

Rethinking the Allocation of Teaching Resources

by Karen Hawley Miles and Linda Darling-Hammond

School reform proposals vary in their details, but all call for dramatically improving student achievement. Plans to accomplish this goal usually include implementing a high-standards curriculum, instructional strategies that create more time for individual attention for students, and increasing time for teacher planning and learning. In an era of belt-tightening and rising student enrollments, finding the resources for these reforms will require schools to reexamine the use of every dollar. Efforts to redirect dollars from administrative or operational functions have attracted considerable publicity, but little attention has been paid to rethinking the use of existing instructional resources—such as teachers, support professionals and technology—the most important and expensive resources available to schools.

The basic structure of schools is strikingly similar across districts and new resources have been added largely around the regular classroom rather than into it. Despite familiar calls for “restructuring”, a number of surveys suggest that public schools rarely engage in major reorganization of resources.¹ From 1960 to 1992, the number of pupils per teacher dropped from 26 to 18 while regular education class sizes changed very little.² At the same time, the proportion of school staff classified as teachers has dropped from 70 to 53 percent, of which only about three-quarters are regularly engaged in classroom teaching.³

To understand how schools might rethink the use of time and teaching resources, this study details the experience of five urban schools with high and improving student achievement that have broken with tradition by using similar levels of resources very differently. Although the schools look very different from one another, they share six principles of resource allocation implemented in varied ways depending on their instructional strategy.

1. Reduction of Specialized Programs and Creation of More Generalized Roles for Teachers

A significant portion of teachers in traditional schools work outside the regular classroom with special populations of students in separate special education, federal Title I, state compensatory education, bilingual education, remedial education, and gifted education programs.

In the traditional schools used for comparison, 28 to 77 percent of teachers work with heterogeneous groups of students regardless of program. In the three sample elementary schools, 91 to 100 percent of all teachers worked with heterogeneous groups of students regardless of program.

- Quebec Heights Elementary School in Cincinnati, Ohio used multi-age grouping to address diversity in student skill levels; used resources freed by eliminating separate Title I programs to reduce the size of reading groups; and fully integrated special education and resource teachers.
- Douglass Elementary School in Memphis, Tennessee used its entire Title I budget to implement the Success for All reform strategy: they had reading classes of 17 students for 90 minutes each day, and reading teachers who provided one-on-one tutoring.
- Mary C. Lyons Model Elementary School in Boston, Massachusetts reallocated special education and Title I funds to limit class size to 15 (ten regular students and five emotionally disturbed students per class). Each class had a master teacher and a highly-trained instructional assistant.

Central Park East Secondary School and International High, the two New York City secondary schools in the study, achieved reduced teaching loads by integrating previously specialized resources, investing more in teaching than in non-teaching positions, and combining teaching resources into a core academic program in which all students participate

2. More Flexible Student Grouping Targeted to Individual Student Needs

Perhaps the most striking difference between the sample elementary schools and traditional schools was the strategic, proactive way teachers adapted instructional grouping to student needs. School districts generally use formulas based on student age, subject and program to assign students to classrooms. Such formulas are costly: uneven allocation of teachers over grades, small programs, and under-subscribed subjects contribute to unintended differences in class size unrelated to educational strategies. In traditional schools, administrators assign students to year-long programs and classrooms; these groupings remain constant across the day and subject. Teachers in the sample schools used their knowledge of student needs, rather than a student's program classification or age, to assign each student to a regular homeroom or classroom and to manage their instruction throughout the day. For example, the Douglass Elementary School regrouped students during the day to achieve significantly smaller reading group sizes. This required tradeoffs: the intermediate grades lost their instructional aides, and reading teachers were relieved of homeroom responsibilities. Students at Quebec Heights Elementary School progressed individually as they demonstrated specific skills; they no longer advanced together in groups.

At the high school level, the problems of grading by age are compounded by tracking, program schedules, teacher and subject specialization, and often contribute to increased student loads for teachers. Reducing the number of programs, courses and levels made it easier for the sample secondary schools to match the size of instructional groups to student needs. The two New York secondary schools achieved significant reductions in class size and total pupil loads for teachers: 18 students per class at Central Park East with a total pupil load of 36, and 25 students at International High with a total pupil load of 75. This contrasts with the average class size of 33 at traditional high schools in the city where teachers see close to 170 students each day.

3. Structures to Support More Personal Relationships

The average enrollment of secondary schools nationally is nearly twice that of elementary schools.⁴ The conventional justification for this size differential is to create economies of scale by distributing administrative and operating costs, and to offer a more diverse curriculum cost-effectively. However, research suggests that when high schools get larger than about 800 students, the benefits in curriculum may be outweighed by the sense of alienation and depersonalization that can come with larger schools.⁵

Reducing the number of students a teacher has responsibility for teaching is perhaps the most important way to increase personal attention available in schools. Both high schools studied have done this by reducing class size and student loads. In addition, students belong to small advisory groups of 10 to 15 students. The advisor serves as an advocate for the student, meeting and corresponding with parents on a regular basis, and helping the student plan and solve problems.

At the elementary level, Quebec Heights established a family structure in which teachers worked with mostly the same 85 students for three years. Mary Lyons had an intensive staffing ratio of two teachers for 15 students, and conducted weekly staff meetings to discuss the progress of individual students.

4. More Common Planning Time for Teachers

The sample schools provided significantly more time for planning and learning with other teachers and in much longer blocks of time. Traditional schools provide planning time scheduled in short blocks that are not coordinated with other teachers. In elementary schools, teachers typically have 45-minute duty-free periods four or five times a week. Specialists in art, music and physical education usually work with the students to provide classroom teachers these free periods. Secondary school teachers usually teach five of seven instructional periods each day, and spend one of their free periods planning independently and the other performing non-instructional duties.

Two of the elementary schools, Douglass and Quebec Heights, used the conventional method of using specialists to cover the time, but placed special emphasis on scheduling to allow common meeting time for small groups of teachers each day.

In contrast, Mary Lyon teachers had more than twice the planning time each week because each classroom had two instructors (a teacher and instructional assistant) and because the afterschool teachers overlapped the regular school day by one hour, when they covered the classes in conjunction with the instructional assistants while the teachers met together.

Central Park East and International High also doubled planning time as compared to traditional high schools and found ways to allow teams of teachers working with a shared group of students to meet together. To do this, students participated in internships and courses at local colleges, thereby freeing teachers to work together. Central Park East students also were dismissed early one day a week so teachers could have more planning time.

5. Longer and More Varied Blocks of Instructional Time

In contrast to the traditional high schools' seven 42-minute periods each day, both restructured high schools created longer periods and more flexible schedules. All seventh through tenth grade teachers (except two special education teachers) at Central Park East taught either humanities or math/science courses that met two hours each day. (Electives and foreign languages were taught by outside contractors.)

International High had self-managing instructional teams of four teachers plus guidance and paraprofessional staff. These teams developed and taught two theme-based courses to approximately 75 students each term. At International, students typically had four courses, each of which met for 70 minutes four times a week, a two-hour internship, and an hour-long seminar each week. Each team of teachers controlled their students' entire time schedule over the 13-week cycle; they could vary class length as needed for the students' work.

6. Creative Definition of Staff Roles and Work Day

Inflexible definitions of the work day and job responsibilities make it difficult, if not impossible, to implement many of the practices described above, such as: integrating specialized programs to create smaller class sizes, combining instructional periods to create longer blocks of instructional time, extending the school day and scheduling common planning

time for teachers. Most of the sample schools created new job descriptions for teachers and other staff, used resources outside the traditional school to support instruction and used teachers working on part-time or extended day shifts to accommodate scheduling needs.

For example, Mary C. Lyons Model Elementary School was able to provide teachers with more planning time because each class had two instructors—a master teacher and a highly-trained “instructional assistant trainee.” The job description and required qualifications for this instructional assistant were much more rigorous and specific than the district's existing paraprofessional position. Paraprofessionals at the Lyons worked on staggered shifts, some starting much earlier than the rest of the staff in order to support extended hours. The school also used contracted teachers from the after school program to cover planning time during the school day.

Central Park East had no tracking, no separate programs, no attendance officers, deans of discipline, assistant principals, supervisors or department heads. Both Central Park East and International High focused teaching resources on core academic subjects by contracting with outside providers for elective and non-academic courses. Central Park East also incorporated counseling and advising into the teaching role instead of having guidance counselors.

Supports for and Barriers to Reallocating Resources

To accomplish these things, the sample schools directly challenged policies, regulations, and collective-bargaining agreements. First, three of the schools changed the contractually defined teacher workday. Second, in breaking down barriers between programs, age groupings and subjects, they confronted staffing formulas, program administration rules and, sometimes, teacher certification rules. Third, many of these schools redefined both teaching and non-teaching positions to create new jobs that do not fit neatly into existing contractually defined categories. Finally, districts will need to find ways to support schools in retaining and recruiting the individuals they need. Many districts and union contracts treat staff as interchangeable when they make assignments and move staff on seniority transfers.

These barriers can loom large but the biggest constraint to reallocating resources may be a limited vision of how changes in school organization can create a more professional organization and improve student achievement. As models like these are tested against evidence of improved student performance, one could imagine states and districts working with schools to adopt proven designs by working through the complex changes in resource allocation, practice and regulations that must change to support new, more effective schools.

More on the Subject

This **CPRE Policy Bulletin** is based on the 49-page **CPRE Research Report**, *Rethinking the Allocation of Teaching Resources: Some Lessons from High-Performing Schools*, written by Karen Hawley Miles and Linda Darling-Hammond. Copies of the report are available at \$12.00 each. Write to: CPRE Publications, Graduate School of Education, University of Pennsylvania, 3440 Market Street, Suite 560, Philadelphia, PA 19104-3325. Make checks payable to: Trustees of the University of Pennsylvania.

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End Notes

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