Imagine a school that embodies many of the remedies currently advocated by educational reformers: The school is governed by a site-based council, composed of teachers, administrators, parents, and community members. The principal of the school reports regularly to the council on the progress of reform within the school and the council makes major decisions about the allocation of funds to activities within the school and the evaluation and hiring of personnel. Groups of teachers work together on a range of projects, including planning of common activities across groups and grades, development of curriculum units, and professional development to enhance their skills. Groups of teachers also exercise control over discretionary resources that can be used to purchase new supplies and materials. On their own initiative, and with the cooperation of the principal and the endorsement of the site council, teachers have organized themselves and their students into multiage teams, so that students move flexibly among teachers within a team and are grouped according to their needs in a given subject. The planning time necessary for teachers to work in teams and to engage in curriculum development is created by coordinating teacher planning times, scheduling art and physical education so as to release teachers from regular classroom duties, and by shortening the school day by an hour once a week.

By almost any prevailing definition of the term, we would regard such a school as being "restructured." Relations between the school and the district were changed by introducing site-based management. Relations among teachers were changed by creating cross-grade teams and workgroups that encourage cooperation among teachers. Relations among teachers and students were changed by introducing a more flexible grouping structure in response to student diversity. And the organization of work in the school was altered substantially by changes in the schedule.

What would we expect to be the consequences of this kind of school restructuring for teachers and students? We might expect teachers to feel more energized, motivated, and positive about their work. We might expect students to experience a more stimulating educational environment, adapted more explicitly to their individual strengths and weaknesses. We might expect parents and community members to regard the school more positively. But would we expect teachers to teach differently and, as a consequence, students to learn more, to think differently, or to approach the acquisition of knowledge differently? Surely structural change in schools is intended to produce changes in teaching and learning. Why else would we go to the effort and expense of changing structures?

Most school reformers and practitioners take for granted that changes in structure produce changes in teaching practice, which in turn produce changes in student learning. Research on these connections presents, as we shall see, a much more pessimistic and complex view. But before we explore the complexities of these connections, it is worth pausing a moment to consider why structural change is such an important theme of educational reform.

Why Reformers Like to Change Structures

I recently gave a talk about school restructuring to a gathering of high school principals and superintendents from school districts that identified themselves as reform-oriented. The common theme of their reforms was changing the high school schedule to lengthen the standard 45- or 50-minute class to something longer, perhaps as much as 90 minutes. They had war stories to tell about how difficult the change had been, how resistant some teachers and department heads had been to changing existing routines, and how invigorated they were when the schedule changes began to take place. When I asked them why they chose to concentrate so much energy and attention on changing the schedule, they first looked at me as if I had descended from another planet. To them, the answer was obvious: More uninterrupted learning time meant more student engagement and more engagement meant more learning, or at least more opportunity for students to learn. When I asked them why they believed that changing the schedule would actually result in these changes in teaching and learning, they again looked at me strangely. They were unable to say exactly what kinds of teaching would occur in a longer period of time that couldn’t occur in a shorter period. To them, it was obvious that changing the schedule would lead to a different kind of teaching, but it wasn’t necessarily obvious what kind of teaching that might be. My favorite commentary on this problem is the teacher who was quoted as saying, after his school changed from 45- to 90-minute periods, “Oh good, now I can show the whole...”

Richard F. Elmore is Professor of Education and Chairman of the Department of Administration, Planning, and Social Policy at Harvard University Graduate School of Education, 6 Appian Way, Gutman 409, Cambridge, MA 02138. His areas of specialization are state-local relations in education policy, school organization, and educational choice.
movie." It is not obvious, in other words, that changes in teaching practice follow from changes in structure.

I think the principals and superintendents to whom I spoke focused on changing the schedule for a variety of reasons, most of which are not directly related to changing teaching and learning. First, the schedule is a highly visible fixture of daily life in the school and, therefore, to change the schedule is to send a signal that something important is happening. Reformers like to change structures, in other words, because structures are important and disrupting important established patterns communicates that they are serious about change. Structural change has high symbolic value.

Second, reformers like to change structures because, as difficult as they are to change, they are easier than most other candidates for change. One could think of reforming schools, for example, by getting rid of the teachers and administrators in them and replacing them with others. One could think of reforming schools by closing them down and sending the students to other schools that had demonstrated their capacity to teach more effectively. Or one could think of reforming schools by recruiting only teachers who had a common method of practice that could be demonstrated to lead to student learning. Next to these alternatives, structural change, as difficult as it may seem, is easy. So reformers like to change structures because, among the array of alternatives available for transforming schools, they are feasible and readily available.

Third, reformers like to change structures because they believe that structures exercise a strong influence over their work and that structures often constrain their ability to do things they think are good for students. It is not difficult to imagine how, for example, a 45-minute period might frustrate a teacher who was deeply committed and knowledgeable and determined to teach students the intricacies of Shakespeare or the Civil War, and how the teacher might feel liberated by having a class period twice as long. Nor is it difficult to image how an elementary teacher might feel isolated in her classroom, and energized when she was allowed to work with other teachers to design a writing sequence for a group of students. Yet it is not obvious how lengthening the period of time available to teach something, or working cooperatively with other teachers, leads directly to a different kind of teaching and learning. Educators believe that structures constrain them, but they often are not sure exactly what they would do differently if the structural constraints weren’t there. They just know that things would be different.

It is understandable, then, that structural change should occupy such a highly visible place in school reform. It has high symbolic value, it is relatively easy to do, and it is consistent with deeply held beliefs among reformers and practitioners about what people think is wrong with schools.

**Emerging Evidence on Structure and Practice**

My colleagues and I spent a considerable period of time studying the relationship between structural change and teaching practice in three elementary schools. (Elmore, Peterson, & McCarthy, 1995). We deliberately chose to focus on schools that were exemplars of restructuring. That is, they were actively pursuing ambitious changes in structure—teacher collegiality, student grouping, scheduling, and the like—and they purported to agree on a common pedagogical approach, which we characterize broadly as a "constructivist" view of learning. We entered the schools thinking that we would find a variety of connections among changes in structure and changes in classroom teaching practice, and that our task would be to describe how these connections played out in different schools. Instead, what we found was that in two of our three schools, teachers felt highly motivated and energized by their involvement in school restructuring, but made few changes in their teaching practice, judged either in terms of how they said they had taught earlier or in terms of their espoused constructivist views. Many teachers would say enthusiastically that their lives and their teaching practice had been dramatically changed by their involvement in restructuring, but when we observed them teaching we saw teaching practice that looked mostly quite ordinary. Teachers would, for example, supply most of the answers to questions they themselves had asked, they would organize their classrooms so as to make themselves the center of learning, children’s understandings were not the dominant theme of teacher-student interaction, and most activities focused on relatively routinized learning. Though teachers and administrators were enthusiastic about, and committed to, school restructuring, and we saw substantial evidence in two of our three schools of significant structural change, we saw little evidence that teachers were teaching differently than they said they had been teaching or that they were teaching in ways that matched their espoused beliefs about what good teaching was.

In the third school in our study, a rather different pattern emerged. That school was established as an alternative school in the mid-1970s and teachers were recruited initially based on their agreement with a particular approach to teaching. This agreement was reinforced over time by recruitment of teachers whose views matched those of existing teachers. The school initially adopted a relatively unconventional structure—no full-time principal, cooperative decisionmaking on virtually all matters, high involvement of parents in the life of the school, and the like. Over time, though, the school evolved toward a more conventional structure—self-contained classrooms, a full-time principal—with a strong overlay of teacher collegiality. Even though teachers were responsible for a single group of students in a single classroom, they established strong patterns of formal and informal interaction outside the classroom, and they shared strong norms about what good teaching looked like. Not surprisingly, we found that classroom practice in this school looked very different from that in our other schools and closely approximated teachers’ espoused views of what good practice was.

Research from the Center on Organization and Restructuring of Schools (CORS) presents a similarly complex picture of the relationship between structural change and practice. Marks and Seashore Louis (1995) found that when they related measures of teacher empowerment (teachers’ perceptions of their influence on school decisions) to measures of authentic pedagogy (observed practice of teachers), in a sample of 24 restructuring elementary, middle, and high schools, roughly 4 schools in the sample were characterized by high empowerment and high authentic instruction, whereas 3 schools were characterized by high levels of empowerment and low levels of authentic instruction, and 1 school was characterized by low empow-
erformance and high authenticity of instruction. The majority of the restructuring schools in the sample (16) were characterized by low empowerment and low authenticity of instruction (Marks & Seashore Louis, 1995, 24). Thus, among nominally restructuring schools, the relationship between one prominent feature of structural change—opportunities for teacher influence on school decisions—and observed instructional practice seemed to be notably slippery. Restructuring does not seem to be strongly related to teacher empowerment, and teacher empowerment does not seem to lead unerringly to authentic pedagogy. Marks and Louis did find, however, that when teacher empowerment was mediated by measures of the school’s focus on instructional issues, empowerment had a significant impact on both instructional practice and measured student achievement (25). That is, when the values and norms of the school focused attention on instruction and teachers took responsibility for student performance, teacher empowerment seemed to lead to significant changes in pedagogy and changes in pedagogy seemed related to changes in student learning.

Likewise, in a survey of teaching practice in their sample of restructuring schools, CORS researchers concluded that all the schools in this study had made clear progress in organizational restructuring. Nevertheless, the quality of authentic pedagogy in these schools varied widely. . . . even the most successful teachers and schools scored far below the highest level of our proposed standards [for authentic pedagogy]. (Newmann, Marks, & Gamoran, 1995, 7)

They also found “significant variation in student performance” and that “even the most successful students scored well below the upper end of our scale.” They conclude, “the good news is that some teachers and schools have been at least reasonably successful at delivering authentic pedagogy. But the bad news is that overall levels of authentic pedagogy remain low, even in highly restructured schools” (7).

When this finding began to emerge in our own research, my colleagues and I asked ourselves, “Why would anyone expect structural change to produce changes in teaching practice anyway?” And this question led us to look more broadly at research on the impact of structure on teachers and students. Briefly, what we found suggested a pattern of methodological connections between structure and practice. Two examples will suffice.

One of the most common structural reform debates in schools revolves around tracking and ability grouping. Critics of the practice of tracking and ability grouping argue that homogeneous grouping of students deprives lower achieving students of the stimulation of higher achieving students in the same classroom or learning group and limits the access of lower achieving students to opportunities to acquire knowledge (Murphy & Hallinger, 1989; Oakes, 1985). The empirical evidence on tracking and ability grouping is, however, quite mixed. There is general support in the evidence for the conclusion that, particularly at the secondary level, students in different groups receive different content and are treated differently by teachers (Gamoran, 1987; Oakes, 1985; Sorenson & Hallinan, 1986). But the evidence on the effects of tracking and ability grouping on student achievement is much less clear. Looking across a number of studies, for example, Slavin (1990) found that there was little difference in measured achievement between secondary schools that tracked and those that didn’t. He also found in a review of elementary school ability grouping practices (1987) that certain types of homogeneous grouping seemed actually to increase student achievement under certain conditions. Within-class grouping in mathematics, for example, seemed to have a modest positive effect as did cross-class grouping for reading.

Another common structural reform debate centers on class size. Most educators regard the relationship between class size and instructional quality to be unambiguous—the smaller the class, the more likely teachers are to succeed with children. Yet the evidence on the effects of class size on achievement is highly ambiguous and problematical. In general, the research finds that class size affects student learning, positively or negatively, only at the extremes—say, below 20 students or above 40 students per teacher. Class size effects, where they exist at all, tend to be modest in the primary grades—kindergarten through third grade—and weaker to nonexistent in the later grades (Finn & Achilles, 1990; Glass & Smith, 1979; Mosteller, 1995).

Why, when reformers and practitioners are often convinced that tracking, ability grouping, and class size are powerful influences on teaching and learning, do we find such weak and indeterminant effects of these structures? The answers might be in the marginal ruminations of the researchers who focus on structural effects. Slavin, for example, concludes his review of elementary grouping practices by saying,

Unfortunately, the research comparing alternative ability grouping arrangements in elementary schools has, with few exceptions, failed to specify in detail the changes in instructional practice brought about by the various grouping methods. Clearly, the effects of grouping on achievement are mediated by teacher behaviors. (Slavin, 1987, 297)

Likewise, Gamoran and Berends conclude their study of secondary tracking by saying, “Another explanation for weak and inconsistent effects [of tracking] is that although instruction varies between tracks and ability levels, the instructional differences may actually be small when compared to the overall similarity of instruction at all levels” (1987, 425). Similarly, Robinson concludes a review of class size research, “Many teachers whose classes have been reduced, even by substantial numbers, do not change their teaching techniques to take advantage of the smaller classes,” by, for example, giving students more individual attention, changing the layout of the classroom to encourage more active student participation, or engaging in more personalized forms of student evaluation (1990, 87).

So the findings of research on tracking, ability grouping, and class size appear to corroborate the findings of school-restructuring research: Changes in structure are weakly related to changes in teaching practice, and therefore structural change does not necessarily lead to changes in teaching, learning, and student performance.

Rethinking the Relationship Between Structure and Practice

The implications of these findings for educational reform and educational research are, I think, fairly substantial.
They suggest, for example, that the relationship between structural change in schools and changes in teaching and learning are mediated by relatively powerful factors, such as the shared norms, knowledge, and skill of teachers, and that changing structure has a slippery and unreliable relationship to these mediating factors. A teacher who responds to the opportunities presented by longer class periods by showing the whole movie is a teacher who is pursuing old practices while working in a new structure.

One implication of this finding for reformers is that reforms might focus first on changing norms, knowledge, and skills at the individual and organizational level before the focus on changing structure. That is, teachers might actually learn to teach differently and develop shared expectations and beliefs about what good teaching is, and then invent the organizational structures that go with those shared skills, expectations, and beliefs. This perspective on reform would not be easy to sell in a political and administrative culture that accepts at face value the power of structural change as an implement of reform. It would also require reformers to invest more heavily in developing the knowledge and skills of teachers, rather than in moving boxes around in a structure. And it would require reformers to treat structural change as a more contingent and uncertain result of change in practice, rather than as a means of reaching new practice.

An implication of this finding for research is that empirical studies of structural change should not focus on the simple relationship between structure and student outcomes, as seductive as that might be. Rather, researchers should probe underneath the structures to discover, both conceptually and empirically, what changes in teaching practice and student learning are actually entailed in them and what evidence one would accept that changes in structure were actually related to changes in practice and learning. Such studies might lead to more useful ideas about how structural change relates to changes in student outcomes, by specifying what kinds of practice have to be in place for structures to work.

Note

1CORS defined authentic pedagogy according to three criteria: (a) active student participation in the construction of knowledge; (b) disciplined inquiry grounded in a field of knowledge; and (c) aesthetic, utilitarian, or personal value to knowledge beyond the school (Newmann, Marks, & Gamoran 1995, 3).

References


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