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In Search of Cost-Effective Schools

GIVEN THE DEBT LEVELS of most public entities—ranging all the way from small villages to large states and the federal government—finding ways to make schools cost-effective is apt to become increasingly necessary. The urgent need for other services also calls for cost-cutting, and a strapped public is becoming more and more impatient about school needs. One local newspaper's recent response to teacher salary demands was a blunt, "The plain, pure, simple fact of the matter is the taxpayers cannot afford increased taxes. . . . Do the job you are paid to do, or find another" (Willmott, 1992). We examine here some major extant cost-effectiveness proposals, and we look largely to New York State developments to display the context of such concerns.

In late 1992, New York's commissioner of education announced his intent to seek legislation enabling him to impose consolidation on any districts where indicated. His rationale was that "the people of the state . . . have an interest in seeing that all children receive their constitutional right to an education and that the public's money is not squandered, regardless of local wishes" (Sobol, 1992, p. 7). A few months later, an exposé revealed a retired regional (BOCES, or Board of Cooperative Educational Services) superintendent to have just left the system

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with what the governor called a "\$1 million goodbye kiss" (Hildebrand & Keeler, 1993). This was the approximate size of his retirement package, built on a salary enormously inflated for his final employment contract, and on the privilege of cashing out unused sick leave as well as vacation time. (According to his contract, the vacation time was being amassed at the rate of almost 29 weeks per year, and the sick leave could be accrued even after his death.) The response was public outrage, suits to recover the sums, warranted fears as to likely further state funding cuts, and an intensified search for cost-effectiveness in schools (Dao, 1993).

Cost-effectiveness is something that is likely to loom larger, since scarce funds are apt to become an increasingly pivotal factor in educational decisions. It was not ever thus. In an expanding economy, cost effectiveness was not of such concern. In fact, the idea that the cost-effectiveness of schools and programs should be systematically investigated is of fairly recent origin, having grown out of the evaluation movement that took root in the 1960s. In the 1970s, the notion was added that an evaluation must look not only at a school or district's educational effectiveness, but at its cost-effectiveness as well (Levin, 1991). While the former is concerned with what makes schools successful, the latter asks what makes them affordable in terms of their efficiency. Cost-effectiveness is concerned with productivity, or the relation of costs to benefits. It asks, in the words of

one title, how to get "the biggest bang for the buck" (Hickrod et al., 1989).

Yet cost-effectiveness is not synonymous with cost reduction: It asks how to spend money wisely rather than how to avoid spending it at all. This means that a cost-effectiveness assessment demands a broad look not only at present circumstances but at future projections, and it means raising questions about what are reasonable goals and commitments. Because it is likely to mean pain as well as gain, it also requires an objective look at the interests and concerns of all who have a stake in public schools—youngsters, parents, teachers, administrators, and the business, professional, labor, and public service communities.

Cost-effectiveness concerns do not always merge with educational concerns, which is where trouble can start. It may be, for instance, that one on one—one teacher per child—is the most educationally effective arrangement we could offer. But certainly we cannot afford such a set-up. It may be that an enrollment of 4000 is about the minimally cost-effective size for a school district, but consolidation is not always something we are willing to countenance. It may be that dividing schools into K-2 for one, 3-4 for another, and 5-7 for a third is the most cost-effective way to distribute the school population of a particular community. But such assignment patterns with their frequent moves would probably never be inspired by educational interests (even though they may be rendered compatible with them).

Nor are cost-effectiveness concerns always compatible with equity interests. Indeed, it is the commitment to making education accessible to all that has skyrocketed school costs in some locales. Compensatory programs and special education settings are typically far more labor-intensive than regular classrooms. So cost-effectiveness measures may recommend modifications rendering such efforts less successful.

Fortunately, however, a number of proposals now advanced primarily for improving educational effectiveness, and/or for enhancing equity, coincide extensively with cost-effectiveness concerns. Interage grouping, for example, offers the possibility of combining groups that might otherwise remain very small classes. De-tracking also offsets the need for small, targeted groups. The "inclusion" concept recommending the inclusion or mainstreaming of handicapped students also responds to cost-effectiveness

concerns by permitting the balancing out of student-teacher ratios between regular classrooms and what were previously special education classrooms. (By combining its special education and regular classes, an elementary school in Fairmont, Minnesota, has managed to halve the size of all its classes.)

Thus, there are ways to blend the several concerns of educational quality, equity, and school costs, and a number of proposals have been offered for doing so. Subsequent sections attempt to touch on many of them, including district consolidation, shared service and facilities arrangements, new accountability strategies, new information systems, school restructuring, and broadened impact and context plans. We move from the more specific and familiar to the broader, more pervasive second-order changes that could prove cost-effective.

Merger and Consolidation

Perhaps the most frequently proposed way to lower school costs is by school district merger. It is thought that by consolidating two or more low enrollment districts, it should be possible to reduce costs in several ways: the elimination of duplicate sets of high priced administrators and services, the closing of some buildings, the enlarging of classes, and larger scale purchasing on the part of the single, enlarged district. It has also been argued that the cost-benefit savings of consolidation are matched by real educational-effectiveness gains, since the enlarged district can expand its curriculum and gain from the increased expertise present in the combined teaching staff.

A recent study on Long Island urges the reduction of the area's 127 districts to 66 by bringing most to a minimum enrollment of 4,000 (Long Island Regional Planning Board, 1992). Investigators projected an eventual annual cost savings of \$140 million, largely through the elimination of administrative costs. But such predictions are subject to challenge, since the evidence favoring consolidation now appears somewhat weaker than it has long been assumed to be. The *educational* benefits argument has been substantially undermined over the last decade by findings and conclusions supporting the desirability of small schools and districts. In fact, one extensive and influential study went so far as to conclude that the smaller the district, the higher the student achievement (Walberg & Fowler, 1987).

Moreover, the extent of savings occasioned by consolidation also now appears questionable (Streifel, Foldesy, & Holman, 1991). The economies of scale have long been challenged (Sher & Tompkins, 1976). More recently it has been pointed out that the savings share on administrative costs—which is what most recommends consolidation to many advocates—is likely to be smaller than anticipated, since administration is not where the bulk of the expenditures lie. Instructional costs, which the National Center for Education Statistics (1990) reports to have averaged 61 percent of total school expenditures in 1986-87, either remain unaffected or may even increase under many consolidation plans. The studies recommending consolidation in New York State, for instance, have shown that where two or more districts merge, the new salary scale usually represents the higher of the two (Sobol, 1992). This could mean considerable cost increase, depending on the discrepancy between previous salary scales.

Nevertheless, given the importance of paring back public expenditure, it seems difficult to argue that the elimination of costly and duplicative offices is unimportant—especially given the multiplication of administrative posts in education over the past several decades. Rockland County, for example, is a New York City suburb of approximately 80 square miles, with eight towns, eight school districts, and a total enrollment of 37,000 students. The combined salaries of the eight superintendents total \$872,050 per year (without including fringe benefits, which add another \$200,000-\$300,000) (“Back to School,” 1992). Mergers reducing the eight districts to three, of approximately 12,000 students each, would save \$500,000 per year in superintendents’ salaries, plus perhaps an additional three-quarters of that amount in the salaries of business managers. And such totals are prior even to examining the salaries of assistant superintendents, clerical support staff, and office maintenance costs for each of these officials.

Objections to consolidation remain strong, however, expressed largely in terms of loss of local identity and control, loss of jobs, increases in transportation time and expense, and possible tax increases. Feelings run high, leaving the political viability of consolidation always a question. (New York’s commissioner of education withdrew his request for the power to impose consolidation on the grounds that it had generated too much resistance.) Merger propos-

als are likely to be unpopular with the districts affected, and they are now being contested on educational quality grounds as well as on economic grounds. But the idea of pooling particular resources and merging some services meets far less opposition.

Shared Resources, Facilities, and Functions

Partly in an effort to stave off consolidation, neighboring districts have worked out plans to share both services and facilities in multiple ways and to varying extents. Shared transportation and food services are not uncommon, nor are regional bidding arrangements on oil and gasoline contracts. Shared arrangements for contracting out custodial and maintenance services have been found cost-effective in some areas, and the sharing of experts in bid, grant, and contract preparation, as well as in the preparation of transportation schedules and routes, has been undertaken in others in the interests of cost-effectiveness.

A different order of sharing occurs in those districts that have at least to some extent pooled instructional resources to share teacher expertise in particular areas (e.g., in teaching advanced physics or Latin). Two small Illinois districts have gone much further. In trying to maintain their separate high schools, the two were running average class sizes of seven. They combined the two schools into one, using one building as a humanities center and the other as a math and science center, and students are bused the six miles between the two, changing buildings at midday. The arrangement has permitted larger classes, an increase in the number and diversity of course offerings, and savings in salaries and supplies (Pearch & Liesse, 1992).

Still another kind of sharing involves the sharing of facilities and functions with non-school groups. For instance, in Dade County, Florida, elementary schooling is being offered by special arrangement at business sites. The business provides the facilities and the school district provides the teachers and the program. In Minnesota, an alternative school operates in rented space in a mall. And in many areas, districts rent out extra space in school buildings to other agencies and organizations—sometimes to groups that can enhance the instructional program (e.g., senior citizen centers) and sometimes to other public facilities that make available needed resources, such as libraries and other social services.

In Wichita, Kansas, the community and the school district share cooperative libraries—greatly augmenting what school libraries can offer and simultaneously eliminating unnecessary duplication (Nathan, 1989). Elsewhere, in-school space has been rented to agricultural and church groups, Head Start and day care center programs, travel agencies, doctors, and insurance companies (Nathan, 1991).

It is possible to enhance school cost-effectiveness by sharing functions as well as facilities with other groups. Interagency collaboration can simultaneously provide the supplementary services many students need while eliminating the necessity for duplication. Charter Oak Elementary School in West Hartford, Connecticut, for example, represents a partnership between a school, a preschool program, a family services agency, and the city's social services department. Such a pooling of resources eliminates the need for duplicating the extensive in-school student support services that could otherwise prove important to success (Miller, 1992).

It may be possible for other agencies to contribute instructional as well as auxiliary services—in driver education, sports and recreation, safety, music, and theatre, for example. And some extracurricular programs might be handled to advantage elsewhere. For instance, it is common for baseball, soccer, and football teams for younger children to be operated by community organizations. Only at the high school level do schools take them over (and at considerable expense). It will surely be controversial, but the question of whether to let community organizations handle competitive team sports throughout seems a reasonable possibility to explore in the interest of cost-effectiveness.

Rethinking Accountability

Even given the widespread adoption of such efforts, the chances remain good that still more, and more fundamentally pervasive ways, may have to be found for extensively altering school expenditure patterns. Thus, here are some system-altering ways in which we might look for added cost-effectiveness. They have to do with fundamentally rethinking the way we organize schools and hold them accountable.

New modes of accountability might well serve cost-effectiveness purposes, since school systems spend many dollars between attempts to assure that schools and teachers do what they are supposed to

be doing, and attempts to assure that they do it well. A reduced need for supervision and monitoring might lower costs substantially. But in that event, how might accountability concerns be met?

Depending on their features, both of today's major restructuring strategies, school-based management and choice, can have extensive effects on accountability. School-based management councils can oversee and hold schools responsible on both compliance and effectiveness, but only, of course, if they possess the authority to do so. To date, authority of this magnitude seems to have devolved only to Chicago's local school councils. Where school-based management is a matter only of delegating specific decisions within the administrative hierarchy, school-based councils lack the independence and autonomy to hold school officials accountable.

The choice arrangement entails a very direct form of accountability: the client's right to tell a service provider that the services are unacceptable by going elsewhere. But this kind of consumer accountability is contingent upon the existence of other places to go and other places that attract. Depending on the details of the choice plan, its effectiveness as an accountability strategy may also rely on sufficient consumer sophistication to be able to discern whether an education is adequate and appropriate.

Whether school-based management or choice can serve as sufficiently effective accountability mechanisms to reduce the need for compliance and supervisory officials depends upon the availability of information that is relevant, accurate, and meaningful. Such information is not always accessible. Questioners are frequently told by schools that data they seek have simply never been generated. Available information can also prove inaccessible in another, equally fundamental sense: Its complexities render it so, and the way it is presented—e.g., the categories selected to display it—may function to obfuscate rather than to enlighten. Thus, if either school-based management or the choice feature is to function as an effective accountability mechanism, meaningful information must be available to the public and/or its representatives, who will have to act on the information conveyed.

In what should such information consist? It would need to describe expenditures in multiple ways, school by school as well as aggregated for the level and for the district, and category by category as well

as aggregated into broad functions such as "instructional costs." Readers should be able to get a clear idea of the allocation of funds between teacher salaries, for example, books and other instructional materials, and what is spent on supervising teachers and developing curriculum.

Contrast such a need with what the National Center for Education Statistics' expenditure figures tell us about school expenditures nationwide. They report only that schools spend 61 percent of education funds on instruction, 35 percent for support, and 4 percent for non-instructional purposes (NCES, 1990). Such figures conceal most of what is important to determining school cost-effectiveness. They also lead to such situations as the disagreement between the New York State Comptroller's Office and the State Department of Education as to whether it was \$1.4 billion or \$494 million that the state's schools spent on administrative costs in 1990-91 (Chang & Hughes, 1993).

Meaningful budget displays are possible but how to arrive at them is by no means obvious. Cynics suspect deliberate obfuscation on the part of school officials. But even the experts disagree on how to compute school expenditures accurately and appropriately. A recent exchange between two of them showed substantial disagreement on how to proceed. One, Fred Hess, leads the external effort to study budgeting under the Chicago reorganization plan; the other, Bruce Cooper, has devised a new plan for computing school costs which has now been used in a number of cities. The two men tangled over the way to find out how money is spent within a school system (Cooper, 1992; Hess, 1992). But whether Hess's "proportional expenditure" method, or Cooper's "cascade" presentation, or some other approach is selected, the effort to render schools cost-effective will probably depend in part on public insistence on budgetary information that most can comprehend, and that permits comparisons.

Reducing Administration

The difficulties of arriving at such information become clear in exploring another sort of approach to cost-effectiveness often heard today: that we reduce school costs by reducing the number of administrators within a district. School systems vary widely as to what they spend on administration. A California study reported that 14 percent of school ex-

penditures in that state go to administrative costs (Weintraub, 1992). But in New York, the administrative share comes to only either 7.4 percent (if you accept the comptroller's figures) or 2.6 percent (if you believe the state education department's figures) (Chang & Hughes, 1993).

Such figures are all but impossible to assess, or even to compare, for several reasons. One is the use of different accounting systems and reporting categories from district to district and state to state. For instance, in some places supervisory costs are reported within administration totals. But perhaps in most budget displays, curriculum and instructional development—as well as their supervision—are all categorized as instructional expenditures. So it is difficult to be sure whether two sets of figures that appear comparable actually are.

Nevertheless, one California study ventured a comparison of two districts for which it sought parallel figures. It found two quite similar in size, type, student population, and total spending. But in one, administrative costs totaled 12 percent of the school budget while in the other they reached 24 percent. According to the investigator's computations, the difference was equivalent to the salaries of 100 experienced teachers (Weintraub, 1992).

Is that what ought to be done, then—eliminate the administrative positions and add as many of the 100 experienced teachers as possible? The public mood would almost certainly lead most people to recommend that action, and Cincinnati won national acclaim by cutting its central administrative staff by 50 percent (Celis, 1992). One reason for such attitudes is situations and trends that are difficult to explain and even harder to justify. One recent study released by New York State legislators revealed that Long Island's 127 school districts have more high salaried school administrators than the rest of the state combined, including New York City (Galiber, Halperin, & Perry, 1991). Moreover, the growth in the number of administrators had occurred during a period when student enrollments fell steadily.

Thus in the case of one school district, the number of administrators with salaries in excess of \$70,000 rose by 1000 percent between 1983 and 1990 (from 2 to 22), during a period when the district's enrollments decreased by 23 percent (from 9,663 to 7,448 students). This may be partly a matter of normal salary increases, but it is also clearly due to a

number of new positions. And despite serious continuing school financial woes, the numbers seem to keep rising. A follow-up study of the 1983-1990 figures shows that in the subsequent 2 years, the trend line rose sharply and the number of Long Island's high salaried administrators (\$70,000 and above) almost doubled between 1990 and 1992 (Galiber & Halperin, 1992).

But what can be concluded from such findings? How many is too many and under what conditions is a district over-administered? The National Center for Education Statistics (1992) reported that as of 1990 there were three principals and assistant principals for every 100 students, and two district administrators. Is this too many? There could be conditions justifying the added administrative posts—e.g., new student populations suddenly presenting overwhelming challenges, or teacher retirements suddenly yielding a highly inexperienced teaching staff. The local cost of living index is also certainly pertinent to assessing salaries. The point, however, is that it is difficult to determine how many is too many in the absence of guideposts or helpful criteria for arriving at what is reasonable. Under these circumstances, comparisons can help some, but they are of limited value.

Such situations as Long Island's are by no means unique. An increase in administrative personnel is a national trend of long standing. "Middle managers in school districts more than doubled in the last forty years," reports historian David Tyack (1990, p. 185). Current estimates suggest that teachers now constitute only a bare majority of school personnel, 53 percent (Halfond, 1991). And the same kinds of developments have occurred simultaneously in colleges and universities (Grassmuck, 1991). Tyack's explanation for the growth of the number of school administrators is "fragmented centralization" (1990, p. 185). It is a major tendency of a bureaucratic system, which places a premium on centralized control as well as on the creation of specialties with an ever-narrowing realm of expertise for each specialist.

Rethinking Control, Coordination, and Specialization

The centralization feature can seriously compromise cost-effectiveness. An illustration shows how: Several years ago a description appeared in a

Honolulu newspaper of a peer counseling program being piloted in several local public schools. The principal of a local private school with such a program sent a letter to the paper's editor expressing interest and approval, but curiosity as to why it was to cost \$750,000 annually to install and operate the program in 22 additional schools. His school, he reported, had launched such a program 7 years earlier at a cost of \$900, and it had quickly become entirely self-supporting. Several days later, the director of the projected Peer Education Program (PEP) responded in the letters column this way:

Each PEP site has one full-time coordinator hired to work exclusively with the peer educators. . . . The budget accounts for the salaries of the coordinators, a program director, a clerk-steno, program supplies, and the administrative costs associated with coordinating and managing a statewide program. (Bonar, 1989)

It was apparently inconceivable to this official that a program be launched without a site coordinator at each location and then a coordinator of the coordinators with a separate office and staff at central headquarters. This being so, he obviously felt, the additional \$750,000 annual expenditure had been fully justified. And according to standard bureaucratic practice, it had been. However, if this is the only way schools can operate, we must expect questions about whether they can operate at all. At some point, we will face the choice between running programs or financing the "monitors for monitoring the monitors" instead (Timar & Kirp, 1988).

We may also have to strike a different balance between our commitment to specialization and the need for cost-effectiveness. Interestingly, many of today's secondary school reform proposals call for cross-disciplinary as opposed to more narrowly specialized instruction, and for more diffused roles for teachers. The Coalition of Essential Schools recommends explicitly that teachers be "generalists" rather than specialists (Sizer, 1992). Yet at the same time, trends point to increasing specialization in elementary schools—with physical education teachers, art teachers, drama teachers, music teachers, computer teachers, in addition to librarians and sometimes counselors and social workers. Certainly a case can be made for the advantages of expertise. But when cost-effectiveness appears imperative, perhaps the appropriate compromises between specialization and "generalism" might be re-examined and re-negotiated.

Enlarging Responsibility

Yet another deeply embedded obstacle to cost-effectiveness results from the narrowness of the interests that typical school organization fosters. Most districts have a business manager whose function includes the doling out of funds to cover expenses incurred by the various offices and administrators. The process typically generates incentives for each office to seek as many dollars as possible, leaving the business manager to monitor when requests exceed budgeted amounts. It also sometimes leads to spending that is far from necessary or even important, but which prevents available funds from reverting to other offices and purposes. (The process often invites, for example, sums that appear to lie at the business manager's discretion, and the loss of any unspent funds.) Such circumstances result in each school, grade level, and department competing with the rest.

One superintendent recently tackled the situation in his district by abolishing the office of business manager altogether and shifting responsibility and accountability for their own spending to individual administrators. Any official who attempts to overspend his or her own budget now has an angry superintendent to deal with. Such structural changes can make a substantial difference in the spending practices of individuals and offices.

But what kind of structural changes might deliver benefits on an even larger scale?—for genuinely cost-effective schools will require examining a broadened context. For instance, we know that early childhood education is cost-effective in that, despite its costs, it pays off later: Fewer of the children exposed to the early programs need expensive school and social services later, fewer drop out of school, and fewer get in trouble (Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984). For our purposes what is important, however, is that the administrative unit that bears the burden of the earlier costs is not typically the same unit that reaps the benefits of the later savings—and for the first group, early childhood programs add substantial expense. The problem is not simply temporal, of course, because the cost-effectiveness is not just a matter of school savings but also of police and welfare savings, and of increased earnings on the part of adults who experienced such programs as children, and are thus able to contribute more in the form of taxes.

Can we design structures that will function comparably in towns, cities, and states to the superintendent's solution for getting individual administrators to assume fiscal responsibility for their own operations? Is there some way, that is, that we can hold officials responsible in any significant sense for more than their own operations? We have recently discovered that school cultures can be built to generate a sense of broad responsibility, making each individual assume a sense of responsibility for the total school (Bryk, Lee, & Smith, 1990; Rosenholtz, 1989). Can we build a comparable sense of responsibility for all of a district's educational system, K-12? Or for all of a community's public services? Ultimately, this is the sort of question that must be addressed if we are ever to make major improvements as to the cost-effectiveness of all schools, and indeed, of all public services.

Solutions are difficult, but it seems safe to conclude that minimally it will require removing the present incentives to focus narrowly and to deliberately ignore the broader context. We might ask for budget proposals to contain something analogous to the environmental impact statements that require an assessment of the prospective effects of proposed action: If money is spent as here proposed, how will it affect other offices? What are reasonable immediate and prospective impact projections of the proposal on program recipients—and what kinds of costs and benefits might these mean for the community at large?

It would appear that when we get beyond the cost-effectiveness enhancements that can accrue from minor adjustments, substantial savings may entail not only a broader but a far more penetrating look at some of the fundamental "givens" regarding the way the education system operates. In the long run, it could prove to be the need for cost-effectiveness that ultimately brings the organizational restructuring that has otherwise so often proved elusive.

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