IMPROVING THE QUALITY OF CLASSROOM INTERACTIONS

The William T. Grant Foundation supports research to improve the lives of American youth. Since 2002, we have done this by focusing on the improvement of social settings. The Foundation defines these settings as the social environments in which youth go about their daily lives—such as schools, after-school programs, households, peer groups, and neighborhoods.

One of the main ways the Foundation approaches this work is by funding high-quality intervention studies. Interventions are a powerful method for increasing our understanding of how settings work and testing strategies for how to improve them. Four fundamental questions guide our intervention research.
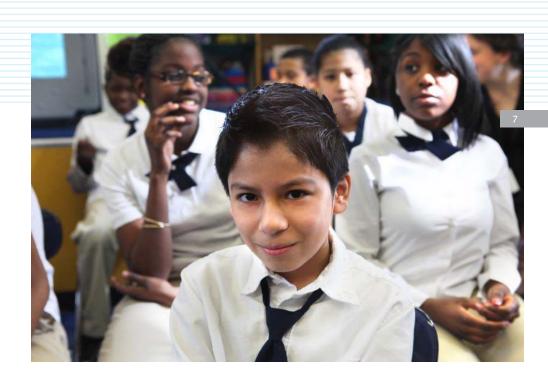
- Can social settings be intentionally altered?
- If so, can settings be altered in ways that improve the well-being of the youth within them?
- What are the critical intervention strategies needed to alter social settings?
- Are setting alterations and their effects on youth in those settings sustainable? That is, do they last once the intervention ends?

The Foundation has funded several innovative classroom interventions designed to alter settings in ways that result in positive outcomes for the youth within them. In order to change a setting for the better, we need to first understand how that setting works. To that end, we have developed a theoretical framework to guide our intervention research and funded a number of studies on the development of reliable and valid measures of classroom processes. Strong theory and good measures are critical components in the development of a thorough understanding of settings.

THEORY

Vivian Tseng and I described the Foundation's framework for understanding and improving the functioning of social settings in our 2007 *Annual Report* essay. We started with the basics: What is a social setting and how does it work? How do social settings differ from other possible targets for intervention, both smaller and larger, in scope and complexity? Our framework defined social settings as systems consisting of three major features— social processes, resources, and the allocation of those resources—dynamically interacting.

The distinctive patterns of social processes—which I refer to as social regularities—have the most impact on a person's daily experiences in a setting and are a major focus of our framework. Social regularities are ongoing patterns of social processes that represent the status quo in a setting. As such, these regularities are good targets for interventions. For example, if we found that the quality of teachers' interactions with and support for students in a classroom were related to students' academic achievement, that would be an important regularity and a possible intervention target.

MEASUREMENT

The Foundation supports the development of reliable and valid measures for assessing social settings. Our work focuses on how to measure the complexity of social setting features (i.e., social processes, specifically regularities; resources; and the allocation of those resources).

To date, we have supported three promising methods for measuring social setting regularities—behavioral observations of interactions and practices, self-reports from setting members about norms, and analyses of social networks.

The Classroom Assessment Scoring System (CLASS)—which was created by Robert Pianta, Karen M. La Paro, Bridget K. Hamre, and colleagues—is an example of a behavioral observation instrument. The CLASS uses observations to measure the quality of teacher-student interactions in the classroom. Observers rate interactions in 10 dimensions (with well-defined indicators) to identify levels of emotional support, instructional support, and classroom organization. Emotional support consists of positive and negative classroom climate, teacher sensitivity, and regard for student perspectives. Instructional support includes concept development, quality of feedback, and language modeling. Classroom organization refers to behavior management, productivity, and learning formats. Over time, the emerging patterns in these three areas constitute the key social regularities of classrooms.

A version of this observational instrument, known as CLASS-S, has been extended to secondary school classrooms.[1] In a study of 643 students in 37 secondary school classrooms, Joseph Allen and colleagues found that the CLASS-S predicted relative gains in student standardized achievement after accounting for test scores from the previous year.

The Foundation is funding several studies using the CLASS or CLASS-S to measure social regularities in elementary and high school classrooms.

INTERVENTION

By definition, social regularities in classrooms and schools are difficult to change, since they are part of the "system," or the way things work. Changing regularities in ways that last is even more difficult. Our research agenda for classroom interventions is focused on understanding whether and how such changes impact teacher practices and student performance and behavior. We are also trying to learn whether the impact lasts after the intervention has been removed.

We have funded several intervention programs designed to have lasting impacts. Four of these—one in college classrooms, one in high school classrooms, and two in elementary classrooms and schools—are described here.

Intergroup Dialogues

In 2004, we funded Patricia Gurin and her colleagues to work on Intergroup Dialogues. These innovative settings—on university campuses around the country—were designed to foster meaningful communication between members of different social identity groups. The investigators prescribed the composition of the class (i.e., equal numbers of "two different social identity groups that share a history of contentious relationships with each other or have lacked opportunities to talk to each other in meaningful ways,") and the instructional practices.

The study included 52 social experiments at 9 universities across the country. Student applicants were randomly assigned to an Intergroup Dialogue or a wait-list condition. Compared to the wait-list control group, students in the Intergroup Dialogues became increasingly critical of inequality and had a stronger post-college commitment to action. Change in these two outcomes was significantly related to the interactions students experienced within the groups, such as appreciating difference, critical reflection, and alliance-building. Here, we see how altering setting features and practices (i.e., the composition of the groups and instructional practices) overcomes the age-old problems of group misunderstanding and conflict. Currently, this team of investigators is analyzing the actual content of the group interactions. This should help us understand if altering group composition and instructional practices actually changed the interactions within the Intergroup Dialogues, and ultimately, whether such changes are related to the positive outcomes reported.

My Teaching Partner

Robert Pianta, Joe Allen, Bridget Hamre, and colleagues at the University of Virginia created the My Teaching Partner (MTP) intervention to target the quality of classrooms. MTP is designed to support and coach teachers and give feedback on their classroom performance. Formally, MTP consists of five phased activities that repeat every two weeks. In phase 1, each teacher videotapes 40 minutes of instruction and electronically sends the tape to an MTP consultant or coach. In phase 2, the consultant reviews the video, identifies a positive aspect of the teacher's performance, and tries to help the teacher improve self-observation by directing him or her to different clips on the website. During phase 3, the teacher reviews these materials and responds to the consultant. In phase 4, the consultant and teacher discuss relationships with students and teaching practice via telephone conference. Then, they create an action plan for the next cycle. In Phase 5, the consultant summarizes the major conference topics and emails a summary and action plan to the teacher. Here, we see a unique combination of feedback on actual performance and continuous coaching and support.

The study includes 88 classrooms with teachers with less than five years of experience. Preliminary analyses of the first year of data (using the CLASS-S) are promising. By the spring of a school-year intervention, there is a significant difference in the overall quality of teacher-student interactions—classrooms without MTP (i.e., control classrooms) decline, whereas classrooms using MTP either remain constant or improve. (In other words, without help, classrooms get worse over the course of the year.) Observed student engagement also improves significantly in MTP classrooms compared to those without it. It appears that MTP did change the classroom regularities in terms of the quality of teacher-student interaction and student engagement. A significant change in achievement between MTP and control students does not occur until the spring of the second year of the intervention. This suggests that it takes longer for change in student academic performance to unfold. Whether this change represents a sleeper effect or a gradual development has not yet been determined. The investigators also suggest that the effectiveness of the intervention on student achievement is related to the quality of teacher feedback.

Interestingly, the long-term achievement gain happened in a new classroom with a different teacher who was not involved in the intervention, which suggests lasting individual change. We do not yet know whether a teacher who participated in MTP can improve the quality of teacher-student interactions with a new class of students in the year following the implementation of the intervention.

The RULER

Mark Brackett, Susan Rivers, and their colleagues developed a series of social and emotional learning programs based on the key role of emotions in attention, memory and learning, decision-making, and social behavior. Their system is based on the acronym RULER (recognize, understand, label, express, and regulate emotions). The researchers believe that educators must learn to practice and model positive emotions in order to teach them. In addition to the curriculum for students, teacher-training intervention strategies were developed and implemented to provide coaching for individual teachers. The investigators hypothesized that the RULER should change the nature of teacher-student interactions in terms of the emotional climate of the classroom so that students become emotionally engaged in learning and experience better cognitive and socio-emotional outcomes. The RULER also addresses teachers' needs for regular one-on-one support and instruction, but through a different strategy than MTP.

The field experiment took place in fifth, sixth, and seventh grade classrooms. These classrooms were in 62 schools in Brooklyn and Queens, New York, that were randomly assigned to the intervention or the control condition. Following a full academic year of intervention, analyses revealed that classrooms in the schools using the RULER had significantly higher supportive emotional climates than the control classrooms (as assessed using the CLASS). Teachers reported increased use of emotion-focused interactions and cooperative learning strategies. Thus, the RULER approach was also successful in changing key aspects of classroom settings. The investigators hope to determine if these positive changes in the emotional climate of the classroom translate into improvements in students' emotional literacy, peer relationships, and academic performance.

The 4Rs Program

The 4Rs Program (Reading, Writing, Respect, & Resolution) was developed by Morningside Center for Teaching Social Responsibility, a practitioner organization. The program consists of school-wide implementation of three interwoven strategies—a social-emotional learning and literacy curriculum, training and technical assistance for teachers, and ongoing coaching/mentoring for teachers and other staff. The direct targets of these intervention strategies are teacher practices, teacher-student interactions, and classroom regularities. The continual, intensive, on-the-job coaching/mentoring is a key intervention component that distinguishes this intervention from other popular curricular-based programs that use teacher training. In this way, like MTP and the RULER, 4Rs is responsive to teachers working under demanding, often chaotic conditions and in environments that lack economic and social resources.

Joshua Brown, Stephanie Jones, Maria LaRusso, and J. Lawrence Aber observed the impact of 4Rs in a three-year trial in 18 low-income, urban public elementary schools. After the first year, they examined the quality of 82 third grade classrooms in schools with and without the RULER intervention. (They also used the CLASS tool to measure quality.) The classrooms in the experimental schools showed significantly higher ratings in the overall quality of teacher-student interactions. This improvement appears to be primarily attributable to the instructional and emotional support created by 4Rs.

Jones, Brown, and Aber report that after two years of program participation, students in the intervention schools self-reported fewer aggressive interactions with peers and less depression. Teachers reported improved attention skills, reductions in aggression, and more socially competent behavior among students. Moreover, youth at highest risk make the largest positive gains in developmental outcomes. The 4Rs Program achieved changes for both classrooms (setting-level) and students in them (individual-level), with individual change lasting through a second year.

NEXT STEPS

As the examples demonstrate, changing settings (and social regularities in particular) is possible. More effective settings have been created by structuring group composition and implementing a novel curriculum or changing the practices, routines, organizational climate, and/or organizational culture of the setting.

These researchers have identified some of the critical strategies needed to change settings. In many of the examples, social regularities were altered by two strategies—intensive one-on-one coaching/mentoring and feedback of the results of assessment or intervention.

Feedback (or knowledge of results) has a long tradition of making a positive difference.[2] Professional development training also has a long history, but rarely includes sustained, intensive, on-the-job coaching or mentoring, coupled with a framework for measuring and discussing the important regularities. Both of those elements are critical to the success of professional development efforts. Several of the interventions we've described differ from past efforts in that they include these elements. They provide the type of continuous feedback and support that front-line service staff rarely receive. In educational settings, practitioners are often overwhelmed with daily responsibilities to youth, the bureaucracy, peers, and supervisors. Yet, each of the researchers found a unique way to provide ongoing and intensive feedback and support.

More important is whether these changes lead to meaningful improvements in the well-being of the settings' inhabitants. The evidence is promising. In several of the examples, positive impacts on youth were found. In two, they were sustained or more evident in a second year. We will continue to track this work to see if the impact of these changes continues to last. We want to understand what is required for positive outcomes to continue long-term. In the classroom and school-based interventions described, do the changes in teacher practices last in the next year with a new class? Researchers are planning to answer this question.

We are also exploring the idea of continual learning organization. What would it mean to have a continual learning organization—meaning one that can alter its own regularities on an ongoing basis in response to the needs of the youth within it? If an organization doesn't learn and change continually, larger systemic forces will lead to a return of the status quo (i.e., the old regularities). We have only begun to scratch the surface of understanding what strategies can make a real difference in the social regularities of everyday settings and affect their members' outcomes in the short and long run. We are committed to supporting future innovation and research to address these challenges.

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1. Pianta, R.C.; Hamre, B.K.; Hays, N.; Mintz, S.; & La Paro, K.M. (2008). Classroom assessment scoring system—Secondary (CLASS-S). Charlottesville, VA: University of Virginia.
2. Butler, D.L. & Wimme, P.H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65, 245–281.