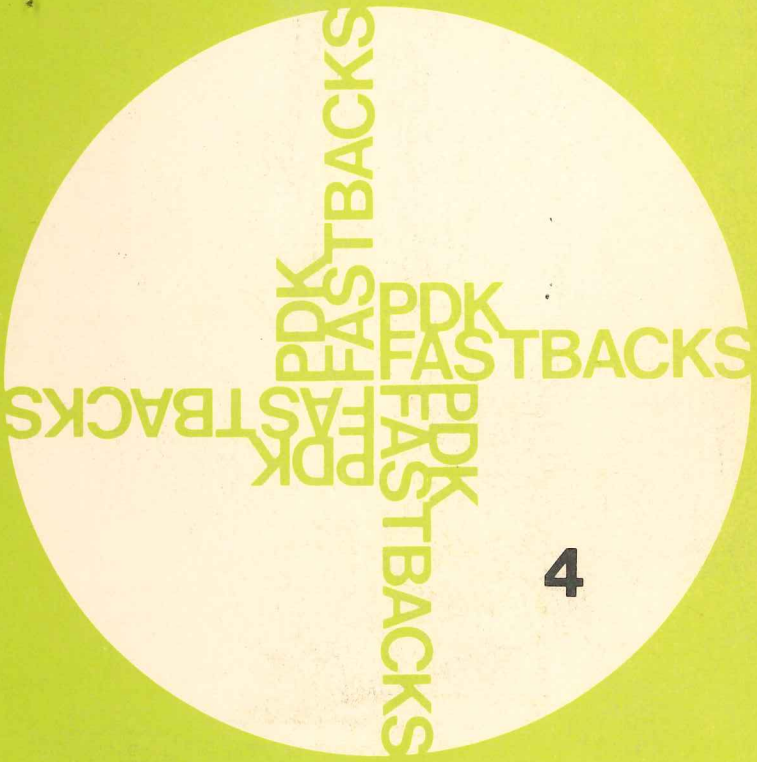
PERFORMANCE CONTRACTING: WHO PROFITS MOST?

Charles Blaschke



Phi Delta Kappa Educational Foundation

PERFORMANCE CONTRACTING: WHO PROFITS MOST?

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Charles Blaschke is president of Education Turnkey Systems, Inc., a Washington, D.C., based Management Support Group, which has assisted over forty schools and agencies in the planning, development, implementation, and evaluation of performance contract projects. The firm has a record of planning and developing innovative firsts—the first Texarkana project, the sophisticated Dallas contract project, the nationwide Office of Economic Opportunity experiment, the Dade County, Fla., "teacher incentives projects," and COST-ED Models to simulate the cost effectiveness of alternative instructional programs. Education Turnkey Systems, Inc. is not a performance contracting firm.

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WHAT IS PERFORMANCE CONTRACTING?

The performance contract-turnkey approach to school system reform is a managerial concept designed to encourage responsible innovation while holding those in charge accountable for results. Typically, a school district enters into a contract with an outside firm or a teachers' group or faculty to accelerate the skill development of a limited number of educationally deficient students, usually in such areas as math and reading. Reimbursement to the contractor is based on the actual performance of the students as measured by standardized achievement or criterion referenced and performance based tests. After a period of successful demonstration, the school adopts or expands the contractor's program in its regular classrooms on a turnkey basis, making the necessary changes in order to realize the full potential of the program.

The meaning of "turnkey" is based on its use in the public housing field, where authorities contract with private firms to build houses. When the houses are completed and certified, the firms "turn the keys over" to the authorities, who in turn present them to the recipients. As applied in education, turnkey refers to the turning over of the instructional program and learning systems designed, packaged, and successfully demonstrated by the performance contractor to the school system. The contracting firm steps out of the picture, and the school continues the program with its own staff and management.

A school district could decide to initiate a performance contract-turnkey project because it seeks one or all of the following:

A supplemental capability in a program or curriculum area that does not now exist or would be too costly to develop internally (for example, vocational training in a specific skill to meet a short-run industry employment demand)

A vehicle for testing, analyzing, and validating newly developed and unproven instructional systems sold by firms to determine whether or not to adopt or expand it on a large-scale or system-wide basis

A feasible solution to political, social, and economic problems confronting school administrators, board members, or community leaders.

The heart of the approach to the planning of a performance contract-turnkey project is the Request for Proposal (RFP) sent to prospective bidders or local teachers' groups. This document includes not only the educational performance specifications desired, usually in grade level equivalents or mastery levels on criterion referenced tests, but also such provisions as the number of dollars to be budgeted per student and the amount of the student's time which will be available to the contractor. The final provisions are based upon the RFP, the contractor's response, and face-to-face negotiations.

After the project has been in operation for seven to nine months, a turnkey analysis is conducted, usually by an independent Management Support Group (MSG), to determine:

The relative cost effectiveness (usually in dollars per unit of achievement) of the contractor's program in math and reading as compared to the school's existing program in similar areas with similar students

The economics of the contractor's instructional program for planning the nature and extent of the turnkey phase the second year (for example, cost trade offs that allow an increase of instructional materials by 75 percent if the class size is increased by one student)

The nature, extent, and costs of management changes that have to be initiated by the school to achieve the benefits that the contractor has demonstrated can be achieved.

For example, the contractor can guarantee that the school will achieve 90 percent of the demonstrated effectiveness by utilizing differentiated staffing, incentive pay, and individualized, self-paced materials in the turnkey classes. A lesser guarantee is offered if the school decides to adopt the learning system using only some of the recommendations. The school administrator is thereby able to consider alternative levels of costs and benefits in deciding the extent of the turnkey phase, and can present them to the school board with leverage. Hence, the performance contract-turnkey approach should not be viewed as an end in itself. Rather, it provides a means by which the local school system can experiment effectively, test a new instructional program, and adopt the new program, making changes within the system to ensure that the potential results can be realized.

Most school board members and laymen find it difficult to decide on such matters as pedagogy and methodology, but the concept of tying costs to guaranteed or minimum results is easily understood when common sense and quality control measures are incorporated. Since most board members have their own political constituency, it becomes relatively easy to gather support for a concept that can be easily communicated. Performance contracting also enables the school board to make policy decisions while delegating the program decisions to the contractor or the administrative staff.

HOW IT ALL STARTED

Critics with a bent for history say that performance contracting is not new. "Pay for results" in England during the late 1800's created such intense teacher anxieties that officials were forced to strip the "inspector" of his authority to test and determine payment due. In Canada several decades later, the plan was terminated because of the large number of teachers who were caught "teaching to the tests." More recent critics have attributed performance contracting to a "conspiracy among the author, former Associate Commissioner Leon Lessinger, and the White House to have private industry take over public education."

In reality, the foundation for performance contracting as applied recently in education evolved from a study conducted in 1964-65 by the author while a graduate student at the John F. Kennedy School of Government at Harvard and a consultant to the Office of the Secretary of Defense. In 1964, the President established a Committee to Report on the Economic Impact of Defense and Disarmament. One of its subcommittees analyzed the problems and potential of defense industry diversification into areas such as transportation, housing, and education.

The subcommittee's report recommended as early as April,

1964, that management techniques—including performance contracting and, to a lesser extent, hardware systems technology—should be applied to solving some of our urban problems. The major conclusion of the study was that defense and technology oriented firms could diversify and apply techniques and technologies in the public service area; however, local governments, including school systems were not managed and organized in a way that enabled them to utilize these breakthroughs effectively. In short, the market did not exist.

Yet big business could see big money in the field of education. Misled by a simplistic report written by a staff of accountants, a large number of combines and joint ventures were formed in 1964-65 among electronics based firms, and education publishers, and software manufacturers, for example, SRA, D. C. Heath, and RCA-Random House. Moreover, during the same period the U.S. Office of Education expanded its developmental efforts in such areas as computer assisted instruction, the development of multimedia systems, and other technological developments. The large combines utilizing private as well as public funds designed and developed costly learning systems; however, few attempts were made to develop the management capability of local school systems to purchase and implement such learning techniques. The great irony in our society once again surfaced: adept in developing science and technology, we were unable, if not unwilling, to design and develop the political and managerial innovations needed to apply such technology effectively, thereby, realizing its fullest potential while minimizing its adverse implications.

The upshot was that private industry paid the price of learning the hard way. School systems did not have the incentive to purchase cost effective learning systems; their procurement practices favored piecemeal purchases over the total package, and their traditions and regulations had to be modified radically to not only demonstrate such learning systems and pilot programs, but, more important, to expand and apply them once proven successful (see *Phi Delta Kappan*, January, 1967). So industry began to retrench, and federal funds for technology dried up. In 1967, many school officials and teachers, recalling the 1959-61 teaching machine-programmed learning fiasco, once

again had their heyday; others were beginning to realize their deficiencies in school management and organization.

In this atmosphere of growing awareness, performance contracting emerged conceptually as the vehicle and managerial innovation that would free industry to design and implement a learning system tailored to meet the needs of the target population to be served in the most cost effective manner. At the same time, it was thought that a successful demonstration program would modify school regulations and customs so that new management and technological approaches might be adopted (see *Education Technology*, June, 1968).

The Gainesville Proposal

Performance contracting was attempted first in Gainesville, Ga., in a Concentrated Employment Program (CEP). One of the program's components was vocational training for recent high school dropouts. Contracting firms working with Gainesville employers were to institute a combined formal and on-the-job training program for 200-300 youths. Incentives would be provided for both the contractor and the employer to ensure that the trainee completed the course at a certain proficiency level in the least amount of time for the least cost. Even though the proposed program would guarantee results and cost approximately 30 percent of traditional programs, it became evident that federal, regional, and state officials would not support the program because of its implications and its radical break with tradition.

A second component of the program proposed to improve the achievement of adults in basic education and to accelerate achievement for potential dropouts in the Gainesville schools. The major hurdle in applying the concept was the number of rules and regulations that would have been violated—class size, payment based on the number of hours attended rather than achievement levels performed, and so on. The controversial nature of the proposal prompted the Manpower Administrators Office to state that CEP dollars "cannot be used to prevent students from dropping out of school; rather, they can be used only if and

when the student actually drops out." Largely because of the performance contracting controversy, as well as political controversy surrounding the CEP, the young and imaginative director resigned and his successor was ordered to "clean it up or close it down."

Even though the attempt was aborted, three facts became apparent to those involved in developing the program. First, the concept could be supported by high-level, politically responsible officials (in this case, White House staff members and HEW officials), but at the same time opposed strongly by the bureaucracy. Second, while only a small number of firms were contacted as potential contractors, considerable interest was generated providing program managers with the opportunity and necessary ammunition to begin selling the concept to hesitant corporate officials. And last, as a corollary, it was clear that the concept would have to be sold on this basis of social, economic, and political criteria as well as educative merit.

The Texarkana Project

On Dec. 7, 1968, the author met in Texarkana, Ark., with the district's three school superintendents to discuss the possibility of performance contracting in this rather desolate city on the Texas-Arkansas border. After forty-five minutes of probing, it was concluded that the three districts would apply jointly for a planning grant under the new "dropout or prevention" amendments, Title VIII, Elementary and Secondary Education Act. The major purpose of the project would be to use performance contracting to discourage students from dropping out. However, it became apparent that the superintendents and their staff felt that the concept had other merit, including a means to defeat "freedom of choice" and to assist school desegregation; an alternative to teacher pay based on tenure; an opportunity to increase community involvement with school activities; and a means to experiment at little or no risk.

The climate for innovation in Texarkana appeared favorable. First, the dropout rates in all three school districts were officially reported relatively high although understated for political reasons. (The actual dropout rates were about 15 percent.) Second, all

three school districts were under community pressure or court orders to desegregate. The Texarkana, Ark., district's plans to desegregate the senior high school in September, 1969, had been accepted by the Department of Health, Education, and Welfare. The black students to be integrated into the previously all-white high school were approximately 70 percentiles below their white counterparts in math and reading.

Third, all three school boards favored desegregation to varying degrees, even though Texarkana was the home town of Freedom, Inc., the national advocate of "freedom of choice." Most of the members felt that a performance contract which guaranteed to accelerate the achievement of students, most of them members of a minority group, would ease the integration process by bringing the students to a level where they could compete with their peers. They also felt that information about the project could be conveyed to minority parents through the Model Cities Demonstration Agency and the Model City neighborhood councils, thereby allaying the fear that their children would not be able to compete after integration and would drop out. Board members felt that the program's success would guarantee their reelection in the spring.

Fourth, many of the school board members felt that performance contracting offered a low risk opportunity to experiment with radically innovative programs, which could in fact improve the performance of many disadvantaged children, a rising and genuine concern. The risk was low in several respects. If the contractor failed, the schools could hire another, and the program would not have cost the school district much since payment was based upon results. If the program succeeded, the school could adopt the contractor's program on a turnkey basis, expanding it to benefit all underachieving students. Finally, several board members, including local and state politicians, felt that existing teacher certification, class size, and other state and local regulations which created inefficiency could be revealed as the obstacles they were.

Passively supported by the State Department of Education, the project was chosen as one of twenty to be awarded an initial planning grant. Superintendent Edward Trice, designated as a fiscal agent for the three districts, was notified of the selection

in February, 1969, and the project was critically reviewed by the U.S. Office of Education Review Panel, outside consultants. Most objections were based on ideological rather than technical grounds; this was to be expected since the majority of the panel members represented the educational establishment and, through various connections, were associated with threatened vested interest groups. The project probably would not have been funded had it not been for "encouragement" from both Associate Commissioner Leon Lessinger and Arkansas and Texas congressmen and high-level state officials. The final proposal was submitted to the Office of Education in May, 1969. Meanwhile, other political obstacles were being created in Texarkana. Freedom-of-choice advocates running for school board positions promised to withdraw the previously approved desegregation plans, leaving the school district out of compliance and thus unable to participate in the project. A public referendum was held in Texarkana in May, and 71 percent voted against freedom of choice!

In June, the project was approved; however, only two of the three districts were allowed to participate. The Texarkana Independent School District was placed in a "deferred status" because of some questions regarding its desegregation plans. In a tersely worded letter to Secretary Robert Finch, Senator Wright Patman stated that "this action is contrary to our entire governmental process . . . that the project was designed to assist in eliminating the problem in contention, and that . . . in short, Mr. Secretary, you are cutting off your nose to spite your face." Even though the Texas independent desegregation plan was eventually accepted, HEW refused to allow the district to participate.

The prebidders' conference in June was attended by representatives from more than forty firms and by various local and state political figures. Ten firms submitted proposals, and five were asked to make presentations. It became apparent from the proposals and the briefings that most of the firms had attempted to utilize proven techniques, such as hiring local athletic heros as project personnel; proposing to hire educators known and acceptable to board members; entering into agreements and subcontracts with local universities; and conducting private "discussions" with community leaders. In the end, the evaluation

committee and board members reviewed the bottom line—the cost per grade level increase guarantees of the respective bidders—and made their choice.

In September, 1969, Dorsett Education Systems, which guaranteed a grade level increase for $80 per pupil, was selected. The draft officially submitted to the Office of Education in October included prohibitions on "teaching to the test", since Dorsett had demonstrated that the incorporation of word meanings in a limited number of vocabulary test items could guarantee well over a grade level increase. The draft provided that:

At least two tests would be selected with alternative forms used for pretests and posttests

In addition to the regular vocabulary test used to determine student level, differential vocabulary testing developed in conjunction with the local teachers and, if possible, Arkansas or Texas state testing specialists would be used, with the weight given to this test to be determined by the contractor

The contractor would have the option of retesting the enrollees at any time up to six months after leaving the instructional program in order to compare their retention to that of normal achievers in the local area. The comparison could be the basis for adjustment of payments to the contractor or for a reimbursement to the fiscal agent based on renegotiations.

These provisions, directed at preventing the contractor from teaching the test, were deleted or radically modified by the Office of Education.

The preliminary favorable results of the program (for example, gains over one grade level) were dampened by a letter from HEW in February, 1970, to the Texarkana, Ark., School District. The district was ordered to desegregate its elementary and junior high schools immediately, rather than in September, 1970, or face termination of the project. All efforts to communicate the success of the program (based on preliminary results, community acceptance, and reduction of dropout rates) fell on deaf ears in the Office of Civil Rights Compliance at HEW. In desperation, a letter was sent to the Vice-President. The letter highlighted the preliminary results and noted that one branch of HEW was apparently disregarding a promising integration approach that was being supported by another branch within the department.

A few days later, Texarkana was notified that they would be allowed to wait until September to desegregate the elementary and junior high schools; the HEW Chief of Civil Rights Compliance "resigned" shortly thereafter.

The project's troubles were still not over. In May, a student being posttested noticed an item that had been included in his curriculum. Upon further analysis, other repeated items were found in frames presented to the students in April and May. The Magnolia Service Center, a Title III-sponsored regional technical assistance group hired to monitor and evaluate the project, attempted to determine the extent of teaching to the test.

Unable to satisfy Office of Education and local officials regarding the extent of the violation, Magnolia asked Education Testing Service to determine the validity of the allegations. ETS officials, strong critics of performance contracting, concluded that a large number of test items did appear in the curriculum, making "the results invalid." The education auditor (like Magnolia selected four or five months after the project was initiated and therefore unaware of much of its background) certified the evaluator's report. The school board members and staff, however, expressed contrary opinions, since the project had reduced the dropout rate significantly, lowered vandalism, involved parents, and motivated a large number of failing students. The program was continued the second year with another firm.

Many have asked why the contractor did teach to the test to the extent that he did. Some have argued that he followed the letter of the "revised" contract precisely rather than the intent, since teaching to the test provisions had been removed. Others have argued that rather lax quality control over the development of materials provided the opportunity for an "anxious" programmer to put test items in the audio-visual frames. Still others have surmised that certain programming staff members, given two weeks notice because they were about to form their own company, deliberately put forbidden items into the curriculum.

A more fundamental question is whether or not the alleged teaching of test items was significant enough to affect student achievement. For example, forty of the 106 students who took the "contaminated" May test also took "pure" March and April

tests. Of the forty, twenty-one showed a slight gain and nineteen a slight loss between the March and April tests, and the May testing. In addition, a recent project for young school dropouts (using a modified Dorsett system) indicated that these dropouts showed a 1.7 grade level gain in reading and 1.4 grade level gain in math in approximately sixty hours of instruction in both subjects. The results, which were alleged to be invalid during the Dropout Prevention Project, indicated that the students had achieved approximately 1.5 grade level gains in reading and slightly less in math in approximately eighty hours.

The Texarkana experience, in retrospect, was healthy. First, it highlighted the inadequacies of standardized tests as an instrument for determining payment and generated the demand for performance based and criterion referenced testing systems. Second, the complexities in designing and implementing a contract project became generally appreciated. Third, it legitimatized several new roles: the Management Support Group as an unofficial communication linkage, management broker, and provider of technical assistance; the education program auditor as the certifier of implementation procedures and results attained; and the school board as the body decides policy issues which the administrative staff implements. And last, it proved that a performance contract project could be implemented despite formidable political and bureaucratic hurdles.

1970-71: THE YEAR OF EXPANSION

Performance contracting began to expand during the summer and fall of 1970 (see Table 1). The Dallas Independent School District unveiled its large and complex project for senior high students in math, reading, vocational training, and achievement motivation. The major objective of this five-year performance contract-turnkey project was to determine the cost effectiveness

TABLE 1

Performance Contracting Expansion in 1970-71

LOCATION	CONTRACTOR	SUBJECTS	NO. STUDENTS	GRADES	TOTAL $	GUARANTEE
Anchorage, Alaska	Quality Education Development	Reading, Math	600	1-3, 7-9	$444,632	1.0 Grade Level Gain
Dallas, Texas	Quality Education Development	Reading, Math	600	1-3, 7-9	$299,417	1.0 Grade Level Gain
Rockland, Me.	Quality Education Development	Reading, Math	600	1-3, 7-9	$299,211	1.0 Grade Level Gain
Athens, Ga.	Plan Education Centers	Reading, Math	600	1-3, 7-9	$301,770	1.0 Grade Level Gain
Selmer, Tenn.	Plan Education Centers	Reading, Math	600	1-3, 7-9	$286,991	1.0 Grade Level Gain
Wichita, Kan.	Plan Education Centers	Reading, Math	600	1-3, 7-9	$294,700	1.0 Grade Level Gain
Bronx, N.Y.	Learning Foundations	Reading, Math	600	1-3, 7-9	$341,796	1.0 Grade Level Gain
Hammond, Ind.	Learning Foundations	Reading, Math	600	1-3, 7-9	$342,528	1.0 Grade Level Gain
Jacksonville, Fla.	Learning Foundations	Reading, Math	600	1-3, 7-9	$342,300	1.0 Grade Level Gain
Fresno, Calif.	Westinghouse Learning Corp.	Reading, Math	600	1-3, 7-9	$299,015	1.0 Grade Level Gain
Las Vegas, Nev.	Westinghouse Learning Corp.	Reading, Math	600	1-3, 7-9	$298,744	1.0 Grade Level Gain
Philadelphia, Pa.	Westinghouse Learning Corp.	Reading, Math	600	1-3, 7-9	$296,291	1.0 Grade Level Gain
Grand Rapids, Mich.	Alpha Learning Systems	Reading, Math	600	1-3, 7-9	$322,464	1.0 Grade Level Gain
Hartford, Conn.	Alpha Learning Systems	Reading, Math	600	1-3, 7-9	$320,573	1.0 Grade Level Gain
Taft, Texas	Alpha Learning Systems	Reading, Math	600	1-3, 7-9	$243,751	1.0 Grade Level Gain
McComb, Miss.	Singer/Graflex	Reading, Math	600	1-3, 7-9	$263,085	1.0 Grade Level Gain
Portland, Me.	Singer/Graflex	Reading, Math	600	1-3, 7-9	$308,184	1.0 Grade Level Gain
Seattle, Wash.	Singer/Graflex	Reading, Math	600	1-3, 7-9	$343,800	1.0 Grade Level Gain
Stockton, Calif.	Classroom Teachers Assoc.	Reading, Math	600	1-3, 7-9	$ 55,154	1.0 Grade Level Gain

Mesa, Ariz.	Classroom Teachers Assoc.	Reading, Math	600	1-3, 7-9	$ 33,976	1.0 Grade Level Gain
Buchanan Co., Va.	Learning Research Assoc.	Reading	500	1-7	$212,500	1.7 Grade Level Gain
Dickinson Co., Va.	Learning Research Assoc.	Reading	250	1-7	FOR	1.7 Grade Level Gain
Luenenberg Co. Va.	Learning Research Assoc.	Reading	250	1-7	ALL	1.7 Grade Level Gain
Mecklenburg Co., Va.	Learning Research Assoc.	Reading	250	4-7	SEVEN	1.7 Grade Level Gain
Norfolk, Va.	Learning Research Assoc.	Reading	500	4-9	VA.	1.7 Grade Level Gain
Prince Edward Co.,Va.	Learning Research Assoc.	Reading	250	4-6	PROJECT	1.7 Grade Level Gain
Wise Co., Va.	Learning Research Assoc.	Reading	500	4-9	SITES	1.7 Grade Level Gain
Texarkana, Ark.	Educational Development Labs.	Reading, Math	300	7-12	$ 65,788	1.0 Grade Level Gain
Texarkana, Ark.	Dorsett (Turnkey Phase)	Reading, Math	250	8-12	$	
Gilroy, Calif.	Westinghouse Learning Corp.	Reading, Math	100	2-4	$ 60,000	1.3 Grade Level Gain
Compton, Calif.	Reading Foundations of Amer.	Reading	3,000	7	$120,000	Reading Speed Quintupled
Cherry Creek, Colo.	Dorsett Educational Systems	Reading	100	6-8	$ 50,000	Reading Speed Quintupled
Denver, Colo.	Dorsett Educational Systems	Reading	100	6-8	For All	Reading Speed Quintupled
Englewood, Colo.	Dorsett Educational Systems	Reading	100	6-8	Three	Reading Speed Quintupled
Oakland, Calif.	Education Solutions	Reading	400	6-8	$ 80,000	Reading Speed Quintupled
Jacksonville, Fla.	Learning Research Assoc.	1st grade sub.	300	1	$ 70,000	Reading Speed Quintupled
Savannah, Ga.	Learning Foundations	Reading	1,000		$ 97,000	
Gary, Ind.	Behavioral Research Labs	All Subjects	800	K-6	$640,000	Above Nat'l. Norm
Boston, Mass.	Educational Solutions	Reading	400	K-6	$120,000	1.6 Gain
Grand Rapids, Mich.	Westinghouse Learning Corp.	Reading, Math	400	1-6	$143,700	1.0 Gain
Grand Rapids, Mich.	Comb. Motiv. Educ. Systems	Reading, Math	600	6-9	$164,000	1.0 Gain
Flint, Mich.	Educational Development Labs	Reading	2,160	9	$210,000	
Philadelphia, Pa.	Behavioral Research Labs	Reading	15,000	1-2, 7-8	$600,000	1.0 Gain
Providence, R.I.	New Century	Reading	1,500	2-8	$145,000	1.2 Gain
Greenville, S.C.	Comb. Motiv. Educ. Systems	Reading	480	6-9	$100,000	
Dallas, Tex.	Thiokol	Vo. Ed. Motiv.	960	9-12	$209,000	
Dallas, Tex.	New Century	Reading, Math	960	9-12	$256,000	1.4 Gain

of sixteen treatment configurations. New Century and Thiokol Corporation were awarded the contracts for the project, which had been planned and developed by the district staff, Education Turnkey staff, and consultants.

The Virginia State Department of Education implemented its network of projects in eighteen schools in seven districts in October. Learning Research Associates was awarded the contract for a year. One of the major purposes was to test a "total learning system," which, if successful, would be considered for adoption by the state board.

In Michigan, State Superintendent John Porter became one of the first chief state school officials to take a firm stand supporting performance contracting. The Grand Rapids school system, under the leadership of Dr. Norman Weinheimer, applied the concept in using the services of three firms. An attempt was also made to enter into contracts with the Grand Rapids Education Association in which teachers could receive bonuses or be penalized through salary reductions based on student performance.

Detroit and Chicago began planning performance support contracts with firms and teachers. In Philadelphia, Behavioral Research Laboratories entered into a contract to increase the reading skills of over 15,000 students by approximately one year or not be paid. In Gary, Ind., BRL assumed complete management of the Banneker School, guaranteeing to raise the achievement levels of all students in all subjects to the national norm over a four-year period. The Gary project was by far the most threatened of all projects, decommissioned by the state at one time and constantly faced with teacher strikes and resistance.

The major experiment with performance contracting, however, began in April, 1970, when two Office of Economic Opportunity officials visited Texarkana to review first-hand the project that had introduced a "shaft of light" into their analysis of compensatory projects. They designed a preliminary research and evaluation project, which was presented to and approved by the director, Donald Rumsfield, as the basis for a broadly based federally supported pilot project in performance contracting.

In May, Requests for Proposals were sent to over 100 firms, and Education Turnkey was selected as the Management Support Group. Two weeks later, over 250 school systems were contacted,

and by June 15, eighteen were selected. Of the thirty firms submitting proposals, six were selected and matched with three school systems each. Within one week, contracts amounting to over $6 million were negotiated with the eighteen districts; eighteen subcontracts with the firms were then negotiated. Test data from all Title I schools and Title I eligible schools in each district were analyzed for selection of experimental and control sites. Student test data were analyzed to select the 600 most academically deficient students in grades 1-3 and 7-9 in both school sites. OEO selected the testing and analysis contractor, Battelle Memorial Institute, ten days prior to the opening day of school in one district. In late August and September, 1970, the largest field experiment in the history of public education was underway.

The major objective of the OEO experiment was to determine if any of six different instructional systems used by performance contractors could produce significant results in math and reading for poor, underachieving students. A second goal was to determine the feasibility of performance contracting as a technique for conducting a large-scale field experiment. And, in light of the scanty information and guidelines from the Office of Education regarding the concept, a third purpose was to establish some benchmarks and standards for school officials to judge firms' proposals in the future.

Applications

Performance contracting is a problem oriented concept, flexible enough to be applied in a number of areas by a number of potential contractors. This recognition is explored more fully in the recent NSPRA report on performance contracting, written by Stanley Elam and James Mecklenburger. Most school systems and federal agencies have viewed the arrangement as a low risk, low cost means for experimentation with various kinds of instructional systems. A few school districts view performance contracting as a long-run program. Dallas, which applied it to vocational training in 1970, is using several contractors to operate an entire vocational training institute this year. Gary, Ind., is allowing Behavioral Research Laboratories to provide services for a five-

year period. A larger number of school districts are utilizing performance contracting to solve political, social, and economic problems. Among the school districts that have used or attempted to use it to assist in school integration are Texarkana, Ark.; Savannah, Ga.; Greensville, S.C.; and Wichita. In other cities, where the community school concept has substantial support, districts have proposed to utilize performance contracting as a means to ensure "equity of results." The Dallas School District recently made such a proposal in its desegregation plan.

An underlying reason for its use has been to rationalize collective bargaining processes by establishing precedents such as pay based upon productivity, differentiated staffing, and teacher accountability. In districts with large teacher organizations (Hartford, Grand Rapids, Dallas, Gary, Philadelphia, Seattle, and New York City) performance contracts have precipitated or fostered such concepts.

Since performance contracting is simple in concept, although complex in realization, it provides an opportunity for community involvement in the determination of performance specifications and in the operation of projects, since many contractors utilize locally trained community aides. One of the first major decisions of the decentralized community controlled district #9 in New York City was to enter into a performance contract project, which had strong community support. In certain school districts (for example, Dade County, Fla.) with aggressive teacher associations or faculties, administrators have used performance or incentive contracting as a means to delegate decision-making authority to the classroom level while holding the teacher accountable for results, thus leading to teacher self-governance.

Performance contracting is limited to areas where objectives can be clearly defined and criteria for measurement mutually agreed upon by teachers, parents, educators, and administrators. As a result, over 90 percent of all contract projects in existence or being planned are directed toward math and reading and toward underachieving, educationally deficient students at both elementary and secondary levels. Federal funding priorities are also directed toward these areas.

Vocational training has been the area of secondary application, ranging from automotive mechanics to drafting classes for

women, largely because proficiency levels can be easily determined and cries of dehumanization, right or wrong, fall mainly on deaf ears. A small project in Jacksonville, Fla., used performance contracting in several elementary courses, including a program to improve the creative thinking capability of students. IQ tests were used to measure achievement. In Grand Rapids, Mich., performance contracting is being used for the first time to improve the proficiency of educable mentally retarded children in math and reading, utilizing a unique learning system. Several firms have proposed to utilize performance contracting in music, language training, social studies, and art.

Instruments used to measure achievement have not varied much, and heavy reliance on standardized tests persists even though critics have pointed out their pitfalls (for example, basing payment on individual rather than mean scores; requiring minimum individual grade equivalent gains before any payment is due; or "regression to the mean" phenomena favoring contractors). In a number of schools, paper and pencil criterion referenced performance objectives (usually proposed and developed by the contractors) have been used to measure achievement on which partial payment is based. In these performance specifications, the students are required to perform certain tasks at given proficiency levels (for example, read four or five employment ads in the newspaper without a mistake or repair a flat tire in less than seven minutes).

Types of Contractors, Staff, Systems, and Methods

The majority of projects have been conducted by private corporations, some of which have utilized teachers who remain employed by the school district. Most of the firms have had experience with programmed instruction, teaching machines, and contingency management. Their personnel have backgrounds in industrial training, behavioral psychology, and the Job Corps or other poverty programs.

The vast majority of the firms are small or medium size. Performance contracting has not attracted the large educational firms because their pricing arrangements on materials frequently are not competitive, and they are reluctant to reduce mark-ups

to become competitive. In other instances, they fear that performance contracting will provide new entrants with footholds in a market which is qualitatively different from the traditional audio-visual or textbook market.

Most of the contracting firms are systems management groups that utilize commercial equipment which they feel will work best with the particular students. In many instances, the firms develop supplementary materials during the project. The instructional systems range from traditional ones to sophisticated teaching machines, computers, or instructional management, prescription, and diagnosis. Usually, student ratios are high; (one contractor utilized one professional and thirty-two paraprofessionals for 600 students instructed in math and reading). Some firms offer material rewards, and others rely heavily on intrinsic motivation to increase student performance.

Aside from the types of learning systems used, several other observations are significant. First, most firms seek to avoid the traditional classroom practice in which a single teacher is the most important source of knowledge. They try to establish a system in which the teacher becomes the manager of a learning and resources system, facilitating the students' search for knowledge through diagnosis and prescription. Most firms feel that the project teachers face two crippling problems: a feeling that the target population will continue to fail and inadequate training in how to manage an individualized, self-paced classroom with a large number of students. Preservice training is provided by the contractor in most sites with both attitudinal and classroom management dimensions.

Second, firms that rely heavily on automated instruction do not want to bear the expense of a fully qualified classroom teacher, required by local or state regulation or agreements, to perform less complex tasks. Most firms use paraprofessionals where available; some firms would prefer to use paraprofessionals exclusively.

Third, most firms insist on refurbishing classrooms. Some work is usually required to accommodate the firm's system (for example, electrical wiring for teaching devices), but the most significant reason to make the classroom look different and thus break the failure syndrome associated with the usual setting. It

also provides the freedom to use individually prescribed instructional systems. The typical redone classroom contains small tables and chairs that can be grouped as desired. The student does not bring instructional materials to class, but uses the prescribed library of materials which is stationed around each room and presented in various modes, including programmed texts, cassett tape recorders, and teaching machines.

Fourth, a classroom visitor might observe activity that would not be tolerated in a traditional classroom. More than 80 percent of visiting traditional classroom teachers view such activity as generally chaotic and nonproductive. Most students work on their own project at their own pace; consequently, there is always a considerable individual movement and, at time, a great deal of noise. Such classrooms are normally carpeted to reduce the sound level.

Fifth, an observer of several contractor classrooms gets the impression that a unique psychological reversal has occurred. Students often refer to their teachers as a "partner to help learn" while the teacher no longer teaches "at" students. One can speculate that the availability of incentives for both teachers and firms based upon student performance has contributed to the emergence of potentially dangerous learner controlled instruction. Performance contracting does place the student in a powerful position, which at the secondary level could be abused.

Sixth, over time it has become apparent that the operational success of the projects, excluding achievement results, depends in varying degrees upon the interface between the contractor and the school. The two key personnel at each site were the project administrator of the contractor (firm or teacher group) and the school's project director. The firms had to weigh carefully the delicate choice between hiring a local person and training him in a short period of time and assigning to the project an employee knowledgeable about the system and loyal to the firm. On the other hand, the school had to decide whether to hire a person who could deal effectively with teachers and principals or one qualified to manage a complex project requiring tedious reporting and careful administration. The respective choices of both the school and the firm had genuine implications for the projects.

Fees

In 80 to 90 percent of the 1970 projects, the firms guaranteed a minimum grade level increase per child or no payment would be made (in the Office of Economic Opportunity experiment, the minimum grade level gain was initially set at 1.0). In most contracts, incentives are provided for incremental gains above the minimum level; in others, penalties are imposed on a pro-rated basis below a specified level of student performance.

In projects in which the participating teachers remained on the payroll of the school but were assigned to the contractor, the contracted fee for raising a student one grade level per subject ranged between $45 and $70, with one exception of about $300. Payment to contractors providing total learning systems, including locally trained personnel to operate the centers, ranged from $81 to approximately $220 per grade level gain in math or reading.

During 1970-71 at least two teacher's associations contracted with their local boards of education on an incentive contract basis whereby teachers could collectively earn several thousand dollars. Several projects in operation during 1971-72 provided incentives for individual teachers and even parents based upon student performance. In an Office of Education sponsored project in four sites, teachers can earn up to $1,200 per class and parents $100 per child, based upon performance above the class expected gain. In Dade County, Fla., a project is being planned whereby teachers may earn as much as $110 per student for gains 100 percent above expected levels. Moreover, teachers will also be provided $55 per student to defray operating costs and have the option of utilizing $55 per student as risk capital to invest in the classroom.

PROBLEMS TO BE SOLVED

To analyze the merits of performance contracting as a catalyst for change in education, one must view the problems and the

barriers to innovation in a new light—a management perspective.

Education lobbyists feel the *major* problem is lack of funds. Obviously, the general public does not share this belief. Bond issue defeats rose from 40 percent in 1960 to 88 percent in 1969, including instances where school systems were threatened with closing. President Nixon has stated: "As we get more education for the dollar, we will ask the Congress to supply many more dollars for education." In short, the movement for accountability is rooted in the public's unwillingness to continue to pour dollars into school systems without evidence that there has been a commensurate increase in performance.

The "Gallup Survey of Public Attitudes Toward Public Schools" (see *Phi Delta Kappan*, September, 1971) confirms the view that the number one problem facing schools is finances—where should costs be cut when local boards are forced to reduce total budgets? John Q. Citizen does not want to increase class size (79 percent) or cut teachers' salaries (77 percent), but does want to reduce the number of administrators (50 percent) or the number of counselors (32 percent), or would have schools charge rent on all textbooks (34 percent).

A *second* major problem in education is the lack of effective participation by the students, parents, and community members in school systems. Over the last decade, the community control-decentralization movement has gained widespread support. Confronted with new pressures, most school administrators have reacted defensively. The political acumen, management capability, and necessary resources to meet the demands of the community have been hard to come by.

Because of its inherent simplicity, performance contracting allows for active parent and community involvement in policy decision making. The student is also encouraged to participate actively in the decision-making process. In most projects, the outside contractor as well as many of the organization's employees will be paid on the basis of how well the individual student achieves, a significant psychological departure from the traditional classroom. Teachers become resource personnel assisting the student to learn at his own rate. As a result, instruction is not only learner centered but to a large extent, learner controlled.

A *third* problem in education has been increasing number of confrontations between organized teacher groups or unions and school administrators. The growth of unionization in education is ironic, indeed. Education is the only industry in this country that has experienced an increase in the labor/capital ratio since 1945. Moreover, education unions, unlike their counterparts in other industries, have never been faced with job insecurity because of technological displacement.

Nevertheless, the costs of public education, of which over 80 percent is made up of teacher salaries, have doubled over the last decade without concomitant increases in productivity. Compounding the difficulties in the collective bargaining process, school administrators have not attempted to negotiate on points related to productivity, but on issues such as the rights and responsibilities of administrators.

The negative reactions of the American Federation of Teachers to performance contracting are significant indicators of the need to drastically modify existing collective bargaining processes. Many school boards view performance contracting as a vehicle for introducing merit pay into public education, especially if contractors are permitted to reward their employees on the basis of student performance. At the same time, since most contractors utilize differentiated staffing, efficient practices by school systems during turnkey phases must also follow similar staffing patterns. However, while precedents for merit pay and differentiated staffing could be set by performance contractors, forward-looking teacher groups are attempting to set precedents for greater decentralization of decision making and flexibility, similar to that allowed the contractor. In short, performance contracting is looked upon by many administrators and some teacher groups as a means of ensuring that the collective bargaining process is meaningful or will produce significant results.

A *fourth* major problem has been the federal push for desegregation and racial balance. As a result of court orders and federal guidelines, the public school system has been under pressure, and public and professional opinions have polarized. Two situations seem to have emerged. First, school systems that anticipate or have completed integration seek an educationally effective and politically palatable approach to the new problems

that have been created. Second, systems faced with anti-integrationist militant pressure groups (both black and white) seek an approach that will ensure equity of results regardless of the location and type of facilities and equipment provided.

In the first situation, many white parents fear that the quality of instruction for their children will deteriorate; minority group parents are concerned that their children cannot compete and will drop out. Performance contract projects in certain schools provide deficient students with "accelerated learning" for several hours a day on a guaranteed performance basis. As a result, when the students are sent into regular classes full time, they are able to compete with their peers on an equitable basis.

In the second situation, where the movement toward desegregation has run into opposition, support has been growing for the following argument: If the primary aim of integration is to improve the education achievement of minority children, then why not provide quality education for all students? Should we be concerned with the concept of equal education opportunities, which in practice has not been too successful or, instead, equity of education results for all students? Doesn't performance contracting offer an opportunity to guarantee achievement? Bolstered by the accountability movement in public education, the concept of equity of results is growing and could well become the policy of the seventies. For example, one spin-off of the Dallas performance contract project was a plan that purports to integrate through the use of closed circuit television, guaranteeing equity of results for all students involved. If these results are not attained after two years, the district will be held out of compliance.

A *fifth* problem has been the failure of many students, particularly those from low and even middle income backgrounds, to develop basic communication and computational skills. An effort to cope with this failure was recently formalized in the Right To Read program. New educational technologies developed by the Department of Defense, Job Corps, and other groups have been effective in developing basic skills in math and reading. However, school systems were not adopting such improvements and allowing the full potential of these learning systems to be realized. Performance contracting has offered an opportunity for

total package procurement. Since the technology is available, there is no reason why a new Bill of Rights could not be formulated—the right of every student to read at grade level.

A *sixth* problem is the difficulty of conducting an experiment in public schools. Aside from operational difficulties, the politics of experimentation almost precludes failure, resulting in foregone "successes," albeit with caveats. Several unique opportunities emerge if performance contracting is used as a vehicle for serious experimentation. If the contractor's program fails in terms of student performance, the dollar costs to the school are little, if any. In addition, because the firm's confidence will be reflected in the level of guarantee and price, risk is reduced. However, if the contractor does fail, the school administrators have a scapegoat outside the system.

Moreover, the contractor has a greater degree of flexibility than most schools in designing the program, using innovative techniques, and operating the program without the constraints of regulations, procedures, and custom. Hence, the opportunity for a high degree of innovation exists during the first year's operation, and a high degree of leverage exists for school administrators to make necessary changes during the turnkey phase if the contractor's program is successful.

Seventh, and last, many have argued that the major barrier to education reform is the incentive structure in public schools. Few, if any, incentives reward personnel (with the possible exception of athletic coaches and band teachers) for improving student performance or allocating resources more efficiently. Advocates of change in education are directing greater study and analysis to the incentive systems or lack thereof in public education as a major explanation of an unresponsive structure. Ted Sizer and Christopher Jencks, advocates of the voucher program, have conceptualized public education as a monopoly which provides little variety and choice of services for consumers. Presidential counselor and scholar Daniel P. Moynihan has argued the need for federal policies that utilize incentives as a means of increasing productivity in social services including education.

Advocates of merit pay and promotion based on student performance are no longer writing research papers on the subject but are now attempting to apply the concept in schools from

Washington, D.C., to Mesa, Ariz. New concepts of grants management, including performance contracts, are, for the first time, being seriously studied in the federal and state education agencies for probable application and implementation.

HOW WELL DID PERFORMANCE CONTRACTING SUCCEED?

Detailed results from many projects are still unavailable (results from the twenty sites in the Office of Economic Opportunity experiment were released in January, 1972; see Prologue). Therefore, the following comments and indications should not be taken as conclusive, since they are based on the limited hard data presently available, impressions gained through observation, and communications with both firms and school district personnel.

Is performance contracting a cost effective system? Thus far, however, preliminary results from scattered projects indicate that the average rates of achievement in math and reading for underachieving students were about doubled for a cost slightly more than existing cost per student year per subject. The recent Rand study of a limited number of projects stated that gains ranged from 0.4 to 1.7 grade levels in nine months. Since the break-even point for most firms was higher than the grade levels achieved, the fees actually paid were less than the firms' costs, making the year more profitable for the schools than for the firms in several instances.

Most firms conducting performance contracting projects guarantee improvement of approximately one grade level in math or reading for a $81 to $210 fee per pupil with penalties and bonuses based on student performance. Other firms utilizing local personnel who remain on the payroll of the school system provide a similar guarantee for a fee of $45 to $75. In properly planned projects, the Request for Proposal will specify conditions that ensure a high probability of reducing the costs per unit of achievement during the turnkey phase. At the same time, the school's cost and performance accounting system must be mod-

ified in order to evaluate results and costs (for example, dropout and repeater rates must be factored into the reporting and analysis) during the turnkey phase. Therefore, depending upon the changes the school system is willing to make, the probability of reduced costs through greater instructional efficiencies and optimal allocation of resources in *specific program areas* can be high.

The costs of the twelve OEO performance contract projects analyzed by Education Turnkey staff, using the COST-ED computer analysis and simulation model, are revealing. First, while many firms used similar materials, the economics of the systems varied significantly, especially regarding staff use, equipment, books, and audio-visual costs. For example, about 70-75 percent of total costs in the control sites were spent on teacher pay and books, and 1-2 percent on audio-visual materials. The contractors spent 60-65 percent and 15-20 percent in the corresponding areas (see Table 2).

Second, compared with control programs, contractors' investments in instructional equipment were significantly greater in most programs. Third, if the schools adopted contractors' instructional programs, operating costs would be less than existing school costs per student/subject in about one-third of the cases and greater in the rest.

Fourth, achievement scores (used here only as one benchmark for analysis) in contractors' programs will not have to be significantly greater than control program scores for contractors' programs to be more cost effective than the schools'. Assuming that the average control site scores showed a 0.5 grade equivalent gain, the contractors would have to produce the following gains to have proportional cost effectiveness ratios: *Alpha Learning*, 0.53; *Learning Foundations*, 0.82; *Plan Ed. Center*, 0.67; *Quality Ed. Development*, 0.63; *Singer-Graflex*, 0.57; and *Westinghouse Learning*, 0.53.

The reasons for variances and costs that were lower than expected were noted as follows in the report to the OEO:

Lower classroom costs through better student scheduling and utilization of facilities, space, and instructional equipment

Lower staff costs through the use of paraprofessionals to operate self-paced, individualized student learning systems

TABLE 2

Program Rankings by Total Cost per Student-Year (National Average Prices)

ELEMENTARY READING

RANK SITE	ORGANIZATION	HOURS/DAY	TOTAL COST PER STUDENT-YEAR	Percentage of Instruction-only Cost						
				Teacher %	Paraprofessional%	Total Staff%	Classroom%	Instructional Equipment%	Books and Audio-visual%	Other %
CONTROL PROGRAMS:										
1 Athens	District	1.100	$150.32	70.9	0	70.9	23.0	2.3	1.1	2.7
2 Las Vegas	District	.983	174.10	66.5	0	66.5	28.7	0.9	2.3	1.6
3 Jacksonville	District	1.083	176.53	66.9	0	66.9	26.7	1.0	0.9	4.5
4 Grand Rapids	District	1.050	186.57	64.4	11.6	76.0	17.7	1.9	2.8	1.6
5 Dallas	District	1.546	216.63	80.9	0	80.9	15.3	1.7	0.8	1.3
6 Rockland (Thomaston)	District	1.170	221.01	76.3	0	76.3	16.1	0.6	2.8	4.2
7 Seattle	District	1.000	252.35	77.7	0	77.7	12.1	1.0	3.8	5.4
8 Selmer	District	2.000	255.76	78.8	0	78.8	18.4	0.5	1.0	1.3
9 Hammond	District	1.700	274.15	73.8	0	73.8	23.6	0.9	0.7	1.0
10 Fresno	District	1.500	286.95	75.4	0	75.4	19.4	0.9	1.4	2.9
11 Taft (Sinton)	District	2.000	300.85	80.0	0	80.0	17.9	0.4	0.6	1.1
12 Portland	District	1.917	349.80	74.3	0	74.3	19.9	2.3	2.3	1.2
EXPERIMENTAL PROGRAMS:										
1 Selmer	PLAN	.750	$147.70	46.1	15.4	61.5	19.2	0.8	17.6	0.9
2 Dallas	QED	1.000	186.47	53.0	19.0	72.0	13.3	5.3	6.1	3.3
3 Athens	PLAN	.920	190.84	53.2	19.7	72.9	10.9	1.5	14.7	0
4 Fresno	WLC	1.000	215.52	12.6	41.7	54.3	10.4	8.6	3.6	23.1
5 Seattle	S/G	.694	215.79	52.2	9.5	61.7	8.4	4.1	23.3	2.5
6 Grand Rapids	Alpha	1.156	217.29	51.5	15.0	66.5	20.3	11.9	0	1.3
7 Hammond	LF	.750	252.04	0	59.6	59.6	7.0	2.3	24.9	6.2
8 Portland	S/G	.917	263.01	66.4	0	66.4	13.2	5.5	13.3	1.6
9 Jacksonville	LF	1.000	270.25	0	66.1	66.1	7.9	2.1	17.6	6.3
10 Taft	Alpha	1.500	280.52	49.5	32.0	81.5	9.4	0	8.2	0.9

Reliance on instructional components with relatively low operating cost, such as teaching machines, cassettes, and non-consumable programmed instructional packages

Better management control and greater administrative and classroom flexibility than in traditional settings.

Before drawing hasty conclusions, school officials will not only have to await the OEO results, but also consider the public's present attitude towards where costs should be cut. The general public is either emphatically certain about what constitutes good education policy and contributes most to student achievement, or is totally ignorant about the economics of school operations and budgets. An analysis by the Education Turnkey staff of the typical school's costs (elementary math) derived from national averages used in the OEO study is illuminating:

Increasing the student-administrator ratio from 406/1 to 564/1 would save as much money as increasing the student-teacher ratio from 29/1 to only 29.7/1.

The saving of renting books rather than providing them free could be surpassed by increasing class size by one student or by reducing the average annual pay of teachers (for example, by hiring paraprofessionals or younger teachers) by an amount less than 1 percent of the total budget.

A decrease in annual pay of teachers by 5 percent will free enough resources to increase audio-visual materials and books by 170 percent.

COST-ED analyses of these and many other equal-cost trade-offs in performance contractor's and control school programs indicate the cost saving potential of performance contracting in specific areas. In the same Gallup poll, 49 percent of the public favored performance contracting; however, the public's attitude towards the cost-saving implications could constrain the adoption of learning systems during the turnkey phase. If the achievement results are significant, perhaps public views will change as certain myths and concepts are displaced.

Is performance contracting a low risk, low cost way for administrators to experiment? Because many firms were overly ambitious or optimistic about grade-level guarantees, the actual fee paid by many school systems was small in relation to the increases in student performance. One district, for example,

paid a fee less than existing school costs per student year for a doubling of the rate of learning. Schools also avoided risks. In most instances, the political heat resulting from the experimentation was not directed toward the school but to federal sponsoring agents or to performance contracting firms. Similarly, where the contractors' results were not significant, the contractor, again, rather than the school, "failed."

The Virginia Department of Education in its report to the state board on its performance contract project in seven districts expressed dismay at the slight gains made on standardized tests but noted: "The use of performance contracting as a method for delivery of an instructional program cannot be deemed a failure on the basis of results in Virginia. . . . As experienced here, performance contracting, as a means for low risk, low cost experimentation in education innovation can be considered successful." However, these results have been somewhat rectified by analysis of the mismatch of the posttest of May, 1971, compared to the contractor's curriculum content.

Was innovation encouraged? Performance contracting was also designed to encourage responsible innovation by prescribing levels of performance and cost constraints, but not the methodology or materials to be used by the contractor. During the first year, the most significant innovation was the design and actual application of total learning systems. In this respect, performance contracting allowed the firms flexibility to systems engineer a variety of methodologies and curricula into learning systems tailored for the target populations.

In the first Texarkana project, Dorsett Educational Systems unveiled the TM80, a teaching machine with an audio-discriminator that permitted the student to respond verbally to programmed questions. The device could discriminate between the responses "tree" and "three." Behavioral Research Laboratories used for the first time, in the Gary project, its novel math program (grades 1-8), which requires little if any reading capability. In Providence and Dallas, New Century demonstrated its capital-intensive Skinnerian math and reading programs. LRA in the Virginia project used extensively the Cohen reading taxonomy, which was recently announced by Random House. And in a "sleeper" project in Texarkana in 1970, the James Evan touch-

and-tell reading program for educable mentally retarded children was demonstrated.

Few other radically innovative learning systems, hardware or software developments, or pedagogical approaches have surfaced. Perhaps the lack of developmental funds in contract project budgets or the relatively short life of performance contracting has been a significant factor. Or perhaps the realization is dawning that classroom instructional management rather than gadgetry might be more significant in producing results.

Is performance contracting a catalyst for reform? Another primary criterion for judging performance contracting must be its impact on school system renewal. A major conclusion of the Rand study is that performance contracting "really does facilitate a radical change." Even though achievement scores are not yet available, about a third of the schools involved in performance contracting in 1970-71 planned to continue the projects; another third planned to adopt on a turnkey basis the contractors' program in part or totally; and the rest were undecided.

Norfolk, Va., expanded the turnkey phase from two schools in 1970 to ten in 1971, while Buchanan and Wise County, also in Virginia, have turnkeyed the LRA Project after major redesign efforts. All three projects in Grand Rapids have been turnkeyed, and an additional project in special education is underway. The teachers and principals in the school involved requested that the turnkey phases be expanded in January, 1972. A turnkey operation at the elementary level in Taft, Tex., was implemented after school officials refined the program during the summer; the performance contractor has now adopted the Taft program and is using it in most of his major performance contracts elsewhere.

In 70 to 80 percent of the turnkey projects, local rather than nonformula federal funds are being used. It is uncertain whether turnkey projects were operated as effectively or efficiently as the performance contract projects that preceded them. Only the long-range results will tell—if school administrators are willing to initiate management changes and independent evaluations are preformed.

Is performance contracting dehumanizing? One of the serendipities observed over the past two years has been a unique psychological reversal in the classroom: The firm, the teachers,

and others depend monetarily or otherwise, upon the success of individual students. In several projects, teachers began to perceive themselves as learning and resource partners. Instruction in this sense was not only learner centered but also learner controlled.

National and local teacher associations generally have opposed performance contracting. Although the attitudes of the participating teachers toward the projects ranged from intensely negative to extremely positive, the marjority felt that they were allowed, within limits, flexibility to do what they had always wanted to do. In certain sites, participating teachers became "salesmen" for performance contracting within the school and in the immediate area. Early involvement of teachers during planning is critical to positive teacher attitudes and cooperation.

Student reaction to the project has been observed in several areas. A "smile factor" was noticeable in many projects; attendance was generally significantly higher than in control sites (because make-up classes were available, actual attendance in one performance contracting site was greater than the number of regularly scheduled hours available); and dropout rates were significantly reduced in the vast majority of sites analyzed thus far. In one Virginia project involving 500 students, the dropout rate of the target group fell to zero.

Did community involvement increase? The New York City district mentioned earlier viewed the experiment as leverage not only to countervail union pressures but also to involve community residents as paraprofessionals and teacher aides. After the first abortive attempts to implement the project in September, 1970, Learning Foundations, the contractor, and officials, including Fran Tarkenton and other New York giants, held a community dinner attended by over 100 parents, many of whom signed up as paraprofessionals. With substantial community support, the project was initiated despite strong teacher resistance, including attempts to obtain court injunctions. In Taft, Tex., minority parents threatened to withdraw their children from the project, arguing that inferior paraprofessionals were teaching and that segregated classes were being perpetuated. As communications between school and community improved, parent resistance subsided.

In Dallas, where disciplinary problems threatened the contractor's program, parents who had been members of the planning advisory group formed voluntary committees to patrol the school hallways to ensure the project's continuance. And some have credited community support for the continuation of the Gary project in the face of strong teacher resistance. In the majority of projects, principals reported a high level of parental support during the entire year, even though a few parents withdrew their children from the program during initial stages. Genearlly, as indicated in the Gallup Survey of Education, public support for performance contracting increased from about 23 percent in 1970 to 49 percent in 1971.

Did it rationalize the collective bargaining program? Without doubt, performance contracting has provided a leverage for school administrators trying to initiate incentive or merit pay and differentiated staffing. One school board plans to initiate incentive programs for all students and teachers during the turnkey phase. Other school principals have attempted to initiate projects with teacher incentives similar to those in the performance contract. In one project a lawsuit was filed by the teachers' groups resulting in the discontinuance of incentive pay during the last semester.

Aside from the impact of performance contracting on the negotiating process, the nature and results of COST-ED analysis have provided administrators with another tool leading to the rationalization of collective negotiations. Through the equal-cost trade-offs analysis of both control and experimental schools, administrators in several sites are able to determine trade-offs between teacher pay and other factors. For example, an increase in teacher pay in the typical elementary third grade from $9,025 to $9,291.80 could be absorbed by any of the following equal-cost trade-offs:

Increase class size from 27.3 to 1, to 27.9 to 1

Reduce classroom maintenance by 29 percent

Reduce classroom equipment costs from $18.99 to $2.59 per student.

These trade-off reports have forced teachers and administrators to focus on costs of alternative negotiating points rather

than waste time in the political hyperbole which too often surrounds negotiations.

Was it an aid to desegregation? It is too early to judge decisively, but performance contracting seems to have aided desegregation. The NAACP recently passed a resolution favoring performance contracting. One contract in a southern state last year was funded under the Emergency School Fund Act. And the supporters of performance contracting in Texarkana soundly defeated freedom-of-choice advocates at school board election time; integration there has occurred relatively smoothly. In several sites, including Wichita and Jacksonville, court orders and decisions have required the closing of schools or transfer of students; these developments have affected the validity of any evaluation.

NEW DIRECTIONS: PROBLEMS AND POTENTIAL

Originally conceived as a catalyst for school system reform, first-generation performance contracting by private firms should put itself out of business for the most part within the next couple of years, not because of its failure but because of its success. While school officials will continue to use it as a low risk, low cost vehicle for experimenting with radically new or untested learning systems, its major contributions will have been made in the immediate future.

Performance Support Contracts

As the results of learning systems used by contractors become available, both contracting firms and school officials will see the advantages of entering into turnkey projects immediately, without going through the costly and time-consuming performance contract stages. Previously sold only materials, schools are

now getting training and other support from firms with guarantees. With cost effectiveness data available for a large number of learning systems, it is possible to simulate the cost effectiveness of alternative programs under varying constraints to assist officials in selecting programs or reducing the costs of recently turnkeyed contract projects.

Performance support contracts are presently under way in Chicago, Detroit, and Miami. In the first two districts, LRA and Alpha II Learning Systems, respectively, are providing teacher training, materials, equipment, and monitoring services to both principals and teachers; the major risk is assumed by the firms even though the teachers remain under the employment of the districts. In Miami, Plan and Behavioral Research laboratories, operating under similar conditions, will receive their maximum payment if elementary students achieve 100 percent above expected gains and none for gains less than 10 percent. The major problems anticipated in such contracts include illegal delegation of authority to the firm regarding supervisory and firing or transfer policies, and conflict with union and school regulations regarding teacher working conditions and maintenance liability (for example, if the district purchases the firm's equipment, then the school's maintenance personnel are required to service the equipment, and any downtime affects the firm's costs). Even these potential problems are less formidable than those in first-generation performance contracts; guarantees by firms are likewise less extensive because of lack of management control.

Incentive Contracts with Teacher

In two of the Office of Economic Opportunity project sites, Mesa and Stockton, the districts entered into contracts with their teacher associations, whereby the teachers receive incentive payments based on student performance. The participating teachers chose to pool the incentives earned during the year. In the majority of states, such contracts would be illegal, since teacher association charters do not specify such activity and services; waivers were required in the OEO project.

Because of legal and political problems, most teacher incentive projects have taken on a new character. The most innova-

tive has been developed in Miami. Beginning in March, 1971, representatives of three teacher associations, parent groups, administrators, and students formed a Professional Advisory Committee (PAC) to assist and advise in the development of a Request for Proposal. Specifications discussed at a prebid conference included the following:

Both faculties and firms could receive up to $110 for each student who achieved a grade level approximately 100 percent above expected gains in math and reading as measured by standardized tests and "banks" of performance objectives.

Both would receive $55 per student to be used to defray operating costs, without the risk of having to pay back the amount.

Faculties could invest up to $55 per student of "risk capital" for teacher training or instructional classroom equipment; however, if the students achieved less than 50 percent above expected gain, a portion, if not all, of the risk capital expenditures would have to be repaid.

Technical support was provided to the interested faculties by Turnkey staff, administrators, and representatives of the teachers associations. Proposals submitted by teacher groups and five private firms indicated that teachers were willing to guarantee a higher level of student performance than the firms. However, the teachers demanded certain *quid pro quos* from the district, such as twenty-four hour maintenance service, specific information regarding student achievement levels and validation results of instruments to be used, and greater classroom flexibility. Moreover, the teachers proposed to use the risk capital allocations and negotiated agreements with equipment suppliers so that the suppliers shared the risks, as in a performance support contract. Teachers proposed to use teaching machines, student incentives, and peer tutors in their respective programs which began in January, 1972.

While legal and political problems of delegation exist, they are minimal, especially in light of the participatory management process which was followed in the creation of PAC and the development of the RFP. Aside from establishing precedents in the use of risk capital and new testing instruments, the project is the most visible example of combining incentive contracting with professional self-governance, a much discussed goal of the NEA.

Another variation in incentive contracting with teachers is the USOE-sponsored Project in the Use of Incentives being conducted in San Antonio, Oakland, Jacksonville, and Cincinnati. Teachers can earn up to $1,200 if student achievement, as measured by standardized tests, is three to four months ahead of expected gains. In the first two sites, incentives up to $100 per child can be earned by parents. The major objective of this evaluation project is to determine whether incentives offered to teachers and parents will result in increased student performance for poor, minority group elementary students. A second objective is to determine what, if anything, teachers and parents will do differently to ensure maximum student achievement.

Contracting Between State Departments and Districts

The idea of contingency funding and grant management between funding agencies and grantees has been batted around at the federal level since 1966, when Bureau of the Budget officials proposed to the U.S. Office of Education that Elementary and Secondary Education Act Title I and Title II funds be based upon results achieved. Departments of education in several states have discussed and considered accountability "agreements" with locals. None, however, were implemented until November, 1971, when Michigan initiated its $23 million accountability model, possibly the most significant turning point in public education during the century.

Approximately sixty-five districts have been awarded amounts ranging from $6,000 to over $11 million to increase achievement of minority students scoring below the 15th percentile in math and reading. The districts have been given specific achievement levels as goals. If, after the first year, tests indicate that each student achieves the specified level, the district receives the full amount of funding the succeeding year based on the state formula. If, on the other hand, the students achieve less than 75 percent of the specified goals, a prorated penalty is applied.

"Revolutionary" hardly describes the project. First, the districts receive in essence a fixed fee per student to raise him to a specified level or be penalized the following year—grant management at its highest level! Second, districts that are most ef-

ficient in meeting the objectives will be rewarded, since the amount of the fee is based upon results, not costs incurred. In this respect, the project differs from the vast majority of federally funded projects. For example, given a fixed fee of $200 per student, a district could purchase a system costing only $50 per student; if it produced the necessary achievement level of 0.8 years growth, a $150 "profit" could be earned and used for general and administrative purposes by the district. Third, each district now has an incentive to search the market place for the learning system which it feels will produce the necessary results at lowest cost. Cost considerations have often been neglected in performance contract projects funded largely with federal funds. One firm's fee for raising a student one grade level was 80 percent above the school's existing cost to produce similar results. And last, it could put the districts out of the compensatory education business as the number of eligible deficient students decline, if the district does its job right; it could be put out of business altogether if it does not, as state aid dries up.

Implications for performance contracting between districts and teachers or private firms are significant. Of the $23 million, $500,000 is specifically earmarked for contracts with private firms; a large number of districts are entering similar performance support contracts with private groups with the $22.5 million. In Detroit, it is estimated that several million dollars will be allocated to performance support contracts.

As with any bold and innovative undertaking, the Michigan project inherits some of the problems inherent in performance contracting. First, even though officials are hopeful that criterion referenced tests will be used, most districts will propose to use norm referenced tests, which will require state approval. Since *individual* rather than *mean* scores will be the basis of determining future allocations, the standard error of most norm tests will take its toll on the districts. Second, because teachers will administer tests and will be aware of the specific tests to be used, the opportunity for teaching to tests exists. Allegations, just or unjust, are certain to be made.

POLICY IMPLICATIONS

Only in education would a contract have to be called a *performance* contract; any contract worth its salt requires some specification of performance. Part of the concern and controversy must be attributed to the focus of performance—the student—and few schools are organized and managed to direct their resources, if not their concern, towards student performance. A drastic departure from the concept of "schoolkeeping," performance contracting has raised some fundamental issues. In doing so, it impinges upon certain vested interests. Performance contracting has forced us to recognize that these interests possess sensitive antennae that pick up signals which are transmitted and converted into the milieu in which decisions are made at both the local and national levels.

Any attempt to pinpoint the policy implications of performance contracting must be tempered by at least two reminders. First, because the concept encompasses so many departures from tradition, conceptually and even operationally, it is tempting to attribute many policy changes to its adoption and expansion. However, differentiated staffing, individualized instruction, contingency management techniques, cost-effectiveness analysis, and merit pay were around long before performance contractors packaged and demonstrated them. Second, some have assumed that federal education policies affect local decisions beyond the enticement of federal funds. Public education consists of thousands of autonomous entities, and their decisions reflect the desires of local constituencies despite official guidelines. In short, performance contracting in its first generation or hybrid stages will prevail, not because of federal policies or support, but only if it meets the political, social, economic, and educational criteria of acceptance at the district level.

A New Approach to Federal Experimentation

Federal approaches to field experimentation in education will certainly have to consider performance contracting. A proper analysis of the Office of Economic Opportunity experiment must separate contracting as a technique of experimentation from that of a technique of instruction. Its low risk, low cost

characteristic hedges against failure; its flexibility encourages innovation and quick start-up; and the incentive structure reduces the costs of administration.

At the same time, it places critical significance upon goal definition and criteria selection. Furthermore, it assumes the existence of a management capability at the local level while exaggerating the conflict between rigid evaluation design and operational efficiency.

A Prescriptive Role for Industry

Typically, federal policy towards industry has been *proscriptive* ("thou shall not"), for example, antitrust legislation. Through the *prescriptive* policies of performance contracting, industry is asked to do a job without being told how to do it, thereby encouraging a perpetual search for efficiency. And to the extent that the users (school systems) demand efficiency and that market power does not become concentrated within, a type of creative destruction will continue as old concepts and techniques are displaced by the new.

The major role of the federal government and even local districts will be to ensure that it becomes profitable for firms only if and when the firms serve the public or student's interest. Performance contracting has and will continue to change the qualitative nature of existing markets, introducing competition through innovation.

Equity of Results vs Equal Educational Opportunity

Performance contracting has precipitated an argument for equity of education results, regardless of similar opportunities. Aside from the social goals of integration, the failure of many approaches, especially busing, to increase the achievement levels of minority group children has led to support for programs such as performance contracting. These guarantee results regardless of the location of the child, the amount of resources, or class size, and maintain the integrity of the neighborhood school. While most guidelines of federal programs (for example, Elementary and Secondary Education Act Title I) require equality in terms of comparable inputs, such as facilities or student-

teacher ratio, performance contracting introduces the concept of equity of results.

Management Control with Program Flexibility

From a management perspective, accountability is nothing more than the adoption of management for results principles, whereby the criteria for measuring the attainment of stated objectives are determined through a participatory management process. Program flexibility is delegated to the lowest operating unit, the school or classroom, and those managers who are willing to accept the responsibility for greater results are provided not only additional resources but also incentives, material or otherwise, for successful performance. Performance contracting epitomizes management control, program flexibility regarding the approach, incentive for successful performance, and delegation of authority. Ironically, it has established precedents for professional self-governance for teachers, encouraging teacher-generated proposals for accountability.

The policy implications are clear: the effective application of the fruits of educational reward and development will not occur in our public schools until a management environment conducive to innovation and risk taking is created in the classroom through the board level. At the heart of such a system is an incentive network that encourages the attainment of school system objectives by perpetuating phased and evolutionary creative destruction and renewal.

The O.E.O. Evaluation Report

The release by the Office of Economic Opportunity of its own evaluation of the 18 performance contracts it had sponsored deserves comment because of the exaggerated importance some persons will place on this report.

The O.E.O. report indicated that no significant gains were made by students in the experimental group compared to the control schools. Hence O.E.O. flunked performance contracting and critics had a heyday.

While the preliminary results were disappointing, they were not as discouraging as the O.E.O. report made them appear. When probed by the press, O.E.O. officials admitted that small to

medium sized Southern sites produced five significant successes for every one failure. These schools, administratively more flexible and less unionized than Northeastern and Western schools, provide a clue to the settings where performance contracting is most likely to succeed and where resistance occurred in the project.

The O.E.O. report may be further criticized for being based on projects that were hastily planned. The average planning time for the 18 projects was less than half of that generally accepted—six months for one project.

Finally, O.E.O. fails to identify performance contracting as an experimental approach. If no results are achieved, no payment is made. One firm did receive the maximum payment; others received less, as expected. Moreover, one-third of the contractors' programs cost less than the control programs in math and reading. Hence, significant grade level gains were made in many of the 18 sites at less cost.

But the greatest error of commission in the experiment and ommission in the report was O.E.O.'s unwillingness to analyze performance contracting as a change agent. Although strongly recommended by Turnkey staff, the turnkey concept was not included in the project design. Most persons who have been intimately involved in the performance contracting movement have consistently argued that performance contracting would make a major contribution as a catalyst for change. In fact, the recent Rand Corporation study of five non-O.E.O. sites concluded that performance contracting did "facilitate radical change" in all five schools. At least five of the 18 districts participating in the O.E.O. experiment are continuing *with their own money* some of the innovations introduced by the contractors.

We cannot underestimate the importance of this spirit of willingness to innovate that has been nurtured by performance contracting. This is just one of the reasons why the contracting concept will continue, though perhaps by a different name, in spite of the distorted reports that have been circulated about its early successes and failures. Performance contracting is still a three year old infant. It is much too soon to know how strong it may grow and how much it may offer—especially when the vital Turnkey operation is applied.

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