The application of rational methods to improve student outcomes in a school district is described. Issues in school reform development are addressed, followed by a description of a restructuring program implemented in the Charleston County (South Carolina) School District to reduce grade retention and the dropout rate. The program was evaluated by demographic and test score data, interviews with a cross-section of school district staff, and application of the Program Development Evaluation (PDE). The final section summarizes recent applications of system development methods to the dropout problem. Twelve figures and two tables illustrate the text. (23 references) (LNI)
Achieving School Improvement Through School District Restructuring

Gary D. Gottfredson
and
Denise C. Gottfredson

Report No. 10
August 1990
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Harold Himmelfarb, Office of Educational Research and Improvement
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Gary D. Gottfredson

and

Denise C. Gottfredson

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Center for Research on Effective Schooling for Disadvantaged Students
The Johns Hopkins University
3505 North Charles Street
Baltimore, Maryland 21218
(301) 338-7570
The Center

The mission of the Center for Research on Effective Schooling for Disadvantaged Students (CDS) is to significantly improve the education of disadvantaged students at each level of schooling through new knowledge and practices produced by thorough scientific study and evaluation. The Center conducts its research in four program areas: The Early and Elementary Education Program, The Middle Grades and High Schools Program, the Language Minority Program, and the School, Family, and Community Connections Program.

The Early and Elementary Education Program

This program is working to develop, evaluate, and disseminate instructional programs capable of bringing disadvantaged students to high levels of achievement, particularly in the fundamental areas of reading, writing, and mathematics. The goal is to expand the range of effective alternatives which schools may use under Chapter 1 and other compensatory education funding and to study issues of direct relevance to federal, state, and local policy on education of disadvantaged students.

The Middle Grades and High Schools Program

This program is conducting research syntheses, survey analyses, and field studies in middle and high schools. The three types of projects move from basic research to useful practice. Syntheses compile and analyze existing knowledge about effective education of disadvantaged students. Survey analyses identify and describe current programs, practices, and trends in middle and high schools, and allow studies of their effects. Field studies are conducted in collaboration with school staffs to develop and evaluate effective programs and practices.

The Language Minority Program

This program represents a collaborative effort. The University of California at Santa Barbara is focusing on the education of Mexican-American students in California and Texas; studies of dropout among children of recent immigrants are being conducted in San Diego and Miami by Johns Hopkins, and evaluations of learning strategies in schools serving Navajo, Cherokee, and Lumbee Indians are being conducted by the University of Northern Arizona. The goal of the program is to identify, develop, and evaluate effective programs for disadvantaged Hispanic, American Indian, Southeast Asian, and other language minority children.

The School, Family, and Community Connections Program

This program is focusing on the key connections between schools and families and between schools and communities to build better educational programs for disadvantaged children and youth. Initial work is seeking to provide a research base concerning the most effective ways for schools to interact with and assist parents of disadvantaged students and interact with the community to produce effective community involvement.
Abstract

This report describes an ambitious attempt to apply rational methods to produce radically improved outcomes for all students in a school district. It (a) discusses issues that must be tackled to produce major changes in a school system's operations, (b) illustrates how a program development method can be used to address these issues and promote restructuring, and (c) summarizes progress to date in developing constructive system responses to the problem of student dropout.
Acknowledgments

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Achieving School Improvement Through School District Restructuring

For a number of years we have been exploring methods for helping schools and other organizations assess themselves and then plan, implement, and evaluate improvement efforts. This work has led to a method for assessing school climate (G. Gottfredson, 1985), a structure for facilitating school improvement (G. Gottfredson, 1984; G. Gottfredson & D. Gottfredson, 1987; G. Gottfredson, Rickert, Advani, & D. Gottfredson, 1984), and some examples of the application of these tools in successful school improvement programs (D. Gottfredson, 1986, 1987a) and experimental programs to reduce the risk of adolescent problem behavior in schools (e.g., D. Gottfredson, 1986, 1987b; G. Gottfredson, 1987a, 1987b).

More recently, we have applied this school improvement method in helping to restructure a school system to reduce the risk of dropout. This is a bigger leap than it may at first appear to be. People planning and implementing improvements in a school are workers at the production level (the faculty) and their first-level supervisor (the principal). In contrast, planning and implementing improvements in a school system require concerted action by individuals at more levels of the system, concerted action despite specialization of roles and function and barriers to communication, and less direct firsthand knowledge of the conditions of instruction on the part of the planners. Nevertheless there are similarities between the planning structures that are appropriate for building-level groups and those appropriate for school districts.

In this report we (i) discuss some issues involved in intervention with a school system to promote restructuring, (ii) illustrate how a program development structure applies to coping with these issues, and (iii) summarize progress to date in developing constructive system responses to the problem of the risk of student dropout in a large school system.

J. Issues in School System Development

Attempts to restructure a school system must address nine issues: (a) perspective, (b) goals, (c) inertia, (d) coherence, (e) objectives, (f) design choices, (g) norms, (h) quality control, and (i) persistence. School systems are composed of groups of people in interaction who work with and through each other to accomplish the educational goals of the organization. These nine issues are issues with which these groups must cope successfully to improve schools in the system and reduce dropout and other forms of adolescent problem behavior.

Perspective

A successful poet once explained that it was his job to notice the things that most people took for granted -- the things they did not notice because their attention was directed to the hazards and tasks of day to day life. Most of us--including most superintendents, educational evaluation and research specialists, pupil personnel directors, curriculum and instruction specialists, and other school system administrators--are focused on the routine hazards of our jobs. Even when personnel are directing attention to relatively large projects (overhauling curriculum, say, or working to get a new criterion-referenced testing program operating properly), this attention is really mostly attention to details.

One product of a structure useful for educational improvement at the school district level is perspective. Achieving perspective requires distancing oneself and other members of the administrative group from the specific roles assigned to each member and from the specific hazard occupying one's attention at the moment to take stock of how the system is doing. What are the major patterns in the educational outcomes being achieved by the entire system? Are there obvious areas where the reduction of risk is possible? Would alternative methods of accountability or educational assessment produce a surprising or familiar portrait of the system's productivity?

This distancing and stock taking may require an occasion for formal assessment of the system's functioning and outcomes; it may require the use of information not routinely scrutinized or the organization of available information in
alternative ways. For example, everyone in the district may know that standardized test scores have increased in recent years, but few people in the district may know whether the average age for fifth graders is higher or lower than it was three years ago. Such information may be available but unexamined.

Goals

By goals we mean the long-range, overarching aims of the school system. The clarity, balance, and management of these goals are issues in planning to reduce the risk of adolescent problem behavior. A school system’s goals presumably hold out to all members of the organization -- from board president and superintendent to custodians -- an indicator of the general direction in which the system should be going and what its outcomes should be. Assuming these goals are clear, an important question in planning to reduce the risk of dropout and school failure is, "Is this mission balanced or does it rig the schools against some segments of the student population?"

A balanced mission directs attention to educational outcomes not only for that segment of the student population and that constituency in the community that is easiest to serve but also to those segments of the student population and those community constituencies that are more difficult to serve.

How the goals are managed is also important. Are there accountability mechanisms that focus attention on one part of the system’s goals but that tend to ignore others? For example, does a grade-level testing program focus attention on test scores in grade but fail to direct attention to the rates of retention in grade? Do accountability mechanisms focus attention on students in the aggregate but fail to focus attention on specific subgroups of students?

Attention to ways goals are managed in a school system is especially important. No instruction takes place in a district office; instruction occurs in schools within classrooms. Educational improvement can occur only at the school. Consequently, it is the activities, planning, problem solving, and implementation of improvements at the school level on which the productivity of any district school improvement program depends. Providing direction and support for beneficial improvements in the school buildings of a district requires directing management attention in the schools at district goals.

Inertia

Every organization is anchored in place by a mix of traditions, rules and regulations, normative expectations, role definitions, habits, and conscious and unconscious perceptions of the possible. Together with external constraints--student input and demands for output, for example--these anchors perpetuate the status quo (Beer, 1980). To make changes, a school system must weigh anchor.

Some specific kinds of events and structures are useful in weighing anchor. These include (a) information, (b) communication events, (c) crises, (d) salient alternative organizational forms or activities, and (e) a method for managing change. It is useful in particular to think of school systems as groups of interacting individuals and to use methods for group decision and the induction of social change along the lines illustrated by Lewin (1947).

Coherence

Education suffers no shortage of reform ideas. The half-life of these reform notions seems to be somewhere between three and five years. Some ideas seem downright impossible to resist. Who could be opposed to instructional leadership or parents being involved in their children’s education?

Problems with program coherence occur when the reform ideas are not the ideas a given school system most needs at the moment. For example, no matter how good an idea reading in the content areas for middle school students may be, if first grade students are not learning to read this is not the idea that will help solve the problem. Or, for example, no matter how enthusiastic the staff may be for the Madeline Hunter model, if a structure and method for coping with student heterogeneity in the classroom is what is needed, this is not the solution to the problem because it includes no specific strategies for coping with heterogeneity.

One reason reform programs often lack
coherence, then, is enthusiasm for the fall of the moment. A second reason is that program choices are made without benefit of what we call a theory of action.

A theory of action explains a problem or the path to its resolution in terms of variables over which the school system or its personnel have control. In contrast, whenever you hear educators explain a problem by reference to variables over which they have little control (e.g., "parents don't 'value' education") you are hearing a theory of inaction. A group operating on the basis of a theory of action is more likely to develop a coherent program directed at solving the system's educational problems. A group operating with a theory of inaction may do something, but what it does may bear little on the problem.

Objectives

According to a recent report in the Baltimore Evening Sun (Kelly, 1988), the city school system's grade retention rate in the first grade is about 19%. It is equally high in grade 7 and higher in grades 9 (31%) and 10 (23%). With such high retention rates it is likely that only around half of students make it to the legal age for leaving school without having been retained in grade at least once and the dropout rate is probably around 50%.

Suppose that Baltimore City Public Schools adopted a goal of raising the school completion rate from its current level to 80% within four years while maintaining current graduation requirements (that is, not lowering graduation standards dramatically). This would be a hopelessly difficult objective for the system. Because so many persons entering high school currently have been retained at least once—therefore displaying the single most potent predictor of dropout—no foreseeable short-term program could cut the dropout rate by the amount required to attain the goal. Were the system to plan a program with this aim, the predictable consequence would be a lack of personnel commitment to the goal and probably an added sense of demoralization.

Weick (1984) has explained how large social problems (such as Baltimore's dropout problem) can usefully be redefined as a collection of smaller problems many of which can feasibly be addressed in the short run, allowing problem solvers to experience a succession of "small wins." For the same reason, some structures for helping groups make plans schedule critical benchmarks (Gottfredson, 1984) that signal progress in problem solving long before the cumulative effects of programs become visible. These critical benchmarks and small wins serve as worker and organizational reinforcers. Critical benchmarks, short-term objectives, and implementation or performance standards all serve reinforcing functions. They should be built into any school system's plans to reduce the risk of adolescent problem behavior.

Objectives must be attainable and perceived to be attainable by the application of feasible amounts of effort.

Norms

Every school system has developed a set of verbalized and tacit norms that structure the way it does business. These norms have a stabilizing influence, they are some of the "anchors" that maintain the status quo. Developing or changing shared definitions in entire school systems is more difficult than changing norms in single schools. Departmentalization and the tall organizational structures typical of moderate to large sized school systems make communication problematic and the management of change difficult.

Among other things, norms and role definitions determine who communicates with whom, who is regarded as "responsible" for planning in specific areas of the system's concern, and who is "not responsible" for planning in various
areas. Making improvements in school systems to help them better serve students at risk of dropout and other adolescent problem behaviors will usually require specific mechanisms for enhancing communication and for managing change so that normative re-education (French & Bell, 1984) can occur.

Quality Control

The same features that make communication an issue in school system planning and improvement—tall organizational structure, specialization of function, and norms regarding communication—make quality control an issue as well. Quality control is especially problematic if the school system has norms antithetical to the upward communication of bad news.

It appears typical of school systems that they tend to quality control some traditional and easy-to-assess outcomes while attending relatively little to the management of the specific interventions or reforms that are intended to solve problems. For example, systems regularly track standardized achievement test scores but often have no mechanism at all to track the match between the content of tutoring in a pull-out program and the reading instruction that occurred in the student’s classroom that day. To conduct quality control at the level of classroom implementation, building-level personnel must be involved. District-level personnel cannot quality-control classroom activities.

One common result of the difficulty of quality controlling many aspects of programs from the system level is the phenomenon of school systems quality controlling their image rather than their programs.

Persistence

Most reforms in education do not work as intended. Most reforms do not produce the expected outcomes. Most reforms do not occur in the intended way. Most reforms are eventually abandoned in favor of a different reform. Most reforms that replace old reforms do not work as intended.

Persistence is required because the difficulty in getting innovations to be effective is predictable. It is predictable that groups involved in innovation will experience turnover in membership long before the bugs have been worked out of the reform. This can lead to the abandonment of much needed reforms long before they have had a chance to be refined to the point where they work to achieve the desired outcomes. Structures are needed to foster tinkering with innovations through an iterative process until successful implementation occurs.

II. Program Development Structure and System Change

How can educational leaders cope with these issues to achieve educational reform in a district? In this section, we illustrate how a structured method for planning, implementing, and evaluating change is being applied by the Charleston County (SC) School District to restructure itself to reduce grade retention and dropout throughout the system. We are assisting this district as it develops ambitious plans to reduce dropout by applying the Program Development Evaluation (PDE) method (G. Gottfredson, 1984; G. Gottfredson et al., 1984). This method calls for composing a planning group of responsible parties and for this group to work through a sequence of steps intended to stimulate rational planning and program development.

Specifically, the method calls for:

1. Using information in defining problems and in translating these problems into concrete, measurable goals.

2. Specifying a theory of action to direct choices among potential interventions and indicate the manipulable causal variables that will have to be addressed by the program.

3. Selecting proven (or at least plausible) interventions to bring about the outcomes the theory of action implies must occur.

4. Group decision making that uses information about the force-field as perceived by those who must implement the decisions.

5. Specifying critical benchmarks, implementation standards, and time-delineated tasks to serve as indicators of progress early in the developmental life of the program.
6. Monitoring all aspects of program implementation and outcome to signal needed revisions in course.

7. Expecting that program and organizational development occurs over time, that emergent problems will require accommodation, and that program refinement rather than abandonment is necessary for organizational effectiveness.

Perspective and Problem Definition

The structure calls for the application of information to define needs for educational improvement and in the contemplation of all aspects of program development. A first step for this school system, therefore, was to conduct a comprehensive re-appraisal of evidence about its current levels of effectiveness. Although problems of grade retention were clearly visible in the system, the prevailing opinion was that the system must be on the right track because test scores had been increasing in recent years.

Outside researchers helped the system achieve perspective by (a) conducting independent analyses of the test score and demographic data which showed that the increase in test scores was in part due to a change in the population taking the tests (G. Gottfredson, 1986); (b) gathering interview data from a cross-section of schools to assess normative expectations, communications, current methods, and coping with the at-risk population, and goals within the district, and (c) presenting the results of these fact-finding exercises in a retreat for system administrators.

It turned out most attention had been focused on the improving test scores, with little realization that the population tested was shifting markedly due to high and increasing levels of grade failure in the district. Figure 1 shows the kind of data produced by the accountability structures that were in place when we began to work with the school system. Accountability focused on achievement in terms of class or student performance standards according to grade level criteria-referenced and norm-referenced achievement tests. This figure shows steadily increasing percentages of eighth graders meeting or exceeding performance standards in recent years. The increases are impressive, and there are similar increases for other grade levels.

There was no accountability structure in place, however, to provide the school systems with the adequate information illustrated in Figure 2. We used bivariate regression data analysis to calculate the effects of program improvements and thus the within-program accountability structure. The results are clearly shown in Figure 2. Various grade levels were at risk in the same way that they were before. The reason for the increasing test scores was the shift in the ages of the students tested.

We began to look at grade retention, again something not anticipated by the existing accountability structures, and in Figure 1. District-wide, a fifth of last grade cohort were retained; and for one school we found a rate of almost 50%. No one in a position of leadership in the district knew these rates were this high.

The accountability structure the district used for monitoring dropout was based on the annual incidence of dropout for students in junior high schools and high schools; it was estimated to students who dropped out during the school year. For 1987 these incidence rates ranged from 9.7% with a median of 7.3%. There was no structure for examining dropout as a prevalence datum. By applying grade level incidence data to a six-year model of dropout, the prevalence of dropout for cohorts of students in grade 6 in 1980 and 1981 worked out to 30% and 26%, respectively. These prevalence estimates ignore dropout over the summer. A comparison of the sizes of 6th and 12th grade populations six years apart suggest dropout rates of 46% and 44% for the 1980 and 1981 cohorts of sixth graders. These were surprising figures.

Analyzing district data from an altered perspective showed, for example, that the percentage of students enrolled in the grades appropriate for their ages fell from 97% in kindergarten to 41% by grade 9 (see Figure 4). An altered perspective on available district data also showed that only 40% of students whose age implied that they would be in eighth grade were making expected educational progress measured by a criterion score on the 8th grade criterion-referenced test.

Figure 5 shows how grade retention contributes to produce high dropout rates. It also
shows that high rates of grade retention have been a problem of long standing in this district, although a problem that may have been exacerbated by the application of stricter standards for grade promotion in the absence of effective restructuring to produce greater student learning. Overage students drop out in grade 9 and after, relatively few graduating seniors are overage.

Fact-Finding, Balance, and Goal Management

Additional fact-finding focused on the ways the system’s general aims were understood and managed, and on how balanced this understanding was. Interviews were conducted with area superintendents, principals, assistant principals, counselors, and teachers in a cross-section of schools. In response to questions about goals, most individuals at all levels identified raising test scores on the norm-referenced and criterion-referenced tests composing the district’s state-imposed testing program as a key goal. Some personnel pointed to "overage students" in middle schools and dropout in the high schools as problems, but not as priorities for problem solving.

Interviews turned up no evidence of any systematic methods for coping with student heterogeneity beyond Chapter 1 resource and in-class programs and special education programs. That is, no programmatic attempt to assist classroom teachers manage the instruction of heterogeneous classes was evident. Interviews, and a review of records, showed that rates of suspension (in and out of school) and expulsion were extremely high in many middle schools. High rates of grade retention in first grade were generally regarded as expected. Certified special education teachers, and teachers in work in schools in the poorer rural areas and in central city (predominantly black) schools were in short supply. Some noncertificated personnel were being used, and there was a general perception that less experienced and talented personnel were staffing schools in less "desirable" locations.

Our examination of "balance" versus imbalance in the management of the district’s goals showed that there were vast differences in educational outcomes for different groups of students and different schools. Figure 6 shows that black males are much more often retained in grade than are other groups, with white females least often retained. Only about 22% of black male ninth graders have never been retained in grade. Figure 7 shows retention rates in two elementary schools in the same constituent district, one all black and one mostly white. Other analyses (G. D. Gottfredson & D. C. Gottfredson, 1989) showed, for example, that the percentage of elementary schools’ students receiving subsidized lunch was correlated -.76 with mean reading test scores at the end of the first grade.

Interview evidence also showed problems with the methods being used throughout the district to test for mastery of district objectives. Problems with mastery testing probably also contributed to grade retention, and the origin of the testing methods being used was in the district’s emphasis on maintaining standards.

Combined with the data about test scores and grade retention, this additional information served to focus the school system planning team’s attention on a redefinition of goals and assessment procedures that reflect a greater balance. Specifically, the team framed long-term goals for increasing the percentage of students who meet grade-to-grade promotion standards at the expected age as well as goals for the percentage of ninth graders who graduate from high school. The planning group was constrained by the expectation that the school board would look with disfavor on any proposal that hinted of relaxing performance standards in any way, and the new overall goal coped with the board’s emphasis on standards by setting a more balanced as well as more difficult standard by emphasizing both the promotion criteria and the timeliness with which they are met.

Overcoming Inertia

Both the situation the school system faced and the program development structure we applied probably contributed to progress for this school system. Grade retention had developed into a sufficient problem for the middle schools that there was in some sense a "crisis" and the system had been negatively reviewed by the state department of education partly on this basis. The application of the PDE method by a group specially composed for planning and fa-
ciliated by outsiders also helped to stimulate communication, caused new information to be considered, explicitly fostered the examination of alternative courses of action, and provided a method for managing change. Force-field analysis was used as one method to overcome inertia.

Program Coherence and Program Theory

In simplest terms, the rationale for the educational improvements in this system's plan is that improved instruction focused more directly on ensuring that low performers learn and on better application of available resources will lead to enhanced academic performance, leading to higher rates of on-time attainment of promotion standards, leading to less retention in grade, leading (because the best predictor of dropout is grade retention; Bachman, Green, & Wirtanen, 1971) to higher rates of on-time completion of the school system's standards for high school graduation. The theory of action, shown in Figure 8, provides one structure for focusing personnel and program effort in new directions, and it structures the district's decisions by making certain kinds of activities and innovations easy to defend and others more difficult (in the sense that they require special justification). The elected board endorsed the 2001 plan and the theory incorporated in it (Charleston County School District, 1988).

The system's plan recognizes, however, that the causal process leading to dropout on the one hand and on-time graduation on the other are somewhat more complex than this simplified rationale implies. In more complete detail, the plan assumes that teacher quality, methods of and arrangements for instruction, adult supervision in the schools and in the home, and student attitudes and conduct all contribute to or detract from academic performance. The plan recognizes that these factors are only partly within the purview of the schools and only partly amenable to school action to bring about improvements. Where appropriate and feasible, however, the school can influence each of these elements of the causal process. Teacher assignments, teaching methods and arrangements, and supervision and discipline by school personnel are all factors that can be manipulated to advantage by the school system. Parental supervision and assistance in achieving educational objectives is only partly amenable to school intervention. But it is legitimate for schools to request specific kinds of assistance from parents in these areas—monitoring the completion of homework assignments and encouraging businesslike conduct in school, for example.

Improved academic performance and school discipline, concomitant decreases in grade retention, combined with greater assistance from the home in meeting academic and conduct standards in the school, will (according to the system's theory of action) lead to less student problem behavior, greater attachment to the school, more commitment to educational pursuits, and higher levels of belief in the validity of conventional rules. These outcomes will all contribute to sustained educational progress. These outcomes should also reduce the mismatch between school structures and arrangements and the life predicaments that thwart school participation for some adolescents (although some life predicaments are beyond the school's purview). This theory, developed by group consensus through discussion and consideration of the evidence about persistence in education, led to the specification of objectives congruent with the theory and the consideration of improvements congruent with the objectives specified. In abbreviated form, these objectives are:

1. Increasing the percentages of students meeting grade-to-grade promotion criteria at the expected age by specified amounts each year.

2. Reducing counterproductive student behavior, including drug and alcohol use, delinquent behavior, pregnancy, nonattendance, and misconduct in school.

3. Increasing student commitment to educational goals, attachment to school, and belief in conventional social rules.

4. Improved experience and performance of teachers providing instruction in high-risk schools (i.e., rural schools and schools with a high proportion of students receiving subsidized lunch) and providing instruction to high-risk students in all schools (i.e., students eligible for Chapter I services and students who have failed to meet promotion standards at any point in their educational careers).
One important structure for promoting program coherence was an agreed-upon rule that only those innovations that evidence implied would approach the objectives that the theory of action implied must be reached would be considered in planning. The application of this rule led to the specification of 17 specific interventions to be initiated in the next two years (with additional interventions to be phased in over time). These interventions are a credible and impressive set of reforms targeted directly at the problems the district must solve. They include the application of more structured kindergarten, improved reading and math instruction in the early elementary grades, an ambitious agenda of teacher and administrator training, cooperative learning and improvements in discipline in the middle schools, and other improvements.

These innovations must be first implemented on an experimental basis, complete with a rigorous evaluation, and shown to be demonstrably more effective than existing arrangements before they are extended district wide. This additional rule about piloting and showing the superior efficacy of new arrangements is a powerful structure for directing the activities of educational professionals in the district. The first of these formal evaluations highlighted the efficacy of some methods for managing student behavior in the middle grades (D. Gottfredson, Karweit, and G. Gottfredson, 1989) and implied that the program could be modified to make improvements. An evaluation of another pilot program to increase the equity with which elementary school teachers interact with students is almost complete, an assessment of the use of home-based reinforcement by guidance personnel implied that improvements in implementation are needed before the program will work. Ambitious evaluations of radically restructured kindergarten and elementary school instruction and fundamental changes in the allocation of resources for instruction in Chapter 1 schools are being conducted now (despite the ravages of Hurricane Hugo just as the experiment was beginning).

Setting Feasible Goals and Objectives

In 1987 in this school district, the number of persons enrolled in 12th grade was about 55% of the number of persons enrolled in 5th grade in 1980, so the current on-time graduation rate for this school district is about .55%. The speed with which this percentage can be raised to 80% is limited by the demography of the current high school population and the unfortunate fact that many high-school aged students have already discontinued their educations. The planning team decided to use graduation records to calculate the on-time graduation rate for each year as precisely as possible (using the number of district students of fifth-grade age seven years earlier as the denominator), making corrections for in- and out-migration if necessary, to assess progress towards the goal of 80% graduation by the year 2001. The year 2001 is the year students entering kindergarten in 1988 would be expected to graduate. To achieve a goal of 80% graduation by the year 2001, the percentage improvement will have to exceed 2% each year on average. Because bigger improvements due to the cumulative effectiveness of improving educational progress in the earlier grades will not be manifested in high school completions for several years, improvements smaller than 2% are expected in 1989 and 1990, with larger improvements manifested in later years.

Similar logic was applied in the specification of feasible goals and objectives in other areas.

We have worked with the Division of Research and Evaluation to design new organizational performance and accountability structures. From now on, the district and every school in it will know what proportion of students in each grade are meeting the district's educational standards on time. In addition, key outcomes implied by the district's theory of action will be regularly monitored through student surveys and other means. These modified evaluation and accountability structures, reported on a routine basis, serve to focus the attention of everyone concerned on a new set of goals and objectives. This modified reporting method produces dramatic differences in performance criteria from the old grade-level criterion-referenced testing program and reports; it directs attention to on-time achievement of standards.

Normative Re-Education and Job Re-Definition

The school system's plan for educational improvement and dropout reduction calls for applying the PDE method in an iterative fashion.
over the years. This means, repeated monitoring of key aspects of implementation and outcomes, redesigning strategies when they are ineffective, and being vigilant for information about obstacles to progress. The application of the method itself is intended to be a tool for normative re-education in the school system.

Communication of new norms -- new goals and objectives -- in a large, complex organization proved difficult. A look at the chart of organization shown in Figure 9 helps to explain why. Like many school systems, line authority over school-building personnel goes through a Division of Administration, and most of the personnel with responsibility for the design, selection, and quality-control of instructional improvements are in a separate division (Curriculum and Instruction in this instance). Staff development functions are separated in a third division (Personnel). These structural arrangements build in isolation of workers performing one function from workers performing logically related functions in other divisions.

In addition, the organizational structure as it existed in 1987 for the Division of Curriculum and Instruction (Figure 10) shows that the span of control for the Deputy Superintendent and for the Director of Curriculum were broad. Observations implied that it was difficult for these administrators to know about and coordinate the activities of all of those under their supervision. The Board approved the reorganization shown in Figure 11, that reduced the span of control considerably, especially for the Director of Curriculum.

Sub-Committee Structure. To integrate the planning, implementation, and evaluation functions that would otherwise have been carried out in isolation in one part of the organization or another, we devised an approximation to a matrix organization structure (Steiner & Ryan, 1968; Davis & Lawrence, 1977). Sub-Committees, each with a Chair serving as project leader, are composed of the requisite people from the various Divisions -- Administration (including school building), Personnel, and Curriculum and Instruction. This brings together people with expertise in Chapter 1 funding with professionals specializing in early childhood education and local administration to design, implement, and evaluate kindergarten and early elementary programs, for example. There is one such Sub-Committee for each major new undertaking. People are assigned to the Sub-Committee by their own Divisional supervisor, but work together under the leadership of the Chair of the Sub-Committee regardless of the Division from which they are drawn (see Figure 12).

This requires coordination at the Deputy Superintendent level, and it proved necessary to ask the Deputies and the Superintendents -- meeting together as the "A-Team" -- to regularly place 2001 matters on their weekly meeting agenda. The Deputies make decisions about the assignment of Sub-Committee responsibility to their subordinates. These decisions are discussed in the A-Team and in 2001 Task Force meetings that involve all Sub-Committee Chairs.

The application of this approximation of a matrix organization structure, together with the changes made in the District's organization chart, necessitated the redefinition of jobs for central administration personnel. We created a special workbook for job redesign to facilitate the negotiation of new job definitions and the inclusion of Sub-Committee responsibilities in performance reviews (G. Gottfredson, 1989).

Other steps have been taken to compress ordinary channels of communication. This includes several district-wide special meetings for principals and assistant principals to discuss the new goals, objectives, rationale, and method of operating, and it includes the regular publication of a 2001 newsletter.

Quality Control and Persistence

The planning team is now working with those parts of the PDE method that call for specifying implementation standards for their reforms. Because of the system-wide nature of the reforms being developed, quality control procedures that can be applied at the building level and monitored at the system level are required. Educators in pilot schools are working with district personnel to devise quality control systems that are effective in the building with district personnel then having responsibility for disseminating these procedures in other schools and monitoring the monitoring of these implementation standards (e.g., Behavior and Classroom Management Committee, 1990).
III. Current Status

There are now 19 separate Sub-Committees of the 2001 Task Force; they are listed in Table 1. In addition to these, experiments have begun to evaluate drug prevention programs in late elementary and in middle schools, and several additional intervention areas are being planned for incorporation into the Task Force structure. Table 2 shows the state each intervention area has reached, and the schools in which it is being implemented as a demonstration or pilot.

Pilot programs being implemented and evaluated now include: (a) two alternative modified kindergarten programs, (b) a school-wide Chapter 1 program based on the "Success for All" model and a Chapter 1 program involving "Reading Recovery," (c) "Cooperative Integrated Reading and Composition" in upper elementary grades, (d) a computer assisted instructional program, (e) enhanced summer school program, (f) a home-based reinforcement program, and (f) a comprehensive classroom and behavior management program for middle schools. Plans for piloting and evaluation of additional program components beginning next year are being made.

Final Words

We have provided a partial description of an application of a systematic approach for program planning to one school system’s current ambitious efforts to reduce the risk of dropout and accent problem behavior. In the process of assisting this school system develop its plans, we were struck with the similarity of the group-psychological processes involved in planning at the district and at the school building level. We were also struck by the magnitude of the benefits of perspective and rational problem solving at this higher level of complexity. For example, discovering better ways of expending Chapter 1 monies can easily result in millions of dollars being spent more productively in a district. As far as we know, the Charleston experiment with school-1. Chapter 1 programs is the first instance of such a radical restructuring of the application of those resources anywhere in South Carolina. We are encouraged that the PDE structure appears to hold promise of being useful in reformating school systems to help them better serve at-risk students.

The magnitude of the task of sustaining the programmatic effort begun in this district must not be underestimated. Socialization and recocialization are continuing challenges of the first order. Turnover in personnel originating from any source can have a ripple effect so that the departure of a single person from the school system can result in many reassignments. The long-range success of the reform will depend on many factors, but it is clear that one of these will be the ability of the system to doggedly focus on its declared goals and operating procedures in a continuing effort at recocialization.

References


Gottfredson, D. C. (1986). An empirical test of school-based environmental and individual interventions to reduce the risk of delinquent


### Table 1

2001 -- Schools Involved in Pilots and Demonstrations, 1990-91

**Key to Interventions**

1: Improved Kindergarten (KIND)

2: Primary Reading 1-3 (READ)

3: Cooperative Integrated Reading and Composition (CIRC) 4-6

4: Reading and Writing Across the Curriculum 4-12 (RWW).

5: Computer Assisted Instruction Language Arts (CAI)

6: Math Instruction 3-5 (TAI) Team Assisted Instruction

7: Teacher Effectiveness and Expectations (TESA)

8: Middle Schools Instruction (Cooperative Learning) (MSI)

9: Flexible Arrangements for High School (FLEX)

10: Business and Community Collaboration (BCC)

11: High School Teacher Advisor-Advisee (ADV)

12: Assessment of History (ASSH)

13: School-Based Support (SBS)

14: Summer Enhancement Program K-8 (SUN)

15: Student Suspension/Regulations and Practices (SUPP)

16: Middle School Behavior and Classroom Management (BCM)

17: Personnel Allocation to At-Risk Schools (ALL)

18: Parental Assistance (PAM)

19: Vocational Education's Role (VOC)
# Table 2

2001 -- Schools Involved in Pilots and Demonstrations, 1999-90

| Intervention No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| **District 01**  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 504 St James-Santee El | C | C | P | C |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 554 Lincoln High      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **District 02**  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 202 Mt Pleasant Academy |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 203 Namie Whitesides El |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 204 Sullivan's Island El |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 207 Jennie Moore Elem |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 210 James B Edwards El |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 242 Lowing Middle     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 245 Moultrie Middle   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 274 Wando High        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**NOTE.**
- P = School involved in a pilot as a program school
- C = School involved in a pilot as a comparison school
- D = School involved in a demonstration
- E = School involved in expansion
* = 1989-90 is a planning year.
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## 2001 -- Schools Involved in Pilots and Demonstrations, 1999-00 (Cont.)

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25
**District 23**

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**Note:**
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- **=** 1989-90 is a planning year.
Percent of 8th Graders Meeting Standard in Criterion Referenced Testing Program (1982 - 1987)

Figure 1
Percent of 8th Graders in the Grade Expected for Age, and Percent Meeting Standard by Year (1982 - 1987)

Figure 2

- Right grade for age
- Meet reading standard
- Meet math standard
Retention Rates by Grade Level
1986 - 87

Figure 3
Percentage of Students Overage by Grade, 1988

Figure 4
Percentage of Persons—Still in School—who Are in the Grade Expected for Their Age, by Expected Grade

Expected Grade

12
11
10
9
8
7
6
5
4
3
2
1

0 20 40 60 80
Percentage

Figure 5
% of CCSD Students Overage for Grade
By Ethnicity and Gender, 1988

Figure 6
Percentage Overage in Two Schools --
One All Black, One Mostly White

Figure 7
Teacher Quality

Instruction: Content, Methods, Arrangements

Academic Performance Grades K - 12

Attachment, Commitment to Education, Belief in Rules

Ever Retained

Problem Behavior

Dropout

Mismatch with School Arrangements

The Theory of Action

Figure 8
CHARLESTON COUNTY SCHOOL DISTRICT
ORGANIZATION IN 1967

Superintendent

Deputy Operations
- Records, Facilities, Etc.

Deputy Curriculum & Instruction
- Dir. Instruction
- Dir. Curriculum
- Dir. Pupil Personnel
- Dir. Eval. & Research
- Dir. Adult Education
- Dir. Federal Programs
- Dir. Middle Schools

Deputy Administration
- Coordinator of Local Administration
  - Area Supt. Dist. 1
    - 2 Rural Schools
  - Area Supt. Dist. 2
    - 8 Suburban Schools
  - Area Supt. Dist. 3
    - 7 Suburban Schools
  - Area Supt. Dist. 4
    - 28 Urban/Suburban Schools
  - Area Supt. Dist. 9
    - 5 Rural Schools
  - Area Supt. Dist. 10
    - 10 Suburban Schools
  - Area Supt. Dist. 20
    - 9 Urban Schools
  - Area Supt. Dist. 23
    - 6 Rural Schools

Deputy Personnel
- Dir. Staff Development
- Other Personnel Functions

County-Wide District
With Eight Constituent Districts (Areas)

Superintendent Appointed by a Board
Which Is Elected County Wide
Figure 10

Note the broad span of control for the Deputy Superintendent and the Director of Curriculum.
Note the narrowed span of control for the Deputy Superintendent, the Director of Curriculum and Director of Pupil Personnel Services.
## An Approximation to a Matrix Organization Structure

<table>
<thead>
<tr>
<th>Sub-Committee</th>
<th>Division of Curriculum &amp; Instruction</th>
<th>Division of Administration</th>
<th>Division of Personnel</th>
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<tr>
<td>Structured Kindergarten Sub-Committee</td>
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<td>Martha Stewart, Division of Admin., Chair</td>
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Figure 12