DOCUMENT RESUME

ED 335 759 EA 023 227

AUTHOR Fitzgerald, Martha; And Others
TITLE School Building Models: Tailoring Interventions To Meet School Conditions and Needs.
PUB DATE Apr 91
CONTRACT H023F800; H023F80027
NOTE 28p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 3-7, 1991).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Cooperative Planning; Educational Change; High Risk Students; Intermediate Grades; Junior High Schools; *Mainstreaming; Models; *Participative Decision Making; Professional Development; *School Restructuring; *Special Education

ABSTRACT

Two models of educational reform that address the dilemma in schools caused by the confluence of two current reform movements--school restructuring and the regular education initiative are presented in this paper. The models offer a more complex framework that considers teachers' values, the role of external support for teacher development, school culture, and acccuntability. The teacher-centered University of Vermont model focuses on the degree to which special education students are integrated into general education classrooms. The student-based University of Pittsburgh model describes changes in the special education program over time, looking at how increased student competencies facilitate integration. Elements common to the two models include cultivation of common knowledge, values, and a language base; establishment of a strategic planning process; development of peer support; and provision of technical assistance. Initial project evaluations indicate that both projects have been driven by forces internal to the school, its culture, and its practice base, supplemented by external on-site assistance. The change process deals directly with conflicting beliefs about learning potential and quality standards and conflicting practices in instruction and measurement of student performance. Both are working toward achieving a school building environment that promotes high and consistent expectations for all learners. Three figures are included. (17 references) (LMI)

School Building Models: Tailoring Interventions to Meet School Conditions and Needs

Martha Fitzgerald, Associate Professor, Professional Education and Curriculum Development Department, University of Vermont;
Naomi Zigmond, Professor, Special Education Program, University of Pittsburgh;
Pamela J. Kay, Lecturer, Special Education Department, University of Vermont;
Shelly Beck, Research Associate, Special Education Program, University of Pittsburgh

Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL, April 7, 1991.

The research reported in this paper was supported by Grants H023F80027 and H023F800 from the U.S. Department of Education. Points of view or opinions stated in this report do not necessarily represent official agency positions.

SCHOOL BUILDING MODELS:
TAILORING INTERVENTIONS TO MEET SCHOOL CONDITIONS AND NEEDS

CHARACTERISTICS OF PROJECTS AT THE UNIVERSITY OF VERMONT AND THE UNIVERSITY OF PITTSBURGH

Two school reform efforts, one known as the "school restructuring movement" and the other as the "regular education initiative," are running a parallel course in terms of their common place in history and their common mission to provide an effective, high quality education for the increasing diversity of learners in American schools.

The Carnegie Forum on Education and the Economy (1986), citing economic and demographic trends, challenged schools to produce an increasingly sophisticated work force for the 21st century from a talent pool comprised largely of students who are "at risk" of academic failure. Efforts to meet this challenge have been described as "restructuring." This process has shifted greater responsibility for decision-making to teachers, modified the curriculum and instruction for higher order thinking, and made individual schools accountable for increased levels of student performance (National Governor's Association, 1989).

Also in 1986, Assistant Secretary of Education Madeline Will asked schools to accommodate students with learning problems by assuming a shared responsibility for special education at the school building level. Proposals to accomplish this second reform movement, called the "regular education initiative," suggest expanded instructional approaches in general education and an

organizational merger of special education and general education (Gartner & Lipsky, 1987; Reynolds, 1987).

The simplicity of these proposals masks the difficulty that teachers have in participating in restructuring and special education reform without compromising a quality education for students who are "at risk" or have special learning problems. There are disappointing reports on the benefits of restructuring for students at-risk (Mirga, 1988). There is also pessimism on the part of special education researchers regarding the capacity of restructured schools to provide skill-oriented instruction for students with learning problems, while using process approaches with other students (Carnine & Kameenui, 1990).

What has become evident for both of these movements is that their underlying values, expressed in terms of entitlement of all citizens to an appropriate education and the tapping of a larger talent pool in the interest of our competitive advantage, are not necessarily values that are embraced by the persons responsible for carrying the movement forward, the teachers. In fact, there is likely to be a mismatch between the values inherent in these reforms and the values expressed by teachers in a given school. If the school has been operating with pull-out services for students with disabilities and ability tracking, it stands to reason that the majority of teachers in that school would have established a philosophical framework that rationalizes those practices. The existence of this conflict in the values base creates a reluctance on the part of teachers to participate in the movement.

In addition to the mismatch of values, there is a conflict in the instructional strategies employed by the two reform movements. If teachers have already embraced a way of teaching that is based on developmental theory and process approaches, they may not find it easy to incorporate other, more explicit instructional strategies into their teaching repertoire. There is little hope of successful adaptation of special education strategies in the general education classroom without a planned program of professional development which includes demonstration, practice, feedback, and continued practice of specific strategies.

There is also dissent over determining authentic standards of quality. Public debates rage on the uses and abuses of assessment methods in general education. Teachers are faced with meeting the demands of externally-developed performance measures which are not related to the essential, daily tasks of learning. The school restructuring movement would view as indicators of quality higher order thinking skills that match the exit criteria demanded by the market place (Wiggins, 1991; Mills, 1990). Standards of quality for students with learning problems are derived through a process of task analysis in which the teacher determines the performance level relative to the tasks expected. High quality performance for these students results from routinely adjusting tasks and performance levels. Students with learning problems as well as those at risk of failure will be left out of the accountability equation unless ongoing measures of performance on increasingly difficult and complex tasks are viewed as authentic standards of quality.

Those who attempt to implement change in our schools through either of these current movements need to address these mismatches of values, instructional practices, and assessment methods among the teachers.

Current Realities

The Rand Change Agent Study sponsored by the USOE, 1973 - 1978, concluded that successful projects designed to promote planned change in education were characterized by a process of mutual adaptation and that local factors dominated outcomes. McLaughlin's new look at the Rand Study, in the light of current realities and understandings, reaffirms the original findings with the following revised interpretations:

The significance of teachers' initial motivation to participate in change efforts was overemphasized as a predictor of outcomes. The original interpretation did not recognize instances where belief follows practice.

The role of external consultants and their ability to promote positive change was underemphasized. The original interpretation did not consider the interaction of external consultants with local practitioners as a factor in mutual adaptation.

The structures available to provide resources and support for teachers' professional growth were underemphasized. The original interpretation did not consider fully the

importance of the collegial networks and professional associations at the school level (McLaughlin, 1990).

These new interpretations of the Rand Study have particular relevance to the dilemma caused by the new wave of policy directives emanating from school restructuring and the regular education initiative. One reality seen in local schools is that teachers may not believe that students with learning problems or at risk of failure can be successful learners, or that there is a separate technology of teaching that can facilitate their success. If teachers in a given school do not hold these basic values, they will have little motivation to learn a new technology of teaching or to expect new levels of learning from their students. This lack of motivation cannot be taken as a predictor of failure for either reform movement; however, it does imply that change agents must address the issue of conflicting beliefs. It is also true that schools may lack the professional development and organizational structures necessary to help teachers adapt and apply instructional strategies to fit the new diversity of learners in their classrooms. They may not have the necessary expertise or staff development opportunities available to become proficient in using a new technology of teaching that is more explicit and skills-oriented than the process approaches they may generally be using in the classroom. Where resources are not available locally, external consultants can play a critical role in three areas: changing organizational and staffing patterns for general and special education, developing new systems for learning and

incorporating research-based technologies for teaching and assessment, and promoting and guiding the development of local resources.

A third reality is that teachers are part of a complex school culture that supports and nurtures their professional development on a daily basis. Unique to each school, the culture relies on formal and informal teams, as well as professional and personal interactions; it is shaped by the local community context as well as the individuals within the community; it is founded on the particular history of the school as well as current events. School culture usually reinforces the barrier between general and special educators. Efforts for change must include elements that address these barriers.

The common goal of the two reform movements, a quality education for all students, is unlikely to be realized without careful attention to potential conflicts in beliefs and practices at the school building level. These conflicts about performance expectations, curriculum and instruction, and measures of quality exist to a greater or lesser degree in all schools, but particularly those engaged in restructuring and special education reform. The existence of these conflicts creates a dilemma in moving forward with confidence; if they are not resolved, one might predict that the potential losers will be those very students these reforms were intended to reach, students with learning problems and those at risk of failure.

School Building Level Reform Efforts

This paper presents two models for promoting education reform which deal with the dilemma caused in schools by the confluence of the two current reform movements, restructuring and the regular education initiative. These models suggest a more complex framework that considers teachers' beliefs about learning, the role of external support for teacher development, the school culture in which change is expected to occur, and accountability for student learning. The change process is founded on teachers coming to a consensus about their professional values, developing new ways to act on those values, supporting one another in their professional development, and realizing authentic gains for students with learning problems or at risk of failure.

The models represent two of the research projects funded in 1988 under Priority V of the Division of Innovation and Development in the Office of Special Education Programs, U.S. Department of Education. Priority V, described by Kaufman et al (1990, p. 113) as "the most ambitious priority of the federal research program," involves designing a model for educating all children with disabilities in general education in all of the classrooms of any school building that participates.

One model was developed at the University of Vermont and the other at the University of Pittsburgh (Project TEAMS). The goals of each of these projects were expressed in very different terms by the researchers who generated them; however, certain key components of the projects are remarkably similar. The two

projects also provide evidence in support of new interpretations of the Rand Study.

Project goals: There are three goals for the Vermont project: to develop, implement, and evaluate a school building model that brings together general and special education professionals to engage in problem-solving and strategy development for educating students with disabilities in general education settings; to create an effective learning environment which will continue to adapt to the needs and experiences of all students in a particular school; and to build a professional environment which promotes collaboration among peers to select and implement effective practices, based on current research. These goals focus on the teachers and the educational environment for both students and teachers.

The two goals of the Pittsburgh model focus on the students: to improve the competence of middle school students with learning disabilities and "at risk" students in the mainstream; and to facilitate maximum reintegration of middle school students with learning disabilities into the mainstream.

Despite these differences in goals there are four elements which are essential to both models. They are: the cultivation of a **common base of knowledge, values, and language** among the teachers; the establishment of a **strategic planning process**; the development of **peer support** among the teachers; and **technical assistance** which is seen as a resource by the teachers. There were variations in the way these four components are being implemented in each of the models, and these will be described.

Common base of knowledge, values, and language. To address the barriers between general and special educators, each project engages in staff development which cultivates a common base of knowledge, values, and language among all teachers in a school, enabling them to discuss and select practices to improve instruction and the learning environment for all students. It is essential to both research projects that their staff development component is guided by the teachers' own choices and decisions, which are enriched by their exposure to current research and theory.

In Vermont, general and special educators initially were given incentives to participate in a credit-bearing course, after school hours, which focused on strategies for school organization, school-community integration, and professional development, as well as instructional practices and the learning environment. After the first year, additional courses and faculty meetings have been scheduled to help teachers meet schoolwide goals of their own choosing. These gatherings are structured by the project staff and selected teacher leaders to encourage discussion and the wide interchange of ideas.

In Pittsburgh, regular and special educators were given opportunities to participate, together, in summer workshops on classroom management techniques, on strategies for adapting instructional materials, presentations and assessments for students at risk, and on procedures for teaching learning strategies as a part of basic skill instruction. These workshops were deliberately kept small and interactive, with lots of opportunity for discussion

and comment from participants, to engage regular and special educators in dialogue and to allow them to discover the commonality of the instructional problems they faced. Learning new instructional approaches together provided a basis for continued conversations among teachers who traditionally had not interacted professionally over the course of the ensuing school year.

A strategic planning process. Both models include the establishment of a strategic planning process which helps the teachers work toward common goals and assess their progress. Skrtic (1987) and others have noted that there are few opportunities for general and special education professionals to engage in cooperative problem-solving and planning. As in the staff development component, both models demonstrate a faith in the teachers' wisdom and skills to create the best possible plans for serving the diversity of learners in their own school, once they are given the information and power they need to do so.

In Vermont, the final sessions of the course offered during the first year engaged the teachers in a planning process designed to help them to set goals for the whole school, goals in which all of the participating teachers are invested. The intent of these goals is to create conditions under which the instruction of all learners is improved. The action plans to meet these goals address on-going staff development, opportunities for the entire staff to participate in problem-solving and decision-making, strategies to improve student self-esteem and social behavior, and methods to increase community and parent support. These plans are now being carried out with support from the project staff, with regular

opportunities for teachers to review progress and revise the action plans.

In the Pittsburgh model, project staff facilitate and model strategic planning by scheduling collaborative working sessions with the building administrator, with academic teams (teachers who are responsible for academic subject instruction to a particular grade level of students in the middle school) and with special education teachers and their special education supervisor. Teachers and administrators concerned with "tomorrow" are asked to place planning for "next year" high on the agendas of their faculty meetings, to incorporate planning for students with disabilities into the more general planning process for school improvement, and to broaden their visions of staffing roles and compensatory or remedial pull out programs to include new models of service delivery like co-teaching (regular and special education teachers sharing responsibility for a mainstream content subject class). Regularly scheduled feedback on the activities of project staff at faculty meetings involving both mainstream and special education teachers provide opportunities to plan jointly for the needs of all students at risk in the building.

Peer support. In asking the teachers to make changes in some very basic values, each model found it essential to develop peer support among the teachers. As Hart (1990, p. 505) speculated about teacher interactions in a school, "These interactions may be key elements in the restructuring process." While the processes used to cultivate a common base of knowledge, values, and language are intended to increase the support of teachers for one another,

both projects also give the teachers specific methods to guide their interactions and to teach them to support one another in learning and using instructional processes.

In Vermont, peer leadership was encouraged by requesting one or two teachers to take the lead in moving the school toward each of the teacher-created goals. There are no "career ladder" implications in this leadership position, but those who were willing to step forward are consulted by their peers as the local experts on the strategies used to pursue their goal. In addition, the strategies chosen to work on one of the goals at the elementary level are encouraging the teachers to explore and use peer coaching and teacher assistance teams.

In the Pittsburgh project, mainstream and special education teachers participate in regularly scheduled brainstorming instructional groups (BIG) as a form of in-school staff development. During these early morning sessions held once or twice per month, teachers share ideas on adapting teaching/learning strategies, commit to continue using adaptations, and develop mutually useful classroom management systems.

By encompassing the whole school in their models, each of these projects has involved a "critical mass" of teachers in making changes. The researchers understand the point made by Keogh (1990, p. 187) and others writing about reform, "Schools are highly structured social systems, and change does not come easily." By developing new structures of peer leadership within a school's social system, the researchers hope that teachers can learn to support their colleagues in making changes. These modifications

in the school's social structure are made in order to meet goals set by the peer group itself. If these new structures are satisfying to the teachers, they are likely to remain in place after the project ends, and to increase the longevity of the effect of the interventions.

Technical assistance. Both projects have similar approaches to the delivery of technical assistance. Project staff regard themselves as resources to the teachers as they make changes in their own educational delivery system, and are careful not to erode the teachers' sense of ownership of their plans. Project staff are spending time on-site throughout the four-year span of the research to assure that the implementation of plans maintains the quality of the original theoretical base.

After guiding the strategic planning process, Vermont project staff have become participant-observers in a variety of settings in the schools, supporting the teacher leaders as the schools work toward the teacher-set goals. The project staff ignores the lines between formal positions and titles for the purpose of discussing instructional issues, modeling an egalitarian approach. Because they have provided information and support for teachers and administrators in organizational development as well as general and special education, they have not been seen as representing any one perspective.

In Pittsburgh, project staff go into classes and teach along with the teachers, learning the characteristics of each classroom on each site, and being realistic about the help they offer. They design demonstration lessons, model their implementation for

teachers, then co-teach with them, and finally coach the teachers as they implement the lessons themselves. Once phased out of classroom instruction, project staff continue to monitor implementation of the new interventions at ongoing planning sessions. TEAMS staff from the University of Pittsburgh are viewed by the teachers as a resource on teaching strategies and collaboration.

While this research has been underway, the schools involved in both Pittsburgh and Vermont have undergone their share of local and state crises around education, creating situations where either teachers or administrators might have refused to implement any additional changes. Field notes from each project indicate that the "give and take" approach to technical assistance has made the staff a resource to the teachers as they make changes they have decided to make. In several instances, this commitment has survived the demands of the crises.

In order to create a design which includes the entire school in making changes, the researchers in each of these projects have chosen methods which address those elements which reflect the process of mutual adaptation stressed by the Rand study. They recognized that the teachers would not begin the project with high levels of motivation, due in part to the mismatches between the movements and the practices. They also recognized that their role as external consultants is important, and are active on site for a fairly intense period as resources to the teachers in the implementation of plans over which the teachers retain ownership. Each model also addresses necessary changes in the school

organization and in the teachers' social culture.

Preliminary findings

With one year of research yet to come, each of the models can show some preliminary results. The outcome measure from the Vermont model focuses on the degree to which students who receive special education are integrated into general education classrooms. The Pittsburgh model can describe changes in the special education program that will, over time, improve the competence of students with learning disabilities and increase the likelihood of their successful integration into the mainstream.

Vermont findings. In this third year of the Vermont project, differences are noted between two matched elementary schools, one of which implemented the model for change. Prior to the start of the implementation, the percentage of instructional time spent outside the general education classroom was virtually the same for both schools. In the target school, students with learning problems spent an average of 8 percent of their instructional time in the resource room, while in the contrast school similar students spent 7 percent of their time in the resource room.

During this three-year period, both schools experienced an increase in the number of students designated as learning impaired and learning disabled. This was due to a variety of factors, including the homecoming of students from the closing of a regional special class, new families moving into the district, and new student referrals. For the target school, 19 additional students were being served in the second year and in the contrast school,

9 additional students were being served (see Figure 1).

During the first year of the project, the entire staff of the target school was engaged in monthly school-based seminars focusing on current research and practice related to teaching students with learning problems in integrated classrooms. The first series of six seminars was conducted in a case study format, using research articles as a resource to respond to simulated cases. Visiting "experts" from other rural schools also contributed their experience and knowledge to the discussion. Case study topics focused on the following areas of study: 1) school organization, 2) professional development, 3) family-school collaboration, 4) the learning environment, 5) instructional technology, and 6) curriculum-based assessment. Through these seminars the school staff were given an opportunity to bring a common knowledge base to bear on educational problems and to suggest the best possible solution to a given problem. In the course of responding to the case studies, lively discussion and open confrontation allowed a public airing of differing and converging beliefs and practices.

A second series of seminars used the school itself as a case study. Problems were identified and solutions were developed for four of the six topical areas addressed in the case studies. The result was an action plan for the school to provide a quality education for all students in their building, including those students with learning problems or at risk of failure. Throughout this yearlong seminar series, school staff shed their roles as passive participants and assumed greater responsibility for planning the change process. At the same time the university staff

relinquished their leader roles and assumed different responsibilities as consultants to the change process.

After the first phase of intervention, differences were seen between the two schools in the degree of integration of students with learning problems. Students in the contrast school spent a significantly greater proportion of their time in the resource room. In the target school students spent 9 percent of their time in the resource room, while in the contrast school students spent 16 percent of their time in the resource room. (See Figure 2). These data suggest that the target school was more successful than the contrast school in integrating students with learning problems into general education classrooms, despite a schoolwide increase in the numbers of students served.

After a year of problem solving and planning there was a consensus among the teachers relative to beliefs about learning and effective practices for teaching students with learning problems or at risk of failure. This consensus is reflected in the goals and action plan developed by the staff as well as their continued responsibility for carrying out that plan. It seems likely that this consensus around beliefs and practices was a factor in integrating an increasing number of students with learning problems into general classroom environments.

Pittsburgh findings. Project TEAMS set out to help teachers infuse new ideas into the design and implementation of their programs. One target of the project's attention was the special education program, since the goal of increased competence among students with learning disabilities could not be accomplished with

business as usual in special education classrooms. At the start of the project, three beliefs of the special education teachers in the target middle school were apparent: First, the special education teachers believed that their job, like that of their colleagues in the mainstream, was to teach groups of students a prescribed curriculum; special education should look just like mainstream education so students would not feel stigmatized by being assigned to the resource room program. Second, teachers believed that individualizing instruction in reading could be accomplished by placing students at the appropriate level of the basal reading text and continuing on, as directed in the Teachers' Manual, from there. Third teachers believed that they were constrained by the range of subject matter taught in the mainstream and could teach only reading during scheduled reading times, only math during math times, only social studies during social studies, and so on; there was no subject scheduled in the mainstream curriculum which addressed school success or survival skills, so these curricular domains were not taught within the special education curriculum, regardless of student needs.

Persistently, over the course of the last three years, TEAMS staff have worked carefully to influence the thinking and classroom practices of the special education teachers. TEAMS uses collaborative planning, inservice training, in class demonstrations, coaching, and ongoing support to encourage change (see Figure 3). Specialized and Intensive Reading Approaches (SIRA) have been infused into the curriculum. Teachers have been introduced to curriculum based measurement (CBM) in reading and

taught how to use CBM data to decide what reading skills to teach and when to change the instructional program. They have seen demonstration lessons on alternatives to the basal reader for improving reading fluency (e.g. paired repeated oral readings), decoding skill (e.g. intensive unit or cluster based phonics instruction), or comprehension (e.g. graphic organizers or paraphrasing strategies for remembering content). They have been helped to make "feasible shifts" in their classroom routines to allow them to try out these new strategies and have been coached until they feel comfortable with the implementation. Two years ago, a visitor to a special education reading period would have seen a group of six to eight students all working on the same basal reading unit, being taught as a group the lesson prescribed in the teacher's manual, or all working independently on the corresponding workbook pages or worksheets. Today, in a single reading period, some students may be engaged in CBM testing with the teaching assistant or on the computer while others are working on an intensive phonics lessons. Some students may be paired and reading aloud to each other while others are engaged in a reading comprehension task involving a graphic organizer or applying the paraphrasing strategy to an expository text. Instruction is differentiated not only by level, but also by need.

And, there is a second, very dramatic change in the special education program that can be attributed to the TEAMS collaborative planning and staff development. A program of school success skills instruction (SSSI) has been incorporated into the weekly routine. Once per week, teachers set aside the subject matter listed on the

master schedule and teach school adjustment skills, instead. Lessons are aimed at building self esteem and skills in organization and time management, studying and test-taking skills, self-awareness, and self-monitoring. Drawing on their own experiences and commercially-available curricula as resources, the special education teachers and TEAMS staff, in collaboration, designed a survey of current student practices and needs, and activities to help the students learn new skills through role playing, graphic organizers, discussions, peer-mediated instruction, and pencil-and-paper tasks.

These changes would not have been possible had attention not been paid to cooperative planning, on-site training, in-class teamwork, all strategies designed to help teacher plan implementations over which they would retain ownership, implementations that were feasible, within the school organization and school culture.

Conclusions

The Vermont and Pittsburgh projects have used processes which are driven primarily by forces internal to the school, its culture and its practice base, with continuing on site assistance provided by external consultants. The change process deals directly with conflicting beliefs about learning potential and quality standards as well as conflicting practices in instruction and measuring student performance. Integral to the process used by the two projects is a sensitivity to the school building culture and practice base that must ultimately accommodate and resolve these

conflicts. While the projects have differing goals, Pittsburgh's being student-focused and Vermont's teacher-centered, both projects are working toward a school building environment that nurtures high and consistent expectations for all learners, in all classrooms.

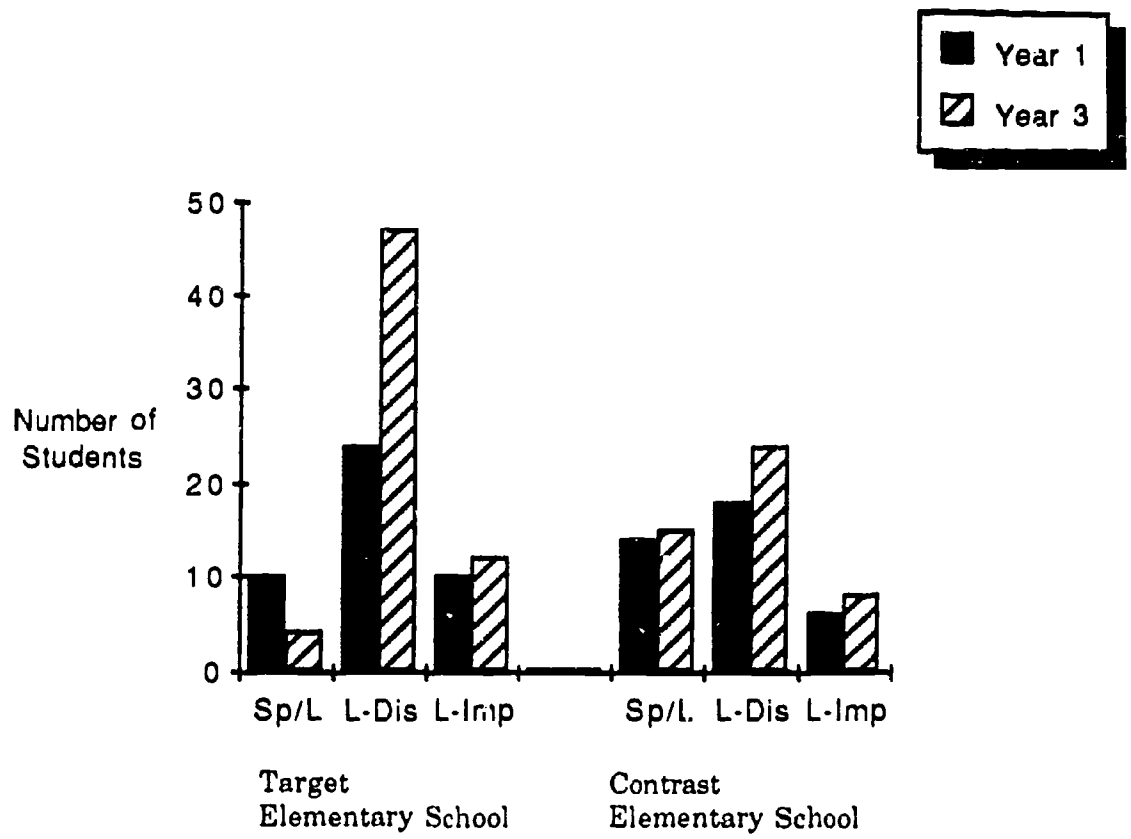

Figure 1: Number of students with learning problems by disability category, Speech Language, Learning Disabled and Learning Impaired, for target and contrast schools, year 1 and year 3

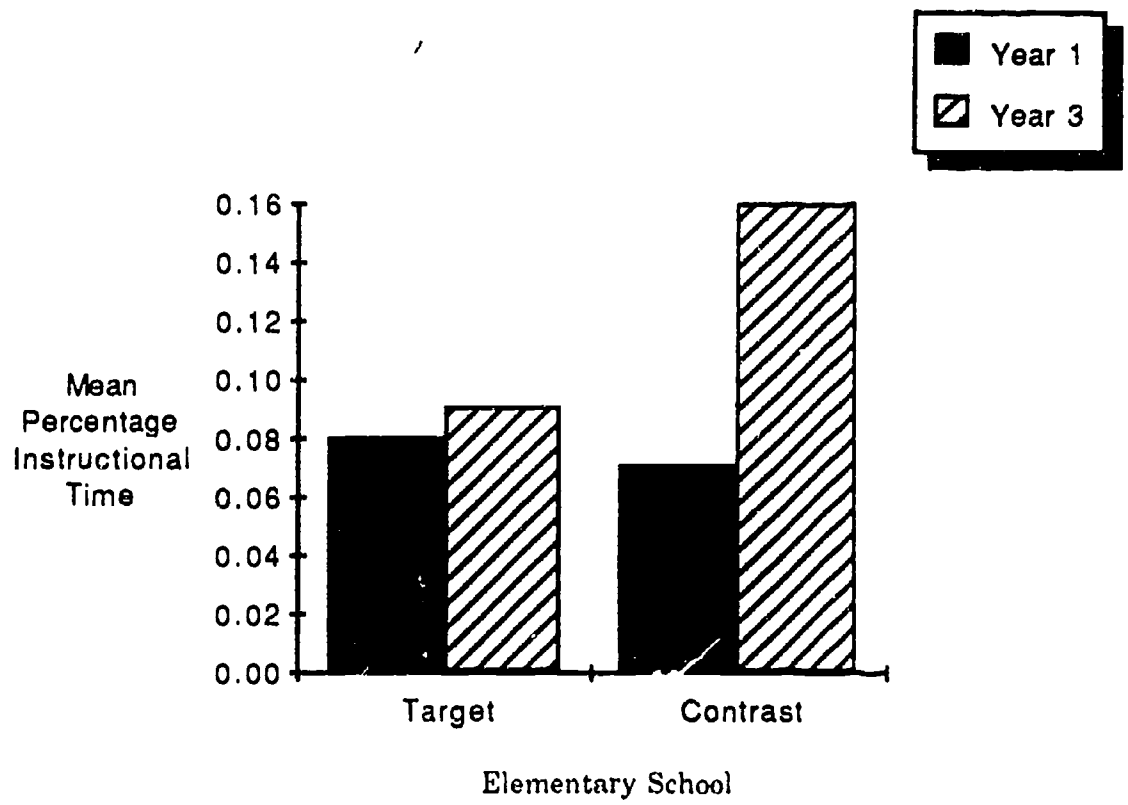

Figure 2: Mean Percentage of instructional time spent in resource room for the target and contrast schools, year 1 and year 3

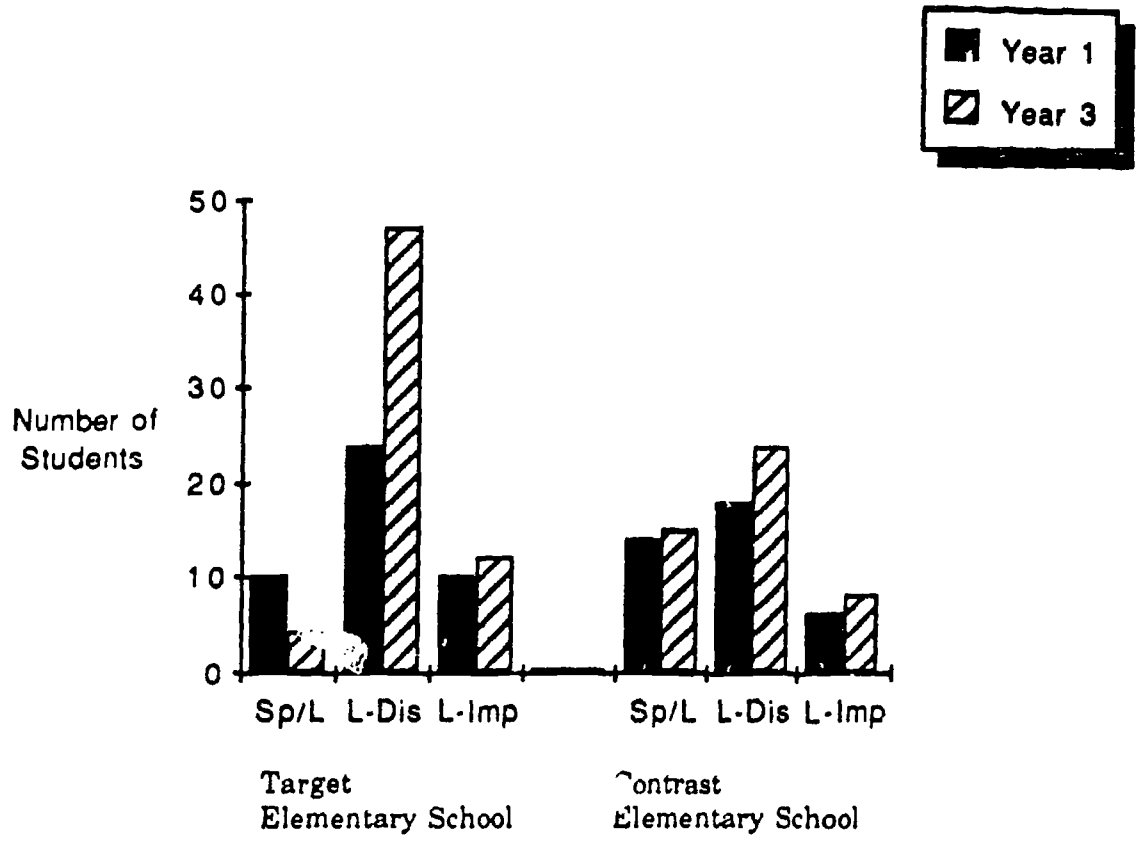

Figure 1: Number of students with learning problems by disability category, Speech Language, Learning Disabled and Learning Impaired, for target and contrast schools, year 1 and year 3

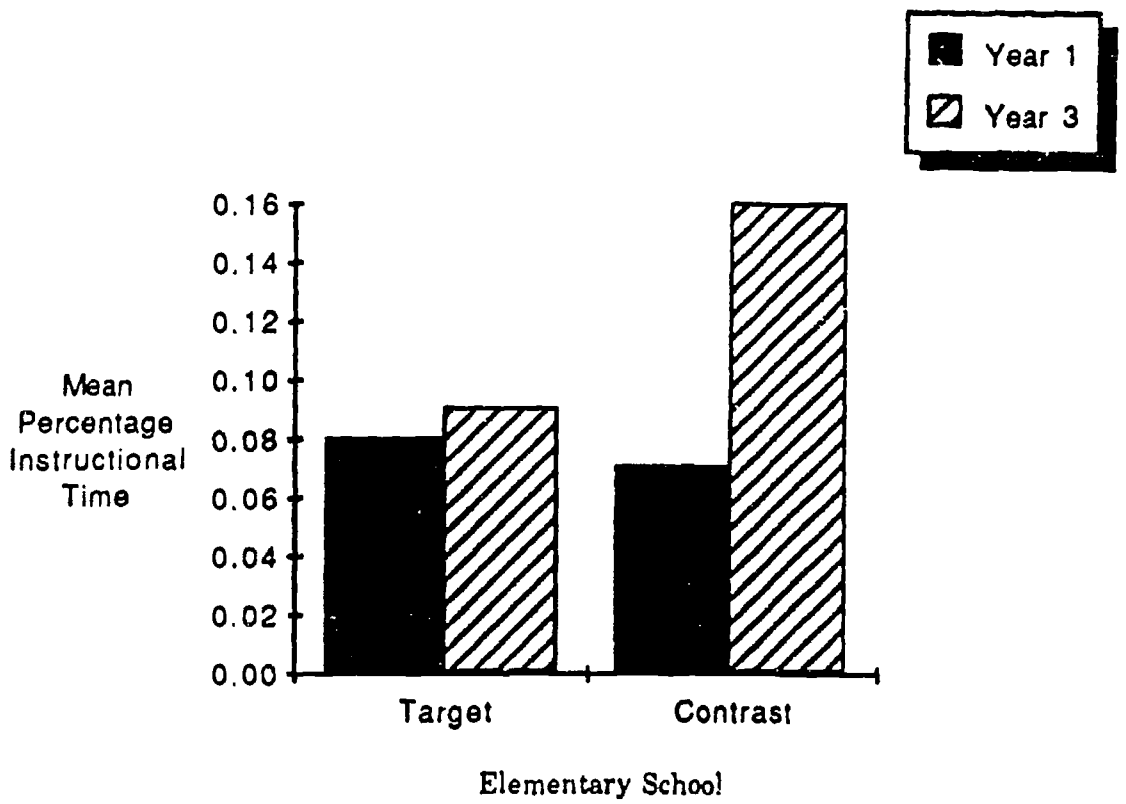

Figure 2: Mean Percentage of instructional time spent in resource room for the target and contrast schools, year 1 and year 3

Principle I	**Encourage Collaboration**	
Practices	•	Cooperatively plan, for interventions including: on site training activities, "feasible shifts" in routines, in-classroom team work and coaching; and monitoring and followup activities.
	•	Share ideas to problem solve, make data-based decisions & goal set
Principle II	**Promote a Common Language and Belief System**	
Practices	•	Extend effective educational practices and adapted strategies through: • inservice workshops • scheduled "teachers helping teachers" brainstorming sessions • on-site support and coaching
Principle III	**Incorporate "Feasible Shifts" in Routines**	
Practices	•	Modify curricula goals and objectives
	•	Alter scheduling practices
	•	Adjust roles and responsibilities
Principle IV	**Utilize In-Classroom Demonstrations, Teamwork & Coaching**	
Practices	•	Design, implement "classroom friendly" formats and systems to enhance skill acquisition and retention through use of: visual structures, application activities (e.g., simulations/role playing), peer assisted instruction, and incentive programs.
	•	Demonstrate/model, co-teach, and coach in modified instructional sequences including specialized, intensified and/or remedial approaches, ie., a demonstration lesson/team coaching staff development model
	•	Initiate trial implementation periods of modified instructional sequences
	•	Infuse modified instructional sequences into existing schedules
Principle V	**Perform Ongoing Support, Monitoring, & Follow-Up**	
Practices	•	Review and refine interventions (e.g., modified routines, formats, and/or instructional sequences) as needed
	•	Transfer effective educational practices by: sharing alternative methods and solutions to problems and challenges; and modifying reinforcement, maintenance, and generalization activities

Figure 3. Principles and practices guiding Project TEAMS (Pittsburgh) interventions in special education

References

Carnegie Forum on Education and the Economy (1986). A nation prepared: Teachers for the 21st century. 1001 Connecticut Avenue N. W., Suite 301, Washington, D. C.

Carnine, D.W. & Kameenui, E.J. (1990). The general education initiative and children with special needs: A false dilemma in the face of true problems. Journal of Learning Disabilities. 23(3), 141-144.

Gartner, A. & Lipsky, D.K. Beyond special education: Toward a quality system for all students. Harvard Educational Review, 1987, 57(4), November 1987.

Hart, A. W. (1990). Impacts of the school social unit on teacher authority during work redesign. American Educational Research Journal , 27(3), 503-532.

Kaufman, M. J., Kameenui, E. J., Birman, B. & Danielson, L. (1990). Special education and the process of change: Victim or master of educational reform? Exceptional Children, 57(2), 109-115.

Keogh, B. K. (1990). Narrowing the gap between policy and practice. Exceptional Children, 57(2), 186-190.

McLaughlin, M. W. (1990). The Rand Change Agent study revisited: Macro perspectives and micro realities. Educational Researcher, 19(9), 11-16.

Mills, R.P. (1990). Vermont's Education Goals. Montpelier: Vermont Department of Education.

Mirga, A. (1988). States and the "at risk" issues: Said aware but still "failing." Education Week, 3, 14-16.

National Governor's Association (1989). Restructuring in progress: lessons from pioneering districts, Results in Education Series, Washington, D.C.

Resnick, D. [illegible] & Resnick, L. B. (1985). Standards, curriculum, and performance: A historical and comparative perspective. Educational Researcher. 14(4), 5-21.

Reynolds, M., Wang, M.C., & Walberg, H.J. (1987). The necessary restructuring of special and regular education. Exceptional Children, 53, 391-398.

Skrtic, T. (1987). An organizational analysis of special education reform. The National Inquiry Into the Future of

Education for Students with Special Needs. Lawrence, Kansas: University of Kansas.

Wiggins, G. (1991). Standards, not standardization: Evoking quality student work. Educational Leadership. 48(5), 18-25.

Will, M. (1986). Educating students with learning problems: A shared responsibility. Washington, D.C.: A report to the Secretary of Education.