New American Schools

District Issues Brief

Rethinking School Resources

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DRIVEN BY RESULTS

District Services

New American Schools partners with school districts and states to provide support and assistance in the implementation of comprehensive school reform designs throughout an entire school system. New American Schools also recognizes that for comprehensive school reform to make a significant difference in public education, it must be widely implemented within systems.

New American Schools has put together a team of experienced educators and leading experts to create a District Services division with staff who serve as consultants to school districts in the areas that are critical to successful implementation of a comprehensive school reform design:

- Leading and managing a focused, comprehensive and coordinated plan for improvement at all levels;
- Identifying and reallocating resources to support the implementation of comprehensive school improvement strategies;
- Enhancing and aligning professional development systems to help build teacher capacity through design-based assistance and comprehensive school reform;
- Developing parents and the community to build broad-based support and long-term commitment to a continuous improvement process.
- New American Schools is partnering with a number of school districts implementing and interested in implementing comprehensive school reform designs.

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Rethinking School Resources

As we move into the new millennium, education is at the top of the public agenda. Americans look to schooling as an investment in the future. We insist that schools help our children meet higher, more clearly defined standards so they will be prepared for a high technology world we can't quite imagine. We expect schools to do for all children what only the best schools and most capable teachers have done for some in the past. These goals, that focus on all children mastering standards, are different from those schools were organized to meet. In the past, schools aimed to "cover" content material and paid much less attention to what children learned and who learned it. Today's challenging goals change the job of teaching and the needs for resources. Yet the basic organization of schools looks much the same as it did fifty years ago. This brief presents the reasons for re-examining the way school resources are organized, a framework for doing so and some concrete steps to help schools and districts get started.

Changing Demands, Evolving Strategies

Today's reform buzzwords, "School Accountability" and "Standards " are now so omnipresent it is easy to forget that the ideas behind them suggest profound changes in what schools should do. School organizations were never set up to guarantee student *learning*. Instead, they promised to give students *access* to certain knowledge and skills. The basic structures of modern public schools: the collections of classrooms organized by age and subject,[1] teacher salary schedules, and district administration, aimed to ensure exposure to ideas and skills. For example, there has never been formal measurement of what students could do, only of the "credits" they received. School districts didn't measure whether teachers helped students gain new knowledge. Instead, they checked to see whether the teachers covered the curriculum. If some students were left behind, most viewed this as a natural outcome of innate differences in ability.

But "standards-based reform" and "school accountability" embody a different idea that requires new educational strategies. Instead of "covering" material, schools must now diagnose what students know and can do and use teaching strategies that fit each student's needs. They need to find ways to respond to those students who don't learn what is covered. To do this, teachers must work together in new ways. When all that matters is coverage, teachers can work independently since they don't need to know or build on what students actually learned. Now, schools must consciously organize to create continuity over time and to adjust to student's different backgrounds, paces and styles of learning. Now, regardless of their subject and specialty teachers are collectively held responsible for developing student's literacy and problem-solving skills. In the past, only the most successful teachers and schools have had this vision of education that provided different, higher levels of outcome for all students.

New American Schools designs and other "Comprehensive School Reform" designs help schools create a collective vision of their goals for student learning and develop a common knowledge-base of practices. The designs employ a range of education philosophies and use different strategies and organizations, but all are based on research-proven practices.

New Goals for Schools

From:

- Presenting subject matter
- Sorting students: "the elite" reach highest standards
- Preparing students for predictable jobs

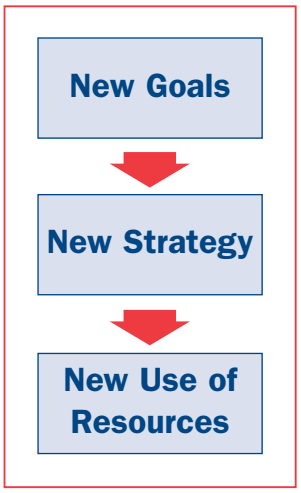
To:

- Ensuring students *learn* subject matter content
- Helping *all* students meet rigorous academic standards
- Preparing students for rapidly changing work place with emphasis on literacy and critical thinking skills

Mounting evidence suggests that when schools fully implement these whole school changes in practice, they can improve student performance dramatically.[2] Looking across these successes, we find that schools that successfully *transform* to meet higher, more inclusive goals invest significant resources in the transformation. As important, successful schools also change their use and organization of existing resources in some common ways.

Why Now is the Time

Just as it does in business, transforming practice and organization in schools will take new investment to build capacity. But, simply adding new resources to existing organizations is unlikely to change practice. Four conditions combine to make *now* the time to rethink the use of existing school resources:

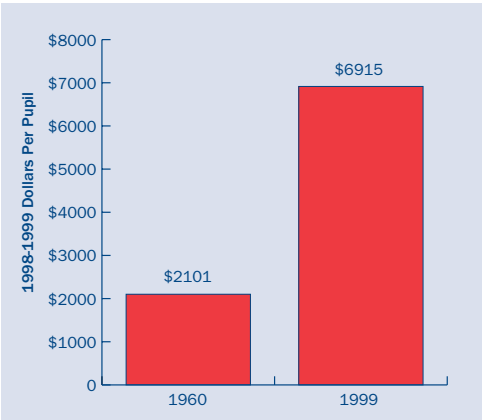


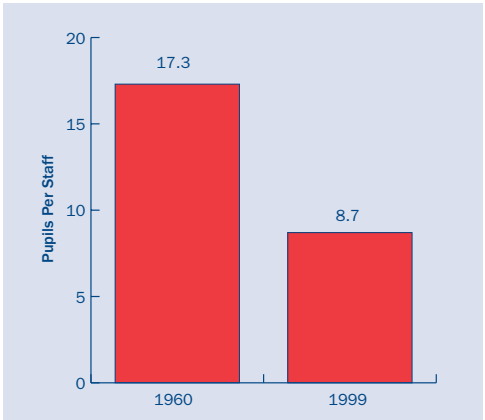
- The gradual addition of resources to schools over the last four decades has given schools more to work with than many realize. This higher level of resources enables new possibilities for school organizations.
- The way that the resources have been added has created fragmented, over-specialized school organizations that may not meet new needs.
- A new level of understanding exists at the federal and state levels about the importance of combining funding streams and allowing school level flexibility in the use of resources.
- New school designs that are proving successful give us some clues about the way that the highest performing schools use resources.

Nationwide, spending on each student, when adjusted for inflation, has roughly tripled since 1960 rising from an average of $2,100 to just over $6,900 in 1999.[3] About half of this increase came from rising average salaries and the other half from the addition of more staff.[4] Because of this growth in spending, schools have much more to work with now. In 1960, schools averaged one staff person (not counting custodians and lunch workers) for every 17 students; now there is one adult for every nine. In 1960, schools had one teacher for every 27 students; they now average one teacher for every 17.

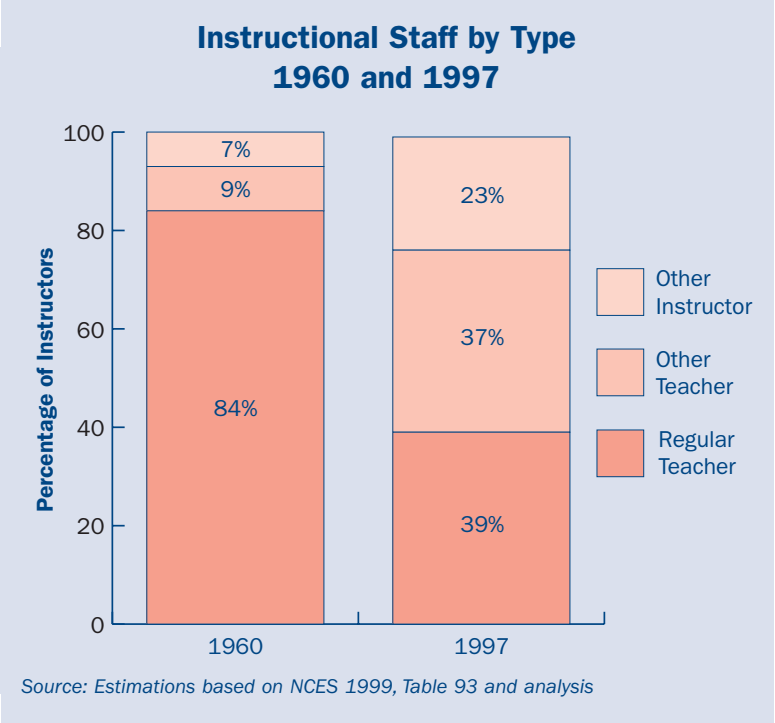
These averages are the same for large urban districts. Districts over 50,000 averaged one teacher for 17 students in 1997.

While the number of teachers has doubled, classroom life for most students and teachers looks much the same because class size has changed very little over the past decades. In 1967, elementary class sizes averaged 27 and dropped to 24 in 1997. Recent federal and state legislation has provided additional funds specifically for reducing class sizes in the early grades and class sizes at the elementary level should drop further. But, average class sizes have not changed at the secondary level, staying at 26. This means that the new teachers added work outside the regular education classroom with special education, bilingual and Title I students or as teacher support or subject specialists.





Source: NCES Digest of Education Statistics, Table 170, 166



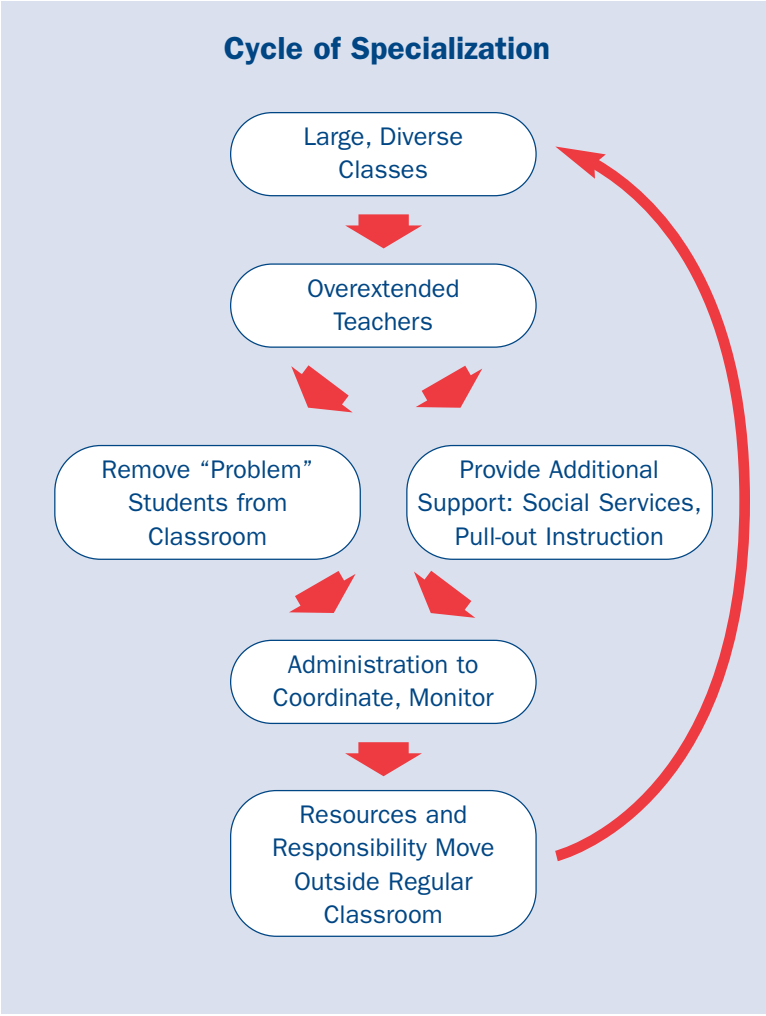
Source: Estimations based on NCES 1999, Table 93 and analysis

Now, in many schools, more adults work outside the regular education classroom than in it. The shift in the mix of school resources has been quite dramatic. In 1960, 70% of district staff were teachers. By 1997, barely half, 52%, were teachers.[5] And the portion of regular classroom teachers dropped even more. In 1960, regular education classroom teachers represented 84% of instructional staff. By 1997, regular classroom teachers had fallen to about 40% of instructional staff.[6]

This shift in resources is not surprising because schools add resources slowly, often when they receive new funding for special programs or politically popular practices. So, while schools now have twice the staff, most students do not receive more individual attention. And those who do receive special attention often find their education fragmented and uncoordinated.

Federal and state programs that provide funding to schools for specific populations, like bilingual and high-poverty students, have contributed to this growing specialization of staff. Schools were required to prove the new resources supported the targeted students, and pulling students out of the classroom to work with newly funded teachers provides a straightforward way of doing this. But the problems with this approach are now more widely recognized, and federal and state programs are allowing much more flexibility in the use of resources. Now, most schools that receive Title I dollars may use them to support school-wide programs if they can show how they are meeting the individual needs of students. States now can now apply to the federal government to become "Ed-Flex" states and combine virtually all federal funds in support of school wide improvement efforts. And states like Maryland *require* districts to show how their state and federal funds work together, not in specialized programs.

Schools that are successful in raising student performance are rethinking the use of all of their resources. New American Schools' work helping districts implement many different designs provides the opportunity to explore the common needs of transforming schools and how they are doing this.



Rethinking School Resources: Guiding Resource Principles

Educators in transforming schools have made choices to change their organization and use of existing resources while they add investment dollars to jump-start the new instructional practices. Our work with schools implementing New American Schools designs shows that transforming schools find resources to provide what we call the "Big Four:"

1. Common time for teachers to work together and to develop and learn new curriculum and strategies
2. Individualized attention for students to meet academic needs
3. More academic time for students, in longer blocks
4. Expert support for school professionals in learning and implementing new practices

And, though these schools often look very different organizationally, they are making some common changes in staffing and organization to do this.

Finding Time for Teachers

When teachers share responsibility for all students learning to standards they need time together to learn new strategies, look together at student work and develop or integrate new curriculum material. As with the introduction of anything new, teachers are likely to need an infusion of time to become steeped in the new ideas and methods. Most of the New American Schools designs organize from 3-5 days for teachers to work together during the summer learning new ideas. In addition, most of the designs also ask schools to set aside half or full days throughout the year for the entire school staff to come together to work on implementation issues. This "extra" time is important in jump-starting new practices, and later it is important time for refining and reflecting on practice.

But creating high performing schools demands more than just extra days added to the calendar. Consider such practices as:

- diagnosing individual student needs
- measuring student progress and looking at student work
- adjusting student grouping and the use of time
- integrating curriculum material across subjects

These educational practices require regular time for teachers to work together and alone **in periods of time longer than 45 minutes**. This time cannot be considered "add-on." Instead, professional time for teaching teams has become central to the job of teaching in today's schools.

Most districts and schools do not provide the necessary time—either "jump-start" time or job-embedded regular time—for teachers to learn new reforms and share practices. RAND analyzed how districts implementing New American Schools designs created time for teachers. In all cases, districts found new and temporary sources of funding to pay teacher stipends for additional days and hours.[7] Some districts and schools also shifted staff and recruited volunteers to find additional, but temporary time. These strategies provide teachers with time quickly and with little disruption of existing practice. But they are not sustainable, because they do not get incorporated into the regular work day. And adding time on top is more likely to lead to teacher burn out over the long haul.

Creating enough of the right kind of time for teachers to work together requires districts, schools and teachers to change their schedules and even their staffing. And doing so will demand tough choices and trade-offs at the district and school levels. Researchers find that teachers need *at least* three hours a week to work together in groups that *collectively share the responsibility for student learning*.[8] A typical elementary school teacher has at least one period free from instruction during the school day as well as lunch and a short period of time before and after school. In secondary schools, a teacher might have two periods out of seven or eight free from instruction in addition to lunch. But, traditional schools have not designed this time in long enough blocks to enable significant joint curriculum planning or professional development. The time is usually short—45 minutes or less—and not coordinated with other teachers by grade or teaching teams. Some teachers may even be assigned administrative duties during this time.

Many schools working to implement New American Schools designs have created new schedules which create significantly longer blocks of time for teacher teams to work together several times a week. They have done this by using five common strategies alone or in combination:

1. Create Double Planning Periods two or three times a week for teams. This strategy puts two free periods back to back. In schools with only enough staff to cover one free period for each teacher per day, this means that a teacher may not have planning time each day. In exchange, teachers have 90 minutes or more, when scheduled near recess or lunch, for common planning time.

2. Combine planning period with other non-instructional time by concentrating free periods near such times as lunch, before-school and after-school teacher work time. Because this strategy concentrates planning time for teachers at certain times of the day, it forces schools to think differently about how to "cover" teacher planning time. For example, most elementary schools use full-time subject specialists, like Physical Education, Music and Art teachers, to create planning time for teachers. But a schedule which requires coverage for half of all teachers around lunch time would demand more than the school's allotted number of specialists. To cover this peak in demand, schools we have worked with have used part-time staff as well as outside contractors who bring special talents to students during these blocks of time. The box above describes how the Mason school changed its staffing to allow the use of this strategy.

3. Combine classes for specialist subjects to create free time for small teaching teams. In this strategy a school that has three subject specialists, but five classes in a team would place all of the students in the five classes into three classes with specialists. So, for example, five elementary school classes of 20 would merge into three classes: 20 students for art and 40 for both Physical Education and Music.

4. Rethink the use of student time by creating time for learning activities not supervised by core teachers. These could be internships, community service blocks, weekly "specials day," theme projects or study halls. Just because teachers do not supervise students doesn't mean they can't engage in important efforts that are connected with their studies. A number of schools we have worked with create regular learning opportunities for students that are supervised by others. Creating and supervising these activities does take money though, to hire staff and develop materials. So schools using this strategy will need to find dollars to support them as well.

5. Reduce teacher administrative assignments by releasing faculty from non-teaching duties during the school day, such as lunch and hall duty or even record-keeping. Again, finding ways to accomplish administrative tasks without using teachers may require schools to hire new kinds of staff for odd periods of time during the day or specific functions that don't lend themselves to explicit job descriptions.

Like any change, these strategies each come with choices and tradeoffs. For example, creating double planning periods means teachers won't have planning time each day. Combining classes for special subjects means that some class sizes will be larger. Concentrating planning time at certain points in the day means that schools may substitute part-time staff for full-time subject specialists. So school staffs need to consider a variety of options to figure out what combination of strategies will work best for them. In our work with schools, we have found that when teachers are passionately and productively engaged in changing working and learning together to improve student performance, the need for more time together escalates. This demand for more common planning time often occurs after the teachers begin to see and feel the benefits of implementing a new design. When this happens, the trade-offs seem less painful.

Schools need three kinds of support from districts to create more common teacher time:

1. Direct support and models for finding time
2. Flexibility and autonomy from rules and regulations that may conflict with new strategies chosen and,
3. Addition of new time to the yearly calendar and teacher work day.

There is no reason for each school to invent new schedules and strategies on its own. Districts can provide expert support and concrete models for doing so. In Cincinnati, the district paid for an expert consultant to work with schools to create schedules that included at least 90 minutes per week of common planning time for teachers. In addition, the district created a task force that developed and distributed sample schedules and strategies that would work in Cincinnati schools. Many Comprehensive School Reform designs also provide schools with sample scenarios and New American Schools publishes case studies that detail new schedules created in schools using its designs.[9]

Second, districts will need to support schools in implementing new strategies that challenge tradition,

policy, and in some cases even contracts and regulations. The table below shows how many of the strategies for creating more and longer blocks of planning time for teams conflict with other practices even though they may make sense educationally. For example, in some districts, teacher contracts require that teachers have planning time *each* day. So a strategy that provides double planning periods every other day would violate this even if the school staff voted to move to this new schedule. Some schools implementing the double period strategy have used part-time staff or even outside contractors to cover for teachers during this time. Again, teacher contracts or district policy may limit schools in doing this. In another example, combining two regular classes for Physical Education might violate strict class size maximums that specify class size regardless of subject or lesson objective.

In our work with districts, we have found it helpful to address these conflicts with policy and contracts in two ways. First, districts need to provide immediate support to schools in implementing their specific strategy. This can be done either by negotiating waivers or changing policies that simply are outdated. At the same time, districts need to make more sweeping kinds of changes in order to allow schools to use their resources more effectively to improve student performance. For example, as schools begin to think more creatively about the skills, schedules, and types of people they need to fit their unique organization, districts will have to create new ways of paying this staff and determine how to handle the new positions. The New American Schools district issues brief, *Freeing Resources for Learning,* addresses this issue in more depth.

Along with changing school schedules, many districts may find they need to add more time to the teacher work calendar or work day. Two common strategies for getting larger blocks of time for whole school planning are adding "professional development time" to the teacher contract and scheduling regular "early release" days. Districts provide varying amounts of time free from student instruction to be used for teacher planning and professional development. The most recent contract negotiated by the Philadelphia Teacher's Union includes 10 full days for professional development. The Boston Teacher's Union contract includes the equivalent of five days; and the Cincinnati contract has none. Both Philadelphia and Boston have structured the time to create school level flexibility by designating a combination of full days for professional development and hours that must be scheduled and planned by schools to fit their needs.

In addition to adding professional development time to the calendar, some districts and schools create "early release" days for teachers to work together at regular times throughout the year. In some districts, like Newton, Massachusetts, students get out early one day each week; others release students monthly or quarterly. This solution requires that districts find ways to ensure that students receive the number of "instructional minutes" required by the state. Sometimes, as in Cincinnati, Ohio, the state will allow a district to waive the requirements by a few minutes. In other cases, the district has been able to add a few minutes to the daily schedule to more than accommodate the time lost by early release a few times a year.

Finally, districts may want to review the length of the teacher work day and the policies and practices

Challenges to Tradition, Contract and Policy

Strategy	Class Size	Teacher Work Rules	Use of Outside Contractor	Part-Time Staffing	Instructional Time Requirement
Double periods on alternating days		●	●	●	
Use more non-instructional time		●			
Combine classes	●				
Rethink use of student time	●		●	●	●
Reduce teacher administrative assignments		●	●	●	

surrounding the use of time before and after school. For example, in Cincinnati, Ohio, the teacher work day (including lunch) is a total of seven hours. Because the elementary school student day is shorter than at secondary school, elementary school teachers have a full hour at the end of each school day that is free from instruction, but still part of the required teacher work day. In other districts, the official teacher work day ends minutes after the student school day.

The actual practice and culture surrounding whole school planning are at least as important as the policies surrounding teacher work schedules. Regardless of the "official" work day, in some schools and districts teachers routinely stay after school to work together or attend professional development, whether they are paid or not. In others, a meeting scheduled after school can be cause for a union grievance. And, those attitudes about after-school time have a lot to do with whether schools have found ways to support teachers in making sure that the precious time they spend together will benefit their students.

Individualized Attention

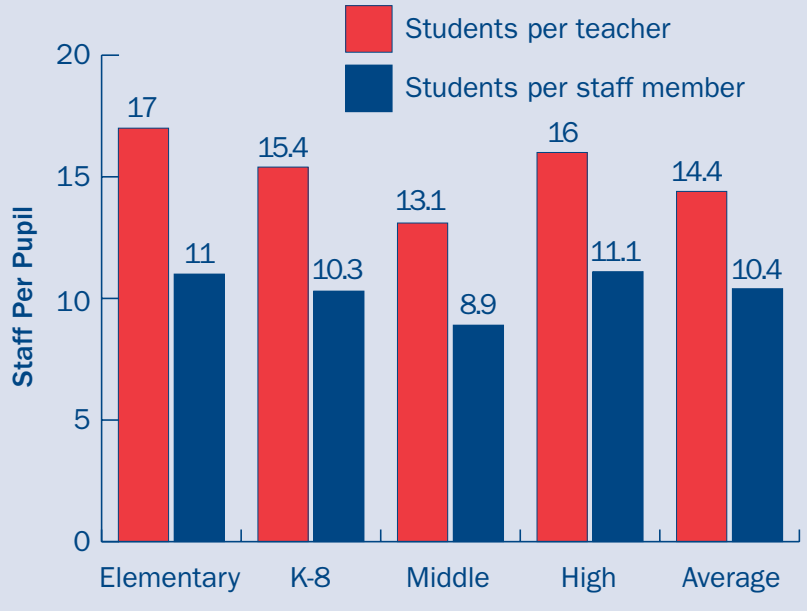
Transforming schools find ways to create more small group instruction based on educational need. Though creating smaller class sizes makes common sense and is politically popular, the research is clear that reducing class size across the board for all students in all subjects does not guarantee improved student achievement.[10] The evidence from Title I experiments with school wide use of funds to make small reductions in average class size for all students has not been convincing. However, research is clear that:

- Class size reduction in the early grades, Pre-K through second grade, can make an important, lasting difference in student achievement
- Small reductions in class size make little difference; it is only when class sizes get down to the 15 to 17 range that achievement increases predictably
- If teachers don't change their classroom practice to take advantage of class size reductions, there is no reason to expect improved student performance
- High performing schools have incorporated these lessons into new organizations that create *significantly* smaller class sizes for students in the early grades and even smaller group sizes for reading. Some schools have chosen to reduce average class sizes for the entire day, other effective schools have targeted the resources by creating smaller group sizes for reading only and using assessment data to assign students to groups that meet their needs. The following cases show how schools might reorganize existing resources with district help to support either strategy.

Clifton Elementary school in Cincinnati Public Schools has class sizes of 15 for all students. In Cincinnati, schools that do not improve student performance over a two year period become eligible for "redesign." Schools in this category are closed and reopened with a new group of teachers, a coherent instructional design and curriculum and a new organization. The district took this opportunity to make the most of existing resources at Clifton by targeting the creation of class sizes of 15 or less. They did this by combining all support and instructional resources to create smaller class sizes first and then adding support around this using available funds and creative strategies.

The chart below shows the district's average ratios of students per teacher and student per adult, including all teachers and students in all programs. It shows that, at the elementary school level, there is one teacher for every 17 students and one adult for every

Cincinnati School Level Staff Per Pupil 1999-2000



11 students. To create class sizes of 15 at Clifton school, the district eliminated all instructional aides and used these dollars to pay teachers. In addition, a guidance counselor and 1.5 social workers were eliminated to pay for additional teachers. The school partnered with social service agencies to provide some of the lost social services and teachers, with much smaller class sizes were able to take on more personal, advisory roles with students. All Title I funds were used for classroom teachers and one of two special education resource teachers became a classroom teacher of both regular and special needs students.

The **Dever school** in Boston, Massachusetts chose to reduce group sizes for reading only. At Dever, the entire school has a 90-minute literacy block scheduled from 9:30-11:00. The entire teaching staff receives ongoing training to use their chosen literacy model, First Steps,[11] and many have attended summer training at a local teaching college. Subject specialists in drama, science, physical education, and Spanish, as well as special education teachers, partner with regular classroom teachers and teach literacy during the literacy block. This helps to reduce the regular-education class size of 25-28 students per teacher to a reading-group size of 12-18 students per teacher**.** This gives almost all classes two instructors per classroom during the literacy block. Students are placed in groups based on assessment results in reading. In addition, the school uses Title I funds to pay for two literacy specialists, who work with small groups of students during the literacy blocks and also provide one-on-one tutoring as needed throughout the day and after school.[12]

A number of schools we have worked with vary the model described above by scheduling literacy blocks for different teaching teams throughout the day. This strategy allows the school to rotate their literacy specialists to create smaller class sizes for each team. One school in Oak Grove, California uses its Title I funds to pay for eight part-time reading experts that work from 9 a.m. to 1 p.m. each day. These 8 reading specialists move in pairs into regular classrooms over the morning to give each classroom three teachers for an hour of reading instruction each day. Teachers work together to use assessment data to help them use small groups effectively.

Regardless of the specifics in organization, all of the schools we studied have reduced the number of specialist teachers and other support staff, who work outside the regular classroom with special populations of students and moved them to work as partners with regular classroom teachers in small groups where skills and educational goals drive the content and group size. At the Clifton school, the strategy converted support staff and specialist positions to classroom instructors; while the Dever school retrained specialist and support staff to create small reading groups.

At the secondary level, creating more individualized attention for academic instruction has two pieces: finding ways to have smaller group sizes, *and reducing the teacher load* or the total number of students a teacher has responsibility for at one time. If a teacher has five groups of 20 in writing, her total student load of 100 students will severely limit her ability to assess each student's progress and create customized learning strategies. Because reducing student load must be done primarily through scheduling strategies we will discuss it in the section below. But the first step is to create the potential for smaller group sizes in academic subjects.

In many secondary schools, creating smaller group sizes for academic subjects will require shifting the mix of teaching staff to include more teachers capable of teaching high priority academic subjects. To test whether this is the case in your school, analyzing class sizes by subject can be a first step. Many schools are surprised to find that class sizes for the highest priority subjects of Language Arts and General History, where writing skills are taught, are much larger than elective courses which do not have the same academic content. Another simple test is to calculate the percent of staff that teach subjects tested on the state's proficiency tests. High schools we work with typically find that these teachers comprise only about half their total staff.

Central Park East school in New York City provides a dramatic example of "shifting the mix" of teaching staff. At Central Park East, full time teaching staff teach one of two courses, Humanities or Science/Math. All other subjects are contracted out and/or provided off campus. The result is that students are in groups of 18 or fewer and teachers have student loads of 26. Another strategy that "shifts" the mix is to create interdisciplinary courses that use teaching teams to address academic content and skills. In Talent Development High Schools, coursework is redesigned around career themes, with curriculum that carefully addresses the most challenging academic standards and skills. In addition, all teachers, regardless of sub-

ject, are continuously trained in the use of a common literacy platform.

More, Longer Blocks of Academic Time

Research confirms the common sense idea that if students spend more time on academic subjects, they will learn more.[13] Successful schools we are working with are looking to:

- Find more time for academic instruction within the school day
- Provide additional, but tightly integrated academic time for those students who need it
- Create longer blocks of time for instruction

A recent study by the Consortium on Chicago School Research documents how much time is lost to fragmented daily schedules, unnecessary interruptions and poor classroom management in the Chicago Public Schools. Researcher Smith shows that only about *half* of scheduled instructional time actually is used due to time lost to: daily start-up routines, special programs and events, holiday slowdowns, test preparation periods, and a steep drop in academic work during the last six weeks of the school year.[14] Surveys looking at how teachers use time can be a powerful way for teachers to assess whether they are spending enough instructional time supporting the achievement priorities.

The most successful schools increase the amount and power of their academic time by carefully integrating academic goals throughout the school day and creating a program of instruction where links between subjects are constantly reinforced and common skills and habits of mind are stressed. Schools can adopt curriculum and instructional materials which do this, like Roots and Wings, or assemble their own programs building on proven available materials, as Comprehensive School Reform designs like Expeditionary Learning and Modern Red School House help schools to do. The Consortium for Research on Chicago Public Schools defines this approach as "instructional program coherence." They found that students in schools with such "program coherence" significantly out-performed those in schools without it.[15]

Successful schools are finding ways to provide students with more time if they need it, after or before school. Though many schools offer after school programs, they are not always linked in any planned way to the student's program of instruction during the day.[16] The Mary C. Lyons school in Boston found that careful integration of their before and after school programs with their academic program paid off in improved student performance for students having trouble reading at grade level.

New studies show that schools that have made dramatic improvements in student performance devote more and longer blocks of time to literacy and math.[17] Many of the successful Comprehensive School Reform Models, such as Roots and Wings and America's Choice require that schools reorganize the school day to create 90-minute blocks of time devoted to literacy. The scheduling of literacy blocks can conflict with the traditional use of full time specialists. For example, if the entire school is involved in morning literacy blocks, the need for specialists in the morning is reduced. Some schools have addressed this by changing the work schedules of their specialists, or by increasing class sizes for subject specialists and including them in teaching morning literacy classes, as described above.

At the secondary level, creating more and longer blocks of time usually means addressing the traditional schedule as well as the organization of course work. Traditional secondary schools have short, daily unchanging blocks of time devoted to each subject. These short blocks of time can limit the types of activities teachers engage in with students, making it difficult to pursue project based learning or other lessons that might require longer blocks of time. The standard schedule also has the effect of giving roughly equal amounts of time to all subjects, instead of emphasizing the development of critical academic skills or concepts by giving more time to them. It is not unusual to find students spending less than half of their class time in academic subjects. Analysis of traditional high school budgets often shows that barely half the total budget supports the teaching of academic subjects.[18]

Block scheduling, used in some high schools and many of the Comprehensive Reform Models, such as High Schools that Work, addresses some of these concerns. Block scheduling creates longer periods of time for teaching the same subject, or to combine with another teacher to teach an interdisciplinary subject. There are many variations of block scheduling. The most popular version is the alternate day or "A/B" model, where students still take six classes but take each for 90 minutes on alternate days. Another

model is the 4x4, in which a year's worth of work is condensed into a semester, and students take only four, 90-minute courses at a time. In the well-known Copernican model, the year is divided into trimesters and students take three intensive courses each trimester.[19]

As the models above show, moving to a block schedule does not necessarily create *more* academic time, only longer blocks of time. Creating more academic time requires re-examining graduation requirements and integrating the teaching of academic content and skills into all course work or creating interdisciplinary course offerings, as described above. A number of prominent high school models, such as Talent Development High Schools and High Schools That Work, are generating powerful student results through reorganizing grades nine and ten to focus *only* on the core academic subjects. These models use frequent student assessment to gauge student skill level, target instruction, and measure progress. They aim to ensure that all students enter their final years of schooling with a solid academic foundation.

Expert Support for Teachers

Transforming schools need to find time for teachers, ways of creating individualized attention, more and longer academic time and,finally, resources to provide expert support for teachers to change practice. The Education Trust recently concluded a study of high poverty schools that had dramatically improved student performance. They found that each of these schools employed expert help to improve their instructional practice.[20] Purchasing a Comprehensive School Reform design and the expert support to help implement it can cost from $50,000 to $75,000 a year for a period of years. Many of the designs also require that schools assign a full time staff person, expert in literacy assessment and instruction, to support teachers in their classrooms implementing new designs.

It's important to think about the cost of this "expert" support in two categories: jump-start or transformation cost, and ongoing professional development cost. Just as in a business that is restructuring, learning new practices and approaches requires an infusion of time and resources that schools are not likely to have on hand. For this reason, districts have organized to provide extra funds through federal and private grants as well as reallocation of district dollars to help schools engage in intensive improvement efforts aimed at transformation.[21] The schools we have worked with have combined district support and also reallocated existing resources to fund this expert support.

How Should Schools Get Started?

Understanding individual student performance and working together to improve it provides the starting point for rethinking the way schools use resources. Clear understanding of student skill levels and progress provides the information teachers need in planning how to group students and how to use the time during the school day. Working together to implement a literacy model school wide provides a framework for talking about the necessary changes in staffing and the use of time. Even though changes in resources must support educational strategies to make a difference, we have found that schools often try to implement new strategies without making significant changes in how they organize and use resources. But we have found that resource issues *must be explicitly addressed* if schools hope to sustain their improvement.

We have created a set of "Guiding Resource Principles" that describe the "Big 4" outlined above in more detail to support schools in looking systematically at how they have organized their resources. These principles are based on research on high performing New American Schools and original research conducted by the Consortium for Policy Research in Education. Schools in both Cincinnati and Boston analyze their practices using these principles and their budget plans must include their strategies for incorporating them. To support this work, New American Schools has developed a tool to help guide schools in quantifying and critiquing the way they organize and use resources. It asks schools to perform simple calculations and answer test questions as a way of highlighting opportunities for further exploration.[22]

Guiding Resource Principles

In High Performing New American Schools:

Schools organize time to:

1. Incorporate ***common planning time*** for teachers into the everyday school life.
2. ***Maximize the time and create longer blocks of time*** for academic subjects, especially literacy and math.

Teaching staff and students are organized to provide individualized attention with:

3. ***Smaller group sizes and reduced teacher loads*** in academic subjects where needed to better meet student needs, contributing to instructional focus by reducing specialized and "pull-out" programs for specific groups of students and teachers.
4. Student ***groups that vary*** over the course of a day, based on education needs (not staffing formulas).
5. Structures that support ***personal relationships*** between students and teachers.
6. More resources in ***prevention than remediation.***

Schools use teachers and hire other adults in ways that:

7. Have the ***largest percentage of teachers working in the academic focus area.***
8. Give ***all adults*** (specialists, administrators, paraprofessionals, etc.) an explicit role in ***supporting improved student learning***.
9. Ensure that all ***new staff hired fit the school's needs*** in terms of knowledge, attitude and work schedule.

Schools use additional programs and funds to ensure that:

10. ***Significant resources for professional development*** are used to support the school's Comprehensive School Reform design.
11. ***All school programs and funds*** – including funds from special programs and external and private sources – ***support the Comprehensive School Reform design.***
12. ***Technology is integrated*** as a tool to support the design.

How Districts Can Help

New American Schools has found that districts need to play an active role in order to support schools in realigning their resources to support higher performance. They need to:

- Create awareness and provide concrete models of alternative ways of organizing staff and using time
- Create a district level team to address conflicts with policy, contracts and procedures
- Proactively address difficult staffing issues
- Create accountability for aligning resources to support school improvement

Many schools need help to see new possibilities for organizing resources and to avoid changes that have little chance of improving student achievement. New American Schools designs all have guidelines for organizing resources and some have specific models to organize around. For example, the New American Schools designs Roots and Wings, America's Choice, and Expeditionary Learning each specify that schools must create 90-minute blocks to focus on literacy. Most designs require that schools employ a staff person, expert in literacy assessment and practice, to support teachers in learning and implementing new strategies. Design guidelines provide a useful starting point. Nevertheless, regardless of the design implemented, districts have an important role in supporting and encouraging schools in making difficult resource decisions.[23]

Second, districts need to explicitly address barriers to realigning resources as they arise. Unless the practices and procedures surrounding staffing and other resources change, giving schools lump-sum budgets or control over certain items has little meaning. Staffing practices, contracts and regulations can combine to make meaningful changes in budget nearly impossible. For example, it is not unusual for the state and district regulations to dictate the size of classes and staffing levels for all programs. These policies and contracts may even specify the specialist staff that all schools must have. The result is that the entire budget for staff is used up in following the state and district mandates, giving the school no opportunity to shift resources to better fit its strategy. The Boston Public Schools, with staffing and analytic support from its local education fund, the Boston Plan for Excellence, have created a district level team to help resolve the difficulties schools encounter as they try to reorganize resources. In Cincinnati, district and union leaders met weekly with principals for the first year of their efforts to address issues as they arose.

Third, though schools can make some of the required changes in organization and resource use on their own, others will require district level action. One example would be the need for high schools to reducing spending on non-academic teaching staff. The traditional comprehensive high school often employs more teaching staff to teach non-academic subjects than it does to teach English, Math, Science and History. This means that over half the high school resources are aimed at goals not being measured by the standards that the state and district have set. It also means that class sizes for the core subjects are usually 30 or above, with teachers responsible for more than 125 students at a time. Changing this situation in any significant way will require reducing the numbers of non-academic teachers and increasing the number of teachers who teach in academic areas. It is impractical to expect principals or "school based decision making groups" to make these kinds of dramatic shifts in staffing. Until districts take steps to change this balance, many high schools will struggle to make marginal improvement.

School districts have always held schools accountable for spending dollars according to the rules and for not spending more than they have. But, they haven't necessarily looked at the integration and alignment of resources to support their educational strategies. In many districts this disconnection between educational strategy and budget happens because the review processes and timelines are completely disconnected. The budget office reviews the numbers, the human resources department approves any staffing requests, while other departments review the educational plans. No one looks at the complete picture, and no framework for thinking about the effective use of school resources exists.

Cincinnati Public Schools are working to link these pieces by creating support teams of administrators and teachers that look at the integration of educational plans and budgets, schedules and organizations in under performing schools. These teams make recommendations and support any necessary changes in both. In Boston Public Schools all schools submit their

budget and organizational plan, along with their education plan, to a Deputy Superintendent who uses a set of "indicators" to evaluate the educational plan and the budget. The indicators measure whether schools have implemented resource allocation best practices, such as creating enough planning time, creating small reading groups, and scheduling focused integrated professional development.

Conclusion

Most educators don't like to think about budgets and staffing. This isn't why they chose their profession. But educators, not budgeting experts or human resource departments, must take charge if schools are to improve. This is because changes in organization and the use of time that are not linked to a strategy for improving instruction aren't likely to make any difference. At the same time, there are some changes, like finding the time for professional development, that are required *in order* to improve instruction. Educators need to look anew at the *whole* picture of resources, not just the new pieces added. By looking at the whole, schools can take advantage of all of the existing resources and also end some of the fragmentation of resources that contributes to less effective instruction.

Endnotes

1. David Tyack calls these the Grammar of Schools in "The Grammar of Schooling: Why has it been so hard to change?" *American Educational Research Journal, Vol. 21, n. 3* p. 453-479.

2. Bodilly, Susan. 1998 *Lessons from the Scale-up of New American Schools* Washington, DC: RAND Institute.

3. *Digest of Education Statistics,* 1999 Tables 170, 168.

4. See Miles, Karen Hawley (1997) *Spending More at the Edges.* University of Michigan Press.

5. NCES *Digest of Education Statistics,* 1999 Table 93.

6. NCES reports the total numbers of instructional staff and teachers over time in the *Digest of Education Statistics,* 1999 Table 93. But, data on teachers by type are not available nationally or for these same years. A detailed analysis of instructional staffing in nine urban districts from 1967 to 1991, shows remarkable consistency in staffing patterns across districts and estimates the growth in the number of teachers by type and subject. This can be found in Karen Hawley Miles, 1997 analysis cited above. These estimates were combined with NCES data to generate this chart.

7. Keltner, Brent 1998 *Funding New American Schools Designs,* Washington, DC: RAND Institute.

8. Bodilly, Susan. 1998 *Lessons from the Scale-up of New American Schools* Washington, DC: RAND Institute.

9. New American Schools, 2000 *Revising School Schedules to Create Common Planning Time and Literacy Blocks.* New American Schools: Arlington, VA.

10. STAR results reported in "The Tennessee Study of Class Size in the Early School Grades," Critical Issues for Children and Youths, vol. 5 no. 2 Summer/Fall and Eric A. Hanushek, Making Schools Work: Improving Performance and Controlling Costs. Washington: DC: Brookings Institute.

11. The First Steps model can be implemented on its own or along with the Comprehensive School Reform design, Expeditionary Learning.

12. For more information on the Dever school and other detailed examples, see *Revising School Schedules to Create Common planning Time and Literacy Blocks,* published by New American Schools 2000.

13. "Prisoners of Time: Schools and Programs Making Time Work for Students and Teachers" National Education Commission on Time and Learning. Washington, DC 1994. 212-512-1800.

14. Smith, B. 1998, p.3.

15. Newmann, Fred M., Bets Ann Smith, Elaine Allensworth and Anthony S. Bryk, January 2001,"School Instructional Program Coherence: Benefits and Challenges," Consortium on Chicago School Research, Chicago, Illinois.

16. See report above.

17. *Dispelling the Myth: High Poverty Schools Exceeding Expectation,* www.edtrust.org/dispell.pdf and see *Making Standards Work: a Case Study of Washington State* by Paul Hill (accessed through www.edexcellence.net/library/msw/msw.htm).

18. (see the CPRE report by Miles and Darling Hammond, 1998 Rethinking the Allocation of Teaching Resources).

19. For more information on block scheduling see Canady, Robert Lynn and Michael D. Rettig "The Power of Innovative Scheduling," *Educational Leadership,* November 1995 p. 1-10. There are also numerous web-sites on block scheduling including specific examples.

20. Education Trust, 1999 "*Dispelling the Myth: High Poverty Schools Exceeding Expectations.*"

21. For more information on funding sources, contact New American Schools "Funding Project", 703-908-9500 and see the New American Schools District Issues Brief, *Funding Comprehensive School Reform* by Jason Cascarino.

22. This Guide, "A Guide to Using Your School's Resources Effectively" can be obtained the New American Schools website or by calling New American Schools at 703-908-9500.

23. See Karen Hawley Miles 2000, "Supporting Schools in Rethinking Resources: Lessons from Cincinnati, paper presented to American Education Finance Association. See New American Schools District Services Framework at www.newamericanschools.org.

About the Author

Dr. Karen Hawley Miles, of Education Resource Management Strategies in Dallas, Texas, specializes in strategic planning in public schools and district and school resource allocation. She works with school districts nationwide to rethink the use of resources and the organization of districts and schools. She has worked to design school improvement and planning processes in several districts. Working at the intersection of research and practice, she has also coordinated national research projects of school district and school level resource allocation. She has focused especially on how districts and schools can find the necessary resources and time to invest in building teacher capacity. She co-directed the study by the Economic Policy Institute, "Where Has the Money Gone?," which traced the growth in school spending since 1967. She recently concluded a study for the Consortium for Policy Research in Education (CPRE) on resource allocation in high performing schools. Prior to this, she worked at Bain & Company as a strategy and management consultant for hospitals and corporations. She has a B.A. in economics from Yale University and a doctorate in Education from Harvard University, specializing in school organization, change, and finance.

New American Schools District Support in Resource Reallocation

Redesigning schools to generate higher student performance requires districts to rethink their use and allocation of resources. Districts need to adjust spending priorities to fund the initial transformation of schools to new designs. To do this, New American Schools has found that districts typically need to:

- Re-align spending to better support its comprehensive school reform strategy and academic priorities;
- Implement an initiative to encourage schools to rethink resources;
- Redesign practices surrounding the allocation and control of resources so schools can reorganize staff and dollars for new designs.

New American Schools offers services including analysis, introductory presentations, self-analysis and reference tools, and ongoing consulting and training to help districts. Though districts face similar issues, each confronts the need to reorganize resources. Whatever actions a district takes to change its spending and allocation of resources need to fit with and build on initiatives underway. Our goal is to share what we are learning from our work with other districts in a way that builds leadership capacity in the district. There are three major areas of district work in resource reallocation.

1) District Spending Levels and Strategy

Supporting comprehensive school reform requires two changes in district spending. First, districts need to invest in buying the new curriculum, assessments, computer equipment, and professional development to support the new designs. Typically, districts need to pull together a multi-year investment fund. Second, most districts find that they need to change the way they spend their dollars to focus more on academic priorities and building teacher capacity. Services and tools include:

- Introductory presentations and reading materials outlining the issues and experience from other districts;
- District Issues Brief: "Matching Spending with Strategy: Aligning District Spending to Support a Strategy of Comprehensive School Reform;"
- District Issues Brief: "Money Matters: Rethinking School and District Spending to Support Comprehensive School Reform;"
- District Issues Brief: "Reinvesting in Teachers: Aligning District Professional Development Spending to Support a Comprehensive School Reform Strategy;"
- Ongoing updates of funding sources available to support comprehensive school reform investment funds; and
- Analysis framework and tool kit for understanding spending on professional development and instructional and school support.

2) Rethinking School Resources

Tools here aim at providing support to schools in re-examining and redesigning their use of resources to support new designs. For example, all of the designs call for significantly more planning time for teachers than most districts provide, and most urge the creation of smaller learning environments. Tools and services include:

- Presentations and reading materials for schools;
- District Issues Brief: "Rethinking School Spending: Organizing Schools to Support Comprehensive School Designs;"
- District Issues Brief: "Many Programs, One Investment: Combining Federal Funds to Support Comprehensive School Reform;"
- Training staff to support resource reallocation;
- A tested calendar and process for training and supporting school efforts;
- A "Resource Review Guide" that supports schools in systematically reviewing their existing staff and dollars and aims at helping them prioritize areas where they need to make or investigate changes;
- Case studies of schools that have significantly reorganized to support improved student performance and new designs; and
- Ongoing consulting.

3) District Practices and Procedures

Tools aim at helping district leaders identify how practices and procedures need to change to enable schools to align their resources to better support instructional priorities, strategies, and design. Services and tools include:

- Introductory presentations and reading materials;
- District Issues Brief: "Freeing School Resources for Learning;"
- Self-analysis tool: "District Practices and Procedures" for districts to identify which policies, practices, and procedures need to change to support more autonomy in the use of school resources; and
- Consulting services.

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