

Teaching Practices for Smaller Classes

Teachers of higher-achieving classes emphasized structure in both student management and lesson management.

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The federal government and more than 20 states have launched class-size reduction initiatives that seek to lower the average class size in the early elementary grades of U.S. schools to 15–18 students. Research points to the beneficial effects of smaller classes on students' academic success, and many states have turned to class-size reduction to raise student achievement (U.S. Department of Education, 2000).

But class-size reduction alone doesn't always lead to high student performance; teachers must also acquire and practice effective teaching strategies. Our recent research examines the evaluation of the Student Achievement Guarantee in Education (SAGE) program (Molnar, Smith, and Zahorik, 2000; Molnar et al., 2001; Zahorik, Molnar, Ehrle, & Halbach, 2000), an initiative that requires participating schools to maintain the student-teacher ratio in K–3 classes at 15:1 and develop rigorous, standards-based academic curriculums. We explored the goals and methods of SAGE teachers in higher-achieving and lower-achieving classrooms; the results suggest some inter-



esting ways in which educators can maximize the benefits of smaller classes.

The Study

We conducted a study to determine the teaching practices that effective teachers in reduced-size primary classes use. First, we identified teachers and teacher teams who had taught in classes with a 15:1 student-teacher ratio for at least two years. On the basis of the achievement gains of their students over the two-year period, we labeled 17 of the teachers as more effective and 9 as less effective. Using mean achievement gain scores for all SAGE classrooms as the expected mean, the more effective group averaged 21.8 points above the

expected mean and the less effective group averaged 11.0 points below the expected mean. We collected data over a six-month period in each of the two years of the study through classroom observations, teacher interviews, and teacher self-reports. We observed two reading classes and two mathematics classes in each classroom and conducted

several interviews with each teacher. One of these interviews focused on teaching in a class of reduced size in general; the others dealt primarily with reading and mathematics instruction.

Our findings revealed three factors that determined that the teachers' effectiveness:

- *Instructional orientation*—the type of content that the teachers emphasized in their lessons and how they taught it.

- *Management style*—how the teachers disciplined their students and organized their lessons.

- *Individualization focus*—how much time and energy the teachers spent on individual, one-on-one instruction.



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More Effective Teachers

Instructional Orientation

The teachers in higher-achieving classrooms stressed both academic and personal learning. They wanted their students to acquire basic knowledge and skills and to become critical thinkers and able problem solvers. They did not treat these dual goals equally in their instructional orientation and practice, however. When allocating time for instructional purposes, they gave a higher priority to foundational academic goals related to benchmarks and standards and gave secondary attention to higher-order personal and social goals. One teacher noted,

You need the building blocks in order to build a house, so you must have a basic foundation of knowledge before you can build on that.

The more effective teachers' primary teaching method was explicit, step-by-step instruction. The teachers gave clear directions, explained concepts, modeled procedures, led class practice, provided feedback, and scaffolded student understanding. One teacher spent up to one-third of her instructional time presenting and modeling the information to the class, following up with personalized practice and critiques, and integrating targeted, one-on-one reteaching as needed. A brief

description of a math lesson exemplifies her methods.

The teacher presented her students with information about fact families. One example of a fact family used for whole-class practice had the numbers 5, 9, and 14. The teacher guided the class in writing addition ($5 + 9 = 14$; $9 + 5 = 14$) and subtraction ($14 - 5 = 9$; $14 - 9 = 5$) number sentences for the fact family. After a few more examples, she assigned students problems to work on individually while she circulated around the classroom and worked with each student one-on-one. She gave some students who finished early a more challenging problem to work on at the board and enlisted others as "secret agents" to whom she whispered directions and distributed new problems on individual slips of paper. The classroom was a hub of activity: "Secret agents" rushed to have their answers checked, students explained their answers at the board, and the teacher continually provided feedback to all students.

Another teacher tested her students' spelling skills by first giving the students a vocabulary word, which they identified from a stack of spelling cards in front of them and then wrote on individual dry-erase boards. The teacher then said, "Ready, set, show," the signal for students to hold up their boards. The teacher said that the activity

allowed for instant visual checking for understanding:

If they don't understand . . . I know right then and I can back up a couple of steps and do it a different way.

Most teachers of higher-achieving classes followed this teacher-oriented direct instruction with experiential learning opportunities that incorporated authentic tasks, challenging problems, and interesting materials into the lesson. The teachers generally used these methods to augment and extend students' knowledge only after the students had acquired a firm grasp of the more basic, targeted knowledge or skills.

Management Style

Teachers of higher-achieving classes emphasized structure in both student and lesson management. Successful teachers established in their classrooms clear rules, routines, and reward systems. They handled student infractions quickly, not allowing them to distract the class. Generally, teachers quietly addressed the individual student or briefly placed a hand on the student's shoulder as a corrective method while proceeding with instruction.

The more effective teachers also structured their lessons with carefully planned activities that had clear goals, logical structure, and step-by-step content progression. The lessons proceeded at a brisk pace. Teachers often engaged students in four or more different types of activities during one instructional segment that required students to move around, get new materials, collect papers, work in groups, or sit in a circle. We observed that students transitioned easily from one activity to the next and rarely required repeated directions. Teachers presented their lessons with enthusiasm, energy, and a commitment to academic success, and allowed few diversions from their targeted lesson plans.

Individualization Focus

The more effective teachers' instructional orientation and management styles gave them more time to directly instruct individual students in basic,

academic content. For example, during a 20-minute vocabulary lesson, one teacher gave individualized feedback seven times to each of the class's 12 students.

Successful teachers encouraged individual students to verbalize their understandings and display their skills; provided students with feedback, explanations, and resources; and assigned appropriate tasks. Among higher-achieving teachers, the student and teacher articulation-critique process—the constant interaction between

discipline and emergent lesson management, practices that encouraged and pursued student interests. These practices left classes with less time to learn basic content and receive individualized instruction.

The Disarmed

The disarmed teachers differed from the more effective teachers in management style. Like the more effective teachers, they believed in the importance of basic learning and explicit teaching methods, but their inability to

classroom implementation is a school-wide understanding of what makes smaller classes work. An emphasis on basic knowledge, explicit instruction, organized and well-planned lessons, and a comfortable, nonpunitive atmosphere will enable teachers to individualize their instruction and interact one-on-one with their students with personalized, constructive feedback. Individualization is the ultimate goal of class-size reduction initiatives and the key to reduced-size classes' academic success. ■

Essential to successful classroom implementation is a schoolwide understanding of what makes smaller classes work.

students and the teacher in which students articulate their thoughts and the teacher critiques and evaluates those thoughts—was a dominant feature of their teaching, whether they were coaching individual students, small groups, or large groups.

Less Effective Teachers

The instructional methods of less effective teachers in smaller classes differed significantly from the methods used by the more effective teachers. Our study identified two distinct profiles of these less effective teachers: the *disinclined* and the *disarmed*. Disinclined teachers reject the teaching methods of the more effective teachers, preferring to use other methods, whereas disarmed teachers believe in the methods of the more effective teachers but lack the skill to implement them effectively.

The Disinclined

The disinclined teachers' instructional orientation emphasized such personal goals as critical thinking, creativity, and self-direction over basic knowledge acquisition. They preferred experiential over explicit teaching methods and focused on student-centered procedures, such as problem-solving activities and hands-on tasks. The disinclined teachers' permissive student management style emphasized student self-

successfully manage their classrooms was evident in both their student and lesson management styles. Their primary concern in managing their students was maintaining order amid excessive noise and student interruptions; they typically established rules and routines, but did not effectively implement them. Their lesson management suffered even more. The lessons of disarmed teachers often included overly long introductions, awkward transitions, laborious explanations, and unproductive lesson diversions. These classroom management procedures neutralized the teachers' instructional orientation, resulted in limited individualized instruction, and allowed less time for academic purposes.

Application of the Research

If educators in reduced-size classrooms—or classrooms of any size—incorporate into their professional knowledge base and apply in their schools the more effective teaching methods that our study identified, they will increase the likelihood of higher student achievement. Reducing class size without rethinking educators' goals and practices is merely an expensive experiment and a squandered opportunity.

The value of this research lies in its application. Essential to successful

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