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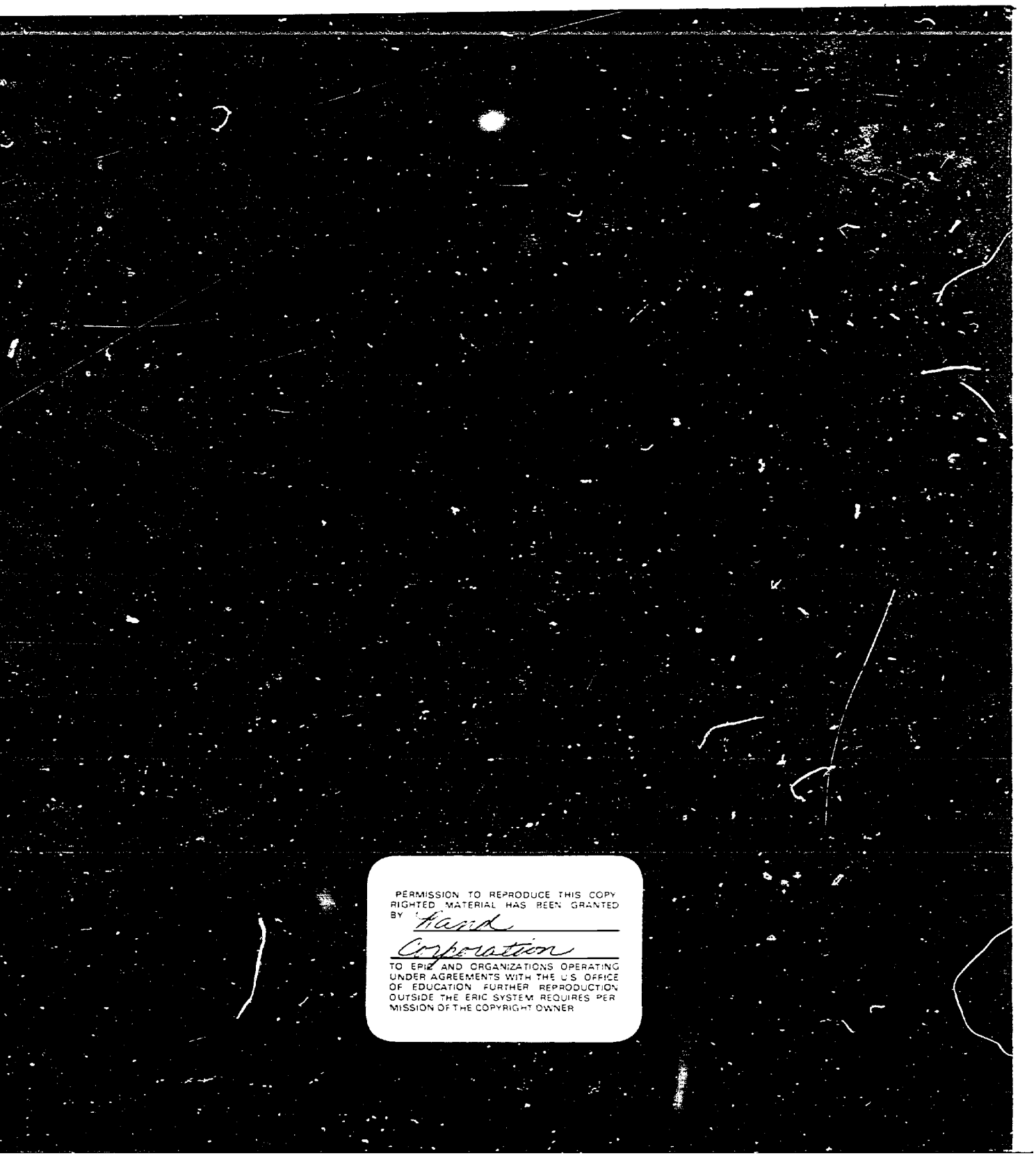
ABSTRACT

This report is distilled from Rand's findings in previously reported research and from new research. It is addressed to school board members, administrators, and other educational decisionmakers who may be contemplating a performance contracting program. The guide follows the life cycle of a project and identifies the three major phases as planning and contracting, operation , and evaluation. Planning and contracting activities discussed are (1) legal research, (2) assessment of needs, (3) requests for proposals, (4) proposals, (5) selection of learning system contractor (LSC) or other program participants, and (6) determination of contracts. Program operation events considered are (1) selection of schools, (2) personnel selection, (3) teacher training, (4) student selection and transfers, (5) program monitoring, and (6) promoting awareness of the program. Considered under the evaluation phase are (1) program validation, (2) settlement of the LSC contract, (3) program evaluation, and (4) the decision about the future of the program. The second part of this guide (Technical Appendix, ED 060392) provides more technical detail on the problems of test and measurement and cost analysis associated with performance contracting programs. Related documents are ED 050 496-497 and ED 056 247-252. (Author)



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A GUIDE TO EDUCATIONAL PERFORMANCE CONTRACTING

G. R. Hall, P. Carpenter, S. A. Haggart,
M. L. Rapp, and G. C. Sumner

Prepared for the Department of Health, Education and Welfare

Rand

PREFACE

This Report is the third element of the Rand/HEW study of performance contracting in education. The first was a Report by J. P. Stucker and G. R. Hall, *The Performance Contracting Concept in Education*, The Rand Corporation, R-699/1-HEW, May 1971, which discusses the theory behind performance contracting and how it was applied during the 1970-71 school year. The second element comprises six volumes, which examine eight performance contracting programs in 15 schools:

1. R-900/1-HEW, *Conclusions and Implications*, by P. Carpenter and G. R. Hall
2. R-900/2-HEW, *Norfolk, Virginia*, by P. Carpenter
3. R-900/3-HEW, *Texarkana, Arkansas and Liberty-Eylau, Texas*, by P. Carpenter, A. W. Chalfant, and G. R. Hall
4. R-900/4-HEW, *Gary, Indiana*, by G. R. Hall and M. L. Rapp
5. R-900/5-HEW, *Gilroy, California*, by M. L. Rapp
6. R-900/6-HEW, *Grand Rapids, Michigan*, by G. C. Sumner

The present Report, distilled from Rand's findings in both previously reported and new research, is a Guide addressed to school board members, administrators, and other decisionmakers involved in school district affairs who may be contemplating a performance contracting program. It delineates questions, issues, and choices they are likely to confront.

The Guide is published in two parts. This volume discusses the planning, operation, and evaluation of performance contracting. The Technical Appendix, R-955/2-HEW, goes into more technical detail on problems of test and measurement and of cost analysis associated with performance contracting programs. It also reproduces the contracts involved in eight programs.

SUMMARY

An educational performance contract is an agreement between a learning system contractor (LSC) and a local educational agency (LEA) for instruction of a specified group of students, with payment according to measured achievement. LSCs have included both teacher groups and private firms, but the latter have been far the more numerous and receive the focus of attention in this Guide.

The Guide neither endorses nor opposes performance contracting. Its purpose is to assist LEAs in assessing the major planning, management, and evaluation issues associated with this type of program. Many issues are common to all new or innovative programs, but three areas are especially important for performance contracting programs: legal issues, program management, and measurement and validation of student achievement.

Despite the large number of programs to date, novel legal questions still attend performance contracts. Because state and local education codes, procurement regulations, union contracts, and employment arrangements differ among LEAs, each LEA must conduct specific research to determine rights, responsibilities, and procedures. The Guide discusses some basic legal matters that are likely to interest all LEAs, however.

Performance contracting programs require active LEA program management. In the initial phases the LEA must assess education needs, prepare the Request for Proposal, select the contractor, and write and negotiate the contract. When the program is under way, the LEA management must monitor the program and resolve questions promptly, and effectively. Finally, the LEA must assure that the evaluation and assessment of the program generates data that not only meet professional standards of reliability and validity, but provide decisionmakers with the information they require.

This last point introduces the third topic of special interest, the measurement and validation of student learning. This is the key element in performance contracting. With the contractor's payment hinging on student learning, measurement must be both reliable and valid. In turn, accuracy and objectivity on the part of the evaluator take on extreme importance.

Validation is an audit of the appropriateness of the program's evaluation procedures and verification of the results as reported by the project evaluation. Ideally,

it should include a review and critique of the criteria for test selection, an assessment of the reliability and validity of the tests as measures of the student learning desired, inspection of the conditions of test administration, checks of test-scoring procedures, and checks of procedures in computation for payment. A well-planned and well-executed validation of student achievement should be an integral part of any performance contracting program. This Guide devotes several sections to validation and evaluation issues, and the Technical Appendix goes into further detail.

The Guide follows the life-cycle of a project. Three major phases are identified: planning and contracting, operation, and evaluation. Within the planning and contracting phase, six activities or events are discussed: (1) legal research, (2) assessment of needs, (3) Requests for Proposals, (4) proposals, (5) selection of LSC and, possibly, other program participants, (6) determination of contracts.

For the program operation phase, the Guide considers: (1) selection of schools, (2) personnel selection, (3) teacher training, (4) student selection and transfers, (5) program monitoring, and (6) promoting awareness of the program.

Four activities and events are considered under the evaluation phase: (1) program validation, (2) settlement of the LSC contract, (3) program evaluation, and (4) the decision about the future of the program.

ACKNOWLEDGMENTS

We extend our thanks to the educators, contractors, and public officials who provided information and guidance. W. I. Harriss, M. W. McLaughlin, and J. Pincus of Rand, and W. J. Turner of the Los Angeles County School District, provided comments and suggestions. Their assistance is appreciated.

CONTENTS

Part 2. Planning and Contracting

Part 3. Program Operations

Part 4. Evaluation

Part 1

Introduction

I. PURPOSE OF THE GUIDE

OBJECTIVES

Local educational agencies (LEAs) have entered into over 100 performance contracts with business firms and teacher groups since 1969. The essence of these contracts is that a learning system contractor (LSC) manages an instruction program for a specified group of students and is paid according to their measured achievement.

Schools ordinarily provide for instructional programs by letting fixed contracts for resources. Teachers are hired on yearly contracts for fixed sums; textbooks are purchased at fixed prices per thousand copies; and similar contracts based on fixed amounts per unit are used to acquire other inputs. The school system then organizes these resources into an educational program and manages the program through its employees. An LSC, in contrast, is "paid for results" as measured by some index of student achievement.

The LSCs in most programs have been commercial enterprises, but some have been individual teachers or organized teacher groups. Some observers believe that performance contracting will increasingly be of this "internal" type, between teachers and LEAs, rather than the "external" type between LEAs and outside enterprises.[1] The two contract types share many features, but external contracts entail some special problems that are not present in contracts between an LEA and its employees. For that reason, and because commercial contracts have been by far the more common, this Guide concentrates largely on contracts between school districts and commercial firms.

"Paying for results" sounds like a simple concept but in practice it has many ramifications, in light of which particular LEAs may find good reason for shunning performance contracts. Consequently, this Guide is not intended as an endorsement or sales brochure for performance contracting. Its objective is to present briefly the major planning, management, and evaluation issues associated with this technique.

[1] Internal programs were conducted during 1969-70 in Portland, Oregon, and in Stockton, California and Mesa, Arizona during 1970-71. Dade County (Miami), Florida, entered two internal and two external contracts during 1971-72.

Our hope is that this information will assist decisionmakers who are contemplating performance contracting programs, and that the Guide will help LEAs to structure the programs they do undertake.

SPECIAL REQUIREMENTS

Like any other new or special program, performance contracting levies special resource and skill requirements on an LEA. This Guide does not dwell on the features common to all innovations, but focuses on three areas where performance contracting levies special requirements:

- Legal research and possibly legal action
- Program management
- Measurement and validation of student learning

All school districts contract for materials, equipment, and personnel. Performance contracts, however, open up a poorly charted area of contract and school law, requiring special legal attention. Research and possibly action may be required to resolve questions. Although variations among contracts and among state and local statutes make it hard to generalize about legal issues, Sec. III is devoted to some basic topics that merit consideration.

An LEA considering a performance contracting program must be prepared to provide effective program management. Any innovative program requires good management, but it is particularly important when the LEA must direct a contractor's activities.

In the initial phases of a program the LEA must:

- Assess the educational needs to be filled
- Write the Request for Proposal (RFP) or similar document
- Select the contractor
- Write and negotiate the contract

LEA management must be all the more effective when a program is under way, especially if it uses materials, techniques, or personnel new to the district. Many questions will arise; only a dedicated and able manager will be able to resolve them without excessive loss of time or educational effectiveness. Various sections of this Guide are devoted to these special managerial requirements.

The essence of performance contracting is the measurement of student achievement. This feature makes a sound evaluation essential. With the contractor's payment hinging on student learning, measurement must be both reliable and valid. In turn, accuracy and objectivity on the part of the evaluator become of extreme importance.

Validation is an audit of the appropriateness of the program's evaluation proce-

dures and verification of the results as reported by the project evaluation.[2] Ideally, it should include a review and critique of the criteria for test selection, an assessment of the reliability and validity of the tests as measures of the student learning desired, inspection of the conditions of test administration, checks of test-scoring procedures, and checks of procedures in computation for payment. Only in a few programs to date have these tasks been accomplished (Texarkana is a noteworthy example). Lacking such careful assessment, many LEAs and LSCs have felt that the means for determining contractor payment were not wholly satisfactory. A well-planned and well-executed validation of student achievement therefore should be an integral part of any performance contracting program. This Guide devotes several sections to validation and evaluation issues, and the Technical Appendix goes into even more detail.

OUTLINE OF THE GUIDE

The Guide is divided into four major parts. Part 1 is an introductory section discussing the performance contracting concept, some past applications, and the major requirements a program generates for an LEA. Part 2 discusses the planning and contracting phases of a program. Part 3 considers the operational phase. Part 4 discusses evaluation. The individual sections reflect the sequence of major events in a typical program as depicted in Fig. 1.

[2] Robert E. Kraner, *Final Audit Report, Texarkana Dropout Prevention Program*, EPIC Diversified Systems, Tucson, Arizona, 1970.

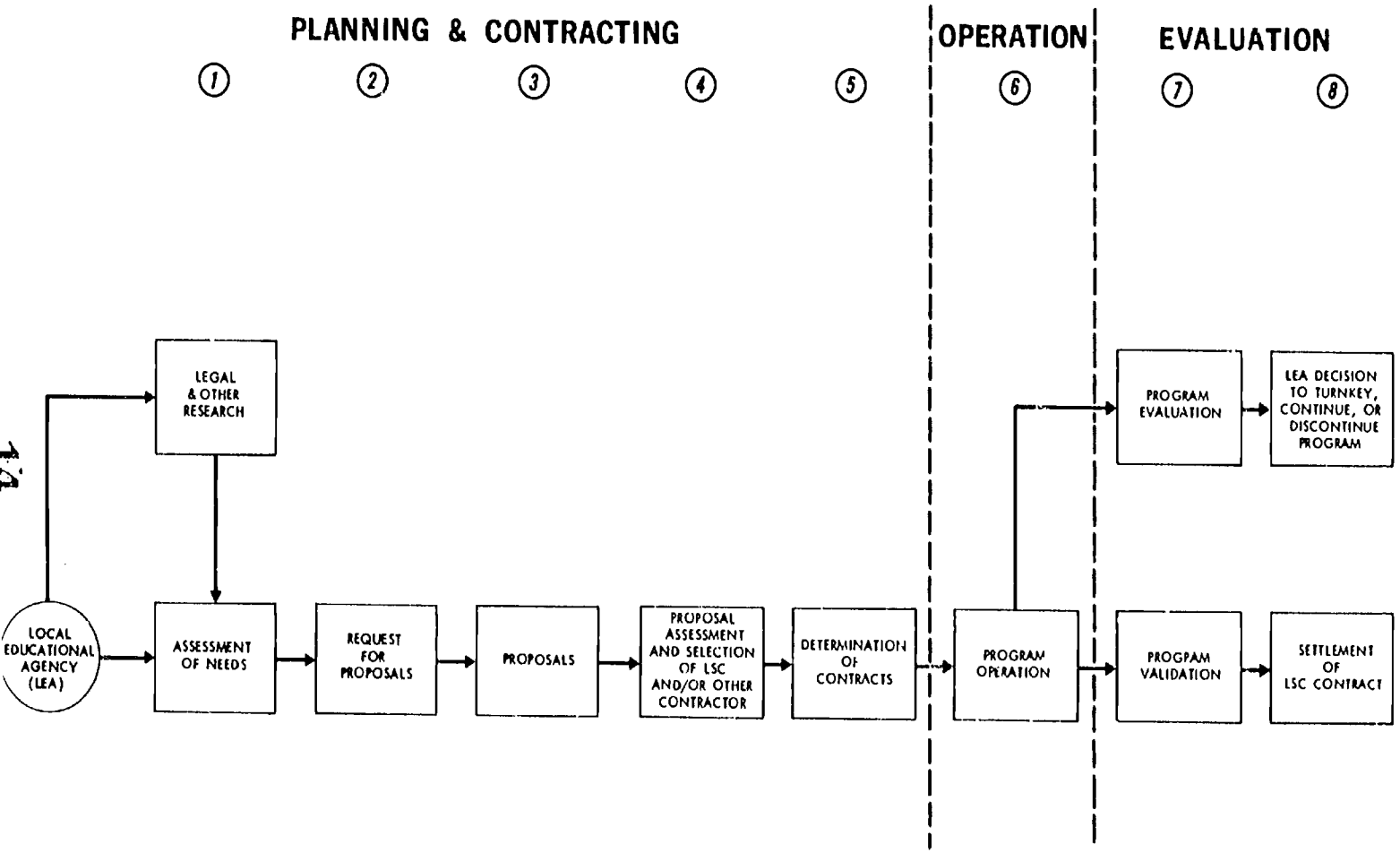

Fig. 1—Schematic representation of a performance contracting program

II. THE PERFORMANCE CONTRACTING CONCEPT

SOME BASIC QUESTIONS

Six questions are often asked about performance contracting:

- Is it legal?
- Will it produce results?
- Can learning be purchased?
- Where has it been tried?
- What kinds of programs do contractors offer?
- What do performance contracting programs cost?

IS PERFORMANCE CONTRACTING LEGAL?

There is no simple yes or no answer. The legal status of performance contracting programs is unclear and in many jurisdictions it is changing. The structure of any particular program is also a factor. Section III will discuss these considerations. Despite some ambiguity, however, programs continue to be implemented in many states.

WILL PERFORMANCE CONTRACTING PRODUCE RESULTS?

Three goals have predominated in past programs:

- A substantial improvement in compensatory education
- Facilitating instructional innovations
- Development of a system of educational accountability

It is hard to generalize about performance contracting because of substantial differences among program characteristics and outcomes. A Rand study of 1970-71

programs, however, reached the following conclusions.[3]

First, although some programs recorded significant improvements in achievement scores, the gains in most programs were not high enough or uniform enough to indicate that performance contracting is a sure solution to compensatory education problems.[4]

Second, performance contracting seems to be an effective "change agent." Performance contracting programs have been successful in introducing new materials and methods into the educational process.

Third, performance contracting programs have given LEAs the opportunity to explore educational accountability. Such programs virtually demand clear definitions of educational goals, and have pushed the development of techniques for analyzing achievement results.

CAN LEARNING BE PURCHASED?

In a very literal sense, schools have always purchased learning. They hire teachers, buy materials, and assemble other resources, knowing from long experience that some amount of learning will result.

No one, however, can "guarantee" that another person will learn. The linking of payments to achievement scores, which is the essence of performance contracting, is far different from "guaranteeing" that the program will achieve the objectives that the LEA seeks.

This last point has a vital implication for the question of the success of programs. It is common to compare observed achievement gains against the goals expressed in the contract. However, it is more meaningful to compare the gains realized by the same students in prior years, or the gains realized by some relevant comparison group such as students in other remedial programs in the district, or to assess the contribution of the performance contracting program to the LEA's overall program.

WHERE HAS IT BEEN TRIED?

There have been performance contracts in many and diverse school districts, as Table 1 reveals. Lengthy as it is, the list in Table 1 is not exhaustive, since it excludes many programs that have not received publicity.

[3] Polly Carpenter and George R. Hall. *Case Studies in Educational Performance Contracting: 1. Conclusions and Implications.* The Rand Corporation. R-900/1-HEW, December 1971.

[4] The OEO experience was even more discouraging. In general the contractors were no more successful than conventional classrooms in improving reading and mathematics skills. *An Experiment in Performance Contracting: Summary of Preliminary Results.* OEO Pamphlet 3400-5. Office of Economic Opportunity. February 1972. p. 17.

Table 1

PERFORMANCE CONTRACTING PROGRAMS FOR 1970-71

LEA	LSC	Subjects	Students		Sponsoring Agency	Target Payment per Student
			Number	Grades		
Anchorage, Alaska	Quality Education Development	Reading & Math	600	1-3, 7-9	OEO[a]	$ 741
Athens, Ga.	Plan Education Centers	Reading & Math	600	1-3, 7-9	OEO	503
Boston, Mass.	Educational Solutions	Reading	400	K-6		300
Bronx, N.Y.	Learning Foundations	Reading & Math	600	1-3, 7-9	OEO	570
Buchanan Co., Va.	Learning Research Assoc.	Reading	500	1-7	Va.[b]	80[c]
Cajon Valley, Calif.	Macmillan Educational Services, Inc.	Reading	80	4		687
Cherry Creek, Colo.	Dorsett Educational Systems	Reading	100	6-8	Colo.	167[d]
Clark Co., Ga.	Plan Education Centers	Reading & Math	600	1-3, 7-9	OEO	503
Compton, Calif.	Reading Foundations of America	Reading	3,000	7		50
Dallas, Texas	New Century	Reading & Math	960	9-12		267
Dallas, Texas	Quality Education Development	Reading & Math	600	1-3, 7-9		599
Dallas, Texas	Thiokol	Voc. Ed. Motiv.	960	9-12		218
Denver, Colo.	Dorsett Educational Systems	Reading	100	6-8	Colo.[b]	167
Dickinson Co., Va.	Learning Research Assoc.	Reading	250	1-7	Va.	80
Duval Co., Fla.	Learning Foundations	Reading & Math	600	1-3, 7-9		570
El Monte, Calif.	Hoffman Educational Systems	Reading	26	7		2,884
Englewood, Colo.	Dorsett Educational Systems	Reading	100	6-8	Colo.[b]	167
Flint, Mich.	Educational Developmental Labs	Reading	2,160	9		97
Fresno, Calif.	Westinghouse Learning Corp.	Reading & Math	600	1-3, 7-9	OEO	498
Gary, Ind.	Behavioral Research Labs	All subjects	800	K-6		800
Gilroy, Calif.	Westinghouse Learning Corp.	Reading, Math	100	2-4		900
Grand Rapids, Mich.	Alpha Systems	Reading & Math	600	1-3, 7-9	OEO	547
Grand Rapids, Mich.	Combined Motivation Education Systems	Reading & Math	600	6-9		273
Grand Rapids, Mich.	Westinghouse Learning Corp.	Reading & Math	400	1-6		359
Greenville, S.C.	Combined Motivation Education Systems	Reading	480	6-9		208
Hammond, Ind.	Learning Foundations	Reading & Math	600	1-3, 7-9	OEO	571
Hartford, Conn.	Alpha Systems	Reading & Math	600	1-3, 7-9	OEO	534
Jacksonville, Fla.	Learning Research Assoc.	1st Grade subj	300	1		233
Jacksonville, Fla.	Learning Foundations	Reading & Math	600	1-3, 7-9	OEO	570
Las Vegas, Nev.	Westinghouse Learning Corp.	Reading & Math	600	1-3, 7-9	OEO	498
Lunenberg Co., Va.	Learning Research Assoc.	Reading	250	1-7	Va.[b]	80
McComb, Miss.	Singer/Graflex	Reading & Math	600	1-3, 7-9		548
McNairy Co., Tenn.	Plan Education Centers	Reading & Math	600	1-3, 7-9	OEO	478
Mecklenburg Co., Va.	Learning Research Assoc.	Reading	250	4-7	Va.	80
Mesa, Ariz.	Assoc. of teachers	Reading & Math	600	1-3, 7-9	OEO	57[e]
Norfolk, Va.	Learning Research Assoc.	Reading	500	4-9	Va.	80
Oakland, Calif.	Educational Solutions	Reading	400	6-8		200
Philadelphia, Pa.	Behavioral Research Labs	Reading	15,000	1-2, 7-8		50
Philadelphia, Pa.	Westinghouse Learning Corp.	Reading & Math	600	1-3, 7-9	OEO	484
Portland, Me.	Singer/Graflex	Reading & Math	600	1-3, 7-9	OEO	514
Prince Edward Co., Va.	Learning Research Assoc.	Reading	250	4-6	Va.[b]	80
Providence, R.I.	New Century	Reading	1,500	2-8		97
Rockland, Me.	Quality Education Development	Reading & Math	600	1-3, 7-9	OEO	599
Savannah, Ga.	Learning Foundations	Reading	1,000			97
Seattle, Wash.	Singer/Graflex	Reading & Math	600	1-3, 7-9	OEO	573
Selmer, Tenn.	Plan Education Centers	Reading & Math	600	1-3, 7-9	OEO	478
Stockton, Calif.	Assoc. of teachers	Reading & Math	600	1-3, 7-9	OEO	9.5[e]
Taft, Texas	Alpha Systems	Reading & Math	600	1-3, 7-9	OEO	506
Texarkana, Ark.	Educational Developmental Labs	Reading, Math	300	7-12		219
Wichita, Kans.	Plan Education Centers	Reading, Math	600	1-3, 7-9	OEO	491
Wise Co., Va.	Learning Research Assoc.	Reading	500	4-9		80

[a] LEA was contractor for OEO. LSC had subcontract with LEA.

[b] State Department of Education did initial planning; contract was between LSC and LEA.

[c] Target payment was $80 for all seven Virginia programs.

[d] Target payment was $167 for all three Colorado programs.

[e] Plus regular salaries.

WHAT KINDS OF PROGRAMS DO CONTRACTORS OFFER?

While there has been some experimentation with vocational education programs,[9] most programs have involved reading, often together with mathematics, partly because most have been remedial; compensatory education focuses on basic skills. This concentration also reflects the necessity for being able to measure results. Theoretically, any subject could be taught under a performance contract with the payment related to some index of outcome; but measurement techniques for reading and mathematics (norm-referenced achievement tests, which still leave much to be desired as measures of program success) are far ahead of those for other subjects.

Vocational education courses are amenable to performance contracting since craft and union standards provide accepted definitions of achievement; even here, however, the administration of tests of skills is expensive, and unions often resort to measures of training input (such as "a year of instruction") rather than direct measures of skill. Be that as it may, performance contracting is more likely to expand in vocational than in academic subjects.

In short, performance contracting is feasible if and only if both parties can agree on how to measure the contractor's work quantitatively. For now and the near future this means that contracting programs will focus on basic and vocational skills.

Most programs have operated as components within a conventional school setting. If a contractor is to teach reading to 180 students in three grades, let us say, he is assigned a classroom and the students come to him in groups of 30 for an hour's instruction. For the rest of the day they follow the ordinary school schedule.

There are some notable exceptions to this pattern. Behavioral Research Laboratories, for example, is providing the entire curriculum for one elementary school in Gary, Indiana. The payment to BRL, however, is based on the students' achievement only in reading and mathematics.

Performance contracting programs have differed so widely that it is hard to speak of a typical program. In general, the contractors have used new materials and teaching techniques with special emphasis on individualized diagnoses and specifications of instruction. A few contractors have used educational hardware extensively. Most have introduced changes in classroom management techniques—notably, using the certificated teacher more as an organizer of instruction and an analyst of individual students' needs, and less as a direct transmitter of instruction. A number of programs have used paraprofessionals.

Some, but not all, contractors have emphasized changing the classroom environment by carpeting floors, setting up "reinforcement centers," substituting carrels for conventional desks and tables, and the like.

[9] In Dallas, Texas, some vocational skills have been taught under contract, and the Dallas school system is expanding the program. Muskegon, Michigan, has also been developing a vocational education program and other LEAs have shown interest in doing the same. See D. R. Waldrip, "Performance Contracting: The Dallas Experiment," unpublished paper, Dallas Independent School District, Dallas, Texas, n.d.

Some contractors have used contingency management techniques and special incentives for children. A few programs have also offered special bonuses to teachers, but most programs have provided conventional rewards to students and teachers.

Programs have differed in the extent of LSC involvement. In most, the contractor has been the prime manager of the learning program; in other programs, such as those under OEO sponsorship, the LEA has retained the authority to approve all aspects of program changes, though the contractors have had considerable authority over day-to-day operations. In a few programs (e.g., Philadelphia, Portland, Oregon, and Flint, Michigan) the LEA retained almost complete operating authority; the contractors did no more than supply educational materials and train the districts' teachers in using them. The price of the materials was contingent on the achievement of the students in the programs.

Most contractors have been directly involved in the classroom, but the teachers have usually been LEA employees. Most contractors have viewed their classroom activities as a passing phase, leading to "turnkeyed" systems whereby the LEAs ultimately take over and operate the new systems as part of their regular programs.

Many programs have been financed out of various categorical funds such as the Elementary and Secondary Education Act or other special Federal and state assistance funds. The OEO programs were financed out of OEO's research and development funds. A number of programs have been financed wholly or in part by regular school district funds.

In sum, any LEA considering a performance contracting program has a wide choice among programs. There is no "model" performance contracting program. A host of different arrangements have been used. LEAs therefore have to evaluate the usefulness of relating payment for instructional services to student learning, and also determine which variant, if any, is most appropriate.

WHAT IS THE COST?

Table 1 has shown some figures for target prices, but they should not be confused with costs. First, the programs have differed widely as to the expenses shown on the contractor's books and those paid directly by the school district. Teacher salaries are the prime example, but clerical, evaluation, and many other expenses also have been accounted for differently from program to program.

Second, it is improper to make interdistrict comparisons of payments, because salaries and other prices differ widely among districts. Third, the figures shown in Table 1 are target prices that would have been paid if the achievement-gain goals had been realized. Since actual results have differed from targets, actual payments would differ from the figures shown in Table 1. Very few actual prices have been made public, however.

In general, the cost-per-student (on a comparable replication cost basis) in performance contracting programs will be about the same as or somewhat less than

that in purely remedial programs.[6] As is true in most compensatory education programs, however, this cost is higher than it is for conventional programs.

Performance contracting programs have usually had a different resource structure from that in conventional remedial programs. Most contracting programs have featured relatively high student-teacher ratios compared with the usual compensatory program, but have made extensive use of materials, paraprofessionals, classroom modifications, and sometimes machines.

In sum, although performance contracting is generally more expensive than instruction in the conventional classroom, it remains financially attractive compared with other types of remedial education.

[6] See Carpenter and Hall, op. cit., for a discussion of program costs; and see the Technical Appendix for a discussion of resource and cost analysis in performance contracting programs, particularly the concept of comparable replication costs.

III. LEGAL RESEARCH AND ACTION

LEGAL RESEARCH

Many of the legal implications of performance contracting remain cloudy. Until experience clarifies matters, school districts undertaking contract programs will need to engage in research and possibly action, in light of relevant state and local statutes. Specifically, the LEA should investigate the legalities touching on the following:

- LEA authority to enter a performance contract
- Authority over the project
- Contracting
- Instructional time-allotments
- Textbooks and materials
- Teacher qualifications and conditions of employment
- Provision for student rights, responsibilities, and liability
- Warranties, bonds and other legal protections

AUTHORITY TO ENTER A PERFORMANCE CONTRACT

An LEA may find that it lacks authority to enter into a performance contract, or authority may depend upon the source of funds. For example, the New York State Department of Education has decided against use of state money for performance contracting, but a New York school can still enter into such a program using Federal funds.[7]

The legal authority to enter a contract may depend on how the program goals are designated. Three ways that have been used in the past to assure this authority are to designate the program (1) as an experiment, (2) as a program for disadvantaged children, (3) as a phase in a "turnkey" program.

[7] "Performance Contracting in New York State." *Phi Delta Kappan.* Vol. 52, No. 5, January 1971, p. 323.

Experimental programs frequently come under rules different from those for regular programs. For example, state textbook requirements and teacher certification rules may not apply. Of course, if the experimental program becomes a regular program, problems might then arise, but many districts have preferred to postpone such questions.

In California, and possibly in other states, the Education Code in its section on the instruction of disadvantaged children specifically mentioned "private agency or organization." Before 1972, it would appear that performance contracts for experimental compensatory programs would be authorized in California, but programs for other children would not. Recent legislation, however, appears to have removed this distinction in California.

A third way LEAs have sought to assure authority to contract has been to designate the performance contract as the first stage in a "turnkey" program designed to yield new materials and procedures for in-house district use. But if an LEA commits itself in advance to transferring the program to intradistrict use, then performance contracting is weakened as a device for promoting accountability. Furthermore, such a posture may itself create legal problems, because it might be interpreted as premature approval of the outcome of the program.

There are advantages to programs lasting more than a single year, but legal counsel for some LEAs have advised that contracts for more than one year would be illegal. On the other hand, Gary, Texarkana, and Cajon Valley, California, have been able to structure multiyear programs within the context of their respective state laws.

If an LEA enters a contract without appropriate authority, the state may withhold credit from students for the subjects taught by the LSC, or withhold funds from the school, or even decertify the school. But authority may not be clear and may depend upon other features of the program such as the materials used, credentials of the contractor's personnel, and the like. To date, each LEA considering a performance contracting program has had to determine its own legal position; until legal principles become clarified they will probably have to continue to do so.

AUTHORITY OVER THE PROJECT

No LEA can legally waive responsibility for any program for its students. Any contract must clearly reserve ultimate control for the LEA. The central issue is how to preserve control and at the same time allow the contractor the necessary freedom to conduct his program.

Three basic principles have been suggested:[8]

- Safeguards should ensure that any "nontraditional" procedures will not harm children
- A principal or other official should have the power to intervene if students

[8] Ibid.

are being damaged
- Clear lines of authority and responsibility should be established among parents, school boards, principals, teachers, and contractor personnel.

CONTRACTING REQUIREMENTS

In a number of states contracts in excess of certain amounts must be advertised and let by means of competitive bids.[9] Sometimes there are exceptions to such rules that might cover a specific program. Therefore, an LEA should check the applicable contracting and procurement regulations.

TIME ALLOCATIONS

Most states have requirements or suggested standards on how much of the school day will be devoted to each of various required subjects. Several programs have run into problems with these standards, as for example in Gary, where the LSC manages Banneker School's entire curriculum. Programs involving only one or two subjects and a fraction of the student's day are less likely to face trouble.

The LEA faces a different problem if state standards are suggestive rather than mandatory. In this case it may be possible to rearrange schedules to meet both program requirements and legal time-allocation standards.

TEXTBOOKS

Most states specify permissible textbooks and materials. An innovative program is likely to use books and materials not on the approved list. This problem has arisen in several program, and the most frequent solution has been to obtain waivers on the grounds that the programs are experimental. Other possible solutions would be to get the materials approved or seek legislative change in the textbook laws.

TEACHER QUALIFICATIONS AND CONDITIONS OF EMPLOYMENT

The LEA should ensure that teachers assigned to a contracted program meet state requirements governing teachers' credentials and qualifications. In most but

[9] Indiana. for example, requires competitive bids for purchases of materials, equipment, goods, and supplies exceeding $2000. Personal services contracts are exempt, but the Indiana State Department of Education criticized the Gary contract on the grounds that it involved more than services and therefore should not have been let sole-source.

not all programs the LSC has used local teachers, a practice that usually avoids challenges regarding credentials but leaves open the question of whether the credentials are appropriate for the program.

Problems are more likely to arise if the LSC brings in teachers or supervisors from outside the district. The LEA should make sure in advance that any personnel the LSC intends to assign to the program can meet certification requirements or that waivers can be obtained.

If teachers operate under a collective bargaining agreement, teacher arrangements in the program will have to be consistent with union-agreement provisions, required employment practices, and state codes. (Many of the following remarks about unions also apply to LEAs where there are established teacher employment rights but no collective bargaining agreement.) Issues have arisen in five areas:

- Union involvement in the planning process
- Initial assignments and transfers of teachers
- Subsequent transfers and reassignments
- Class sizes
- Teacher compensation

Collective bargaining agreements usually contain a clause stipulating that all changes in pay or conditions of work will be the subject of LEA and teacher-group negotiations. In some cities teachers' unions have claimed the right to participate in the initial planning for any performance contract program, arguing that it would affect working conditions. In the cases we know about, the LEA did not accede to such claims. Claims are likely to arise again, however.

The initial selection of teachers may involve assignments and transfers that raise questions about seniority rights. In the past, some LEAs have argued that performance contracting programs create special requirements and therefore supersede normal transfer provisions.

Many performance contracts have contained clauses permitting the contractor to reassign a teacher on short notice if his work is unsatisfactory. The advantage to the LSC of such an arrangement is obvious, but it may not accord with standard district employment practice.

Class size may become an issue. Classroom instruction in contracting programs has often been done by a team composed of a certificated teacher and a paraprofessional, making extensive use of materials. The pupil-to-adult ratio has frequently been low, but the pupil-to-certificated teacher ratio likely will be higher than in conventional classrooms (and a few programs have operated with no certificated teachers). This may lead to conflicts.

Teacher compensation can become an issue, particularly if the contractor proposes to pay bonuses to teachers on the basis of student achievement. At the minimum a union is likely to insist that all teachers in the district receive bonuses similar to those received by the teachers in the program (this happened in one school district, which immediately insisted the LSC withdraw the bonuses).

The usual arrangement is that teachers in performance contracting programs

are paid according to the standard LEA pay scale. In any event, it is important to make sure that all parties understand and agree on the pay arrangements, to avoid conflicts between the LEA-LSC contract and the LEA-union contract.

RESPONSIBILITIES AND LIABILITIES REGARDING STUDENTS

The LEA should ensure in advance that its responsibilities regarding students will be discharged under the contract, that the LSC understands its responsibilities, and that all rights and liabilities have been specified.

WARRANTIES, BONDS, AND OTHER LEGAL PROTECTION

Some contracts have included clauses requiring that the contractor post performance bonds, guarantee prices, or maintain fixed prices for any materials or equipment purchased. Many of the clauses have followed commercial contracting practice, but it may be counterproductive to include in a performance contract all the protective clauses commonly included in contracts for standardized materials such as furniture or motion picture projectors. Because a performance contracting program is an attempt to develop innovative procedures, uncertainties and changes are inevitable. In such cases, a contract bristling with constraints can cause more trouble than it is worth. In short, the standard protective clauses should probably be included, but the LEA should avoid "overengineering" the agreement.[10]

LEGAL ACTION

Research may be insufficient to resolve all questions, and legal action may be required. In some programs the contract and planning documents have been submitted to the LEA's state attorney general or department of education for an advisory opinion. Doing so means the LEA will know where its program stands with state officials, but if there is an adverse opinion it may be difficult to proceed even if the LEA feels the state's views are debatable.

Despite much talk about judicial challenges, few if any suits have yet been taken to court. In past years critics of performance contracting programs have been persuaded to postpone formal challenges on the basis that the programs were experimental. In future years, this argument is unlikely to be as persuasive.

Various state legislatures have considered or are considering statutes involving the status of performance contracting. As performance contracting becomes less of a novelty, LEAs should be prepared to devote more attention to legal matters.

[10] The Norfolk-LRA Agreement in the Technical Appendix is a good example of a contract with many protective clauses. Most, if not all, of the contingencies that arose in Norfolk were covered by the contract.

Part 2

Planning and Contracting

IV. PROGRAM DEFINITION

PROGRAM GOALS

The first step in planning the program is to assess needs and define goals and objectives. This need not be elaborate but it is essential for a coherent program.

Probably there will be a hierarchy of goals and objectives. At the most general level the LEA may have one or more *basic educational* goals such as improved community support, racial integration, or a more modern curriculum. These must be translated into *program* objectives. Program objectives must be expressed in specific terms, such as lowering the student dropout rate, increasing the rate of cognitive growth, and improving student self-images and attitudes. Finally, the LEA must translate the program's objectives into the specifications for contractor payment, or *contract* objectives. Examples of such objectives might be doubling each student's rate of cognitive-skill achievement as measured by a standardized test, having students qualify for on-the-job vocational training, or the attainment of some other measurable criterion of performance.

To link payment to results, the LEA needs to specify appropriate measures. Measures do not necessarily have to be limited to a norm-referenced test. Criterion-referenced tests of behavioral objectives have been used along with norm-referenced tests in some programs. Quantitative measures of achievement such as the student dropout rate might also be used if, for example, lowering the dropout rate were a program objective. The reliability and validity of the proposed measures, however, are basic questions; at the start of a program the LEA should assure itself that the measures are accurate and relevant for the program objectives. If objectives cannot be specified or if there are no meaningful quantitative measures, a performance contract is inappropriate.

There is a natural tendency for an LEA to detail a large number of program objectives, but doing so will make it difficult to find an LSC who can accept them and even more so to find one that will be able to meet them all.[11] Most LSCs have a fixed

[11] The experience of Yuba County, California is an apt example of these problems. Yuba wanted a program that would increase the "positive attitude" of mathematics teachers. The contractor's payment would be based, the LEA decided, primarily on achievement of two objectives: improvement in student scores on standardized norm-referenced tests, and improved teacher attitudes. Teacher improvement was

repertoire of techniques and materials designed to attain a finite set of educational objectives. It is unrealistic to expect them to meet a wide array of targets.

USE OF SUPPORT CONTRACTORS

A basic decision the LEA must make is whether to use support contractors, and in what roles. Many LEAs have provided their own management, evaluation, and auditing, but many others have employed business firms, governmental units, or university groups. The schematic outline of the program has been expanded in Fig. 2 to indicate some of the optional roles support contractors can play.

If a management support group (MSG) is employed, it may assist the LEA in one or more of such tasks as: needs assessment, RFP preparation, LSC selection, drawing up of the contract, program monitoring (e.g., collection of data on program cost and program implementation), evaluation monitoring, and consultation on the future of the program.

An independent evaluator will usually assist in designing the evaluation, selecting or designing specific measuring instruments, administering tests, scoring tests, and computing contractor payment. An independent evaluation, among other contributions, enhances the credibility of program outcomes.

Educational auditors, in programs where they have been used, have analyzed evaluation designs, observed test administration, and performed other validating functions. The use of an auditor to validate measures of educational outcome offers many advantages. Notably, an auditor relieves the evaluator of the onus for guaranteeing the validity of test results, and frees him to focus on program improvement.

Against the arguments for the use of support contractors must be posed the advantages to the district of performing these functions "in-house." Because good management support contractors and evaluators are expensive, some LEAs feel it is more economical to perform these functions themselves. Another, and more impressive, consideration cited by some LEAs is that without support contractors the LEAs can preserve tighter cognizance and control. The more agencies involved, the harder it is to administer the program and maintain coordination. Also, by performing the support functions itself, the LEA gains valuable experience that can be applied in other performance contracting programs and educational programs generally, assuming the LEA has the necessary expertise and personnel available.

If the LEA decides to use support contractors, then it alone should select the contractors. The Management Support Group (MSG), evaluator, or auditor should be financially responsible only to the LEA. There should be no direct contractual link between the LSC and any support contractors. In some past programs there has been joint selection by the LEA and LSD, and in one program the evaluator was paid by the LSC, which led to the evaluator's objectivity being questioned.

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to be measured by a system to be designed by the Yuba County Schools. The Request for Proposal was circulated to 48 institutions, agencies, and private companies but no proposals were returned. The potential respondents were concerned about the highly specified program, the intangible nature of the attitudinal goal, and the uncertainty about how achievement would be measured.

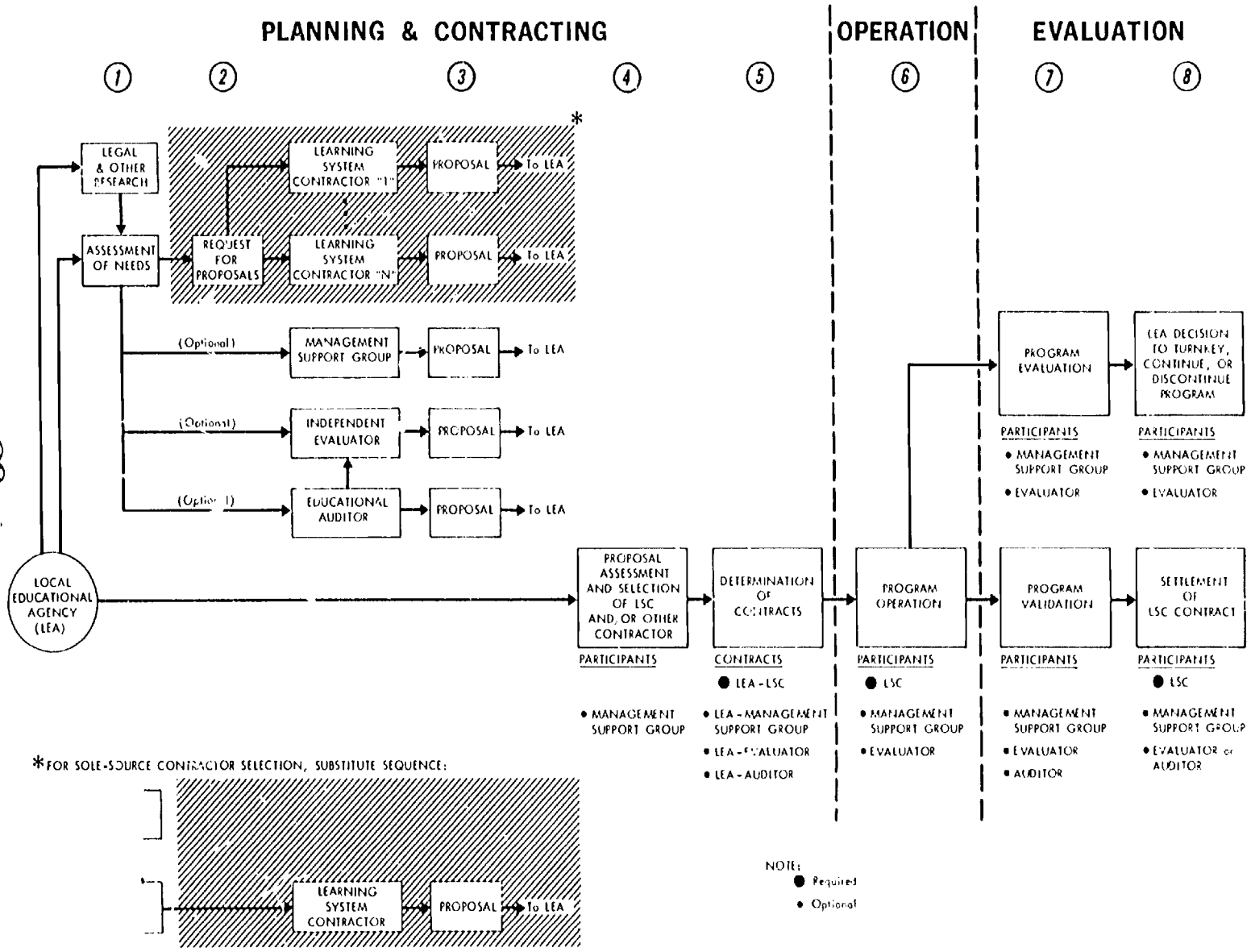

Fig. 2—Performance contracting sequence

TEACHER INVOLVEMENT

An LEA should make plans and *carry them through* to involve teachers from the start in the planning and implementation of a contracting program.[12] This action may produce two benefits:

- It may elicit information concerning the educational needs of students.
- It may promote the active support of teachers and other district employees, which is important if the performance contract is to solve rather than create problems.

Most LSCs have employed teachers already in the school. This practice makes a program less "threatening" and also avoids a new teacher's having to learn the local ground rules. It also taps the local teachers' knowledge of the students and their needs and abilities.[13]

Even if personnel come from the existing LEA staff, teachers are likely to regard performance contracting as something of a threat. The American Federation of Teachers and the National Education Association have been highly critical, partly because most programs combine the use of paraprofessionals and materials with larger class sizes—features not likely to promote teacher enthusiasm. The program may create some scheduling problems for the host school and its teachers: but more generally, teachers are not flattered by school boards inviting "outsiders" to conduct educational programs. Nonetheless, many teachers have supported past performance contracting programs—they have even acted as LSCs in some school districts. Teachers are interested in new skills, techniques, and materials, and they are concerned about compensatory education problems. A program that gives them the opportunity to try something new and increase their abilities is likely to be attractive.

[12] For more on this point see Carpenter and Hall, op. cit., pp. 33-34.

[13] Sometimes the teachers have been carried on the LSC's payroll; often they have remained on the LEA's payroll to simplify tenure and fringe-benefit arrangements.

V. PLANNING THE EVALUATION

INTRODUCTION

Evaluation is commonly regarded as a postprogram function, but it is vital that it be planned for early, when program operations are planned. If LEA officials are to judge the effectiveness of a program, and make rational decisions about its continuance, they must have a sound analysis of its outcomes.

To assure that decision-relevant information is obtained, a thorough but flexible evaluation design must be planned before the start of the program.[14] Without substantial evaluation planning there is a high probability of poorly selected or designed measuring instruments, untested students, poor test conditions, and incomplete or irrelevant criteria.

Designing an evaluation is an intellectual challenge. These programs are quasi-experiments or demonstrations rather than controlled laboratory experiments. A school cannot and should not maintain the same type of scientific controls over the environment that can be maintained in a laboratory. The difficulty is that the standard evaluation methods were designed with laboratories in mind; evaluation techniques for quasi-experiments are much less developed.[15] This lack makes it all the more important for an LEA to have a flexible, thorough, and timely evaluation plan.

There are four basic steps in developing a plan:

- Determining the functions of the evaluation
- Selecting the evaluator
- Selecting the evaluation criteria
- Planning the testing program

[14] Flexibility is important. Without it the evaluator can be, as in the 1969-70 Texarkana program, in the position of having planned for a program that was substantially revised, and therefore having to choose between evaluating a planned program that was not implemented or evaluating a program without a relevant evaluation plan. See P. Carpenter, A. W. Chaffant, and G. R. Hall. *Case Studies in Educational Performance Contracting: 3. Texarkana, Arkansas. Liberty-Eylau, Texas.* The Rand Corporation. R-900/3-HEW, December 1971, pp. 21-23.

[15] The Bibliography provides references to the literature on evaluation of quasi-experiments.

DETERMINING THE FUNCTIONS OF THE EVALUATION

The evaluation may be assigned one or more of four functions:

- Measuring outcomes for contract settlement
- Validation (audit) of the measures of program outcomes
- Helping decisionmakers to decide about the future of the program
- Assisting in program improvement

Someone has to perform all four functions, and it is tempting to assign them all to the evaluator. Because of conflicts among these functions, however, the LEA may want to divide them among the program participants.

If the evaluator is responsible not only for measuring achievement but also for certifying that the measurements are valid and reliable, he is in the position of having to validate his own work. If he accepts such a role, he may well be reluctant to discuss program and evaluation problems with teachers or other program personnel.

The evaluator's most valuable contribution may be the provision of data to LEA officials who have to decide whether to continue the program. If done conscientiously, this task will require collection of more data of more kinds than are required to settle contracts. The LEA will want to know, among other things, about costs, reactions of teachers and parents, and various scholastic and affective influences on students. If the evaluator is assigned this sort of decision-support role, either he will have to be provided with more resources than he would otherwise receive, or he will have to devote less time to measuring student achievement.

Finally, the evaluator can provide on-site monitoring that can help operating personnel improve their programs as they go. Again, however, he would require more resources than he would need for contract settlement alone. Also, if he is responsible for certifying the validity of the measurements he may be unwilling to provide much feedback to program personnel, for fear that feedback might instigate test-teaching. Moreover, if the evaluator is also concerned about contract settlement he may be unwilling to release data until both the LEA and LSC have agreed on the final settlement. Thus, in contrast with other programs, evaluators may be much less willing to provide "real time" data during performance contracting programs.

The important point for the LEA's plans is that all four functions have to be performed. If more than one is assigned to the evaluator, the LEA should think about possible conflicts. If only one is assigned, the LEA must consider what parties will perform the other functions, and what their relationships will be.

SELECTING THE EVALUATOR

The choice of an evaluator depends on his assigned functions. If he only has to measure or validate program outcome, a multitude of universities, nonprofit groups, educational agencies, and business firms have the required resources and skills. It

is intuitively obvious that the LSC should not perform these functions. In some past programs the LEA has provided the achievement measurements and/or validation. Using an independent evaluator or auditor is preferable, however, because critics may argue that the LEA has an interest in a favorable assessment of the program.

If the evaluator is to provide information for LEA decisions, then a new set of qualifications arises. The LEA will want an organization that can work effectively with the public officials involved and that has the required skills in resource and educational analysis. The LEA may decide to assign this function to an internal group or to an independent management support contractor rather than an evaluator. If so, however, the division of responsibility among the various groups assessing program outcomes should be made clear.

Evaluation for program improvement levies the largest demands for staff skills and resources because it requires frequent visits for observation, interviews, and data collection. The evaluator must establish rapport with program personnel and win their trust, while maintaining objectivity about the program's results. Both internal LEA groups and external organizations have been used in this function in past programs. The choice will probably depend upon whether the LEA has the necessary people with the required skills.

SELECTING EVALUATION CRITERIA

The important task in evaluation planning is determining how to define and measure program success. If settling the contract is the chief aim, the measurement problem is fairly simple. Success in this context can be determined by comparing actual achievement measurements with whatever goals were established in the contract.

Much publicity has been given to such computations. At best, however, they are incomplete and can often be misleading. Any goal, large or small, can be specified in a contract. A more meaningful test of program success than meeting achievement-test targets may be whether it was more cost-effective than other potential programs or, more generally, whether it made a net contribution to the LEA's overall program.

To date most measures of program success have been limited to standardized norm-referenced tests and, to a lesser extent, criterion-referenced tests. The usual standardized tests were not designed to measure the effectiveness, for individual students, of short-term instructional programs; consequently, a number of statistical and practical problems beset the use of such tests in this mode. The literature on this issue is reviewed in Technical Appendix A, R-955/2-HEW.[16] Despite their drawbacks, standardized norm-referenced student achievement tests will likely continue to be used for want of a better measure. Their imperfections, and the suggestions in the Technical Appendix for limiting their impact, should be kept in mind. In

[16] Prepared by Dr. J. Richard Harsh of Educational Testing Service.

particular, performance contracts should cover a long enough time period to make it likely that gain-differences will represent real achievement gains and not short-term statistical errors.

Criterion-referenced or learning mastery tests at first glance appear to be an attractive alternative to norm-referenced tests. Student mastery is judged by criteria associated with the educational objective itself rather than by the student's standing with respect to his peers. A review of experience in past programs, however, indicates that severe problems afflict the use of such tests.[17]

- The needed tests probably do not exist; and if they have to be devised after the program is started, it is likely that testing schedules will not be met.
- Few if any instruments have been field tested for reliability.
- Criterion-referenced tests pose significant difficulties in test administration.
  - Some require special training of test administrators.
  - Since they are tied to individualized curricula, the evaluator must use sampling techniques for students and objectives to keep required resources within reasonable bounds.
- Unless they are given on a pre- and post-test basis, it may be open to question whether the students had already mastered the objectives before entering the program.

Few programs have gone beyond norm-referenced or criterion-referenced test results for payment purposes. There is widespread agreement, however, that for determining the future of a program other data are important. Some LEAs have considered using other measures of program outcome for contract payment purposes, but have been discouraged in their attempts to get quantitative data that are reliable and valid. Even if the LEA cannot link such outcomes to contractor payments, however, it is still important that the LEA plan to collect data other than test scores for management and evaluation.

A rough achievement measure can be obtained by sampling the classroom work of program students and of regular students with comparable academic ability at two or more points in time.[18] Ranking techniques can be used to carry out such an analysis.[19] The results may also suggest the program's effects on student attitudes, which may be even more important than achievement but which are gains difficult

[17] The problems were dramatically illustrated in the OEO performance contracting experiment. It had been planned that 25 percent of the contractors' pay would be based on criterion referenced examinations that OEO called interim performance objective tests (IPOs). The problem of the large number of tests and test items required by the individualized curriculum and the changes in curricula during the school year made it unrealistic for contractors to submit tests in advance to the evaluator for analysis and approval. The result was, according to OEO, that some of the tests were too easy and others failed to measure what contractors had taught. The OEO report concluded that, "... the IPOs appear to have been virtually useless for evaluation purposes and to have had questionable value for payment purposes." Office of Economic Opportunity, op. cit., pp. 15-16. See also Appendix A of the Technical Appendix.

[18] See, for example, W. S. Torgerson, *Theory and Methods of Scaling*, John Wiley and Sons, New York, 1958.

[19] T. S. Donaldson, *Subjective Scaling of Student Performance*. The Rand Corporation, P-4596. March 1971.

to measure in this way because there is no simple and direct relationship to achievement gains. Evaluators often use survey questionnaires to assess attitude changes, but these generally have low validity and sometimes low reliability. It is possible to assess attitudes fairly reliably, however, through structured interviews by trained psychometrists. Ideally, such interviews should be validated by direct observation of student behavior in appropriate situations. Another approach is to try to infer affective changes from behavioral data such as vandalism rates, dropout rates, police actions, disciplinary problems, attendance rates, and the like. The task is easier at the high school level, where such variables can reasonably be regarded as reflecting student attitudes toward school. At the grade school level, attendance seems to be the best index. Referrals to the principals for discipline are also a relevant measure but they are highly dependent on teachers' tolerances for deviant behavior.

Affective results can be measured and can provide a good basis for program decisions. The 1970-71 Texarkana program is a case in point. The evaluator monitored dropout rates as well as cognitive achievement growth. This factor was especially important since the basic program objective was dropout prevention. Despite low achievement gains on standardized achievement tests, the evaluator recommended, and the school system adopted, a policy of continuing the program without contractor participation primarily because of a sharp reduction in the dropout rate.

Teacher attitudes toward performance contracting programs vary. In some programs teachers have enjoyed the opportunity to learn new teaching techniques and explore new materials. In others some teachers have felt overburdened by new duties. The independent evaluations that we have seen have generally surveyed or interviewed teachers in the program and reported their reactions, but have less often examined reactions of teachers outside the program. In several of the programs Rand has studied, outside teachers knew little about the way the programs operated. If turnkeying technology is a goal, teachers throughout the district should be fully informed about it. Reactions of administrators and union spokesmen are also relevant, and it is wise to assure that all factions are heard, not merely the most vocal.

The influence of performance contracts on parental attitudes may turn out to be the most important measure of success for some programs. Recorded test gains may be outstanding or no more than modest, but cold facts and figures do not carry the force of parents who believe that educational quality has been improved. The most important indicator is likely to be their participation in parent organizations that most performance contractors try to organize. If a substantial percentage of parents come out to meetings and thereby help to shape or monitor these programs, it is safe to assume there is genuine interest.

Decisions about the future of the program must rest on a solid understanding of what "the program" really is. Certainly in the first year or two, performance contracting programs are developmental, altering as they go along to adjust to unforeseen problems and to take advantage of unexpected opportunities. While the end result may well be an increase in students' achievement scores, the program in its ultimate successful mutation may seem like a different species from the program described in the proposal or the contract. The evaluator should note major changes

in the instructional process, in the use of resources, in the teachers or students involved, or in the program direction. Otherwise, "the program" that is continued or expanded in the future may be an imperfect model of what actually went on.

In developing an evaluation plan it is useful to designate control or comparison groups. Such comparison is not necessary for settling a contract but it is extremely useful for decisions about a program's future. In some programs the history of the treatment group has been used as the control. If the school or program, however, has had a number of transfers it may be difficult to obtain the necessary historical data. It is usually easier to designate some other group of students for comparison purposes.

PLANNING THE TESTING PROGRAM

Any performance contracting program involves a great deal of testing for:

- Diagnostic/prescriptive purposes
- Determining mastery of assigned material
- Determining payment to contractor
- Evaluation purposes and for the LEA's general test program

But the more tests administered, the less time available for instruction and the greater the possibility of "overtesting" and thereby decreasing the interest of students in scoring well on tests. The original test program design should therefore be sparse; tests can be added as their desirability becomes apparent.

The choice of the proper level of test difficulty may have to be deferred until students have been chosen for the program, and even then some students may be given tests at the wrong level of difficulty for them. This problem is extremely significant. If the test is too difficult for the student, his score may fall within the chance range and the meaning of any computation of achievement gain will be questionable, regardless of how well other aspects of the test program or of the performance contracting program itself are carried out. Such a situation is especially likely to arise with standardized, norm-referenced achievement tests, because the tendency will be to give the test normed for the students' nominal grade level. But a ninth-grade test given to a ninth-grade class full of students who are at least two grade levels behind will produce only frustration and confused data. A test that reflects their actual achievement levels will yield a more realistic picture—but trying to select such a test raises questions about how to interpret scores. It may be necessary to administer tests of several levels of difficulty if the spread of student capability is very large. For example, ninth-grade students may be reading at all levels from pre-primer to the seventh grade. For children in the lower grades who have reading difficulties, it may be well-nigh impossible to find a usable written test; some oral test may be required.

There is another drawback to administering a test designed for a younger chronological age. A twelve-year-old may only have the reading skills of the average

nine-year-old but he will be interested in different topics. If the subject matter is beneath him, his annoyance may damage his motivation to do his best.

Selection of appropriate tests of performance objectives, if these are being used to determine contractor payment, poses a special problem. Their validity depends upon the accuracy of the diagnostic pretests, which pinpoint performance objectives for each student. If these tests yield the correct set of objectives, a high score on the post-test indicates that the student mastered the objectives assigned to him and is, therefore, a measure of achievement. An invalid diagnostic test may generate performance objectives that are too low, in which case a high post-test score would not necessarily indicate real achievement. In short, if a student fails a post-test there is no way to know, unless one is sure the diagnostic test was valid, whether the instruction was inadequate or the objectives were beyond his level of capability. If the student passes the test, there is no way to know whether the instruction was effective or the objectives were easy for him.

If the contractor has already validated a complete diagnostic/prescriptive program of tests and performance objectives for the target population, this problem may not arise, but considering the current state of the art in criterion reference testing, it probably will arise. More likely, the ability of the classroom teacher will determine whether appropriate objectives are assigned.

Test administration should be planned in advance. The logistics plan should specify:

- Selection and training of test administrators
- A test administration schedule
- Physical arrangements for testing

If test administrators will need special training, it is well not to wait until the last minute to find and train them. A schedule for administering tests should be established, and building principals, classroom teachers, and others affected should be consulted *beforehand* in setting up schedules. The evaluator should check out physical arrangements for test administration in advance so that good testing practice can be assured. At the least, sufficient space so that students are not tempted to cheat will be needed and the testing facility should be comfortable and free from noise and other distractions.

If the performance contract has an auditor he can forestall possible questions about testing conditions by observing their administration. He can determine, for example, if time limits are properly adhered to, if directions are being given uniformly by all administrators, and if the physical conditions surrounding the test are the best possible under the particular constraints of any district. Furthermore, he can observe whether students seem to be following directions or answering at random.

An evaluator can perform the same functions if the project does not have an auditor. This kind of observation can be useful in making a judgment about the appropriateness of the test for the population to which it was administered. Desirable testing standards are well known by psychometricians and teachers but the press

of daily tasks and the limitations of school facilities often make it difficult to meet them.

The stress on achievement measurement in performance contracting, however, makes it essential that LEAs do their utmost to meet the conditions and procedures assumed by the test designers.

During the planning phase the LEA should take steps to insure that the test scores will represent achievement and not test-teaching. The LEA and LSC should agree on a definition of teaching-to-the test. Wardrop provides a helpful start:

> The items which actually appear in the standardized test . . . are but a sample of the items which a student might reasonably be expected to know and on which he might reasonably be tested. It is on the basis of a student's performance on this sample of appropriate behaviors that we make inferences about his level of achievement in the domain of interest . . . Insofar as performance on the test may be considered as representative of what the student might be expected to do when exposed to that larger collection of behavior samples from which the test items were selected, that test performance is a valid indicator of his achievement level.
>
> When the instructional process is such that the *particular* knowledges or skills required for successful performance on the *particular* test form(s) to be utilized are in fact specifically taught, the behaviors sampled in the test are no longer representative of the domain to which we wish to generalize. Thus, the most crucial consideration in whether "teaching the test" has occurred is whether the instructional content is of such a form as to render the test—and consequently normative inferences based on the test performance—invalid as an indicator of the general body of knowledge to which inferences are to be made.[20]

In a footnote to the preceding quotation Wardrop makes some useful distinctions:

> "Preparing" students for a test can take several forms: providing them with practice in the test-taking situation by giving them experience with the item forms (but not the content) they will encounter on the test, providing them exposure to the specific content which they will encounter on the test, giving them experience with both the content and form of the test, and coaching them on the specific items from the test in the form in which they actually appear. The first of these is a legitimate form of preparation in that it tends to reduce the contribution of extraneous, situationally linked factors which are irrelevant to achievement in the domain of interest but which might affect performance on the test. The remaining three procedures are illegitimate (in that they invalidate the test as a representative sample of the behavior domain to which inferences are to be made), with the last being the most blatant and dishonest attempt to invalidate the test and inappropriately enhance student performance.[21]

Several procedures to deter test-teaching have been used:

[20] J. L. Wardrop. "Was New Century Teaching the Gates-MacGinitie Reading Test in Connection with its Providence (R.I.) Contract?," Opinion prepared at the request of the American Federation of Teachers, AFL-CIO, Washington, D.C., 1971 (mimeograph), pp. 2-3.

[21] Ibid., p. 3.

- Contractual penalties
- Secret testing
- Redundant testing

Some contracts, such as that in Providence, R. I., have contained the Educational Testing Service definition of test-teaching shown in Fig. 3, and provided for substantial financial penalties if the LSC instructs the items included on a standardized test. However, the charge by the American Federation of Teachers, supported by Wardrop, indicates that this is not sufficient to stop at least *suspicion* of test-teaching.[22] A definition of test-teaching should be in any contract. Penalties are probably also desirable, but probably not sufficient.

Another approach has been used in the OEO, Virginia, and other programs. This is to have an independent organization administer the tests, have it keep the tests secret from the contractors, and administer multiple tests in each classroom. Three sets of examinations in each classroom plus deletion of the test title and publisher's name and prohibition of teachers and other LSC personnel being present, as in the OEO programs, should greatly increase the difficulty of test-teaching.[23] Unfortunately, it also makes testing difficult; and worse, it discourages feedback during the program that might permit adjustment of the program in light of the test results.[24]

For a large program, the OEO approach to preserving test-score integrity may be feasible. For a small program it seems too complex. If it is adopted, the LEA should make alternative arrangements for interim checks on achievement and feedback to program personnel.

Another approach is redundant testing—the administration of two different standardized norm-referenced tests to the same students on a pre- and post-test basis, as was done in the Gilroy program.[25] For contract settlement, only the results of the Stanford Achievement Test applied, but as part of their regular Title I procedure Gilroy administered the Metropolitan Achievement Test. These later data would have provided an easy check had there been a suspicion of test-teaching, which there was not. Of course, presumably the contractor could have taught to both tests but that would have been much harder to do and more likely to be detected.

[22] Ibid.

[23] For a description of the OEO procedure see Office of Economic Opportunity, op. cit., pp. 14-15.

[24] See P. Carpenter, *Case Studies in Educational Performance Contracting: 2. Norfolk, Virginia*. The Rand Corporation, R-900/2-HEW, December 1971, pp. 61-62.

[25] M. L. Rapp, *Case Studies in Educational Performance Contracting: 5. Gilroy, California*. The Rand Corporation, R-900/5-HEW, December 1971, pp. 22-32.

EDUCATIONAL TESTING SERVICE GUIDELINES

Two items are to be considered the same if:

1. Their wording is identical in all respects.	Example: A. Which of these is a way to find the circumference in inches of a circle with a 6-inch diameter? (1) 3x3.14 (3) 3x3x3.14 (2) 6x3.14 (4) 2x6x3.14 B. Which of these is a way to find the circumference in inches of a circle with a 6-inch diameter? (1) 3x3.14 (2) 6x3.14 (3) 3x3x3.14 (4) 2x6x3.14 (Note change in *arrangement* of options.)
2. The wording of the stem and the wording of the correct response are identical; the other responses have been changed.	Example: A. Same as above. B. Which of these is a way to find the circumference of a circle with a 6-inch diameter? (1) 3.14x3 (3) 3x2.17 (2) 6x3.14 (4) 2x6x2.1416
3. The correct response is identical and the *main sense* of the stem has been retained despite a *minor* change in wording.	Example: A. Same as above. B. The number of inches in the circumference of a circle with a diameter of 6 inches is: (1) 6x3.14 (3) 3x3x3.14 (2) 3x3.14 (4) 6x6x3.14
4. The main sense of the whole item has been retained despite the fact that it has been restated in the negative.	Example: A. Same as above. B. The number of inches in the circumference of a circle with a diameter of 6 inches is *not*: (1) 6x3.1416 (3) 3x3x3.14 (2) 6x $\frac{22}{7}$ (4) 2x3x $\frac{22}{7}$
5. The main sense of the stem has been retained despite a minor change in wording; the correct response is identical, but any *incorrect* option has been changed or omitted.	Example: A. Same as above. B. The number of inches in the circumference of a circle having a 6-inch diameter can be found by which one of these? (1) 3x $\frac{22}{7}$ (2) 6x3.14 (3) 3x3x3.14
6. The item has been changed from a multiple-choice to a true-false format by retaining the stem of the multiple-choice item and incorporating in the stem one of the options (correct or incorrect).	Example: A. Same as above. B. The number of inches in the circumference of a circle with a 6-inch diameter is 3x3x3.14: ☐ TRUE ☐ FALSE

Fig. 3—Rules for judging whether two items are to be considered the same

VI. CONTRACTOR SELECTION

METHODS OF CONTRACTOR SELECTION

Two basic procedures for selecting contractors have been used in performance contracting programs: competitive or formal, and sole-source or informal. In formal competitions the LEA circulates a Request for Proposal (RFP) to potential contractors, evaluates the responses, and awards a contract if it finds an acceptable proposal. In sole-source procurements the procedure is more flexible. Some statement of LEA objectives is furnished the potential contractor, who prepares a proposal. There are iterations until a satisfactory proposal is accepted or the project is dropped.

In some cases informal procedures are used because the contractor has assisted the LEA previously. In other cases the LEA has dealt with only one LSC because it believed that only that particular contractor had the experience or other qualifications it desired. In still other cases, sole-source procurement was chosen because it seemed easier or faster than a formal competition.[26]

Formal source selection procedures require that the LEA assess its educational needs and define the program objectives, write and advertise a formal RFP, conduct a bidders' conference, and select the winning contractor. Formal competition has several advantages:

- It increases the choice among alternative programs.
- It increases the probability that the contract will contain desirable protective clauses for all parties.
- It encourages more thorough definition of the program before program operation, leading to better planning for program management and evaluation.
- It encourages the LEA to support legal research to assure that the contractual terms are within the laws affecting the LEA.

Some hold that a formal competition makes a substantial contribution to program success. Formal competition supposedly forces contractors to seek out the best

[26] As discussed in Sec. III, in some jurisdictions sole-source contracts may be illegal.

personnel and the most innovative approaches. Also, it is argued, a firm is more likely to give its "best" guarantees if it is in competition with other firms; in a sole-source situation it is more likely to build in "insurance" factors. The availability of a number of proposals facilitates cost comparisons by the LEA. Finally, competitive procedures minimize suspicions of favoritism that may arise with sole-source contracts.

Others favor sole-source procurements. First, there is some concern that under competition a contractor may not be able to propose his "best" system. The contractor has to be responsive to the RFP, and therefore may not be able to propose an optimum program because it may not respond to the specifications. In an informal procedure there can be more interaction and more freedom to make suggestions. Many contractors have complained about having to live with costly, unnecessary, or counterproductive program features resulting from faulty RFPs.

A second argument is that formal competitions are expensive. Development of the RFP and the evaluation of proposals have required as much as 5 percent of the project funds in some programs.

Proponents of sole-source negotiations also argue that it is difficult if not impossible to compute cost-effectiveness ratios at the time of source selection. There is extensive uncertainty about expected costs and results because the programs must initially be developmental. In a competitive situation, it is argued, prospective contractors feel they will jeopardize their chances if they are candid about these uncertainties. The result, it is claimed, is that competitions turn into contests in "brochuremanship."

THE REQUEST FOR PROPOSAL

The purpose of an RFP is to elicit responses from prospective bidders that provide, first, a sound basis for selecting a contractor, and second, a basis for writing a contract. The RFP should make it easy for firms to propose innovative systems and to take advantage of their peculiar strengths. The more open-ended the RFP, the more diverse will be the responses. This virtue can be overdone, of course. An inspiring but unspecific RFP may generate responses too disparate to be compared, or a competent contractor may be eliminated because he did not understand what the LEA desired. The crux is for the LEA to be specific about what it believes is important, but escape entanglement in issues of secondary importance.

One section of the RFP should provide factual information on the target population, past achievement-test scores, how students in the programs will be designatad, their socioeconomic status, the schools involved (organization, size of rooms, electrical connections, etc.). The more detailed and accurate the information, the fewer changes will be required between the program proposed by the contractor and the program actually implemented.

The most helpful RFPs state the criteria that will be used to rank or grade

contractors' proposals. In some RFPs this has merely been a set of general statements such as "originality of approach is very important." Other RFPs have provided a list of major and minor criteria, with associated numerical weights or points. Some RFPs have listed the criteria in some detail but not the weights, and have stated that the criteria might be modified. It is important, of course, that any stated criteria and weights accurately reflect the LEA's concerns. Some LEAs have borrowed, unchanged, other districts' criteria and bid-evaluation weights. This practice seems unwise, since no two LEAs are likely to have identical preferences. It is hard to see the usefulness of proposal-evaluation instruments that an LEA does not develop for itself and that do not reflect its specific needs. The set reproduced in Table 2 is therefore intended to be illustrative only.

It is unfair to the respondent and counterproductive to the LEA if there is some consideration that the school district thinks important but is unstated in the RFP. For example, if a school district strongly disapproves of teaching machines, it should say so. If it is important to the LEA to choose its own teachers, it should say so; if it is not important, the LEA should permit the firm to propose a method for teacher selection.

Administrative arrangements should be spelled out to the extent that they have been determined. If management support, evaluation, or audit contractors will be used, the RFP should say so and explain their roles. The RFP should explain how technical proposals, price bids, or expected costs should be submitted. Past RFPs have often had the respondent submit his technical proposal in one envelope and his pricing information in another, enabling the LEA to appraise them separately.

Most of the RFPs issued during 1970-71 emphasized two requirements: that the bidder accurately describe his approach for meeting program objectives, and that he fully describe his past performance and relevant accomplishments.

Various lists of prospective LSCs have been prepared by students of performance contracting, but they change so rapidly they are hard to keep up to date. If the LSC is using a management support contractor, he will probably be able to furnish a list. The LEA can also work up a list by publicizing the project in trade publications or by contacting other LEAs with projects.

The RFP can be sent out broadcast, or the LEA may decide to limit distribution to a selected list. True, elimination of firms from the competition may lead to charges of favoritism, but it may be easier to explain why a firm was not sent an RFP than to explain why its proposal was rejected. Limitation also reduces the number of proposals that have to be evaluated, at the cost of reduced breadth and variety of potential programs.

Frequently, an open conference is held with prospective bidders so that questions about the RFP can be answered. If a bidders' conference is held, it should be scheduled well before the proposal deadline so that information provided can be reflected in the proposal. It is probably wise to have legal counsel or an experienced contracting official for the LEA at the meeting so that no legal conflicts arise between statements in the RFP and in the bidders' conference.

Table 2

EXAMPLE OF PROPOSAL EVALUATION CRITERIA[a]

I. Soundness of Approach (25%-35%)
   A. Technical
      1. Theoretical/conceptual basis
      2. Pertinent empirical data
      3. Field tested material and techniques
      4. Behavioral psychology basis
   B. Socio-political/technical
      1. Will the community accept?
      2. Will the schools accept?
   C. General factors
      1. Degree of nonlabor intensity, i.e., low operating cost
      2. Extent to which instruction is individualized
      3. Testing instruments proposed and accompanying rationale
      4. Plan for training local personnel (both consultants and paraprofessionals)
      5. Motivational techniques proposed
      6. Management and logistic plan
      7. Provisions for quality control and on-going internal evaluation
      8. Range and flexibility of instructional time per day
      9. Difficulty of transition of mid-year student transfer from Rapid Learning Center to school system

II. Most Favorable Pricing Arrangement (35%-25%)
   A. Acceptable methods of cost reimbursement
   B. Account costs broken into following categories:
      1. Start-up
      2. Capital outlay
      3. Operating, actual, and "opportunity"
   C. Cost per unit achievement for students with different earning profiles

III. Past Performance and Technical Ability (15%)
   A. Relevance of past performance
   B. Verification by check with previous consumers, clients, users, associates, etc.
   C. Personnel
      1. Managerial expertise
      2. Background in behavioral science and instruction

IV. Organizational Commitment (15%)
   A. Level of corporate support
   B. Investment of time and other resources in planning proposal
   C. Corporate attitude toward project
   D. If consortium, clarity of lines of responsibility drawn
   E. Extent of other operations and overcommitment
   F. Ability to perform on "extras"
      1. Social services
      2. Other instructional services
      3. Counseling and guidance services
      4. GED--basic education

V. Other Factors (10%)
   A. Hardware technology
      1. Cost effectiveness of technical operations
      2. Availability through mass procurement sources
      3. Delivery time and guarantees
      4. Maintenance, re-installation, parts, and repairs
      5. Flexibility to use various kinds and forms of software and conceptual material
      6. Adaptability to modified classroom environments

[a]*Performance Contracting in Education: The Guaranteed Student Performance Approach to Public School System Reform*, Education Turnkey Systems, March 1970, pp. 19-22.

PROPOSAL EVALUATION PROCEDURES

In sole-source procurement, proposal evaluation is essentially a decision on whether to move to a formal contract, present the LSC with a counterproposal, or drop the program. Such a decision can be made in so many ways that no generalization about procedures is possible. In formal competition, it is a common practice to designate a committee to evaluate the proposals. Typically, some instrument or list of questions about each proposal is prepared. Instruments used in past programs have varied. Some have merely been checklists to see whether the LSC has responded to all the requirements in the RFP. At the other extreme, some instruments have gone deep into the substance of the proposal and required judgments about the validity of the motivational techniques used, expertise of the LSC's staff, and other complex, qualitative considerations. The list shown previously in Table 2 is a good example.

Source selection instruments have always used many criteria. Clearly, some criteria are more important than others and weights or points have to be assigned. The definition of the evaluation criteria and their weights is a crucial issue, because they will influence the ranking of the prospective contractors. For example, if corporate experience is a heavily weighted criterion, experienced firms will enjoy a marked advantage over newcomers in the market. Selection of weights can lead to questions about fairness and also about the consistencies between selection criteria and program objectives.

Competitive selections are partly intended to prevent favoritism. It is very important to designate criteria and weights with scrupulous impartiality and objectivity. After criteria and weights have been established, the proposals are scored. Sometimes the firm with the top score wins the contract. Sometimes a small subgroup, perhaps three firms, are selected and a choice is made from among this group by some higher authority. Sometimes a small group of technically superior contractors are selected and a choice among them is made on the basis of the price bids.

The numerical precision that results from the typical proposal evaluation procedure can lead one to forget the underlying uncertainties and qualitative judgments. The use of formal instruments, committees, and similar procedures increases the probability of an objective choice. A quantitative score is obtained, and numbers are always impressive. When all is said and done, however, the LEA is dealing with promises from prospective contractors, and the criteria and the weighting system are themselves qualitative. Ultimately, the choice of an LSC is qualitative despite formal procedures that yield quantitative scores.

DEVELOPMENT OF MATERIALS AND CURRICULA

Observation of 1970-71 programs indicates that an important and often slighted element in contractor selection is the degree of development work to be done. Contractors' proposals frequently do not distinguish between materials and procedures

that they have "in hand" and materials and procedures that they believe can be developed.[27] An LEA may reasonably prefer to contract with a firm that has an attractive program in a development stage rather than with a firm that has a less interesting program that requires little development work. "Off-the-shelf" materials may not be impressive enough to cause an LEA to prefer them to a good development effort. Nonetheless, the amount of development work involved would seem an important issue for the source-selection committee to ponder. Important questions are:

- Do the proposed materials exist? Have they been used in similar programs?
- Is the proposed training program in existence?
- Do evaluation instruments exist?
- What is the experience and training of on-site supervisors and other personnel?

CONSIDERATIONS IN PROGRAM SELECTION

It is generally inappropriate to compare several LSCs' proposals on the basis of the potential payment under the payment schedules they present. Each LSC is likely to propose to supply a different mix of resources—personnel, materials, equipment, and facilities—to implement the program for the same number of students. In one proposal, for example, the LEA may be expected to furnish all instructional personnel; in another, the LSC may wish to supply and pay for all teachers and paraprofessionals. In the first case, the LSC may therefore expect a lower rate of return per student under his guarantee than in the second case. Moreover, under the performance contract, the LSC's payment depends on student achievement. Since gains are uncertain, the final cost is also uncertain.

Nevertheless, the LEA is naturally concerned about the cost of the program, particularly if it extends into a turnkey phase. If the program is to be turnkeyed, the LEA will implement the program itself and will incur all of the remaining program costs. The cost of the program as part of the regular school curriculum may or may not exceed the payments to the LSC under the guarantee. (This point is discussed in the Technical Appendix.) Thus, in choosing among various proposals it is helpful for LEA planning purposes to estimate what different program configurations would cost.

As part of the proposal evaluation process, therefore, a cost-analysis of the various proposals is desirable. For the reasons discussed above, this analysis should not be limited to the costs of the contract but should cover the total cost implications for future years. Some models and techniques for such analyses are in the Technical Appendix.

[27] The Gary experience is a case in point. See G. R. Hall and M. L. Rapp, *Case Studies in Educational Performance Contracting: 4. Gary, Indiana*. The Rand Corporation, R-900/4-HEW, December 1971.

FOLLOW-ON CONTRACTS

Follow-on contracts—contracts subsequent to the first contract in a program—may be let on occasion. Most contracts to date have covered only a single year.[28] Most LEAs apparently have assumed that the program would be operated in-house after the first year without any direct classroom involvement of the LSC. But what is to be done if the LEA decides after the first year that the program merits continuation but is not ready to be turnkeyed?

In that event, no matter what its normal source-selection policy, the LEA is unlikely to open up the program for competition. Switching contractors in the middle of a program is disruptive and creates problems that most LEAs will want to avoid. But this fact gives the LSC a bargaining advantage in dealing with the LEA.[29]

Several practices can alleviate follow-on contract difficulties. First, options for future contracts can be written into the contract. Second, provisions for auditing can be required, to give the LEA a basis for negotiation. Third, the parties' respective rights and ownership of data, materials, equipment, and the like should be defined. Then if the LEA does decide to switch contractors it can do so with a minimum of disturbance.

[28] The Gary-BRL contract is a notable exception.

[29] Switching contractors is possible (for example, Texarkana switched from Dorsett to EDL for the second year of its program) but it has obvious disadvantages.

VII. THE CONTRACT

STANDARD TOPICS IN CONTRACTS

The ultimate goal of the planning process is a contract that formalizes the agreements between the LEA and the LSC.[30] Frequently, the process of going from accepted proposal to signed contract has been long and frustrating to those who want to get started on the operating program. Often the attorneys involved have advised delays to work out ambiguities and contingencies. The difficulties and delays in settling many of the 1970-71 contracts indicate that such efforts to clarify and make the contract terms precise are worthwhile.

Past performance contracts have ranged from simple to intricate (see the Technical Appendix). Many topics discussed in this Guide might appropriately be included; however, the standard topics are:[31]

- Objectives of program and scope of work
- Responsibilities, duties, and performance required of LSC
- Responsibilities of LEA
- Method of measuring performance, and basis of payment and formula for payment
- Procedures for changing the program
- Procedures for testing
- Teacher training
- Teacher administration policies
- Dissemination of data and information
- Procedures for visits to the program
- Successors and assignees
- Covenant against contingent fees
- Equal employment opportunity
- Certification of nonsegregated facilities

[30] Although the discussion relates to the LEA-LSC contract, many of the same considerations apply to support contracts.

[31] Adapted from the Texarkana-EDL contract (see R-900/7 HEW).

- Notice to prospective subcontractors of requirement for certification of nonsegregated facilities
- Rules for deciding whether test items are to be considered identical with instructional items or exercises (i.e., the definition of test-teaching)

Most of these subjects are discussed elsewhere in the Guide or are well known from standard contracting practice. Two topics, however, require discussion here, payment arrangements and provisions for change.

PAYMENT

The amount of the payment depends not only on achievement gains but on:

- Definition of the target population
- Assignment criteria
- Attendance requirements
- Pre- and post-test arrangements
- Payment formula for pupils not covered by the guarantee
- Payment formula for pupils covered by the guarantee

Seldom, if ever, have all students in a program qualified for the performance-payment arrangement. In some programs only one-third of the students in the program have been tied into the incentive fee system because of the way target populations were defined and students assigned, absences, and failures to take tests.

The target population may comprise all students in one or more schools or some subset defined by criteria such as Title I eligibility, IQ above 75, more than two grade-level deficiencies on standardized tests, or some other characteristic.

The criteria used to define the population will presumably affect the contractor's materials and techniques. They may also affect the number of students in a school eligible for the program or the number of students in a program that come under the "guarantee."

Assignment procedures have often funneled some students into the program who were not part of the target population. For example, a contract may provide for instruction of students who have IQs above 75 and are more than two grade levels behind in achievement. Students are assigned on the basis of past records, but when the pretests are graded and returned, say a month or six weeks after school starts, it turns out that some students were less than two grade levels retarded, while others fall below the specified minimum IQ level. In these cases: Can or must the LEA withdraw the students, even if there is no convenient class for them to go to? If the students remain, how is the contractor's payment for them to be computed?

Where student turnover rates are high, the LEA may be hard pressed to meet its guarantee to provide the LSC with some minimum number of students for a

minimum number of days.[32] Nor is it easy to handle the return of students from the program to regular classrooms, or to transfer and adjust the LSC's compensation for students the LSC wishes to reject for being disruptive or not benefiting from the course.

Some LEAs have essentially argued that the LSC should take "potluck" along with the school district, while others have maintained that the program should be limited to the type of students for which the LSC's system was developed. Student selection procedures, transfer arrangements, and payment provisions for students assigned to the program but who do not meet the various criteria for incentive payment, should be clearly understood by both parties at the start of the program. During the planning process, the LEA is well advised to estimate the number of students it believes will meet the criteria selected for achievement payments in order to minimize later surprises.

Despite the drawbacks to a "potluck" approach, it nevertheless seems preferable to more selective methods for two reasons. First, in past programs the attempt to insure that the students in the program came from the target population created substantial managerial difficulties and misassignments occurred despite all precautions. Second, there is a danger that the program will be regarded as being aimed only at "failures," an obvious handicap.

The performance-payment arrangement usually is limited to students with a minimum number of hours of attendance, a number that should be specified in the contract. The minimum figure should be substantially less than the district's scheduled number of schooldays per year. Otherwise, strikes, abnormal weather, absences, parents moving out of the attendance area, assemblies, etc., may prevent the LEA from meeting its minimum guarantees. For example, a minimum of 150 attendance days might be set if there are 180 days in a school year. This would allow for "expected" absenteeism as well as "Acts of God" and school disruptions.

How is the contractor to be reimbursed for students who do not qualify under the performance-payment arrangement? The usual way is to treat the students who qualify for the guarantee as a sample and use a specified procedure to apply some fraction of the payments for the sample to all the students in the program. This approach, although sound, contains a possible bias. Students who complete the course may achieve higher gains than those with excessive absences. Furthermore, the LSC may not be diligent about encouraging attendance or test-taking by students who are doing poorly.

An alternative might be a flat prespecified per diem rate; but this would exacerbate rather than resolve the basic problem with applying the fractional payment procedure. It is probably better to extrapolate the payments to the whole group from the scores of students with pre- and post-tests, unless some students fail to qualify for reasons that legitimately invalidate the extrapolation procedure.

When pupils do qualify for the guarantees, the contractors have been paid under a variety of formulas linking achievement gains to payments. In some pro-

[32] This was a problem in the OEO experiment and one factor that delayed settlement of the contracts. Office of Economic Opportunity, op. cit., p. 27.

grams the pay has simply been a linear function of achievement years of gain as measured by norm-referenced tests. In Gary, payment is a function of the number of students at or above the national norm on the Metropolitan Achievement Test for their respective grades. In a contract in Flint, Michigan, payment was based on the rate of gain; the LSC sought to double the historical rate of growth of each student. A system that was proposed for San Diego, California, would have related the contractor's payment to the overall distribution of test scores, comparing the LSC students' achievement score distribution to that of the district as a whole. The LSC payment would have depended on how closely its students' achievement distribution approached the district-wide distribution.

Proponents of complex arrangements are worried about the theoretical possibility that contractors might concentrate on only a few of their pupils. We question whether this concern is of much practical importance. In order for an LSC to maximize his profit by concentrating on some students rather than on all, he would need a set of highly reliable diagnostic tests. He would also have to know just how his materials affected achievement gain in light of the initial test score. Given the number of students in the typical program and the state of the art of testing technology and learning theory, it is doubtful that any contractor can rationally decide to favor one student over another. This situation may change as testing and instructional systems improve, but at present there seems to be little danger that the use of simple payment arrangements may lead to some students being ignored.

The results in the 1970-71 school year, for the most part, argue against expecting very large increases in achievement test results. Goals on the order of 1.7 or 2.0 achievement years per year represent a very substantial increase in the rate of growth of the students' achievement. Less ambitious objectives seem more appropriate, given the history of performance contracting thus far. The Flint, Michigan, approach of defining the objective in terms of doubling each student's historical rate of growth has the attractive quality of emphasizing the implied *change* in each student's achievement.

The OEO, Texarkana, Virginia and some other programs have included payments based on criterion-referenced or learning-mastery tests. This is an attractive approach since it defines payments in terms of the objectives of the program rather than the wider objectives reflected in standardized tests. As discussed elsewhere, however, the state of the art of criterion-referenced testing leaves much to be desired. Payment arrangements for criterion-referenced test results also pose difficulties because one must be assured that the students actually mastered the objectives in the program, not prior to it, and there are no real norms against which to compare results.

Other payment arrangements can be conceived. For example, at one point in the Texarkana project consideration was given to making the payment to the contractor a partial function of the dropout rate of the students in the program. Again, the problem is how to relate the contractor's achievement to some norm.

The basic theory of performance contracting implies using the payment arrangements to motivate the contractor. Therefore, the payment arrangements should reflect the LEA's objectives. On this criterion the San Diego approach is

appealing; the district wanted to lessen the differences among its schools and it proposed to reflect this goal in its payments to contractors. There are three other considerations, however:

- Complex formulas are often hard to monitor
- Complex goals are hard for the public and sometimes the project personnel to understand
- Incentive clauses provide motivation only if the contractor has the means to achieve the bonus or avoid the penalty

If, for example, a special bonus were offered for all students with IQs below 75 who achieved 1.5 grade levels of gain, it would be possible to identify such students but the offer would be empty unless the contractor had special techniques for training such students.

CHANGE AND SETTLEMENT ARRANGEMENTS

Because each LEA has unique characteristics, a program developed for one LEA will have to be adapted to fit another. Performance contracting technology is not yet standardized. As discussed earlier, nearly all programs are developmental; they change during the school year to cope with unforeseen problems and take advantage of opportunities for improvement. The result is that the LEA and LSC will often have to settle on the basis of a program quite different from that initially envisioned in the contract.

Change itself may be a favorable aspect of performance contracting. Performance contracting encourages teachers to find out how they are doing and revise unsatisfactory materials and procedures. This is a healthy motivation, not always found in conventional school programs. If change is to be encouraged, however, appropriate contract provisions are required.

Multiyear projects have a great advantage over single-year projects because it always take time to implement a new program. The true significance of the first year's evaluation may lie almost entirely in its effectiveness in contributing to program implementation as contrasted to its assessment of program success. In the Gilroy program, for example, the program staff soon decided that a change in the schedule was necessary but the other teachers resisted disruption of their classes, resulting in a six-month delay in implementing the changes. Appropriate contract provisions might have avoided the impasse, to the benefit of both parties.

Perhaps the best example of the problems that can arise because of unforeseen circumstances is the 1969-70 Texarkana program, which was involved in the teaching-to-the-test dispute. This contract has yet to be settled.

It is not easy to write contracts that appropriately provide for possible changes. If contracts are couched in general language, relying on good faith to work out matters as they arise, obvious advantages or disadvantages may ensue. On the other

hand, if contracts try to cover all contingencies, complexities result that have delayed the start of some programs.

It is probably impossible to anticipate all possibilities anyway. The best approach seems to be a mixed strategy of writing clauses for those contingencies that can be easily envisioned and building in procedures for amending the contract to cope with unforeseen events. It is particularly important to specify what parties may initiate these procedures and who must accede to changes. The OEO contracts are good examples of this mixed strategy.

Part 3

Program Operations

VIII. ORGANIZING AND MONITORING THE PROGRAM

This section discusses the major activities required to get a program under way and maintain it in operation:

- Selection of schools
- Personnel selection
- Teacher training
- Student selection and assignment
- Monitoring the program
- Extending awareness of the program

SELECTION OF SCHOOLS

Preferably, the school or schools that will house the program will be selected during the planning phase,[33] but selection has often been postponed until the beginning of the operational phase of the program. In deciding on a school, five considerations are particularly important:

- Population characteristics
- Turnover rates and absenteeism
- Size of school
- Support of building personnel
- Accessibility

If the program is funded by categorical aid (such as Title I), the school selected will have to meet the applicable criteria. If the program is financed by general funds or if several possible sites meet the funding requirements, the range of criteria can be widened. The other considerations—turnover rates, size, etc.—may then determine the choice. If not, the choice should be made with validation and evaluation

[33] The designation of comparison or control schools was discussed in Sec. V, "Planning the Evaluation."

in mind. The district will presumably want to generalize the results and the schools should be selected to aid in generalization. If the focus is on compensatory education, a district might pick a school with a particularly poor educational situation; to test the learning system on a turnkey basis, a more typical school might be a better selection. In short, the selection of a school ideally will reflect the policy issues to be addressed in the evaluation.

The importance of turnover and absence rates has been previously discussed. There are cost and other advantages to having a relatively large group of students in a program (200 to 400 or more). If the program is sited in a small school, all the students in some grade or grades may have to be assigned to the program. Doing so simplifies scheduling and avoids distinguishing "fast" from "slow" students. It may make it difficult, however, to limit the program to students with severe learning difficulties or other particular characteristics.

The support of the principal, teachers and community may be a factor. Like any new program, a performance contract will require changes in school procedures and it is an advantage if those affected by the program are interested in it.

If the school system is within a major metropolitan area served by reliable transportation, it may not be necessary to consider accessibility when choosing schools for the program. If it is difficult for participants to reach the schools, however, travel constraints may discourage them from doing their job well. Remoteness from the school has contributed to inadequate participation in the past.

PERSONNEL SELECTION

Teachers

Teachers are the key element in any learning system. One implication from past experience is that teachers should be involved in planning the project. Another implication is that the program management should insure that teachers are implementing the learning system according to plans. In several past programs knowledgeable officials complained that teachers were not implementing the system as intended, and the results, therefore, were not appropriate measures of what could be done.

Another aspect of this problem is that if teachers are to implement the system they must have the training, materials, and facilities required and receive them on time. In several past programs, the promised logistics support was late or insufficient. Classrooms were not remodeled in time for the opening of school or they were too small for the planned program, and new materials did not arrive on time.

"Off-the-shelf" systems that can be simply plugged into any school's program and work successfully are apparently nonexistent. Program managers must therefore be alert to adapt the program on the basis of feedback on results. The best source

for much of the feedback is the teachers. Teacher-initiated changes should be understood and approved by all the project management, however.

If the LSC and LEA take different approaches to rules and procedures, teachers may be caught in the middle with dual responsibilities and loyalties. The LEA will be wise to set general guidelines about the LSC's authority, if any, to modify regular rules.[34]

In most programs, teachers and the LSC have established harmonious and effective relationships but in a few programs personnel changes have been necessary. Some LEA executive should be empowered to move quickly and resolve matters when they first arise. In at least one past program the changes involved teacher transfers; in at least one other program, however, the LSC staff was revamped.

In some programs the LSC has been assigned teachers by the LEA. Often, however, the LEA has drawn up a list of candidates and the LSC has selected its staff through interviews. This method helps to assure that the contractor will have teachers he can work with and who will be willing to take his direction and support his effort. It does, however, introduce another element of nonrandomness into the "quasi-experiment" because the LEA is likely to designate superior teachers and the LSC is able to pick and choose.

Criteria for teacher selection might include: evidence of interest in and support for the program, past experience with similar students and subjects, and evidence of ability to adjust to new situations.

Paraprofessionals

Paraprofessionals are usually hired especially for the program. Both the LEA and LSC often interview the people concerned. Usually an effort is made to obtain residents of the local community.

Many past programs have made effective use of paraprofessionals. The stress on individualized instruction creates the opportunity for teacher aides to be involved in classroom management and free the certificated teacher from many routine duties. The certificated teacher can concentrate on diagnoses, individual tutoring, affective counseling and other specialized activities. The specialized role that the paraprofessional can play implies that special care be given to their recruitment and training.

Frictions and personality clashes, of course, sometimes arise. A relatively simple tactic to decrease this possibility is encouraging program teachers to help select aides. Teachers may already know people they would like to work with and can propose candidates.

Unionization of teaching paraprofessionals is unusual, but a large-scale performance contract may involve so many that unionization may become an issue.[35]

[34] To illustrate, jealousy arose in one program because the LSC permitted smoking in the learning center while the LEA did not permit it in regular classrooms.

[35] See Hall and Rapp, op. cit., pp. 86-87.

Principals

For the host school, a performance contract inevitably engenders new scheduling require 's and special requests for facilities and services. If the principal is "left out" y understandably view performance contracting as merely a source of added work. In programs where the principal is outside of the direct chain of command, special attention by both the LEA supervisor and the LSC director is required to keep the principal in the decision "loop" and to make sure that his interests are understood and respected.

LSC Director

The on-site LSC director occupies an important and difficult position. He may be an expert, but he is an outsider. In past programs, if he was professionally qualified, flexible, and able to get along with teachers and parents, resentment and fear died down. If he was abrasive or maladroit, problems resulted. It may be desirable to include a clause in the contract permitting the LEA to recommend replacement of the LSC director if problems cannot be solved in a reasonable period. It will be judicious for the LEA to interview and approve the prospective on-site contractor personnel.

LEA Supervisor

A good LEA supervisor can be the key to program success. He should be a decisive official with sufficient authority to permit him to resolve most questions quickly on his own authority. Implementing a new and innovative program requires cutting much red tape and overcoming many obstacles to change. This can only be done if the program is backed by an LEA official with the ability, professional respect, and authority to get things done.

TEACHER TRAINING

LSCs typically provide a week or two of training for certificated personnel before the program begins and some in-service training while the program is under way. Paraprofessionals typically receive somewhat less training.

In the press of getting a program started it is often difficult for both the LEA and the LSC to provide good preprogram training. In-service training may also be slighted because of other demands on teacher and contractor time. This neglect is understandable, but it is unwise. Training programs are important to both parties. The LEA and LSC should review the preservice training program to make sure that:

- There is sufficient time before school opens (at least a week) to familiarize the trainees with the new approach.

- The program will instruct trainees in using the materials and methods in teaching students in the target population. A good sample of the instructional materials, diagnostic test, and other components of the instructional system should be available to trainees.

The LEA should make advance arrangements for the facilities and equipment that will be needed. Positive inducements should be offered to trainees for attendance at training sessions. In some programs the LSC has paid overtime for attendance. This practice provides a slightly higher yearly income for program participants without deviating from the established school district salary scales. It also enhances teacher motivation to attend the training sessions. Considering the importance of training, overtime payments would seem to be a useful practice and a reasonable expense.

Because performance contracting programs are developmental, it is particularly desirable to provide for in-service training throughout the program. Teachers, supervisors, and contractor personnel should have frequent opportunities to discuss and resolve the problems that are bound to arise and to share particularly useful and rewarding experiences. In past programs, teachers often complained that they had no one to talk to after the program was well under way, and sometimes replacements for teachers who had to leave the program received no training at all. Regularly scheduled in-service training sessions, say as often as twice a month, would alleviate such problems. Again, some inducement for attendance would be desirable.

STUDENT SELECTION AND TRANSFERS

Student selection and transfers have been the major operating problems in several past projects. Three types of problems have arisen:

- An undesirable image for the program created by the selection criteria
- Students enrolled in the program who are not in the target population
- Conflict with other school classes or programs

If students observe that only academically inferior students are consistently chosen to be in the class or if they hear teachers characterizing the program as having been designed only for the "slow learners," an image of the program as the "dummy class" may result. One way to avoid this is to enroll entire grades in the program; another is to enroll students with a range of capabilities.

If the times that the performance contracting classes are offered conflict with other course offerings, students may not want to participate in the program. This is particularly likely to arise at the secondary level, where students have some freedom in course selection. This problem can be avoided by paying careful attention to scheduling details or by substituting program subjects for subjects in the regular curriculum. The latter tactic is sometimes possible for particular subjects but not for others. Program math is often substitutable for regular English.

Students are often selected on the basis of regular district tests administered in the previous year. Transfers and late entries naturally complicate preparing the roll. What is more serious is that when the initial pretest for payment purposes or the original diagnostic tests are administered, it may well turn out that a number of students do not meet the selection criteria. Because of this, in some past programs there has been a considerable time lag between the opening of school and the final assignment of students to the program. This time lag has meant that students are reassigned late from the program to the regular school classrooms, to the unhappiness of the students and teachers. It also means that replacements for the reassigned students must be found and these must be taken from regular classrooms and assigned to the performance contracting program after the pretest. This may create confusion and disenchantment with the program. It also makes it difficult for such students to receive both a pre- and post-test for payment purposes and to receive the minimum number of days of instruction specified in the contract.

To minimize these problems, it would appear desirable to schedule students during the summer with the greatest care possible. The expediting of the preparation of the final roll should have first priority at the start of school. If assignment is to be effected by the initial tests, these should be administered promptly and the results scored and evaluated at once.

Some of the early programs had provisions for transferring students from the program when their achievement met specific criteria such as attainment of some target gain or accumulation of excessive absences. If provisions are made for removing students from the program before it has run its course, they usually must be replaced so that the contractor will have enough students to work with. Also, if student exit is determined on the basis of test scores, then students should not be overtested simply because they repeatedly fail to show the gain the teacher thinks they have made. In contrast, inadequate provisions for testing late entrants or early leavers may mean that contractor payment is based only on a fraction of the program participants. Exits at irregular times also put students into unfamiliar classrooms part way through the semester, which may be detrimental to their standing in the subject. The best solution to all of these problems may be to plan for entrance and exit of students at specified times, such as between semesters.

MONITORING THE PROGRAM

A system of cognizance and control over the program is essential to:

- Maintain the LEA's legal and administrative control
- Insure that teachers adhere to the program as designed
- Provide early warning of potential conflicts among program personnel
- Minimize scheduling and management conflicts between the program and the rest of the host school's program

- Permit resolution of operating questions at the operating level through interactions between the LEA and LSC managers
- Identify program improvements

Selecting Monitors

Monitors have included:

- Full-time LEA managers
- Ad hoc executive reviewers
- Local building administrators
- Management support groups
- Evaluators

In the OEO programs each LEA appointed a full-time employee to supervise the programs. This procedure provides a single focus of responsibility and someone with time to become familiar with the program. Problems can be resolved promptly. This approach is expensive, however, and the monitor can become too involved in the program to be objective about it.

In some programs supervision has been a collateral duty of an assistant superintendent or other high echelon LEA executive.[36] If action is required, it can be promptly initiated without having to move up the chain of command. An executive may be too busy, however, to devote much attention to the program.

In other programs, a principal or assistant principal in the host school has been given monitoring responsibilities.[37] Principals are in a position to observe the program continuously but they have many other responsibilties. Conflicts of interest may also occur in coordinating the operation of the program and the school.

Monitoring is a possible role for a management support group. The MSG is in a neutral position from which it can act as a go-between. Because MSG services are expensive, however, there is a tendency not to use them on a continuous basis; it may be some time after a problem has arisen before the MSG is able to deal with it.

Another approach is to utilize the evaluator as a monitor. As an adjunct of his evaluation activities the evaluator can monitor the management and process aspects of the problem and take an active role in suggesting improvements and resolving difficulties.[38] There are two drawbacks, however. The evaluator may not be in the district very often. Second, some evaluators perceive a conflict between providing interim guidance and their need to keep program data confidential so as not to contaminate the final validation of achievement gains.

[36] The 1970-71 Gilroy program is an example. See Rapp, op. cit.

[37] The CMES program in Grand Rapids is an example. See G. C. Sumner, *Case Studies in Educational Performance Contracting: 6. Grand Rapids, Michigan.* The Rand Corporation, R-900/6-HEW, December 1971.

[38] In the 1970-71 Texarkana program the same organization had both an evaluation contract and a management support contract, with excellent results. See Carpenter, Chalfant, and Hall, op. cit.

Records and Observation Reports

To maintain cognizance and control, four types of records and data are required:

- Tests and other measurements
- School district records of attendance, transfers, etc.
- Records of LSC, MSG, and evaluator activities
- Observations and unobtrusive measures

Basic sources of data are the results of the interim and final test given by the evaluator. These data can be useful not only for validation and evaluation of the program but for program management.

School district records such as attendance data, disciplinary referrals, transfers, costs, and like information provide evidence of how the program is progressing. Unfortunately, in some past programs such data have been sporadically collected and even lost. It is best to devise a formal system for capturing and preserving relevant school district data. Examples of important records of program participants are: LSC records of in-service training, visitor logs, and minutes and attendance figures for teacher meetings and parents' meetings. In the press of meeting daily commitments it is extremely likely, on the basis of past experience, that such records will not be kept up to date. The LEA might periodically check or collect the records to ensure having the data. Alternatively, an MSG or outside evaluator, if one is used, might audit the records. In any event, if history is a guide, without special attention LSC data available to the LEA will probably be fragmentary.

Unless the data contribute directly to the collector's primary task (as data on student progress contribute to the teacher's instructional program), special steps will be needed to assure that the data collected will be complete and accurate. Therefore, in some instances it may be wise for the evaluator, auditor, program director, or whoever else is given the responsibility, to make unannounced spot-checks of daily records. But the same data should not be entered on different forms merely to satisfy the needs of different agencies. The forms should be kept as simple as possible.

If an MSG or outside evaluator is used, it is important that what they learn during their visits be captured by the LEA. A useful device here is the "contact report" as used in the OEO, Texarkana, and some other programs. This is a printed form that the MSG or evaluator fills out whenever he deals with someone in the district and learns about some matter that should be brought to the LEA's attention. Trip reports and "debriefing meetings" can also be used.

Finally, as a source of data there is no substitute for direct observations, conversation with teachers and other program participants, discussions with parents and students, and similar formal contracts.

EXTENDING AWARENESS OF THE PROGRAM

Every past program has sought parental and community involvement. It is intuitively obvious that parental support for a performance contracting program can be extremely helpful. Parents may be naturally supportive.[39] In many communities, however, parents show little interest in school programs and may be cynical or even hostile. If confronted by apathy or hostility, the LEA will need to take positive steps to enlist parental support and involvement.[40] Such efforts may have both short-run and long-run benefits to the school in changed community attitudes. They will also provide opportunities for program personnel to explain new features of the program that may puzzle or disturb parents.

To develop community awareness, the district will probably have to mount a public relations program. Interest in the program has two sides. It creates a requirement for the LEA to handle public and professional relations, and it creates an opportunity for the LEA to generate public support.

A performance contracting program is likely to lead to many requests for visits. Program personnel in past programs have found themselves hosting many teachers from other districts, reporters, researchers, and other interested people. This requires much time from the program staff, and in extreme cases has been disruptive.[41] Special visiting days have been established in some programs. Any program should have a set of established procedures governing who can visit the program under what conditions and at what times.

However, teachers not in the program might well be encouraged to observe it in action and be given the time and means to do so. If visits must be limited, teacher visits should be given top priority. Teachers should also be encouraged to sit in on in-service training or consulting sessions to learn about the program's good and bad features.

[39] Parental support was extremely important in BRL's Gary program. See Hall and Rapp, op. cit.

[40] In Greenville, South Carolina, the manager installed a telephone in the center and called the parents of students when they had a particularly meritorious day. One might also make use of home visits by teachers or other program participants, although we know of no performance contracting program where this has been done.

[41] In Texarkana during 1969-70, program personnel had to devote a great deal of time to showing visitors around, speaking at symposia, and so forth. In Gary, visitors and media representatives were at Banneker School observing and interviewing teachers so frequently that it affected the program. The evaluator recommended at the end of the first year that such exposure be limited.

Part 4

Evaluation

IX. VALIDATING ACHIEVEMENT AND SETTLING THE CONTRACT

Experience has shown that contract settlement may generate a series of legal moves and countermoves, claims and counterclaims, with bitterness and disenchantment on both sides, particularly for programs in which measured student gains are appreciably less than those "guaranteed" by the contractor. It is not uncommon for contract settlement to take six months or more. Many of the contracts involved in the OEO experiment, for example, were still unsettled in January 1972.[42]

Since data on program results are usually not released until final contract settlement, there is often a long period in which the LEA is unable to respond to requests for data. This delay can pose public relations difficulties.

VALIDATION OF STUDENT ACHIEVEMENT

The purpose of the validation is to assure that contractor payment is determined objectively and accurately, and as specified in the contract. Two situations may cause disputes about the appropriateness of the tests used as measures of student learning. On the one hand, the subject-matter content of the LSC's program as actually implemented may have had a much weaker relationship to the content of the measuring instruments than the LSC had originally anticipated.[43] On the other hand, the content of the test and the instruction may have matched too well, i.e., the LSC may have taught the test.

Several methods for guarding against teaching the test were previously discussed, but even if they are used the suspicion of test teaching may still arise. To refute or support such suspicions, the evaluator or auditor should analyze how the test items correspond to the materials used in the instructional program. (This further supports the need for continuous monitoring of the program during actual

[42] Office of Economic Opportunity, op. cit., p. 27.

[43] This appears to have happened in the Norfolk program. See Carpenter, op. cit.

instruction.) Such an analysis also will be useful for specifying areas where the program is particularly strong or weak.

A similar analysis will reveal whether the test adequately sampled the content of the instruction. For example, if students spent most of the school year learning skills that are not tapped by the test, the test will not measure program effectiveness.

Matching test contents and the instructional program determines whether the test is a *valid* measure of what was to be learned. Whether it is an *accurate* measure may require further analysis. Newly constructed tests often contain items that elicit wrong responses because they are ambiguous or misleading. The reliability of individual test items and of the test as a whole can and should be determined by analysis of student responses to each item and to sets of items.

"Murphy's Law"—if anything can go wrong, it will—applies to every stage of the validation. The following items should be checked:

- Information on test booklets or answer sheets that identifies individual students' test scores
- Characteristics of students to see if they fall within contract specifications
- Days of attendance
- IQ, if the contract specifies a minimum level
- Existence of a pre-test score or a post-test score or both
- The level of the pre-test score
- The publisher of the pre-test and post-test (if several tests are used it is possible that some students could be given pre-tests and post-tests from different publishers)
- The actual numerical computation of payment

CONTRACT SETTLEMENT

After the tests have been administered, scored, and analyzed, the evaluator must identify the students who qualify for the performance guarantee under the terms of the contract as well as those for whom other special contractual arrangements may have been made. There may even be a group of students for whom the contractual payment schedule is ambiguous. The evaluator must resolve such issues through negotiation with the LEA and LSC or by contract interpretation.

Finally, the evaluator must compute the payment due the LSC by the formulas applicable to each group of students falling within specified contractual arrangements. Such computations are rarely complex, but errors can occur in even the simplest of situations. Computation of payment may also require interpretation of the contract.[44] Also, in programs where there have been a number of changes, it may

[44] For instance, the Gary-BRL contract states that "at least a year's advancement in reading and mathematics will be achieved." In June 1971, the question arose as to how to define "a year's advancement" and relate it to the test score. Price, Waterhouse and Co. was hired to compute the payment, and

not be obvious how the original intentions should apply to the new situation.[45] The two parties might negotiate an interpretation.[46] The Gary approach of hiring an auditor to do the interpretation and calculation is an appealing alternative. A management support group or independent evaluator may also provide the interpretation.

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it interpreted the clause to mean that a student had to achieve a month's advancement for a month's instruction in both reading and mathematics.

[45] For an example of program changes that affect settlement computations, see the report on Gilroy, Rapp, op. cit. This program was converted from one with variable exit times to one in which all students remained in the program the full school year.

[46] Contract settlement details of actual programs are frequently confidential.

X. ASSESSING THE PROGRAM

The purpose of assessing the program is to provide a basis for decisions about its future in the school system. For such decisions, the program's effects on the students' cognitive growth are clearly important, but other information is also needed. Information gathered during the course of the evaluation should assist in settling such issues and should suggest needed changes. Finally, the options for program implementation should be compared with one another and with other alternatives that may be available to the school system.

EVALUATION

Program assessment consists of (1) evaluation and (2) the choice of alternatives. The evaluation should provide a description of the development of the program within the school system in order to answer such questions as:

- What was "the program" in fact?
- How long was "the program" actually in effect in the classroom?
- Did start-up problems reduce program effectiveness?
- What were the major obstacles to implementation?
- How did attitudes toward the program change as it was implemented?
- What program features seemed to generate the most enthusiasm or to work the most smoothly?

A major function of the evaluation is to gather quantitative data on program effects. (Some suggestions on the kinds of data that should be gathered were set forth earlier.) Analysis of these data will reveal whether the program had effects and how extensive they were. As noted previously, the use of control groups is very helpful at this point. In most situations, the data warrant only relatively simple analysis. Elaborate analyses of incomplete or inaccurate data, or sophisticated comparisons of data that are not really comparable, are a waste of time and misleading.

The significance of program effects on student learning to program assessment is obvious. (Since numerous passages in this guide have discussed the measurement

of cognitive achievement, we need not treat it further here.) The analysis of test items proposed in Sec. IX as part of the validation will also provide useful data for program assessment by illuminating the weak and strong parts of the program. This will point the way to whatever changes in content or emphasis are desirable.

The evaluation should also assess significant nonquantifiable effects of the program, such as changes in degree of acceptance or support for the program on the part of teachers, administrators, parents, community groups, teacher unions, and, of course, the students themselves. Many of these effects can be captured by observation and interviews. Changes in the classroom environment are also important. Other intended or unintended outcomes may result from the program. The evaluator should describe any anticipated or unanticipated results because unanticipated side effects may be key considerations in decisions about the future of the program.

CHOICE OF ALTERNATIVES

The evaluation should provide direction for the design and comparison of alternative program configurations to be considered for the future. One such alternative, of course, is for the school system to revert to its prior practices. Since this alternative was inadequate in the past, it is merely a baseline for judging the incremental effects of other alternatives.

Another alternative is to adopt an approach entirely different from performance contracting—some other type of remedial program, for example. This alternative would be attractive if the program just completed were patently unsuccessful or unacceptable to the school system, if the educational need remained as pressing as ever, or if some potential alternative had been tried in another school system and had had outstanding results. The disadvantage, of course, is that the school system would have to go through the implementation process all over again.

There will also be a set of alternatives based on the program just completed. Changes to the program might be made in several areas:

- *Content.* Should subject matter be deleted or added? Are changes in emphasis needed?
- *Students.* Should the program be extended to more students? Should a student population with different characteristics be included?
- *Staffing.* Should the mix of students, teachers, and paraprofessionals be changed? Should the staff be acquired, trained, and paid in the same ways?
- *Management.* Should the LSC continue to have responsibilities for instruction? If so, should he continue to work under a performance guarantee?
- *Evaluation.* Should the evaluation be conducted as before?

Although many alternatives could be generated by all possible answers to the above questions, probably only a few will need to be considered.

One of the options is to turnkey the system, i.e., to operate the program as part of the LEA's regular program without direct involvement of the contractor. The term "turnkey" is widely but loosely used in discussions of performance contracting. When the future of the program is being decided, however, the LEA will have to be precise about the operational meaning of the term. Turnkey has been used to refer to three very different types of adoption:

- LEA conduct of the program exactly as the contractor had managed it, using the same materials and facilities and instructing about the same number of students.
- Retention of the same procedures and materials, but with more students involved.
- General adoption of the basic materials and techniques for use within conventional classrooms.

Each of these "turnkey" options has very different implications for training, cost, and evaluation.

After the educational process and outcomes have been assessed, resource requirements should be analyzed. The objective is to estimate the impacts of the alternative programs on the district's resource inventories, personnel, and cash flow. This will provide input to financial planning and resource management on the one hand, and more information for designing the scope of the learning programs on the other. Such a planning exercise should have a time horizon that spans the initial phase-in period and any anticipated major modifications. It should also include at least the first year in which costs and operations are expected to level off.

The general scheme is to collect certain resource information on the candidate programs, incorporate this information into a design for the planned implementation of the programs, and then arrive at schedules of resource requirements. Resources that are to be supplied by the contractor, or are otherwise available without additional cost to the district, are deleted to obtain a list of the incremental resources that the district must acquire.

We suggest a seven-step analysis:

1. Summarize the resource requirements of the candidate programs.
2. Derive resource factors.
3. Describe the scope of the planned implementation of the programs.
4. Project resource needs for the planned programs from steps 1 and 2.
5. Subtract, from district costs, those resources to be supplied by the contractor or to be otherwise available without cost.
6. Summarize the incremental impacts on resource inventories and staffing levels on a year-by-year basis.
7. Display summary program costs on a year-by-year basis.

Such an analysis is illustrated in the Technical Appendix.

Expected costs must be related to educational effectiveness as measured by indicators that describe the learning (or other stated objectives) of a program. Some

programs are directed specifically to goals other than improvement of student achievement in such subjects as reading and mathematics. For example, the program may seek to change the students' self-images. Objectives such as these are usually thought of as fostering the attainment of student achievement as a primary objective, but the causal relationship may go in both directions. In any event, if the program devotes resources specifically to attain such ends, measures of the extent to which these ends have been attained belong in the set of indicators of program effectiveness. Finally, the attitudes of parents, teachers, and the community at large toward the program may suggest peripheral benefits and can be used to choose among programs of apparently equal teaching effectiveness.

A program's effectiveness can be summed up only by means of a *set* of measures and indicators. To choose among alternative programs, the planner must judge the relative importance of these indicators as they apply to the students and schools in question. For example, reading improvement may be a driving goal in inner-city schools but only a mild concern in schools in upper-middle-class neighborhoods. Similarly, changes in teacher status may cause difficulties in school systems with strong teacher unions but may be accepted fairly readily elsewhere.

Given a set of alternative programs accompanied by descriptions of their resource requirements and their effectiveness, they can be compared on the basis of their relative returns. Such a comparison is often termed a cost-effectiveness analysis. There are two basic ways to conduct such an analysis. One is to specify the level of effectiveness desired and then compare the costs of alternative means to achieve it. The other is to specify an acceptable cost level and compare the relative effectiveness of programs whose costs cluster around that level. In the educational context, however, the answers can rarely be more than rough approximations. It is seldom possible, in education, to compute a truly meaningful cost-effectiveness ratio—that is, an accurate one derived by statistical methods from an abundant data sample. Strictly speaking, given a budget constraint (the usual situation in education), such a ratio can be computed and used to rank alternatives only if numerous levels of effectiveness within the same alternative are available for consideration, up to the limit of the budget.

In analyzing instructional programs, the fixed-budget approach (the second method described above) is probably the most helpful. That is, the LEA should say, "We have $100,000 to spend on 350 students. Which program will give us the greatest effectiveness?"

In assessing a performance contracting program and deciding about its future, these two salient points should be kept in mind:

1. A broad range of possible program outcomes—favorable and unfavorable—should be examined in addition to cognitive test scores; and
2. The cost and effectiveness of the possible implementations of the performance contracting program should be compared relative to each other and to the situation without performance contracting.

SELECTED BIBLIOGRAPHY

PLANNING GUIDES

Adams, John W., and Karen H. Kitchak, *A Guide to Performance Contracting*, Wisconsin Department of Public Institution, Madison, Wisconsin, 1971.

Michigan Department of Education, *An Introduction to Guaranteed Performance Contracting*, Lansing, Michigan, March 1971.

National School Boards Association, *Performance Contracting: A Guide for School Board Members and Community Leaders*, Evanston, Illinois, 1971.

NEWSPAPERS, NEWS SERVICES, AND MAGAZINES WITH REGULAR COVERAGE OF PERFORMANCE CONTRACTING

American Teacher, American Federation of Teachers AFL/CIO, Washington, D.C.

Educational Marketer, Knowledge Industry Publications, Inc., White Plains, New York.

Education Daily, Capital Publications, Washington, D.C.

Educational Technology, Englewood Cliffs, New Jersey.

Education Turnkey News, Education Turnkey Systems, Washington, D.C. (ceased publication, fall 1971).

Phi Delta Kappan, Bloomington, Indiana.

BOOKS, ARTICLES, AND PAPERS

Asbell, Bernard, "Should Private Enterprise Direct Your Child's Education?," *Redbook*, Vol. 138, No. 4, February 1972, pp. 56-63.

Barro, Stephen M., "An Approach to Developing Accountability Measures for the Public Schools," *Phi Delta Kappan*, Vol. 52, No. 4, December 1970, pp. 196-205.

Bhaerman, Robert D., "A Paradigm for Accountability," AFT-Quest Paper 12, American Federation of Teachers, Washington, D.C., August 1970.

——, "Accountability: The Great Day of Judgment," *Educational Technology*, Vol. 11, No. 1, January 1971, pp. 62-63.

Blaschke, Charles, "Educational Technology—A New Perspective," *Educational Technology,* Vol. 8, No. 1, January 15, 1968, pp. 17-18.
——, "Performance Contracting Costs, Management Reform and John Q. Citizen," *Phi Delta Kappan,* Vol. 53, No. 4, December 1971, pp. 245-247.
——, *Performance Incentive Remedial Education Experiment,* Final Report to the Office of Economic Opportunity, Contract No. B00-5114, Education Turnkey Systems, Inc., Washington, D.C., August 31, 1971.
Bumstead, Richard A., "Lessinger's Logic" (review of L. M. Lessinger, *Every Kid a Winner), Educate,* Vol. 4, No. 2, March 1971, pp. 25-30.
——, "Texarkana, the First Accounting," *Educate,* Vol. 3, No. 2, March 1970, pp. 24-37, 52.
"Briton to Expound New Learning Approach on TV," *New York Times,* September 28, 1970.
"Business-Run School Runs into Problems," *Washington Post,* May 2, 1971.
Campbell, Robert E., "Accountability and Store Soup," *Phi Delta Kappan,* Vol. 53, No. 3, November 1971, pp. 176-178.
Carlson, Elliot, "Education and Industry: Troubled Partnership," *Saturday Review,* Vol. 53, No. 33, August 15, 1970, pp. 45-55.
Clapp, Stephen, "Performing for Profit," *P.I.C. News,* Public Information Center, Washington, D.C., Vol. 1, No. 4, September 1970, pp. 3-4.
Coleman, James S., "Toward Open Schools," *The Public Interest,* No. 9, Fall 1967.
Cronbach, Lee J., and Lita Furby, "How We Should Measure 'Change'—Or Should We?," *Psychological Bulletin,* Vol. 74, No. 1, 1970, pp. 68-80.
Donaldson, T. S., *Subjective Scaling of Student Performance,* The Rand Corporation, P-4596, March 1971.
Dyer, Henry S., "Can We Measure the Performance of Educational Systems?," *NASSP Bulletin,* May 1970, pp. 96-105.
Education Turnkey Systems, Inc., *Performance Contracting in Education,* Research Press, Champaign, Illinois, 1970.
EPIE (Educational Products Information Exchange), "Performance Contracting Game Continues," *Educational Product Report,* EPIE Report 38, Vol. 5, No. 2, November 1971, pp. 1-5.
"Free Enterprise for Schools," *Time,* August 24, 1970, pp. 58-60.
Gillis, James, "Performance Contracting for Public Schools," *Educational Technology,* Vol. 9, No. 5, May 1969, pp. 17-20.
Glennan, Thomas K., "OEO Experiments in Education," *Compact,* Vol. 5, No. 1, February 1971, pp. 3-5.
Hall, George R., and James P. Stucker, "The Rand/HEW Study of Performance Contracting," *Compact,* Vol. 5, No. 1, February 1971, pp. 6-9.
Harmes, H. M., "Specifying Objectives for Performance Contracts," *Educational Technology,* Vol. 11, No. 1, January 1971, pp. 52-56.
Harrison, C. H., "Who Is Accountable?," *Scholastic Teacher: Supplement,* November 1970, pp. 6, 18, 26.
Heddinger, Fred M., "New Leverage for Funding Agencies," *Compact,* Vol. 5, No. 1, February 1971, pp. 35-37.

Hottleman, Girard D., "Performance Contracting Is a Hoax!," *The Education Digest*, September 1971, pp. 1-4.

"Hucksters in the Schools: The Performance-Contract Phenomenon," *American Teacher*, Vol. 54, No. 1, September 1970, pp. 9-11.

Klein, S. P., "The Uses and Limitations of Standardized Tests in Meeting the Demands for Accountability," *U.C.L.A. Evaluation Comment*, Vol. 2, No. 4, January 1971, pp. 1-7.

Kruger, W. Stanley, "Educational Performance Contracting: Another Perspective," paper presented at the National School Boards Regional Conference on Performance Contracting, Chicago, Illinois, February 4-6, 1971; Denver, Colorado, February 7-9, 1971; and San Francisco, California, February 11-13, 1971 (mimeograph).

Lennon, Roger T., "Accountability and Performance Contracting," paper presented to the American Educational Research Association, New York, February 5, 1971 (mimeograph).

Lessinger, Leon M., "Accountability in Public Education," *Today's Education*, Vol. 59, No. 5, May 1970, pp. 52-53.

——, "After Texarkana, What?," *Nation's Schools*, Vol. 84, No. 6, December 1969, pp. 37-40.

——, *Every Kid a Winner: Accountability in Education*, Simon and Schuster, New York, 1970.

——, and Dwight H. Allen, "Performance Proposals for Educational Funding: A New Approach to Federal Resource Allocation," *Phi Delta Kappan*, Vol. 51, No. 3, November 1969, pp. 136-137.

Locke, Robert W., "Accountability Yes, Performance Contracting Maybe," *Proceedings of the Conference on Educational Accountability*, Educational Testing Service, Princeton, New Jersey, March 1971, pp. E1-E9.

Martin, Reed, and Charles Blaschke, "Contracting for Educational Reform," *Phi Delta Kappan*, Vol. 52, No. 7, March 1971, pp. 403-406.

Mayrhofer, Albert V., "Factors to Consider in Preparing Performance Contracts for Instruction," *Educational Technology*, Vol. 11, No. 1, January 1971, pp. 48-51.

McAndrew, Gordon, "Gary, Indiana Contracts for Operation of Entire School," *Compact*, Vol. 5, No. 1, February 1971, pp. 10-11.

Mecklenburger, James A., "Performance Contracting Report," (review of Stucker and Hall, *The Performance Contracting Concept in Education*), *Educational Technology*, Vol. 11, No. 10, October 1971, p. 6.

——, and John A. Wilson, "Learning C.O.D.: Can the Schools Buy Success?," *Saturday Review*, Vol. 54, No. 38, September 18, 1971, pp. 62-79.

——, and John A. Wilson, "Performance Contracting in Cherry Creek?!," *Phi Delta Kappan*, Vol. 53, No. 1, September 1971, pp. 51-54.

——, and John A. Wilson. "The Performance Contract in Gary," *Phi Delta Kappan*, Vol. 52, No. 7, March 1971, pp. 407-410.

——, and John A. Wilson. "The Performance Contracts in Grand Rapids," *Phi Delta Kappan*, Vol. 52, No. 10, June 1971, pp. 590-594.

Megel, Carl J., and Robert D. Bhaerman, "Teachers Voice Their Opposition," *Com-*

pact, Vol. 5, No. 1, February 1971, pp. 31-34.
Millman, J., "Reporting Student Progress: A Case for a Criterion-Referenced Marking System," *Phi Delta Kappan*, Vol. 52, No. 4, December 1970, pp. 226-230.
National Education Association, "Policy Statement by the NEA Executive Committee on Performance Contracting," Washington, D.C., December 5, 1970 (mimeograph).
"New Ways of Teaching on Trial," *New York Times*, April 24, 1971.
Office of Economic Opportunity, *An Experiment in Performance Contracting: Summary of Preliminary Results*, OEO Pamplet 3400-3, Washington, D.C., February 1972.
"Performance Contracting: The Issue," *I/D/E/A Reporter*, Winter Quarter 1971, pp. 1-10.
Randall, Ronald, and Charles Blaschke, "Educational Technology: Economics, Management and Public Policy," *Educational Technology*, Vol. 8, No. 12, June 30, 1968, pp. 5-13.
Rice, Carolyn, "Will Performance Contracts Really Produce?," *Virginia Journal of Education*, Vol. 6, No. 4, January 1971, pp. 71-73.
Saretsky, Gary, "Every Kid a Hustler," *Phi Delta Kappan*, Vol. 52, No. 10, June 1971, pp. 595-596.
Schwartz, Ronald, "Performance Contracts Catch On," *Nation's Schools*, Vol. 86, No. 2, August 1970, pp. 71-73.
Schwebel, Milton, Review of Lessinger, *Every Kid a Winner: Accountability in Education*, *Educational Technology*, Vol. 11, No. 10, October 1971, p. 19.
Shanker, Albert, "Possible Effects on Instructional Programs," *Proceedings of the Conferences on Educational Accountability*, Educational Testing Service, Princeton, New Jersey, March 1971, pp. F1-F11.
Sigel, Efrem, *Accountability and the Controversial Role of the Performance Contractors*, Knowledge Industry Publications, Inc., White Plains, New York, 1970.
Stake, Robert E., "Testing Hazards in Performance Contracting," *Phi Delta Kappan*, Vol. 52, No. 10, June 1971, pp. 583-589.
Stenner, Jack, "Education Performance Contracting: Varied Approaches," The Council of the Great City Schools, Washington, D.C., and Dallas Independent School District, Dallas, Texas, n.d. (mimeograph).
——, "Performance Contracting: Some Policy and Legal Considerations," The Council of the Great City Schools, Washington, D.C., and Dallas Independent School District, Dallas, Texas, n.d. (mimeograph).
Stucker, James P., *The Performance Contracting Concept, Appendix: A Critique of the Theory*, The Rand Corporation, R-699/2-HEW, May 1971.
——, and George R. Hall, *The Performance Contracting Concept in Education*, The Rand Corporation, R-699/1-HEW, May 1971.
"Teaching for Profit," *Newsweek*, August 17, 1970, p. 58.
Voegel, George H., "A Suggested Schema for Faculty Commission Pay in Performance Contracting," *Educational Technology*, Vol. 11, No. 1, January 1971, pp. 57-59.
Waldrip, Donald R., "Performance Contracting: The Dallas Experiment," unpub-

lished paper, Dallas Independent School District, Dallas, Texas, n.d.
Wardrop, James L., "Was New Century Teaching the Gates-MacGinitie Reading Test in Connection with its Providence (R.I.) Contract?," Opinion Prepared at the Request of the American Federation of Teachers, AFL/CIO, Washington, D.C., 1971 (mimeograph).
Willingham, Edward, "Education Report: Performance Contracting in School Tests Administration's 'Accountability' Idea," *National Journal*, Vol. 2, No. 43, October 24, 1970, pp. 2324-2332.
Wilson, John O., "Statement Submitted for the Record on Performance Contracting Before the House Committee on Education and Labor," Office of Economic Opportunity, April 20, 1971 (mimeograph).
Zaharis, James K., and Fenwick W. English, "Performance Contracting: Hobson's Choice for Teachers?," paper delivered to California Teachers Association, Good Teaching Conference, Los Angeles, California, January 29, 1971, Mesa Public Schools, Mesa, Arizona.
Zazzera, Edmund, "A Contractor's Viewpoint," *Compact*, Vol. 5, No. 1, February 1971, pp. 13-16.

EVALUATION METHODOLOGY

Buchanan, Garth N., et al., "Political Considerations in the Design of Program Evaluation," paper presented to the American Sociological Association in Denver, The Urban Institute, Washington, D.C., September 1, 1971.
Campbell, Donald T., "Considering the Case Against Experimental Evaluations of Social Innovations," *Administrative Science Quarterly* Vol. 15, March 1970, pp. 110-113.
——, "Methods for the Experimenting Society," preliminary draft of a paper to appear in the *American Psychologist*, 1971.
——, "Reforms as Experiments," *American Psychologist*, Vol. 24, April 1969, pp. 404-429.
——, and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research*, Rand McNally, Chicago, 1966.
Caro, Francis, G. (ed.), *Readings in Evaluation Research*, Russell Sage Foundation, New York, 1971.
Cohen, David K., "Politics and Research: Evaluation of Social Action Programs in Education," *Review of Educational Research*, Vol. 40, 1970, pp. 213-238.
Evans, John W., "Evaluating Social Action Programs," *Social Science Quarterly*, Vol. 50, December 1969, pp. 568-581.
Glennan, Thomas K., Jr., *Evaluating Federal Manpower Programs: Notes and Observations*, The Rand Corporation, RM-5743-OEO, September 1969.
Hyman, Herbert H., and Charles R. Wright, "Evaluating Social Action Programs," in Paul F. Lazarsfeld, et al. (eds.), *The Uses of Sociology*, Basic Books, New York, 1967.
Levine, R. A., and A. P. Williams, Jr., *Making Evaluation Effective: A Guide*, The

Rand Corporation, R-788-HEW/CMU, May 1971.
Orr, Larry L., et al. (eds.), *Income Maintenance, Interdisciplinary Approaches to Research*, Markham Press, Chicago, 1970.
Rivlin, Alice M., *Systematic Thinking for Social Action*, The Brookings Institution, Washington, D.C., 1971.
Rossi, Peter H., "Practice, Method, and Theory in Evaluating Social Action Programs," in James L. Sundquist (ed.), *On Fighting Poverty*, Basic Books, New York, 1969.
Stufflebeam, Daniel L., "Evaluation as Enlightment for Decision Making," in W. B. Beatty (ed.), *Improving Educational Assessment and an Inventory of Measures of Affective Behavior*, National Educational Association, Washington, D.C., 1969.
Suchman, Edward A., *Evaluative Research*, Russell Sage Foundation, New York, 1967.
Webb, Eugene J., et al., *Unobtrusive Measures*, Rand McNally, Chicago, 1966.
Weiss, Carol H., "The Politicization of Evaluation Research," *Journal of Social Issues*, Vol. 26, 1970, pp. 57-68.
—— (ed.), *Evaluating Action Programs: Readings in Social Action and Education*, Allyn and Bacon, Boston, 1972.
Weiss Robert S., and Martin Rein, "The Evaluation of Broad-Aim Programs: Experimental Design, Its Difficulties, and an Alternative," *Administrative Science Quarterly*, Vol. 15, March 1970, pp. 97-109.
Wholey, Joseph S., et al., *Federal Evaluation Policy*, The Urban Institute, Washington, D.C., 1970.
Williams, Walter, *Social Policy Research and Analysis*, American Elsevier. New York 1971.
——, *The Capacity of Social Science Organizations to Perform Large-Scale Evaluative Research*, Public Policy Paper No. 2, Institute of Governmental Research, University of Washington, Seattle, 1971.