate them to learn and develop personally.

Although there have been promising efforts to reform schools to improve such outcomes, most focus on the structural features of schools (e.g., “schools within a school” models; see Felner, Favazza, Shim, & Brand, 2001) and instructional content aspects of the educational process (e.g., mandating that teachers have content area degrees, see Whitehurst, 2002). On the other hand, youth report that they are more concerned with the actual experiences they have in classroom settings, which they find lacking in terms of meaningful challenges, supportive relationships, and competence-building experiences (Crosnoe, 2001; Csikszentmihalyi & Schneider, 2000; Marks, 2000; NRC, 2002; Roeser, Eccles, & Sameroff, 2000). Perhaps they are right and the capacity of schools to support youth development, particularly for “high risk” youth, depends on whether the relationships and interactions among students and teachers within a classroom offer a developmentally meaningful and challenging experience (NRC, 2002). Because these interactions embody the capacity of the classroom to promote positive development, our focus is on improving and changing these relationships and interactions through working with teachers. Thus, our theory and method of change is centered on teachers’ relationships and interactions with students.

## A Theory of Classroom Settings

Schools all fundamentally rise or fall on the success of what occurs within the classroom (e.g., Crosnoe, 2001; Nye, Kostantopolous, & Hedges, 2004; Resnick et al., 1997) Ironically, close observation of almost any secondary school in America reveals that adolescents—both at-risk and high functioning—often display remarkably high degrees of motivation and engagement within the school setting. Rarely, however, does this occur *within* the classroom. High school hallways and lunchrooms literally brim over with youthful energy, excitement, and enthusiasm. Intense interactions occur in sports and extracurricular activities, and interactions with peers dominate students’ perception of the social ecology of school. It is only when these students enter

their classroom that energy levels decline precipitously and it is rare that a given student will “connect” with a teacher or material in classroom or subject area in such a way that they perform at high levels of capacity or “flow” (Csikszentmihalyi, 2000). The classroom setting looks equally bleak from the perspective of teachers, who are also dropping out and becoming more disengaged. Fifteen percent of the entire teaching workforce turns over every year. Rates of teachers leaving the profession are increasing. And those who stay report a sense of malaise and frustration—they feel their job is getting harder and they have fewer tools with which to work and feel effective (Hart, Stroot, Yinger, & Smith, 2005).

A fundamental principle in addressing the chronically resource-starved classroom in the American high school is that modifying the classroom as a setting to engage teachers and youth more fully may be the single best way to unleash and expand the level of *human resources* (e.g., energy, effort, and enthusiasm) available to the educational process (Sarason, 1982). In the following sections, we discuss three features of classrooms likely to influence adolescents’ levels of motivation—relational supports, competence supports, and relevance. We believe this theory of the classroom as a setting for youth development is a fundamental precursor to understanding our theory and approach to *changing* classroom settings. Readers will recognize applications and extensions of Vygotsky’s ideas about the contextualized nature of learning and development and close, interdependent connection among relational supports, task-related challenges, and learning. Pianta (1999) has also discussed the connection between classroom contexts and learning in terms of the relational, structural, and motivational affordances available in classrooms. Central to each of these perspectives, and elaborated in the following sections with regard to adolescents, is an appreciation of learning as a contextualized process and the need, when talking about classroom contexts, to analyze that setting from a developmentally informed standpoint with regard to its value.

### *Relational Supports*

As a behavior setting, the classroom runs on interactions between and among participants: the relationship between the student and the teacher and the relationships of students with one another. These relationships and their value emotionally, instrumentally, and psychologically to adolescents are fundamental supports to the value of their experience in the classroom setting for furthering development. It is not an overstatement to suggest that most adolescents *live* for their social relationships (Collins & Repinski, 1994). Yet, the qualities of these relationships are frequently afterthoughts in battles over curricula, testing, school structure, and funding. Positive relationships with adults are perhaps the single most important ingredient in promoting positive youth development. When teachers learn to make modest

efforts to form a personal connection with their adolescent students—such that the students feel known—they can dramatically enhance student motivation in school and emotional functioning outside of school (Roeser, Eccles, & Sameroff, 1998; Skinner, Zimmer-Gembeck, & Connell, 1998). Adolescents report both that they would learn more if their teachers cared about them personally and that such personal connections are rare (Public Agenda, 1997). A close, supportive relationship with a teacher is a key feature distinguishing at-risk adolescents who succeed in school from those who do not (Resnick et al., 1997) and youths' sense of social connection within settings predict outcomes ranging from higher achievement scores to greater student engagement and more positive academic attitudes (Bryk & Driscoll, 1988; Bryk, Lee, & Holland, 1993; Connell & Wellborn, 1991; Crosnoe, Johnson, & Elder, 2004; Ryan & Deci, 2000; see also NRC, 2004, for extended review of other similar findings). Notably, even for relatively highly motivated late adolescents in college, recent experimental work has shown that a sense of isolation can significantly reduce energy for intellectual pursuits and that this reduction is powerful enough to temporarily depress results on IQ tests (Baumeister, Twenge, & Nuss, 2002), while increasing irrational and risk-taking behavior (Twenge, Catanese, & Baumeister, 2002).

### *Autonomy/Competence Supports*

Teens are engaged by challenges that are within reach and that provide a sense of self-efficacy and control: experiences that offer challenges viewed as adult-like but for which appropriate scaffolding and support are provided (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Eccles et al., 1993). Any setting that intends to advance development and learning outcomes for youth must carefully craft the nature of experience it provides to give adolescent participants a sense of control, autonomy, choice, and mastery. Absent these considerations, or in settings that rely on top-down approaches, classrooms for youth are doomed to be places lacking in engagement and motivation. One of the most tragically avoidable errors that some secondary school teachers make is to assume that youth strivings for autonomy and self-expression represent negative forces to be countered rather than positive energies to be harnessed. This basic misunderstanding of adolescent development (one often promoted in teacher education courses and reinforced by school policies) then takes form in highly controlling and punitive classroom and school settings and in instruction that is highly teacher-driven and discouraging of exploration and curiosity. Teachers also have many opportunities to provide adolescents with meaningful choices and autonomy in classrooms in ways that do not threaten teacher authority. They do not always recognize these opportunities or their importance in adolescent motivation. Supporting student autonomy does not mean giving up teacher control. On the contrary,

autonomy can be supported by giving students choices of partners for group projects, types of projects to perform, and so forth (Allen, Kuperminc, Philliber, & Herre, 1994; Anderman & Midgley, 1998). The fundamental challenge to teachers in this regard is to understand adolescents' developmental push for autonomy so that they can then seek to guide and direct it. This mismatch of classroom and development, driven by profound misunderstanding of teens, results in schools narrowing, rather than expanding, the "space" in which zones of proximal development can be created for youth.

### *Relevance*

Adolescents, like adults, deploy a considerable amount of effort in attempts to make meaning in their lives; for many, adolescence is a period in which this becomes a focus for the first time. This process ultimately leads to a bias in adolescents' evaluation of experience (particularly those experiences offered by adults) toward choices they view as relevant, or connected to their emerging views on what is meaningful and what is not. Too often, the high school curriculum and the rationales behind it are taken as a "given" without recognition that these rationales need to be made clear to each new cohort of students. Drawing even very distal connections between what occurs within high school and the larger "real-world" can alter student behavior. For example, involving students in significant, real-world, voluntary community service and then discussing it within the classroom in an ongoing way has been found to reduce failure rates by 50%, in randomly controlled trials, with similarly profound effects upon other behaviors in youths' lives as well (Allen, Philliber, Herrling, & Kuperminc, 1997). Centuries ago, late adolescents were commanding armies and running countries (Barzun, 2000). Today, an ever more competent generation of adolescents is confined to a classroom for hours a day with little vision of how what occurs within that classroom relates to the larger world. Consciously addressing the relevance of what occurs within the classroom to the students' future options in that larger world is critical to engaging otherwise restless young minds. On a smaller scale, teachers may increase the relevance of the classroom by making repeated, explicit ties between curricular material and real-world applications and engaging peer group processes in learning (given the intrinsic meaningfulness of peer interactions to youth). The key factor here is that the real-world connections must be made in ways that are meaningful *as perceived by the student*. Connecting school work to actual careers in meaningful ways can significantly enhance students' sense of the meaningfulness of what they are being taught, and hence of their motivation to learn it.

These ideas about the central role of interactions and relationships in determining the motivational value of experiences in classroom settings form the basis for our developmentally informed analysis of classroom effects on *student* outcomes. In our view, the capacity of classroom settings to engage

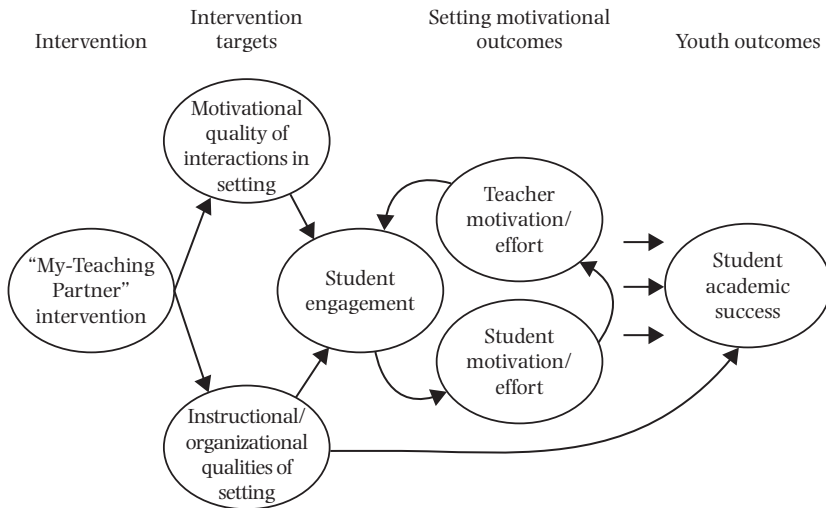


Figure 2.1. Conceptual Model of Classroom Settings.

and motivate youth is the core “criterion” by which they should be judged, and the features of relational supports, autonomy/competence supports, and relevance are how classrooms accomplish that goal. In Figure 2.1, we embed this larger construct of classroom supports for motivation/engagement (relational, autonomy, relevance) in the framework of an effort to modify the affordance value of classrooms for producing positive outcomes for youth.

In this model, we place motivational supports as central features of the classroom, along with instructional supports, in relation to producing cycles of student engagement, teacher efficacy, and student performance. We suggest that in the best classrooms, motivational and instructional supports operate in concert to initiate self-reinforcing linkages among engaged students, effective teachers, and growth in student performance. We also note that the model emphasizes relationships and interactions in the classroom as the media through which motivational and instructional supports are made available to students. In the next section, we present our conceptualization and technical approach to *setting-level change*, which by this definition of setting targets interactions and relationships between teachers and students as the focus of change.

## Changing Interactions Between Teachers and Students in Classrooms

The question then is how to effectively, accountably, and systematically produce desired changes (improvements) in instructional interactions, motivation-producing interactions, and personal relationships that teachers

have with youth in secondary classrooms. This is not a new challenge and educators have decades of experience in attempts to address it. We briefly summarize some of what is known about those attempts and then present our own approach to conceptualizing and implementing change.

## Prior Efforts: The Shortcomings of Traditional Professional Development

Professional development for teachers has a long history of being fragmented and incoherent (Ball & Cohen, 1999); teachers pursue learning opportunities on their own (e.g., weekend workshops, MA courses), pick up advice within informal settings at school (e.g., in the lunchroom, at the copying machine), attend district-mandated workshops, and learn from daily experiences with children in the classroom (Wilson & Berne, 1999). Short-term direct trainings, often knowledge- or technique-based, are the most common form of in-service training with substantial variation in the mechanisms of delivery and intensity of the source and follow-up (Birman, Desimone, Porter, & Garet, 2000). These efforts to promote change fall short in a multitude of ways, not the least of which is their nearly complete lack of connection to a theory of classroom effects and change and their de-contextualized content: teachers are placed in a passive learner role; content is vague, irrelevant, or disconnected from teachers' actual experience in a classroom context; and there is limited follow-up (Sandholtz, 2002). Such longstanding criticisms are reflected in Borko's (2004) recent comment that "each year, schools, districts, and the federal government spend millions, if not billions, of dollars on in-service seminars and other forms of professional development that are fragmented, intellectually superficial, and do not take into account what we know about how teachers learn" (p. 3).

Education theorists have begun to generate lists of key characteristics of effective professional development for teachers, predominantly based on literature concerning adult learning (Abdal-Haqq, 1995; Darling-Hammond & McLaughlin, 1995; Putnam & Barko, 2000; Richardson & Anders, 2005). These visions conceptualize professional development as learning that is active, collaborative, and embedded within a classroom context (Darling-Hammond & McLaughlin, 1995; Lieberman, 1995). NCLB legislation describes high-quality professional development for teachers as intensive, sustained, and classroom focused. Increasingly, mentoring and consultation are viewed as models for addressing some of the shortcomings of typical professional development for teachers, particularly in relation to providing more individualized and contextualized support (Ingersoll & Kralik, 2004; Pianta, 2005). For example, novice teachers are often provided with mentoring support, wherein an experienced teacher becomes an agent of change through support and guidance of less experienced colleagues (Fideler & Haselkorn, 1999). However, although

mentoring does address the need for individualized and contextualized support, recent studies have shown that such supports are rarely, if ever, tied to a validated metric for evaluating classroom practice, nor have the active components and consequent effects of mentoring been specified theoretically or empirically (see Pianta, 2005).

## Putting “Development” Back Into Professional Development

Classrooms are complicated social systems involving materials and physical arrangements, management of time, and interactions between and among students and teachers. As we have discussed earlier, our analysis of classrooms suggests that the active ingredients of the classroom as a setting for positive youth development are interactions, particularly those with a teacher but clearly involving peers as well. Importantly, classroom settings are designed to be intentional; by this we mean that the experiences offered in these settings are, by design, intended to produce learning. Increasingly, learning outcomes are highly specified and so classroom experiences are more and more directed toward producing such ends. Thus, teachers’ instructional, social, and relational interactions with students, and the strategies they use to manage time and arrangements in the classroom, are intended to be active levers for developmental change. In our view, increasing the capacity of the classroom to produce such change involves strategies to alter these interactions through working with the teacher.

Our approach to changing teacher-child interactions is modeled on systems theory conceptualizations of developmental change (see Sameroff & Emde, 1989) in which forces internal and external to systems exert pressures that force adaptation of some sort: reorganization, differentiation, and integration (Pianta, 1999). In terms of teachers’ interactions with children, Pianta (1999) has described a systems model of student-teacher relationships with components that include teacher’s knowledge and beliefs, social and instructional interactions, and external forces such as school discipline policy or climate, teachers’ own developmental histories, as well as features of the student. Importantly, these form a system of connected components that has consequences for students’ learning, motivation, and engagement (see Pianta, La Paro, Payne, Cox, & Bradley, 2002, for a comprehensive review of this work). Ultimately, if the goal is to create and sustain change in the mechanisms by which classrooms enhance youth development (i.e., social and instructional interactions with teachers) a theory and method for change must focus on interactions as well as knowledge, beliefs, and emotional experiences of teachers.

We posit four levers producing developmental change for teacher-student interactions: (a) teachers’ knowledge and cognitions related to their interactions with students, (b) availability of ongoing relational supports for teachers

themselves, (c) teachers' regular exposure to individualized feedback about their actual interactions with students, and (d) a standard and valid "target" around which to focus efforts to change interactions. Intervention packages that activate these levers in a coordinated way are most likely to induce and maintain change, given the systemic nature of teacher-student interactions in classrooms. In the following section, we describe the theoretical and technical features of MyTeachingPartner (MTP), an innovative professional development approach that by design incorporates these four levers for changing teacher-student interactions and relationships. MTP utilizes a collaborative consultation process and web-based resources to provide ongoing, classroom-focused in-service training across a distance.

## MyTeachingPartner

MTP is an ongoing, systematic professional development program for teachers, one feature of which centers on a supportive consultation relationship, which is sustained via web-based interactions (Pianta, 2006a). This consultation emphasizes teachers' implementation of curriculum and how teachers form effective relationships with students. The web-based consultation revolves around observation-based reflection and feedback that is enacted through a regular cycle of interactions between a teacher and consultant. Every 2 weeks, teachers videotape their practices in the classroom and share this footage with consultants. Together, they then use the Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2006) as a common lens with which to observe and reflect upon aspects of teaching and teacher-child interactions that have known links to children's skill development and start by choosing a dimension of the CLASS that will serve as the basis for consultation and feedback. Another key feature of MTP professional development is continuous, on-demand access to a dynamic, interactive website ([www.myteachingpartner.net](http://www.myteachingpartner.net)). This website provides diverse teaching resources, including video examples of teachers implementing evidence-based activities, lesson plans and materials, and video clips that exemplify high-quality interactions with preschool children.

The intervention integrates information-based training delivered through workshops together with *personalized* review of classroom observations using a carefully designed web- and video-conference assessment and feedback process. MTP consultants provide *direct, individualized, regular, and systematic* feedback to teachers based on validated, observational assessment of the classroom environment. The MTP consultancy process functions by increasing teachers' knowledge and skills to observe the qualities of their interactions with students and the contingencies involved, and their awareness of the meanings of these interactions in terms of their contributions to

motivational, relational, and competence-enhancing processes. The process also encourages reflection on the teachers' own personal motivations and tendencies in these interactions and their impact on interactive behaviors in an effort to internalize change and sustain it. Three key features of the MTP approach are important for addressing "capacity" problems in secondary classroom settings: (a) a personally, supportive, nonsupervisory relationship with a "consultant"; (b) regular, individualized feedback on teachers' own classroom interactions; and (c) a standard, validated approach to identifying, describing, and measuring classroom interactions.

A supportive relationship is key for inducing change through trust and a willingness to risk new approaches to interaction and beliefs. In a current evaluation of MTP (Pianta, 2006a) it is clear that teachers' emotional connection to their consultant is the basis for much of their engagement in the other aspects of the intervention, such as reviewing tapes and receiving feedback. Joint review of videotaped classroom interactions and individualized feedback provided to the teacher focus the teachers' attention on interactions, elicits beliefs, and transmits new knowledge in ways that reshape the teachers' views of self and their interactions and provides new models for interaction. Video-conference-based interactive dialogue regarding classroom interactions between teachers and consultants reinforces, extends, and personalizes feedback and is yet another setting in which information and support can be exchanged and linked to teachers' actual classroom experience. Over the course of an academic year the "consultancy cycle" serves as an iterative, highly personalized process of teacher feedback and development that repeats 12-15 times. Collectively, these social, informational, and relational linkages between teacher and consultant create a set of "pressures" that promote developmental change in the teachers' classroom interactions with students. The cycle is intended to produce a stream of communication between consultant and teacher based on observation of that teacher's interactions with students in the classroom and a process of joint reflection on strategies to improve those interactions, using a standardized, validated classroom observation procedure as the focus and metric for teachers' interactions with students.

Teachers have many opportunities over the academic year to receive feedback and support from the consultant and to offer their insight and feedback in return. Because of the extended nature of contact between consultants and teachers, consultants must recognize that the consultancy relationship builds over time, in terms of the capacity to give and receive feedback, particularly feedback that can be interpreted as critical. For this reason, consultants must attend, in the initial stages, to the need to build a relationship with the teacher and focus initially on support, slowly transitioning to more challenging aspects as there is evidence the relationship with the teacher can tolerate such challenges. One teacher describes her experience of the consultation process in the following text, in ways that illuminate the various components of this intervention.

I have been teaching for 27 years and have never had a more involved and personal type of professional development. Naturally I don't *see* [italics added] my consultant on a regular basis, but our I-chats have created a most wonderful bond. Through our tapes, she has also been able to learn about my students, and know them quite well. It's such a joy to be able to share moments in the classroom "across the miles." The best part is that we are able to think and work on possible strategies and solutions together, and she's never even stepped foot in my classroom. What could be better?

## Measurement of Setting-Level Processes—A Lever and a Target for Change

Central to any intentional effort to induce or direct developmental change is a target or desired outcome that can focus and organize the activity of the system that is the focus of change (in this case teacher-student classroom interactions). In fact, Pianta (2005) has argued that validated, objective, standardized observational assessment of classroom interactions is the foundation for establishing teacher professional development supports aimed at improving classroom effects. Thus, a key feature of the MTP approach is that the feedback and support provided to teachers during the ongoing consultation process is directly tied to validated, standardized observational systems shown to assess aspects of teachers' social and instructional interactions that predict growth in student performance. This system is known as the CLASS (Pianta et al., 2006). The vocabulary we use to describe these interactions is based on CLASS-Secondary, an upward extension of the CLASS (Pianta et al., 2006). The CLASS dimensions are based on developmental theory and research suggesting that interactions between students and adults are the primary mechanism of student development and learning (Greenberg, Domitrovich, & Bumbarger, 2001; Hamre & Pianta, 2005; Morrison & Connor, 2002; Pianta, 2006b; Rutter & Maughan, 2002). The CLASS dimensions are based on the *interactions* of teachers and students in the classroom; scoring for any dimension is not determined by the presence of materials, the physical environment or safety, or the adoption of a specific curriculum. The CLASS assesses the quality of teachers' social and instructional interactions with students as well as the intentionality and productivity evident in classroom settings. This distinction between *observed interactions* and physical materials or reported use of curriculum is important, because in most school settings, materials and curricula are usually prevalent and fairly well organized. In the CLASS, the focus is on what teachers *do* with the materials they have and on the *interactions* they have with students.

The dimensions of interaction assessed by the CLASS elementary version predict growth in literacy and math as well as reduced teacher-child conflict

and problem behavior from pre-K through fifth grade (Hamre & Pianta, 2005; Howes et al., in press; NICHD ECCRN, 2004; Pianta et al., 2007). The CLASS, originally designed for elementary settings, has been recently redesigned and adapted for secondary settings, and is now being used in K-12 teacher quality assessments in Ohio, and in research on teacher education programs conducted as part of the Carnegie Corporation's Teachers for a New Era initiative (Hart et al., 2005). MTP consultants rely on the dimensions of interaction presented as observational rating scales in the CLASS and the detailed descriptions of scale points on those dimensions that are provided in the CLASS manual when they provide feedback to teachers. The CLASS is one of the most current and widely used standardized assessments of social and instructional interactions in classrooms (Hart et al., 2005; McCaslin, Burross, & Good, 2005; NICHD ECCRN, 2002, 2005).

The CLASS-Secondary version, or CLASS-S, is explicitly designed to capture precisely those aspects of classroom interactions that we hypothesize in preceding text to be resources for adolescent engagement and motivation. As such, it builds on and incorporates all of the strengths of the CLASS system at elementary levels, while adding specific dimensions conceptualized and operationalized to maximize adolescent engagement. The CLASS-S scales are organized into three overarching dimensions, similar to those reported in factor analyses of the elementary version: Motivational Processes (e.g., Sensitivity, Relational Supports, Autonomy Supports), Organizational Processes (e.g., Effective Behavior Management, Instructional Learning Formats), and Instructional Supports (Content Knowledge, Quality of Feedback, Cognition Supports).

Figure 2.2 provides an overview of these domains and the dimensions within each domain that are measured by the middle/secondary version of the CLASS. This organizational structure for classroom interactions has been

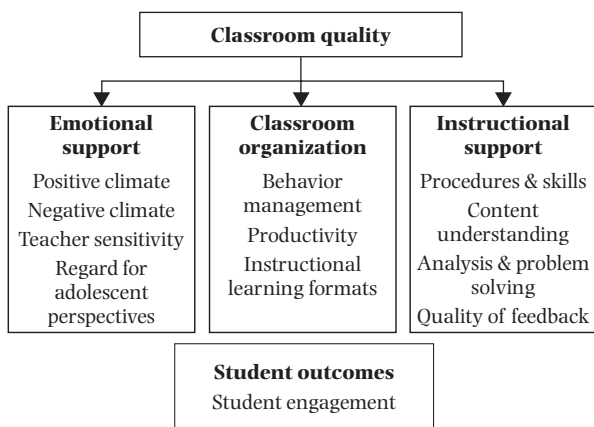


Figure 2.2. Overview of Domains and the Dimensions Within Each Domain Measured by the Middle/Secondary Version of the CLASS.

validated in over 3,000 classrooms from preschool to fifth grade (Hamre, Pianta, Mashburn, & Downer, 2006). As the middle/secondary version is entering its pilot phase, similar data will be collected to confirm or validate this structure for grades 6-12 classrooms.

## Summary and Conclusions

Although classrooms are complex social systems and student-teacher relationships and interactions are also complex, multicomponent systems, we posit that the nature and quality of social and instructional interactions between teachers and children can be changed by providing teachers knowledge about developmental processes relevant for classroom interactions and personalized feedback/support about their interactive behaviors and cues. For work with teachers of younger children, MTP support positively influenced teachers' interactions in classrooms, which in turn were related to improved achievement (Pianta et al., 2006), results consistent with related literature suggesting that observation of teacher-child interaction, knowledge about development in language and literacy, and effective implementation of instruction contributes to higher ratings of observed sensitivity, language stimulation, and implementation in quasi-experiments (Cassidy, Buell, Pugh-Hoese, & Russell, 1995; Howes, Galinsky, & Kontos, 1998; Rhodes & Hennessy, 2000). It is this link between direct and individualized support for teachers, improvements in the classroom setting, and better child outcomes that we posit as a model for improving capacity in secondary classrooms.

A theory of classroom settings must be premised on an understanding of the developmental significance of those settings' influence on youth and the mechanisms of these effects. Once that knowledge base is established, then theory can move to how those mechanisms (in this case, the capacity of classrooms settings as reflected in student-teacher interactions) themselves can be changed. In this chapter, we focused on the theoretical and empirical links between classroom interactions and motivational and achievement outcomes and we presented an approach to intervention designed to increase the quality of such interactions and, in turn, increase student engagement and motivation, and ultimately achievement. Recognizing general principles of development in complex systems, a theory of the classroom as a setting for youth development and a theory of change specific to this social setting are the ultimate goals of this work.

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