DOCUMENT RESUME

ED 361 434 UD 029 445

AUTHOR March, Judith K.; And Others
TITLE The Long-Term Impact of a Staff Development Program on Student Performance in an Urban Setting.
PUB DATE Apr 93
NOTE 59p.; Paper presented at the Annual Meeting of the American Educational Research Association (Atlanta, GA, April 12-16, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Academic Achievement; Classroom Observation Techniques; Classroom Techniques; Elementary Secondary Education; Models; Principals; *Program Effectiveness; *Staff Development; Teacher Behavior; Teacher Effectiveness; Teacher Guidance; *Teacher Improvement; Teaching Skills; *Training Methods; Urban Schools
IDENTIFIERS Ohio; *TRIVET Program

ABSTRACT

This study examined the efficacy of Techniques of Responsive Intervention to Validate Effective Teaching (TRIVET) as a model for training administrators and teachers to provide instructional leadership through effective classroom appraisal. The study dealt with the first of a multi-step process to have principals and teachers impact what happens in the classroom by retraining administrators and teachers in how to use a systematic research-based approach of classroom appraisal and analysis. The 45 teachers and 11 principals who volunteered for training and who constituted the 1991-92 cohort were administered a survey questionnaire prior to the beginning of the training. The participants completed the same questionnaire 1 year later. With regard to the effect of TRIVET on student achievement gains, Ohio achievement tests show that pupils with TRIVET trained teachers did a bit better than their peers; and that they had improved attendance, slightly better grades, and improved reading competency. In addition, the program also showed reduced teacher isolation, and the groundwork was laid for a culture of teaching evaluation, change, and excellence. Contains 24 tables and 110 references. (JB)

THE LONG-TERM IMPACT OF A STAFF DEVELOPMENT PROGRAM ON STUDENT PERFORMANCE IN AN URBAN SETTING

Judith K. March
Karen H. Peters
Michael Schwartz
Pat E. Crisci

Kent State University

A Paper Presented at the Annual Meeting of the
American Educational Research Association
Atlanta, Georgia
April 12, 1993

Introduction

As America's schools brace themselves for the year 2000, they will have labored under the dual yoke of Reform initiatives from the 1980's and the accountability demands of the 1990's. Both imperatives will have come in response to a national crisis, the magnitude of which brought the entire country to attention. In surprised contrast to her earlier role as vanguard of the world's economic, social, and techno-industrial advances, the United States faced the latter half of the 20th century not only out of the lead but falling rapidly behind her competitors. In a desperate search for the cause of this predicament, the nation indicted its entire educational system. The evidence included progressive declines in academic achievement, even among more capable students; high school graduates unable to demonstrate the most minimal competence in reading, mathematics, and oral or written expression; only a small percentage of students able to employ critical thinking or creative problem-solving; and a pervasive lack of such employability skills as self-direction, pride in accomplishment, dependability, respect for the rights of others, and regard for the common good.

The Provisions of Reform and Accountability

The recommendations set forth in the Reform reports of the 1980's called for increases in academic rigor and proficiency standards, periodic assessment and monitoring of student achievement, attention to the individual learning needs of "at-risk" students, and greater levels of accountability for college training programs, classroom teachers, and the building principal. As if to certify education as a national priority, President Bush used the Education Summit to inaugurate the 1990's as the decade of accountability. On the strength of the Reform demands, state legislatures

and departments of education have begun to hold local districts accountable for increased levels of staff performance as well as student achievement.

The Effective Schools Research as a Foreshadow of Reform

An examination of the Reform provisions, as well as the accountability requisites, reveals many of the same issues that were identified during the mid '70's. Ten years before the release of the first Reform report, an equally significant initiative was underway in several urban districts in England and the United States. Known as the Effective Schools research, the work of Ronald Edmonds, Wilbur Brookover, Larry Lezotte, and others had been undertaken to determine what conditions were present in school buildings where students were achieving at acceptable levels, irrespective of social class. Those attributes or variables most often present in "effective" schools became known as the Effective Schools correlates and provided a framework or model for school improvement. The correlates are (a) a commitment by the district to the improvement of instruction and increased student achievement, validated by policies, procedures, and the allocation of human and material resources to these ends; (b) a building climate that reflects safety, order, and an atmosphere conducive to learning; (c) the systematic assemblage, monitoring, and analysis of student information likely to impact achievement, including attendance, attitude, aptitude, and previous achievement; (d) effective instructional leadership by the building principal, including the establishment and maintenance of high expectations for student and staff performance, and an active involvement in the instructional program via classroom observations; (e) genuine expectations by the teaching staff that all students can and will achieve to their optimum levels, irrespective of socio-economic status; and (f) the utilization of instructional activities and methodology appropriate to the particular

needs of individual students and reflective of those criteria identified in the Teacher Effectiveness and Process-Product research.

The similarities between the Effective Schools correlates and the provisions of the Reform and accountability imperatives are clearly to the advantage of the latter two. And the fact that student achievement has improved in buildings in which the correlates were present testifies to their validity. To be sure, the relationship between student achievement and conditions in these buildings is correlational rather than causal, but the positive effects on students and staff alike make the Effective Schools provisions worthy of serious consideration in the improvement of schools and schooling.

The Achievement Formula as an Approach to Reform

In response to requests by school districts in northeast Ohio for assistance in their school improvement efforts, faculty and administrators at Kent State University have translated the findings from the Effective Schools research, the Reform initiatives, and the accountability requirements into a program for improving school effectiveness. Known as the Achievement Formula, the program assists districts in conducting an in-depth self-study to determine whether present levels of student achievement are (a) commensurate with student ability, and (b) consistent with the expectations of the district and the community it serves. During its participation in the Achievement Formula, the district's achievement data are assembled and analyzed in the context of the other Effective Schools correlates. Specifically, each student's aptitude or ability is correlated with his prior achievement to determine the level where he should achieve. This anticipated level is compared with the student's actual level of achievement to determine if a discrepancy exists. These achievement data are

displayed in a classroom grid along with data on each student's attendance and attitude toward school, as well as data on building and district climate, institutional commitment, and instructional leadership by the building principal. Using this Classroom Report, the teacher can examine any achievement discrepancies in the context of the remaining correlates to determine which may have impacted the student's achievement and to devise a classroom intervention plan. Through the analysis of its collective classroom and building data, the district is assisted in developing a blueprint for systematic Reform. Correlations between and among specific variables provide additional direction for the channeling of resources. For example, the correlation between attendance and achievement may be less predictive at grade three (3) than at grade seven (7). Or, is there a predictive relationship between teachers' perceptions of the principal's knowledge of instruction and teachers' expectations for student achievement?

Although the district's leadership is ultimately responsible for making systemic changes necessary to initiate and sustain legitimate reform, the persons most directly accountable for actually managing the change are the building principals and classroom teachers. The Effective Schools research has confirmed that student achievement is positively correlated with teacher behaviors and that teacher behaviors are largely the responsibility of the building principal. If school improvement is measured by increased student achievement and if increased student achievement is the product of improved teaching behaviors, the focus of legitimate and enduring reform is classroom instruction. As the orthodox and proven vehicle for changing teacher behavior, classroom appraisal is the most promising point of departure. Current findings in the Teacher Effectiveness and Process-Product research have

documented that teacher appraisal is more likely to result in improved classroom practices when the evaluator and teacher are collaborative rather than adversarial. To this end, promising initiatives in the improvement of teacher evaluation must include the appraiser and appraisee as partners in the reform of classroom instruction,

TRIVET

The Achievement Formula includes a staff development program to involve the building principal and classroom teacher in a collaborative effect to improve classroom instruction. Techniques of Responsive Intervention to Validate Effective Teaching, known as TRIVET, is a year-long training program that provides building principals and lead teachers the opportunity to develop the competencies necessary to effectively appraise classroom teaching and prescribe strategies for improvement. These principal-teacher teams work collaboratively during the training to enhance the instructional effectiveness of the entire building. The TRIVET training includes four processes for the collection and analysis of classroom data. They are (a) the Pre-Observation Conference to gather significant information about the teacher's overall planning as context for the lesson to be observed; (b) Script-taping to record activities that occur during the lesson and to distinguish between events that went well and those which were unsuccessful; (c) the Post-Observation Conference to discuss how the teaching behaviors impacted student learning and to consider alternate ways to present the lesson; and (d) the Action Plan to collaboratively determine areas for growth, strategies for improvement, criteria for success, a timeline, and resources for assistance.

To distinguish effective from ineffective instruction and to prescribe viable remediation or enrichment strategies for improvement, participants are provided

training in the teaching behaviors identified by the Teacher Effectiveness and Process-Product research as positively correlated with student achievement. These behaviors include: (a) examination of year-long, unit, and daily **Planning**, including congruence among objectives, strategies, and assessments, the developmental sequencing of classroom activities, and the use of Bloom's taxonomy for variety of mental processing; (b) distinguishing effective from ineffective **Behavior Management**, including the use of a discipline plan, various levels of student involvement, grouping, pacing, and focusing attention as a management technique; (c) the **Organization of Time, Space, and Materials**, focusing on the efficient use of academic engaged time, transitions, routines and procedures, materials handling, and physical setting; (d) **Learning Climate** or the establishment of a businesslike and task-oriented atmosphere, nurturing positive teacher-pupil relations, including cooperative learning and the use of student interest surveys; (e) the **Assessment** of students prior to, during, and following instruction, using valid paper-pencil methods as well as several non-paper /pencil methods such as signalling or webbing, and correctly using standardized test results; (f) **Instructional Methods**, examining the criteria for effective motivation, objectives, how to select the appropriate instructional strategy, and various elements of lesson design such as critical attributes, modeling, questioning, etc.; (g) **Oral and Written Communication**, including the effective use of chalkboard, communications with parents and students, and providing clear explanations related to content; and (h) the fifteen TESA behaviors for teacher expectations.

During the training, the participants review pertinent research findings, discuss specific instructional problems, and practice their appraisal skills on videotaped teaching segments. Between sessions, participants implement their training in the

actual classrooms of fellow teachers in a collegial analysis of instructional behaviors. Each team jointly examines the instructional program in its particular building in order to identify the individual and collective needs for staff development pursuant to reform.

In the four years since its inception, the TRIVET program has involved over 200 teachers and principals in over 1,300 classroom observations, the culmination of which has been over 1,400 classroom Action Plans developed to improve instruction throughout northeast Ohio. If TRIVET training results in the improvement of classroom instruction, it is anticipated that student achievement will increase proportionately.

At this writing, the Achievement Formula and TRIVET have been implemented in some of the schools in a large urban district in Ohio for two years. As yet, not enough time has elapsed to determine whether the achievement levels of the 2,900 target students (a number that increases each year as students are added) have been impacted by the 70 teachers thusfar trained in TRIVET as part of the project's intervention plan. Because only 45 teachers can be trained each year, it may take as long as long as five years before greater congruence between anticipated and actual student achievement can be detected. Measurable gains in the other Effective Schools variables such as attendance, climate, attitude, and so on are also being carefully monitored.

TRIVET--A Review of Selected Literature

The components of the TRIVET system of teacher appraisal--the four processes for data collection and analysis, the seven modules for effective instruction, the year-long format including actual implementation with classroom teachers, and the

collaboration among principals and teachers--are wrought from the instructional provisions of the Effective Schools, Teacher Effectiveness, Reform, and Accountability research. Throughout the literature, teacher appraisal has received considerable attention as the primary reagent for helping teachers improve classroom instruction (Acheson & Gall, 1987; Bolton, 1973, Buttram & Wilson, 1987; Castetter, 1986; Castetter & Burchell, 1967; Dunkleberger, 1982; Foley, 1981; George, 1987; Gephart & Engle, 1983; Jacobson, 1987; Johnson & Snyder 1986; Klitgaard, 1987; Martin, 1983-84; Medley & Crook, 1980; McGreal, 1988; NAESP, 1988; Popham, 1981; Prince, 1983-84; Redfern, 1964, 1966, 1980; Turner, 1986; Wise, Darling-Hammond, McLauglin, & Bernstein, 1984).

With the current interest in educational reform and greater accountability for student achievement, have come increased attention to specific teacher behaviors and the relationship between the quality of instruction and student outcomes (Brophy, 1989; Calabrese, 1986; Cotton & Savard, 1980; DeRoche, 1981; Foley, 1981; Hobar & Sullivan, 1983-84; Leithwood & Montgomery, 1982; Lezotte, 1982; McGreal, 1988; Medley & Coker, 1987; NAESP, 1986; Robinson, 1985; Rupley, Wise & Logan, 1986; Texas, 1986-87; Turner, 1983). The significant contribution of teacher appraisal to the Reform and Accountability initiatives, specifically in the improvement of student achievement, depends on making it possible for evaluators to identify competent teaching, to identify ineffective teaching behaviors, to prescribe specific strategies for improvement, and to validly monitor changes in teacher competency (Bartalo, 1988; Bolton, 1973; Calabrese, 1986; Good & Brophy, 1984; Hall, 1980; Klitgaard, 1987; Leithwood & Montgomery, 1984; Medley, Coker, & Soar, 1984; NAESP, 1988; Popham, 1981; Prince, 1983-84, Redfern, 1980; Sadler, 1982).

Prior to 1950, classroom appraisal was more a function of such indirect variables as teacher personality and/or the number of "tallies" on a checklist than on the direct interaction between teacher and student. Despite their popularity, neither the trait nor the checklist approaches resulted in greater pupil learning gains (Medley et al., 1984). It was not until the latter half of the 1950's that teacher evaluators began to record and analyze teacher behaviors in terms of their effect on student response. (Anderson, 1954; Furst, 1971a; Hobar & Sullivan, 1984; Medley, 1972; Medley & Mitzel, 1958; Rosenshine, 1970; Soar, 1972a, 1972b; Soar, Medley, & Coker, 1983). The teacher behavior-student response approach to classroom appraisal has been the focus of the Teacher Effectiveness and Process-Product research. Classroom performance is carefully scrutinized to distinguish the behaviors of effective teachers from those who are unsuccessful (Acheson & Gall, 1987; Brophy, 1973; Brophy & Evertson, 1974; Crawford et al., 1978; Duffy, 1981; Dunkin & Biddle, 1974; Furst, 1971a; Good, 1983-84; Hobar & Sullivan 1983-84; Medley & Crook, 1980; Rosenshine & Furst, 1973; Rupley at al., 1986; Soar & Soar, 1972).

The Effective Schools research has placed considerable emphasis on the principal's performance as an instructional leader rather than as a building manager. Strong correlations were found among principal expectations for teachers, teacher expectations of students, and student achievement. In effective schools, the role of the instructional leader was to establish with the building staff specific learning expectations, deliver to teachers the necessary materials to carry out the instructional program, and continuously evaluate the level of mastery evidenced by students and staff alike (Anderson & Nicholson, 1987; Brookover et al., 1982; Brookover & Lezotte, 1979; Calabrese, 1986; Cotton & Savard, 1980; DuFour & Eaker, 1987;

Gigliotti & Brookover, 1975; Jackson, Logsdon, & Taylor, 1983; Johnson & Snyder, 1986; MacPhail-Wilson & Guth, 1983; Manasse, 1984; McCurdy, 1983; NAESP, 1986; O'Neill & Shoemaker, 1989; Robinson, 1985; Weller, 1985; Worner & Stokes, 1987; Zumwalt, 1982).

Despite the importance of teacher appraisal and the principal's position of authority to perform it, scholars and practitioners alike perceive it as ineffective in improving the quality of classroom instruction (Buttram & Wilson, 1987; Castetter, 1986; Ellis, 1984; Harris, 1987; McGreal, 1988; Prince, 1983-84; Savage, 1982; Smith, 1984). As the person most directly responsible for classroom evaluation, the principal has been subjected to considerable scrutiny by researchers. Among the principal's weaknesses is the inability to connect specific teacher behaviors with student outcomes (Acheson & Gall, 1987; Bartalo, 1988; Bolton, 1973; Calabrese, 1986; Castetter & Burchell, 1967; Klitgaard, 1987; Lamb & Thomas, 1981; Leithwood, Stanley, & Montgomery, 1984; Russell, Mazzarella, White, & Maurer, 1985; Soar, Medley, & Coker, 1983; Wood & Pohland, 1979). A second weakness is the principal's inability to distinguish effective from ineffective instruction (Castetter & Burchell, 1967; DeRoche, 1981; DuFour & Eaker, 1987; Jacobson, 1987; Johnson & Snyder, 1986; Klitgaard, 1987; Klopf, Scheldon, & Brennan, 1982; Lamb & Thomas, 1981; Larsen, 1987, Leithwood & Montgomery, 1982; MacPhail-Wilson & Guth, 1983; Manasee, 1984; Notar, 1987; O'Neill & Shoemaker, 1989). A third difficulty is the lack of consistency among appraisers as to what is effective When there is more than marginal variance in the interpretation of a teaching segment, the impression given is that effective teaching is more a function of principal taste than of sound pedagogy (Calabrese, 1986; Furst, 1971a; Medley & Mitzel, 1958; Soar et

al., 1983). A fourth weakness is the persistence of an adversarial rather than collaborative relationship between the teacher and principal in the evaluation of classroom teaching. When appraisal is perceived as a weapon for fault-finding rather than as a group process for problem-solving, there is resistance among teachers against any proposed reforms (Acheson & Gall, 1987; Bartalo, 1988; Castetter & Burchell, 1967; DuFour & Eaker, 1981; George, 1987; Jacobson, 1987; McGreal, 1982, 1988; O'Neill & Shoemaker, 1989; Popham, 1988; Soar et al., 1983; Wood & Pohland, 1979). Another source of teacher distrust is the feeling that the principal is out of touch with what occurs in classrooms, especially the extenuating circumstances that prevent teachers from being successful (Acheson & Gall, 1987; Andrews & Knight, 1987; Lamb & Thomas, 1981; March, Peters, & Orrach, 1988; Seyfarth & Nowinski, 1987; Turner, 1986).

Most researchers have attributed each of the above weaknesses to a singular problem: the lack of appropriate training. It is unfortunate that the majority of preparation programs for principal certification require very little coursework or field experience in instructional supervision. This lack of training in the appraisal of classroom teaching seriously impairs the ability of the principal to distinguish effective form ineffective instruction and to provide meaningful intervention (Andrews & Knight, 1987; Bartalo, 1988; Bolton, 1973; Brandt, 1987; Buttram & Wilson, 1987; Calabrese, 1986; DuFour & Eaker, 1987; Good, 1983-84; Johnson & Snyder, 1986; Klitgaard, 1987; Lewis, 1983-84; McKenna, 1981; Rutherford, Hord, & Thurber, 1984; Seeley, 1984; Snyder, 1984; Turner, 1986; Wise et al., 1984).

TRIVET was developed in response to the need for more effective classroom appraisals. As a staff development program, TRIVET involves principals and lead

teachers in a collaborative effort to diagnose the instructional program in each building and to prescribe the necessary reforms for improvement. As part of the Achievement Formula to assess, monitor, and eventually increase student performance levels, TRIVET focuses on the following correlates in the Effective Schools research: the instructional leadership of the building principal, the quality of classroom teaching, and teacher expectations for student success. Each of the components of the TRIVET program is derived from needs identified in the Effective Schools, Teacher Effectiveness/Process-Product, Reform, and Accountability research.

The skills and attitudes necessary to conduct effective classroom appraisal are developmental and must be nurtured over time and advantaged by actual practice (Acheson & Gall, 1987; Andrews & Knight, 1987; Hunter, 1988; Klitgaard, 1987, Mannatt, 1988; Zerchykov, 1984). To allow adequate time for presentation, application of the skills, and the establishment of effective collegial relationships, the training spans an entire year. The four processes for data collection and analysis are culled directly from literature: (a) the Pre-Observation Conference (Acheson & Gall, 1987; Manatt, Palmer, & Hildebaugh, 1976; McGreal, 1982, 1988; Petrie, 1982; Prince, 1983-84; Redfern & Hersey, 1980; Stow & Sweeney, 1981; (b) Scripting or data-gathering during the classroom observation (Acheson & Gall, 1987; Duke & Stiggins, 1986; Ellman, 1976; Good & Brophy, 1984; Hunter, 1988; Lamb & Thomas, 1981; Manatt et al., 1976; Medley et al., 1984; McGreal, 1982; NAESP, 1988; Savage, 1982); (c) the Post-Observation Conference (Acheson & Gall, 1987; Bartalo, 1988; Berliner, 1980; Bolton, 1973; Duke & Stiggins, 1986; Dunkleberger, 1982; Hunter, 1988; Jacobson, 1987; Klitgaard, 1987; Manatt et al., 1976; Medley et al., 1984; McGreal, 1988; NAESP, 1988; Redfern & Hersey, 1980; Sadler, 1982;

Scriven, 1988; Sweeney, 1982a); and (d) Action Planning (Acheson & Gall, 1987; DeRoche, 1981; Good & Brophy, 1984; Hunter, 1988; Jacobson, 1987; Klitgaard, 1987; Lamb & Thomas, 1981; Manatt et al., 1976; McGreal, 1988; NAESP, 1988; Redfern & Hersey, 1980).

The criteria for effective instruction are derived from the Teacher Effectiveness research and include Planning; Behavior Management; Organization of Time, Space, and Materials; Learning Climate; Student Assessment; Instructional Methods; and Oral and Written Communication (Acheson & Gall, 1987; Bartalo, 1988; Bolton, 1973; Brandt, 1987; Calabrese, 1986; Conley, 1987; Costa, Garmston, & Lambert, 1988; Jacobson, 1987; Manatt, 1988; McGreal, 1988; Medley et al., 1984; NAESP, 1988; Pembroke & Goedert, 1982; Prince, 1983-84; Redfern & Hersey, 1980; Sadler, 1982; Seyfarth & Nowinski, 1987; Stow & Sweeney, 1981).

Developed in accordance with current research and the demands for Reform, the TRIVET program may represent a viable approach to training principals and lead teachers to conduct classroom appraisals that may result in meaningful improvements in the instructional program.

DESCRIPTION OF THE STUDY

Statement of the Problem

Research pertaining to the training of instructional leaders to conduct appropriate classroom appraisals is not prevalent in the literature. Much has been written about what is wrong with processes currently used by principals to appraise instruction, and much has been written about what makes instruction effective from the perspective of the process-product paradigm. Very little has been published about how to use what is known about effective instruction as a basis for training

administrators to examine the quality of classroom instruction and teacher expectations. This investigation, therefore, examined the efficacy of the program called Techniques of Responsive Intervention to Validate Effective Teaching (TRIVET) as a model for training administrators and teachers to provide instructional leadership through effective classroom appraisal.

The study undertaken here dealt with the first of a multi-step process to have principals and teachers impact what happens in classrooms. This first step involves retraining administrators and teachers in how to use a systematic research-based approach to classroom appraisal and analysis. Through appropriate diagnosis and development of prescriptions for improvement, the trainees demonstrate a knowledge of good instruction and determine when instruction is ineffective. Through successful Action Planning and continuous monitoring, the trainees provide feedback and support as a teacher works at the prescriptions for growth. The overall implication is that by offering suggestions for improved classroom instruction, the trainee can facilitate increased teacher effectiveness. As a result of increased teacher effectiveness, the achievement levels of students can be enhanced.

The current TRIVET training program is being conducted in two school clusters in a large metropolitan urban school district in Ohio. While it seeks to intervene in what has been a downward trend in student achievement in the district, it may be understood in two, broad and interrelated parts.

The first of these parts has to do with finding an effective way of teaching the current curriculum to the students within the schools. This is what is called here, TRIVET. The second, and quite clearly related part, has to do with the development of an organizational (school) culture in support of learning and teaching. The

development of such a culture presupposes two primary objectives. One objective is the formation of a community within a school which reduces (if not eliminates) the isolation of teachers from one another and from the principal during the teaching day in order that a personal and professional social support network can be formed.

The cultural support system to be developed needs to be structured around the second objective which is the formation of a set of shared values concerning the improvement of teaching as an ongoing process. "Values," as the word is used here, is not simply a matter of choices in a relativistic environment. "Values" refers to choices of behaviors that the teacher comes to find "morally compelling." That is to say that the choice of constant focus on teaching improvement is not made because it is modish or stylish, but rather because it is "right," "proper," "correct" and in fact the only "moral" choice.

In brief, it is one thing to train, re-train and re-train again teachers to teach the current curriculum effectively. Any number of such programs exist. But it is likely that such programs' effects will be relatively short lived, as with any Hawthorne Effect, if there is a failure of institutional culture and values to grow up to surround the program, support it, reinforce it and make it a morally compelling dimension of one's professional life.

Working on the premise that the quality of learning will improve if everyone in a school building works together TRIVET involves teachers observing each other and working together to upgrade their effectiveness in improving student achievement. Principals also serve as partners in the process. Teachers and principals grow with each other at the same time they are helping children. TRIVET promotes the idea that education is actually a partnership among teachers, principals and students and that

students will benefit when teachers assume responsibility for each other, which is to say, when teachers form a culture in support of learning.

Administrators and teachers in the participating schools have worked together to remove learning barriers. For example, through the Achievement Formula, one school was found to be negatively perceived by the people in its community. Because of that, the school staff is now focused on getting the community more involved in and aware of school events and activities. The idea is simple, but important--it is assumed that it is difficult for a child to learn in a school when parents and other adults are saying they do not think well of that school.

A major benefit of the Achievement Formula/TRIVET project is the sense of "teamwork" that develops within school buildings. Teachers in the project buildings are developing a shared sense of responsibility for all the children in the school, not just the ones in their individual classrooms. Principals see themselves as partners in student learning, not just building managers.

The process of teachers going into each other's classrooms to observe appears to be "opening doors" and getting rid of the personal and professional isolation felt by individual teachers within school buildings.

A PRE-TRAINING/POST-TRAINING SURVEY OF TEACHERS AND PRINCIPALS WITH REGARD TO THE ELEMENTS OF TRIVET

The forty-five teachers and eleven principals who volunteered for training and who constituted the 1991-92 cohort were administered a survey questionnaire prior to the beginning of training. The questions asked about each teacher's sense of personal instructional leadership:

1. comfort level working with other teachers
2. level of cooperation with other teachers at grade level in subject area
3. comfort with one's ability to diagnose specific improvable points of teaching for others
4. comfort with making suggestions for improvement
5. concern for professional growth and effectiveness of other teachers
6. confidence in one's ability to make viable suggestions for growth
7. sense of responsibility for the success of a colleague

Similarly, questions were asked concerning each teacher's activities in classroom planning, behavior management, organization of space and time and materials, ability to develop a learning climate, sense of sophistication in student assessment, and development of instructional methods. The eleven principals were administered the same questionnaire before the training began.

One academic year later, at the end of the training, the same questionnaire was administered.

The pre-post results are given for teachers in Tables I through VII, and for principals in Tables VIII through XIV. These are expressed as percentages of those responding.

Immediately it is clear that pre-post changes for both groups are great, which is to say the evaluations of the training are quite positive. Similar surveys of two earlier cohorts of teachers produced the same results.

At the very least one might say that the project argues well for the formation of a culture of teaching evaluation-change-and excellence as these trained lead teachers now become TRIVET trainers for other teachers in their buildings with the blessing of building principals. It is fair to say that teacher isolation has been reduced and that evaluation and change in teaching have been introduced as values which, over time, may become compelling ones. To the best of our knowledge, from self reports of teachers and principals, behavior has changed.

But what can be said of pupil achievement in light of that behavior change? In order to set the stage for an understanding of this matter, the reader should know that the State of Ohio now requires pupils to take state-developed achievement tests in grades 4, 6, 9 and 12. What is reported here are percentages of students who passed the ninth grade achievement test in the fall of 1992. The tests are in four parts: writing, reading, mathematics, and citizenship. District wide 3765 students were tested. Table XV shows the percentage of students who passed each part by sex and racial/ethnic background for the entire district. Table XVI shows the percentage of students who passed all four parts, three of four parts, two of four parts, one of four and none of four, also by sex and racial/ethnic background. District wide, the matter of achievement is of great concern and consequently, any salutary

effects of the TRIVET program became very important. The next series of graphs, Tables XVII through XXV, indicate the location of TRIVET students' scores compared to non-TRIVET students in the same buildings and students district wide on the California Achievement Test - for reading. These are expressed as normal curve equivalents. The reading scores are used here as an example, but other portions of the CAT look very much the same.

As one can readily see from inspection of these graphs, it would be difficult to make any serious claim to impressive reading gains due to the TRIVET program. Other than a trend toward slightly better scores in general and by grade level, these students are on average, not to be found much beyond the fiftieth percentile or normal curve equivalents. In short, pupils with TRIVET trained teachers do a bit better than their peers, but do not show gains that go beyond the midpoint of the third quartile at best.

So What's Going On Here?

The answer depends, in great measure, upon what one's goals are and have been. What we seem to know is that the TRIVET project, based in available research and theory from Process/Product thinking and the Effective Schools data, can make a difference in the way in which teachers and principals behave with regard to classroom issues. Preliminary evidence even suggests a reduction in teacher isolation and the beginning of some notion of a common culture of learning and teaching improvement. These changes are the result of a technical model of instruction producing technical changes in behavior. But the results of that, in turn, with regard to student achievement changes are, at best, very modest.

To be sure there are other data from this project that appear to be important. For example, of the children studied in 1991-92, students without TRIVET teachers lost an average of 12.75 days from school. Those who had one year with a TRIVET teacher lost 9.04 days; and those who had two or more years with TRIVET teachers lost an average of only 6.44 days. The differences here yield $F = 19.14$, $p < .0001$. Attendance does seem to be improved. Furthermore, in another study of children done in this same year, a measure was taken of attitudes toward self as learner. The attitude measure had forty possible points and the higher the score the better. The mean for pupils without TRIVET teachers was 14.80 points while the mean for those with one year or more with TRIVET teachers was 22.11. In this case, $t = 2.32$, $p < .05$. Surely this can be taken as another positive indicator of success of training.

In addition, we have data showing that children with TRIVET trained teachers get better grades, but grades are such a suspect measure that we hesitate to lean upon such a slender reed. A somewhat sturdier reed is a locally developed competency reading test. Here we find that children who have never had a TRIVET teacher score an average of 69%; those with one year with a TRIVET teacher average 73.34%; and those with a TRIVET teacher two years or more average 75.5%. A one way ANOVA yields $F = 10.98$, $p < .001$ One must keep in mind that while the California data on reading generally show an advantage for TRIVET students, we could find no statistically significant advantage for TRIVET students.

Shall we, then conclude that the data are promising but not conclusive? Of course; that seems fair enough. But some social structural variables here need some consideration.

The data are confused to some degree because of very substantial loss of student subject data over time. In this school district, school begins in late August. But because the district is under a court desegregation order, final assignments of pupils (and some teachers) to schools does not occur until mid-October! From that time forward, students come and go at such a rate that more than one teacher has reported turnover during the school year in excess of 100%. If one adds to this the refusal of the district and the union to permit the establishment of meaningful control groups and the district's inability in some cases and refusal in other cases to permit access to student records, this sort of research becomes difficult at best.

Finally, it must be said that when projects such as TRIVET are developed, not only must the evaluative research design be built into the project as a whole from the outset, but it ought to be ascertained that the requisite data will, in fact be available. In this case neither was true. Independent project evaluators too often come to the task of having to construct ex post facto studies using data gathered in such a way that meeting the assumptions of even low powered statistical tests becomes impossible. The sampling error in such studies is always a problem. In the instant case, it is coupled with data loss, some computer in-put error, some measures, such as grades, which are suspect on their face, and so on. In short, those of us who are in the business of programming for change also need to be in the business of making it possible to know, not only that change has happened, but more to the point, that it has had a clearly measurable impact on both proximal and distal goals of the change.

From the current data available from the TRIVET program, regardless of their clear weaknesses, the evidence suggests that a technical or technique change model may have the potential to create positive student outcome changes. But a carefully planned and executed evaluation continues to be required.

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE I

INSTRUCTIONAL LEADERSHIP

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
1. Comfort level working with other teachers	6.7	28.9	51.1	13.3	0.0	0.0	31.1	68.9
	1	2	3	4	1	2	3	4
2. Cooperation with other teachers at grade level in subject area	6.5	28.9	43.5	21.7	0.0	7.0	32.6	60.5
	1	2	3	4	1	2	3	4
3. Diagnosing specific improvable points	11.1	42.2	42.2	4.4	0.0	0.0	35.6	64.4
	1	2	3	4	1	2	3	4
4. Making suggestions for improvement	14.0	44.2	37.2	4.7	0.0	2.3	39.5	58.1
	1	2	3	4	1	2	3	4
5. Concern for professional growth, effectiveness of other teachers	13.3	55.6	22.2	8.9	0.0	7.12	28.6	64.3
	1	2	3	4	1	2	3	4
6. Confidence in my own ability to make viable suggestions for growth	13.3	33.3	44.4	8.9	0.0	2.3	15.9	81.8
	1	2	3	4	1	2	3	4
7. A sense of responsibility for the success of a colleague; a feeling of teamness...	15.6	42.2	33.3	8.9	0.0	13.3	42.2	44.4
	1	2	3	4	1	2	3	4

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE II

PLANNING

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
8. Recognition of importance of year-long planning or curriculum mapping	26.7	31.1	33.3	8.9	0.0	0.0	22.2	75.6
	1	2	3	4	1	2	3	4
9. Attention to the four developmental quadrants in unit (chapter) planning	51.1	31.1	13.3	4.4	0.0	0.0	28.9	71.1
	1	2	3	4	1	2	3	4
10. Elements of effective lesson design...	13.3	31.1	13.3	4.4	0.0	0.0	22.2	77.8
	1	2	3	4	1	2	3	4
11. Attention to Bloom's Taxonomy and a variety of mental processes	31.1	44.4	24.4	0.0	0.0	2.2	26.7	71.1
	1	2	3	4	1	2	3	4
12. Triangulation among objectives, teaching strategies and assessment techniques	22.5	53.3	24.4	0.0	2.2	33.3	64.4	0.0
	1	2	3	4	1	2	3	4

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE III

BEHAVIOR MANAGEMENT

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
13. Appraisal of my own discipline plan	0.0	43.2	47.7	9.7	0.0	0.0	34.1	65.9
	1	2	3	4	1	2	3	4
14. Pro-active (preventive) behavior management...	6.8	50.0	36.4	9.7	0.0	0.0	28.9	71.1
	1	2	3	4	1	2	3	4
15. Reduced teacher-centeredness by increasing active student involvement	6.8	65.9	29.5	0.0	0.0	2.2	37.8	60.0
	1	2	3	4	1	2	3	4

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE IV

ORGANIZATION OF SPACE, TIME AND MATERIALS

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
16. Attention to time-on-task ...								
	4.4	48.9	44.4	2.2	0.0	0.0	28.9	71.1
	1	2	3	4	1	2	3	4
17. Attention to transitions and class routines to avoid "down time" ...								
	11.1	35.6	44.4	6.7	0.0	0.0	28.9	71.1
	1	2	3	4	1	2	3	4
18. Focus on distribution and collection of materials, orderliness and student movement								
	6.7	31.1	53.3	8.9	2.2	31.1	66.7	0.0
	1	2	3	4	1	2	3	4
19. Examination of physical setting to determine best use of furniture, physical environment								
	6.7	28.9	42.2	22.2	0.0	31.1	68.9	0.0
	1	2	3	4	1	2	3	4

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE V

LEARNING CLIMATE

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
20. Task-orientation and business like atmosphere	4.5	18.2	52.3	9.1	0.0	0.0	29.5	70.5
	1	2	3	4	1	2	3	4
21. Incorporation of student interests, needs and priorities into lessons	13.3	26.7	46.7	13.3	0.0	0.0	28.9	71.1
	1	2	3	4	1	2	3	4
22. Use of cooperative learning	28.9	48.9	15.6	6.7	0.0	2.2	42.2	55.6
	1	2	3	4	1	2	3	4

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE VI

STUDENT ASSESSMENT

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
23. Concern about frequently monitoring student progress	6.8	45.5	31.8	15.9	0.0	0.0	29.5	70.5
	1	2	3	4	1	2	3	4
24. Increased use of non-paper/pencil (tests)	24.4	48.9	22.2	4.4	0.0	0.0	38.6	61.4
	1	2	3	4	1	2	3	4
25. Attention to student readiness or entry-level skills necessary for mastery...	8.9	35.6	40.0	15.6	2.2	6.7	28.9	62.2
	1	2	3	4	1	2	3	4
26. Teacher-made tests that are criterion-referenced to class objectives	8.9	28.9	42.2	20.0	0.0	0.0	40.0	60.0
	1	2	3	4	1	2	3	4
27. Checking for understanding...to ensure of comprehension before assigning practice	8.9	22.2	46.7	22.2	0.0	0.0	22.2	77.8
	1	2	3	4	1	2	3	4
28. Using guided practice to correct mislearning prior to independent practice	6.8	42.2	33.3	17.8	0.0	2.2	33.3	64.4
	1	2	3	4	1	2	3	4

TEACHERS' RESPONSES
PRE- AND POST-TRAINING
N = 45 1991-92 COHORT

TABLE VII

INSTRUCTIONAL METHODS

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
29. Formulating valid unit and lesson objectives	11.1	26.7	46.7	15.6	0.0	0.0	24.4	75.6
	1	2	3	4	1	2	3	4
30. Using motivational activities that effectively introduce the unit	11.1	26.7	37.8	24.4	0.0	0.0	33.3	66.7
	1	2	3	4	1	2	3	4
31. Selecting the delivery method most appropriate to content and student needs	6.7	31.1	55.6	6.7	0.0	2.2	35.6	62.2
	1	2	3	4	1	2	3	4
32. Focus on intervention when students fail to master objectives or skills	8.9	35.6	53.3	2.2	0.0	2.2	37.8	60.0
	1	2	3	4	1	2	3	4
33. Attention to effective oral and written communication skills	6.7	20.0	51.1	22.2	0.0	0.0	37.8	62.2
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE VIII

WORKING WITH TEACHERS

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
1. Comfort level working with other teachers	45.5	27.3	27.3	0.0	0.0	0.0	36.4	63.6
	1	2	3	4	1	2	3	4
2. Cooperation with other teachers at grade/level in subject area	36.4	45.5	18.2	0.0	0.0	0.0	27.3	72.7
	1	2	3	4	1	2	3	4
3. Dignosing specific improvable points	9.1	90.9	0.0	0.0	0.0	0.0	36.4	63.6
	1	2	3	4	1	2	3	4
4. Making suggestions for improvement	45.5	45.5	18.2	0.0	0.0	0.0	36.4	54.5
	1	2	3	4	1	2	3	4
5. Concern for professional growth, effectiveness of other teachers	45.5	36.4	9.0	0.0	0.0	0.0	36.4	54.5
	1	2	3	4	1	2	3	4
6. Confidence in own my ability to make viable suggestions for growth	54.5	27.3	18.2	0.0	0.0	0.0	72.7	27.3
	1	2	3	4	1	2	3	4
7. A sense of responsibility for the success of a colleague; a feeling of teamness...	27.3	54.5	18.2	0.0	0.0	0.0	72.7	27.3
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE IX

PLANNING

	Prior to Training				After Training			
	Low			High	Low			High
	.1	2	3	4	1	2	3	4
8. Recognition of importance of year-long planning or curriculum mapping	63.6	27.3	0.0	0.0	0.0	0.0	63.6	36.4
	1	2	3	4	1	2	3	4
9. Attention to the four developmental quadrants in unit (chapter) planning	90.9	9.1	0.0	0.0	0.0	0.0	63.6	36.4
	1	2	3	4	1	2	3	4
10. Elements of effective lesson design	100	0.0	0.0	0.0	0.0	0.0	45.5	54.5
	1	2	3	4	1	2	3	4
11. Attention to Bloom's Taxonomy and a variety of mental processes	36.4	63.4	0.0	0.0	0.0	0.0	0.0	100
	1	2	3	4	1	2	3	4
12. Triangulation among objectives, teaching strategies and assessment techniques	81.8	18.2	0.0	0.0	0.0	0.0	9.1	90.9
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE X

BEHAVIOR MANAGEMENT

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
13. Appraisal of my own discipline plan	27.3	45.5	27.3	0.0	0.0	18.2	45.5	36.4
	1	2	3	4	1	2	3	4
14. Pro-active (preventive) behavior management	45.5	54.5	0.0	0.0	0.0	0.0	27.3	72.7
	1	2	3	4	1	2	3	4
15. Reduced teacher-centeredness by increasing active student involvement	36.4	36.4	27.3	0.0	0.0	0.0	9.1	90.9
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE XI

ORGANIZATION OF SPACE, TIME AND MATERIALS

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
16. Attention to time-on-task...	36.4	45.5	18.2	0.0	0.0	18.2	45.5	36.4
	1	2	3	4	1	2	3	4
17. Attention to transitions and class routines to avoid "down time"...	18.2	54.5	27.3	0.0	0.0	0.0	45.5	54.5
	1	2	3	4	1	2	3	4
18. Focus on distribution and collection of materials, orderliness and student movement	45.5	54.5	0.0	0.0	0.0	0.0	54.5	45.5
	1	2	3	4	1	2	3	4
19. Examination of physical setting to determine best use of furniture, physical environment	54.5	36.4	9.1	0.0	0.0	0.0	54.5	54.5
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE XII

LEARNING CLIMATE

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
20. Task-orientation and business like atmosphere	36.4	45.5	18.2	0.0	0.0	0.0	27.3	63.6
	1	2	3	4	1	2	3	4
21. Incorporation of student interests, needs and priorities into lessons	18.2	36.4	45.5	0.0	0.0	0.0	27.3	72.7
	1	2	3	4	1	2	3	4
22. Use of cooperative learning	9.1	63.6	27.3	0.0	0.0	0.0	18.2	81.8
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE XIII

STUDENT ASSESSMENT

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
23. Concern about frequently monitoring student progress	9.1	81.8	9.1	0.0	0.0	0.0	27.3	72.7
	1	2	3	4	1	2	3	4
24. Increased use of non-paper/pencil (tests)	45.5	45.5	9.1	0.0	0.0	0.0	27.3	72.7
	1	2	3	4	1	2	3	4
25. Attention to student readiness or entry-level skills necessary for mastery...	36.4	45.5	18.2	0.0	0.0	0.0	36.4	63.6
	1	2	3	4	1	2	3	4
26. Teacher-made tests that are criterion-referenced to class objectives	63.6	36.4	0.0	0.0	0.0	0.0	27.3	72.7
	1	2	3	4	1	2	3	4
27. Checking for understanding...to be sure of comprehension before assigning practice	54.5	36.4	9.1	0.0	0.0	0.0	9.1	90.9
	1	2	3	4	1	2	3	4
28. Using guided practice to correct mislearning prior to independent practice	81.8	18.2	0.0	0.0	0.0	0.0	63.6	27.3
	1	2	3	4	1	2	3	4

PRINCIPALS' RESPONSES
PRE- AND POST-TRAINING
N = 11 1991-92 COHORT

TABLE XIV

INSTRUCTIONAL METHODS

	Prior to Training				After Training			
	Low			High	Low			High
	1	2	3	4	1	2	3	4
29. Formulating valid unit and lesson objectives	36.4	63.6	0.0	0.0	0.0	0.0	63.6	36.4
	1	2	3	4	1	2	3	4
30. Using motivational activities that effectively introduce the unit	45.5	36.4	18.2	0.0	0.0	0.0	9.1	90.9
	1	2	3	4	1	2	3	4
31. Selecting the delivery method most appropriate to content and student needs	54.5	18.2	27.3	0.0	0.0	0.0	36.4	63.6
	1	2	3	4	1	2	3	4
32. Focus on intervention when students fail to master objectives or skills	27.3	45.5	27.3	0.0	0.0	0.0	36.4	63.6
	1	2	3	4	1	2	3	4
33. Attention to effective oral and written communication skills	18.2	63.6	18.2	0.0	0.0	0.0	45.5	54.5
	1	2	3	4	1	2	3	4

OHIO NINTH-GRADE PROFICIENCY TESTS
SUMMARY OF DISTRICT PERFORMANCE
FALL 1992

TABLE XV

	WRITING			READING			MATHEMATICS			CITIZENSHIP		
	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS
TOTAL GROUP	3765	1822	48	3964	2156	54	4142	794	19	3962	1639	41
MALE	1785	633	35	1912	917	48	1978	437	22	1889	755	40
FEMALE	1974	1188	60	2048	1236	60	2159	356	16	2070	883	43
OTHER	6	1	17	4	3	75	5	1	20	3	1	33
RACIAL/ETHNIC BACKGROUND												
AMERICAN INDIAN	9	8	89	11	5	45	11	2	18	10	2	20
MALE	5	4	80	6	3	50	6	2	33	6	2	33
FEMALE	4	4	100	5	2	40	5	0	0	4	0	0
OTHER												
ASIAN/PACIFIC ISLANDER	49	30	61	53	25	47	52	20	38	52	21	40
MALE	28	16	57	30	12	40	29	14	48	29	12	41
FEMALE	21	14	67	23	13	57	23	6	26	23	9	39
OTHER												
BLACK/AFRICAN AMERICAN	2644	1230	47	2805	1496	53	2926	458	16	2798	1118	40
MALE	1229	406	33	1333	603	45	1381	231	17	1313	488	37
FEMALE	1414	824	58	1471	893	61	1545	227	15	1485	630	42
OTHER	1	0	0	1	0	0						
HISPANIC	268	150	56	281	136	48	297	61	21	284	103	36
MALE	132	54	41	138	63	46	151	39	26	141	55	39
FEMALE	136	96	71	143	73	51	146	22	15	143	48	34
OTHER												
WHITE	766	392	51	791	479	61	831	245	29	795	386	49
MALE	379	148	39	394	231	59	400	147	37	390	195	50
FEMALE	387	244	63	397	248	62	430	98	23	405	191	47
OTHER							1	0	0			
OTHER	29	12	41	23	15	65	25	8	32	23	9	39
MALE	12	5	42	11	5	45	11	4	36	10	3	30
FEMALE	12	6	50	9	7	78	10	3	30	10	5	50
OTHER	5	1	20	3	3	100	4	1	25	3	1	33

OHIO NINTH GRADE PROFICIENCY TESTS
SUMMARY OF DISTRICT PERFORMANCE
FALL 1992

TABLE XVI

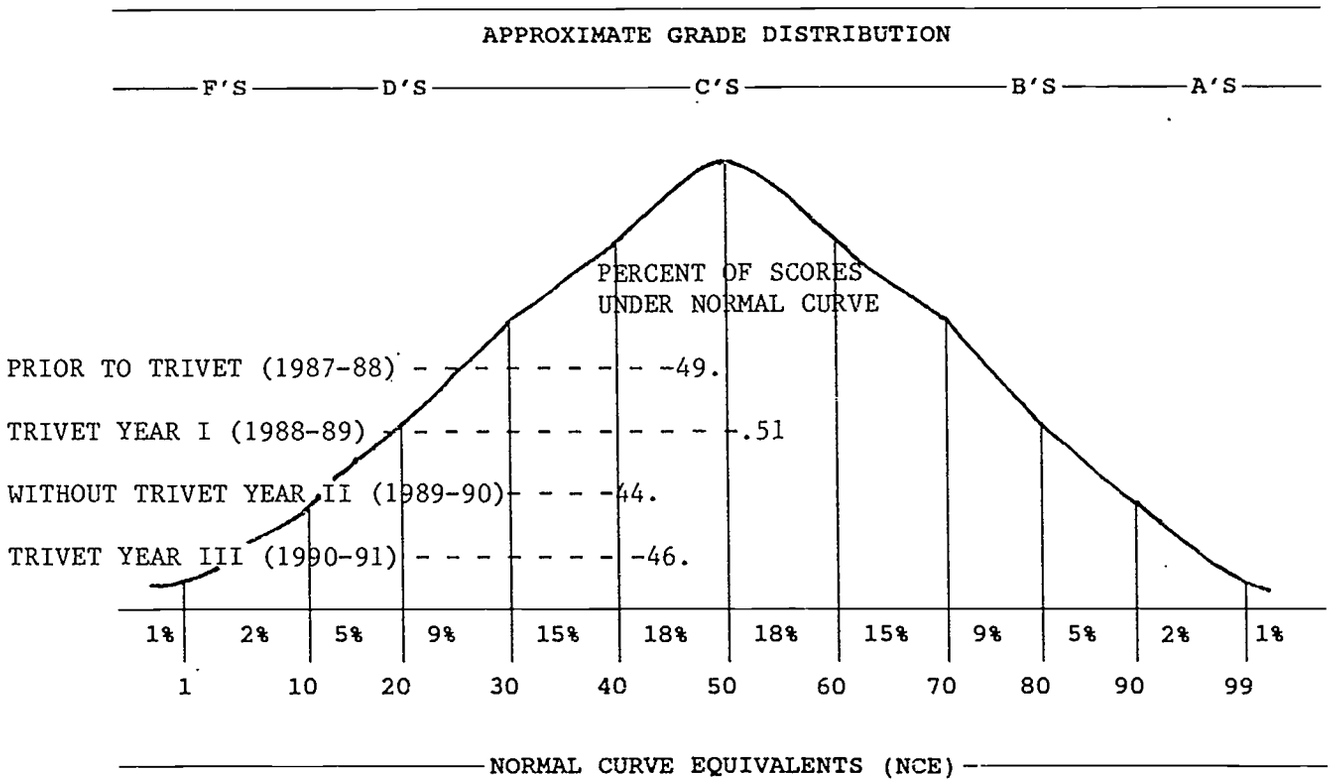
	ALL FOUR SUBJECTS			THREE OF FOUR			TWO OF FOUR			ONE OF FOUR			NONE OF FOUR		
	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS	TOTAL TESTED	NUMBER PASS	PERCENT PASS
TOTAL GROUP	3319	420	13	3319	611	18	3319	745	22	3319	804	24	3319	739	22
MALE	1539	176	11	1539	229	15	1539	323	21	1539	368	24	1539	443	29
FEMALE	1778	244	14	1778	382	21	1778	421	24	1778	436	24	1778	296	17
OTHER	2	0	0	2	0	0	2	1	50	2	1	50	2	0	0
RACIAL/ETHNIC BACKGROUND															
AMERICAN INDIAN	8	2	25	8	0	0	8	3	38	8	2	25	8	1	13
MALE	5	2	40	5	0	0	5	1	20	5	1	20	5	1	20
FEMALE	3	0	0	3	0	0	3	2	67	3	1	33	3	0	0
OTHER															
ASIAN/ PACIFIC ISLANDER	49	9	18	49	7	14	49	13	27	49	12	24	49	8	16
MALE	28	5	18	28	3	11	28	9	32	28	7	25	28	4	14
FEMALE	21	4	19	21	4	19	21	4	19	21	5	24	21	4	19
OTHER															
BLACK/ AFRICAN AMERICAN	2342	241	10	2342	434	19	2342	530	23	2342	580	25	2342	557	24
MALE	1056	80	8	1056	145	14	1056	222	21	1056	269	25	1056	330	31
FEMALE	1286	161	12	1286	289	22	1286	308	24	1286	311	24	1286	227	18
OTHER															
HISPANIC															
MALE	240	35	15	240	37	15	240	49	20	240	71	30	240	48	20
FEMALE	117	17	15	117	20	17	117	20	17	117	28	24	117	32	27
OTHER	123	18	15	123	17	14	123	29	24	123	43	35	123	16	13
WHITE															
MALE	664	130	20	664	131	20	664	146	22	664	136	20	664	121	18
FEMALE	328	62	19	328	60	18	328	70	21	328	63	19	328	73	22
OTHER	336	68	20	336	71	21	336	76	23	336	73	22	336	48	14
OTHER	16	3	19	16	2	13	16	4	25	16	3	19	16	4	25
MALE	5	0	0	5	1	20	5	1	20	5	0	0	5	3	60
FEMALE	9	3	33	9	1	11	9	2	22	9	2	22	9	1	11
OTHER	2	0	0	2	0	0	2	1	50	2	1	50	2	0	0

GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE) OF STUDENTS WITH A TRIVET TEACHER

(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

TABLE XVII



1987-88	Sample:	49 students
1988-89	Sample:	51 Students
1989-90	Sample:	44 Students
1990-91	Sample:	46 Students

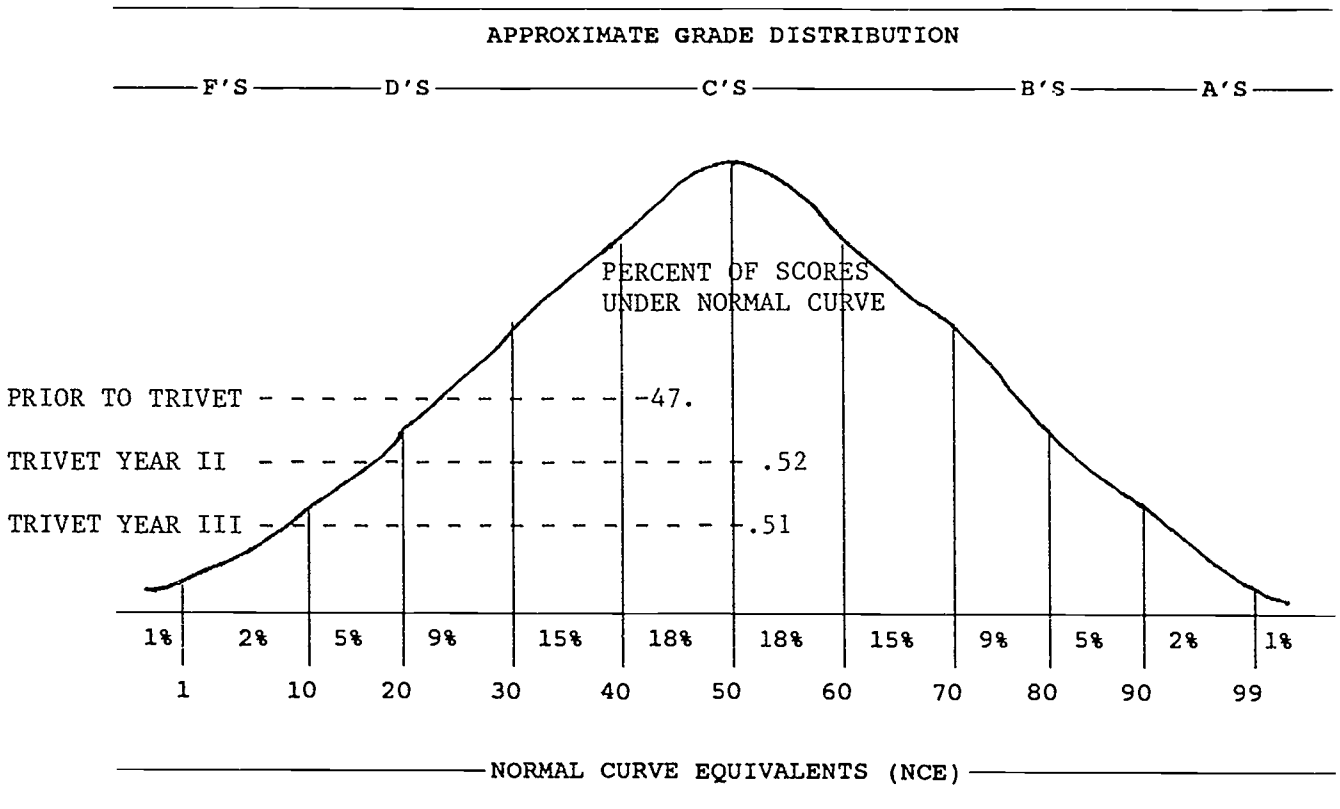
Discussion: These reading scores on the CAT are for students who were assigned to TRIVET-trained teachers compared with those who were not and with those who survived (remained with TRIVET-trained teachers) and those who were non-survivors.

GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE) OF STUDENTS WITH A TRIVET TEACHER

(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

TABLE XVIII



Sample is based on 87 students.

Discussion: The effects of TRIVET training on survivor (87) students as indicated by reading scores on the CAT are quite telling here. Prior to being assigned to TRIVET-trained teachers (prior to TRIVET being instituted in the Kennedy-Marshall Cluster), NCE scores were at 47. Within two years, and after being assigned to TRIVET-trained teachers during those years (Years I, II, and III), the same students as a group scored at 52 and at 51 in the third year (Year III).

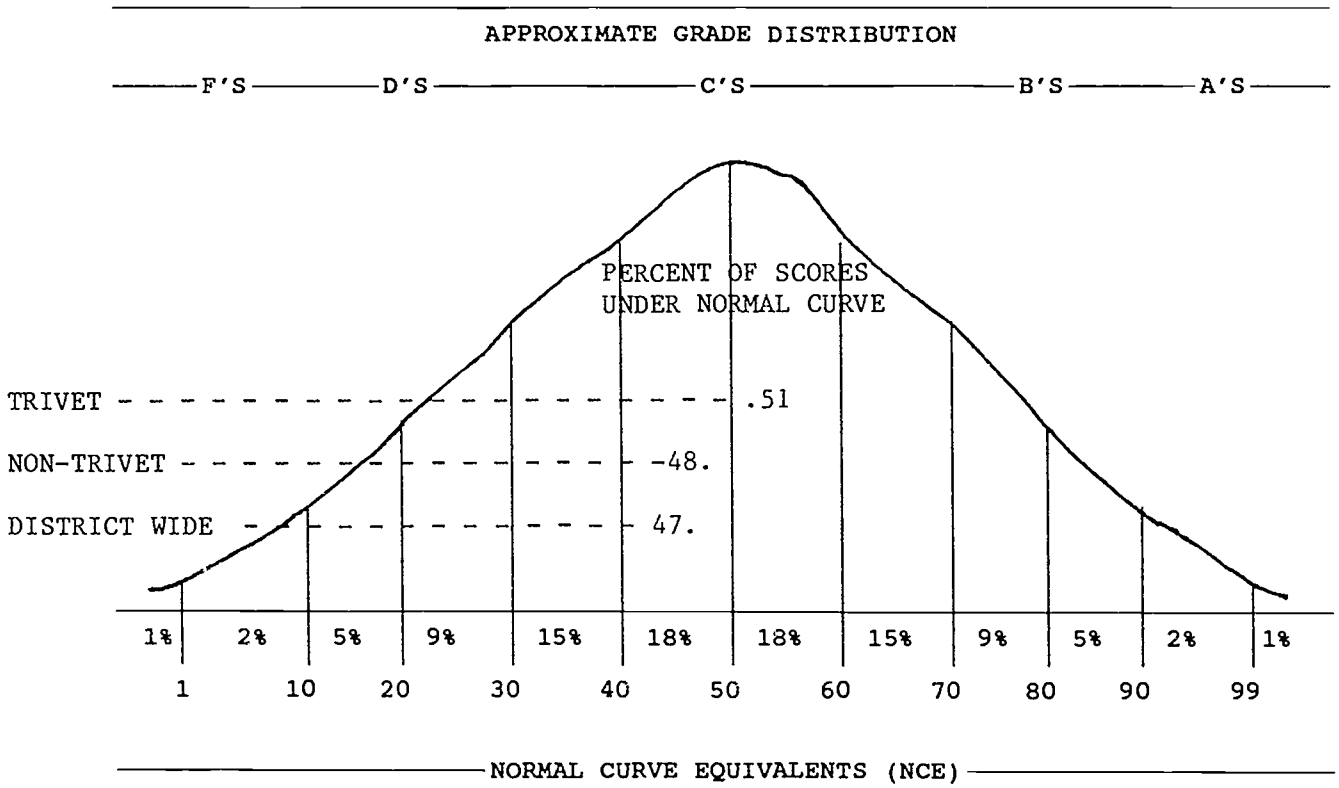
GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE)
AMONG 2nd GRADE TRIVET, NON-TRIVET, DISTRICT-WIDE STUDENTS

(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

GRADE LEVEL - 2

TABLE XIX



TRIVET Sample:	1,148
Non-TRIVET Sample:	4,971
District-Wide Sample:	28,606

GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE)
AMONG 3rd GRADE TRIVET, NON-TRIVET, DISTRICT-WIDE STUDENTS

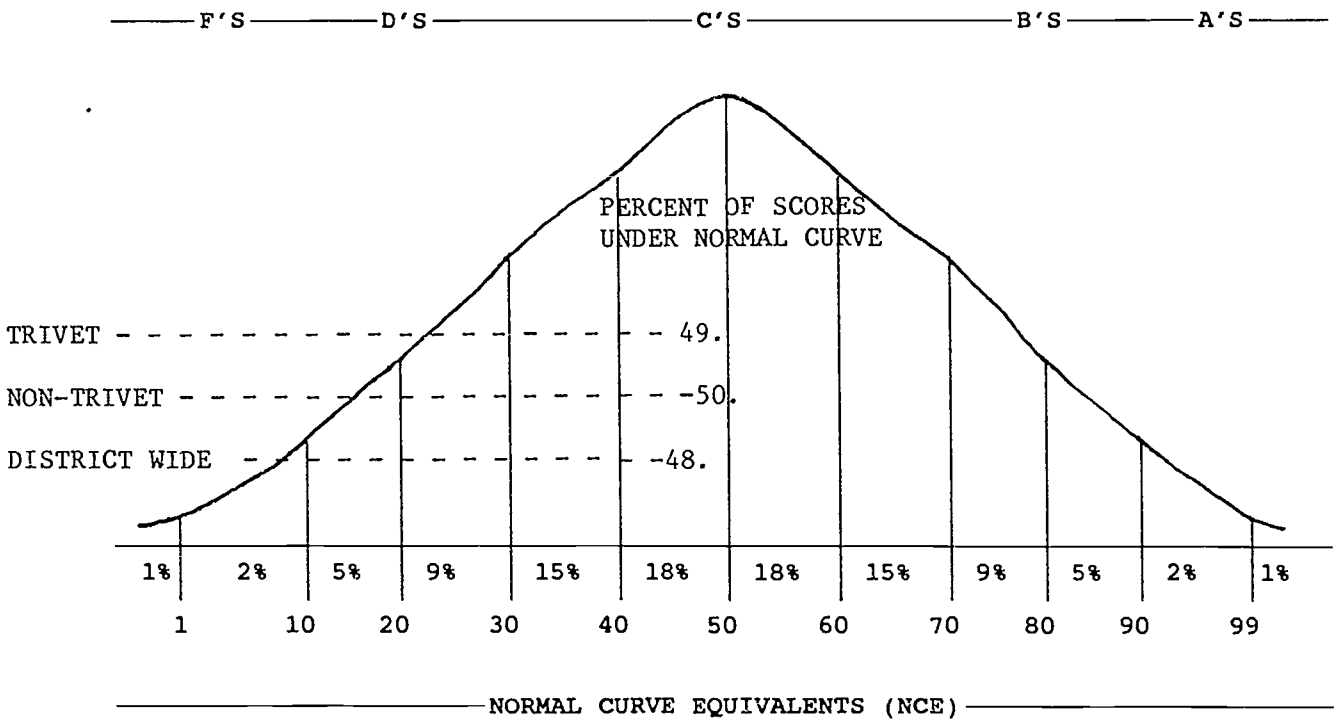
(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

GRADE LEVEL - 3

TABLE XX

APPROXIMATE GRADE DISTRIBUTION



TRIVET Sample:	1,148
Non-TRIVET Sample:	4,971
District-Wide Sample:	28,606

GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE)
AMONG 4th GRADE TRIVET, NON-TRIVET, DISTRICT-WIDE STUDENTS

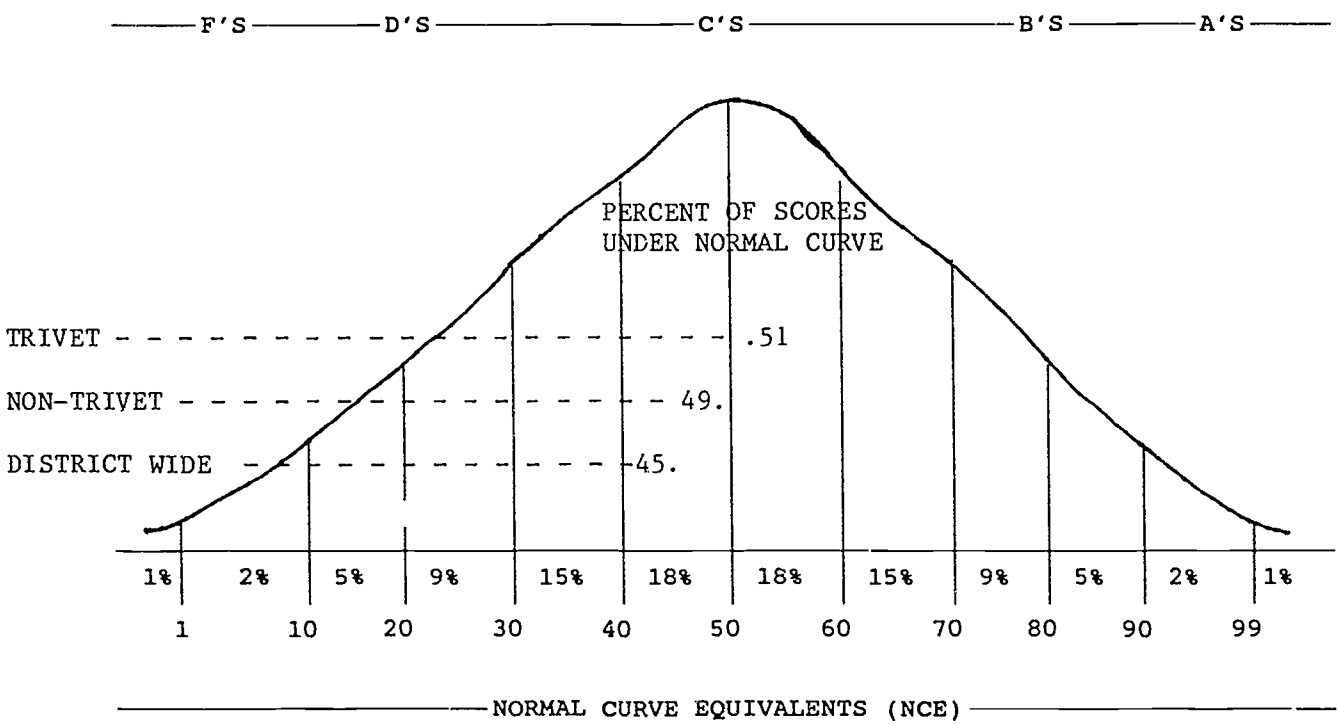
(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

GRADE LEVEL - 4

TABLE XXI

APPROXIMATE GRADE DISTRIBUTION



TRIVET Sample:	1,148
Non-TRIVET Sample:	4,971
District-Wide Sample:	28,606

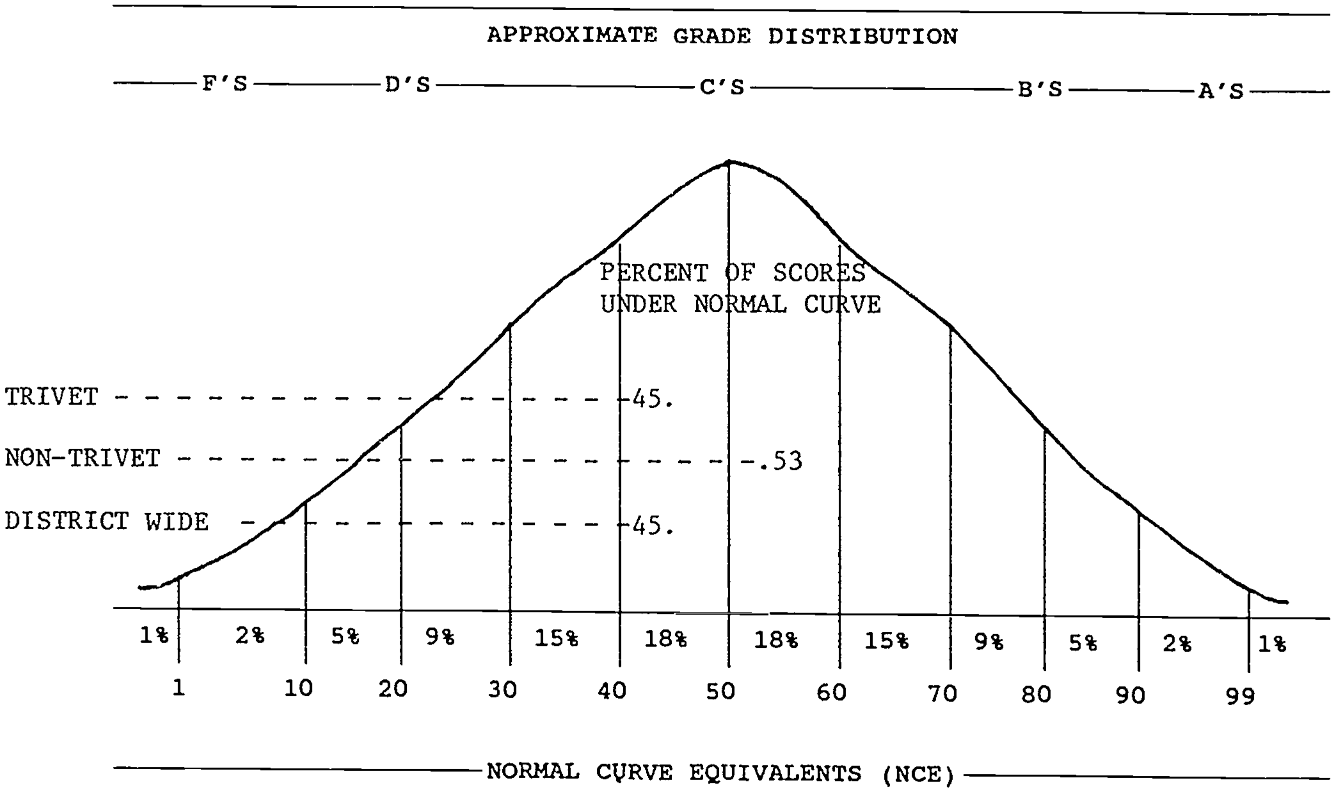
GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE) AMONG 5th GRADE TRIVET, NON-TRIVET, DISTRICT-WIDE STUDENTS

(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

GRADE LEVEL - 5

TABLE XXII



TRIVET Sample:	1,148
Non-TRIVET Sample:	4,971
District-Wide Sample:	28,606

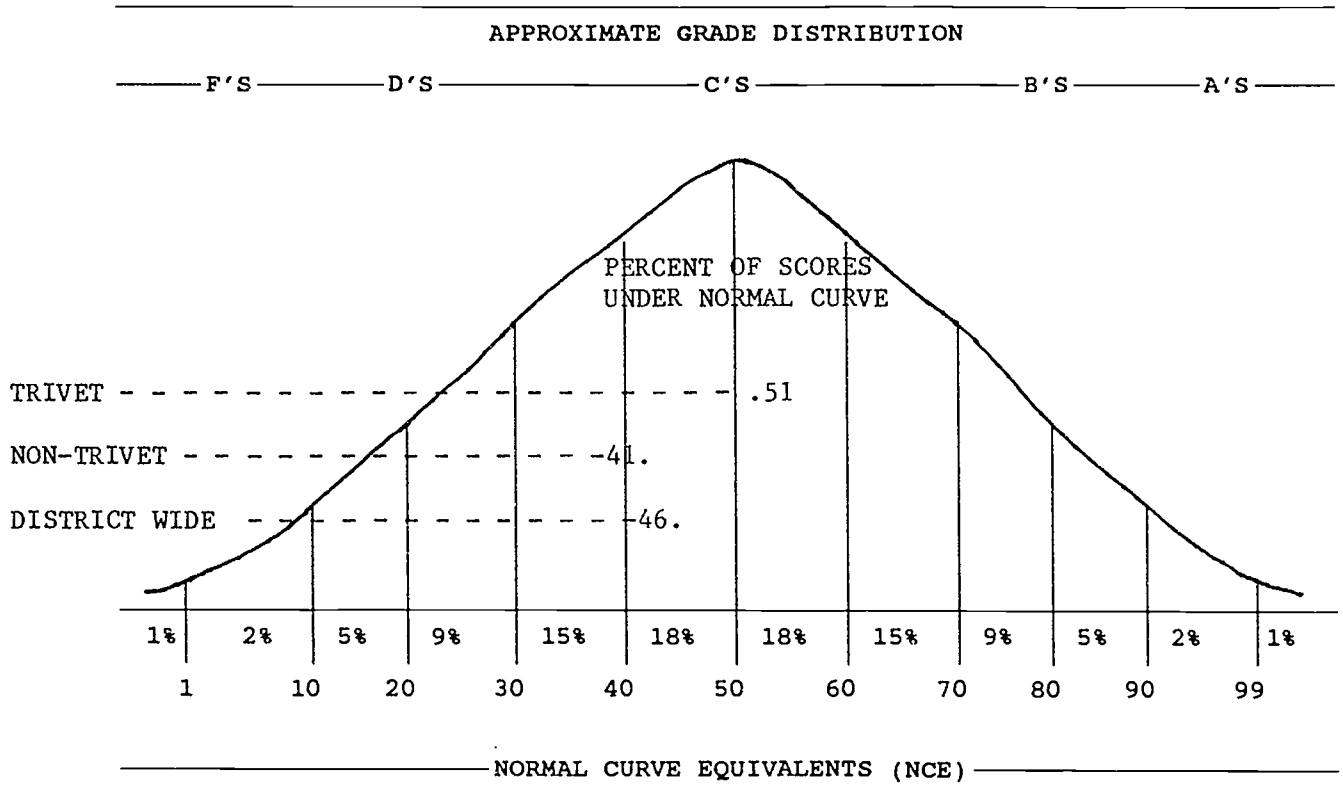
GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE)
AMONG 6th GRADE TRIVET, NON-TRIVET, DISTRICT-WIDE STUDENTS

(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

GRADE LEVEL - 6

TABLE XXIII



TRIVET Sample:	1,148
Non-TRIVET Sample:	4,971
District-Wide Sample:	28,606

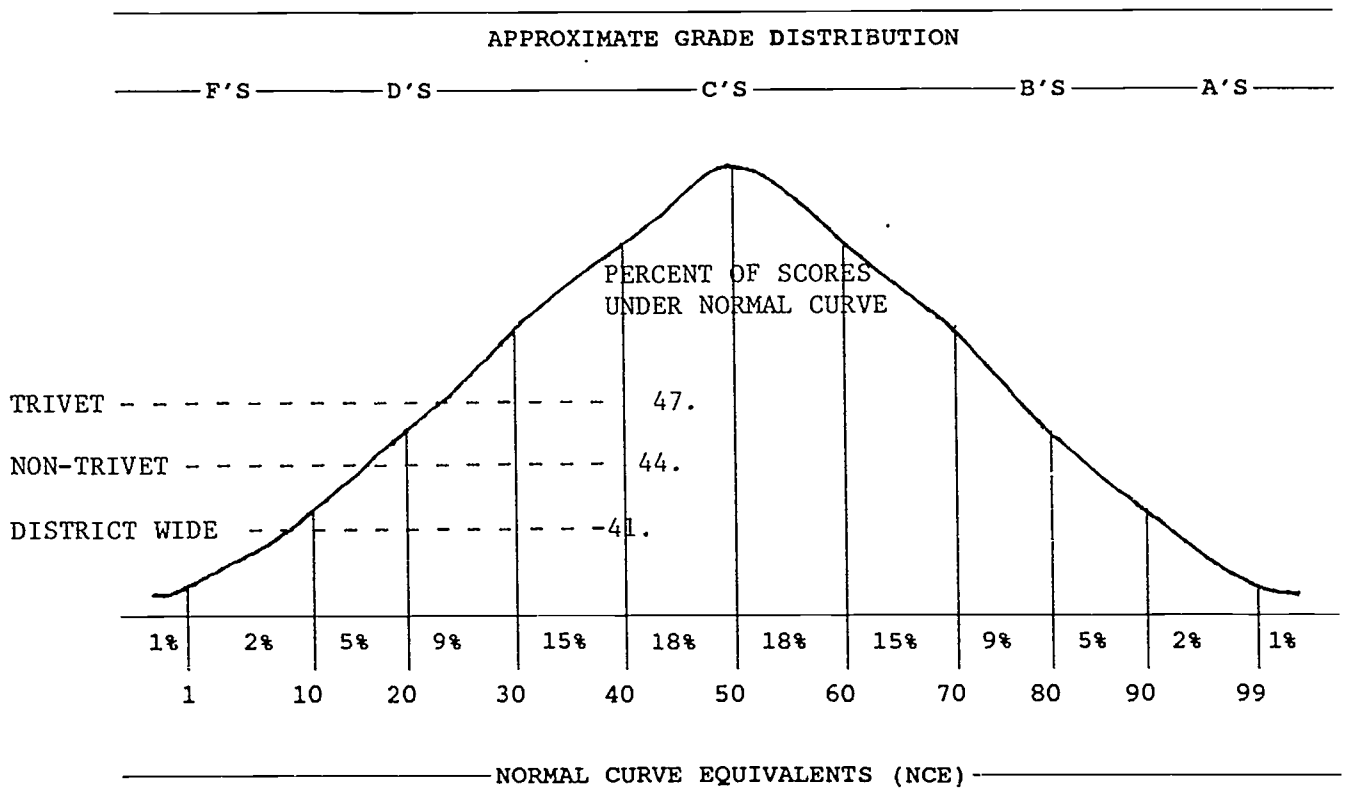
GRADE DISTRIBUTION: AVERAGE NORMAL CURVE EQUIVALENT (NCE)
AMONG 7th GRADE TRIVET, NON-TRIVET, DISTRICT-WIDE STUDENTS

(Based on California Achievement Test - Reading Scores)

Summary Data 1987-91

GRADE LEVEL - 7

TABLE XXIV



TRIVET Sample:	1,148
Non-TRIVET Sample:	4,971
District-Wide Sample:	28,606

REFERENCE LIST

Acheson, K. & Gall, M. (1987). Techniques in the clinical supervision of teachers. New York: Longman.

Anderson, H.M. (1954). A study of certain criteria of teaching effectiveness. Journal of Experimenatl Education, 23, 66-71.

Anderson, C. & Nicholson, G. (1987). Instructional leadership--can it be mearured validly? Who performs what functions? National Association of Secondary School Principals Bulletin, 71(502), 28-40.

Andrews, H. & Knight, J. (1987). Administrative evaluation of teachers: Resistance and rationale. National Association of Secondary School Principals Bulletin, 71(503), 1-4.

Bartalo, D. (1988). Turn "B" teachers into "A+s". The School Administator, 11(45), 15-17.

Berliner, D. (1980). Using research on teaching for the improvement of classroom practice. Theory in Practice, 19(4), 302-310.

Bolton, D. (1973). Selection and evaluation of teachers. Berkley, CA: McCutchan Publishing Corporation.

Brandt, R. (1987). On teacher evaluation: A conversation with Tom McGreal. Educational Leadership, 44(7), 20-24.

Brookover, W. B., Beamer, L., Efthim, H., Hathaway, D., Lezotte, L., Miller, S., Passalacqua, J., & Tornatzky, L. (1982). Creating effective schools. Holmes Beach, FL: Learning Publications, Inc.

Brookover, W. B. & Lezotte, L. (1979). School characteristics associated with changes in student achievement. East Lansing, MI: Michigan State University, Institute for Research on Teaching.

Brophy, J. E. (1973). Stability of teacher effectiveness. American Educational Research Journal, 10, 245-252.

Brophy, J. (1989). Research: Safe harbor from political winds. The School Administrator, 1(46), 23, 26-27.

Brophy, J. & Evertson, C. (1974). Process-product correlations in the Texas Effectiveness Study, final report, Report No 74-4. Austin: Research and Development Center for Teacher Education.

Buttram, J. & Wilson, B. (1987). Promising trends in teacher evaluation. Educational Leadership, 44(7), 4-6.

Calabrese, R. (1986). Effective schools and classroom instruction. The Clearing House, 59(6), 272-274.

Castetter, W. (1986). The personnel function in educational administration. New York: Macmillan.

Castetter, W. & Burchell, H. (1967). Educational administration and the improvement of instruction. Danville, IL: Educational Research and Service Bureau, Graduate School of Education, University of Pennsylvania.

Conley, D. (1987). Critical attributes of effective evaluation systems. Educational Leadership, 44(7), 60-64.

Costa, A., Garmston, R., & Lambert, L. (1988). Evaluation of teaching: The cognitive development view. In S. Stanley and W. J. Popham (Eds.), Teacher evaluation: Six prescriptions for success(pp. 145-170). Alexandria, VA: Association For Supervision and Curriculum Development.

Cotton, K., & Savard, W. G. (1980). The principal as instructional leader. (Topic summary report). Portland: Northwest Regional Educational Laboratory, Research on School Effectiveness Project. (ERIC Document Reproduction Service No. ED 214 702)

Crawford, J., Gage, N., Corno, L., Stayrook, N., Mitman, A., Schunk, D., Stallings, J., Baskin, E., Hanvey, P., Austin, D., & Newman, R. (1978). An experiment on teacher effectiveness and parent assisted instruction in the third grade. Stanford, CA: Center for Educational Research at Stanford, Stanford University.

DeRoche, E. (1981). An administrator's guide for evaluating programs and personnel. Boston: Allyn & Bacon, Inc.

Duffy, G. (1981). Teacher effectiveness research: Implications for the reading profession. In M. L. Kamii (Ed.), Thirtieth yearbook of the national reading conference(pp.113-126). Chicago: National Reading Conference.

DuFour, R. & Eaker, R. (1987). The principal as leader: Two major responsibilities. National Associaltion of Secondary School Principals Bulletin, 71(502), 80-89.

Duke, D. & Stiggins, R. (1986). Five keys to growth through teacher evaluation. Protland, OR: Northwest Regional Laboratory.

Dunkin, M. & Biddle, B. (1974). The study of teaching. New York: Holt, Rinehart, and Winston.

Dunkleberger, G. (1982). Classroom, observation-what should principals look for? National Association of Secondary School Principals Bulletin, 66(458), 9-15.

Dunkleberger, G. (1987). Making the most of the post-observation conference. National Association of Secondary School Principals Bulletin, 71(503), 51-55.

Ellis, T. (1984). Teacher competency: What administrators can do. ERIC Digest, No. 9. Eugene, OR: ERIC Clearinghouse on Educational Management.

Ellman, N. (19). Evaluating representative teaching behaviors. National Association of Secondary School Principals Bulletin, 60(40), 25-27.

Foley, W. (1981). On evaluation and the evaluation of teachers. Iowa City, IA: University of Iowa, Institute for School Executives. (ERIC Document Reproduction Service No. ED 209 764)

Furst, N. (1971a). Classroom observation, systematic. In I. Deighten (Ed.) The Encyclopedia of Education. New York: Macmillan.

George, P. (1987). Performance management in education. Educational Leadership, 44(7), 32-39.

Gephart, W. & Ingle, R. (1983). Introduction to Teacher evaluation: Gathering and using data(pp.1-8). Bloominton, IN: Phi Delta Kappa.

Gigliotti, R. & Broodover, W. (1975). The learining environment: A comparison of high and low achieveing elementary schools. Urban Education, 10, .

Good, T. (1983-84). Observation and the evaluation of teaching. In K. Klein (Ed.). Evaluation of teaching: The formative process(pp.107-150). Center of Evaluation, Development, and Research, Hot Topics Series. Bloomington IN: Phi Delta Kappa.

Good, T. & Brophy, J. (1984). Looking in the classroom. New York: Harper & Row.

Hall, C. (1980). A study of issues involving teacher accountability and evaluation. (ERIC Document Reproduction Service No. ED 196 854)

Harris, B. (1987). Resolving old dilemmas in diagnostic evaluation. Educational Leadership, 44(7), 46-49.

Hobar, N., & Sullivan, D. (1984). Systematic observation of instruction: Genesis, research, practice, and potential. Journal of Classroom Interaction, 19(2), 26-34.

Hunter, M. (1988). Create rather than await your fate in teacher evaluation. In S. Stanley and W.J. Popham (Eds.), Teacher evaluation: Six prescriptions for success(pp.32-54). Alexandria, VA: Association For Supervision and Curriculum Development.

Jackson, S., Logsdon, D., & Taylor, N. (1983). Instructional leadership behaviors: Differentiating effective from ineffective low-income urban schools. Urban Education, 19(1), 59-70.

Jacobson, W. (1987). The rewards of instructional leadership. National Association of Secondary School Principals Bulletin, 71(498), 57-58,60-66.

Jayne, C. (1945). A study of the relationship between teaching procedures and educational outcomes. Journal of Experimental Education, 14, 101-134.

Johnson, W. & Snyder, K. (1986). Instructional leadership training needs for school principals. The Journal of Educational Administration, 24(2), 237-253.

Klitgaard, G. (1987). The principal's role in helping teachers manage their classrooms. National Association of Secondary School Administrators Bulletin, 71(502), 64-67.

Klopf, G., Scheldon, E. & Brennan, K. (1982). The essentials of effectiveness: A job description for principals. Principal, March, 35-38.

Lamb, R. & Thomas, M. (1981). The art and science of teacher evaluation. Principal, 61(1), 44-47.

Larsen, T. (1987, April). Identification of instructional leadership behaviors and the impact of their implementation of academic achievement. Paper presented at the meeting of the American Educational Research Association, Washington, D.C.

Leithwood, K. & Montgomery, D. (1982). The role of the elementary school principal in program improvement. Review of Educational Research, 52(3), 309-339.

Leithwood, K. & Montgomery, D. (1984). Obstacles preventing principals from becoming more effective. Education and Urban Society, 17(1), 73-88.

Leithwood, K., Stanley, K. & Montgomery, D. (1984). Training principals for school improvement. Education and Urban Society, 17(1), 49-71.

Lewis, J. (1983-84). Appraising teacher performance. In K. Klein (Ed.), Evaluation of teaching: The formative process(pp. 165-193). Center for Evaluation, Development, and Research, Hot Topics Series. Bloomington, IN: Phi Delta Kappa.

Lezotte. L. (1982). Effective schools research and its implications. Citizen Action in Education, 9, 10-11.

Lezotte, L. (1983, November). What is the effective school movement? The Effective School Report, 1, 1.

MacPhail-Wilson, B. & Guth, J. (1983). Effectiveness research and school administration-both sides of the coin. National Association of Secondary School Administrators Bulletin, 67(465), 3-8.

Manasse, A. L. (1984). Principals as leaders of high-performing systems. Educational Leadership, 41(5), 42-46.

Manatt, R. (1988). Teacher performance evaluation: A total systems approach. In S. Stanley amd W. J. Popham (Eds.), Teacher evaluation: Six prescriptions for success (pp. 79-108). Alexandria, VA: Association for Supervision and Curriculum Development.

Manatt, R., Palmer, K., & Hidlebaugh, E. (1976). Evaluating teacher performance with improved rating scales. National Association of Secondary School Principals Bulletin, 60(401), 21-24.

March, J., Peters, K., & Orrach, L. (1988). Techniques of responsive intervention to validate effective teaching. Unpublished manuscript, Kent State University, Center for School Personnel Relations, Kent, OH.

Martin, E. (1983-84). Teacher evaluation: A selected review of the recent literature. In K. Klein (Ed.), Evaluation of teaching: The formative process (pp. 65-68). Center on Evaluation, Development, and Research. Hot Topics Series. Bloomington, IN: Phi Delta Kappa.

McCurdy, J. (1983). The role of the principal in effective schools (AASA critical issues report). Sacremento, CA: Education News Service.

McGreal, T. (1982). Effective teacher evaluation systems. Educational Leadership, 39(4), 303-305.

McGreal, T. (1988). Evaluation for enhancing instruction: Linking teacher evaluation and staff development. In S. Stanley and W. J. Popham (Eds.), Teacher evaluation: Six prescriptions for success (pp.1-29). Alexandria, VA: Association for Supervision and Curriculum Development.

McKenna, B. (1981). Context/environment effects in teacher evaluation. In J. Millman (Ed.), Handbook of teacher evaluation (pp. 23-39). Beverly Hills, CA: Sage Publications.

Medley, D. (1972). Early history of research on teacher behavior. International Review of Education, 18, 430-439.

Medley, D. & Coker, H. (1987). How valid are principal's judgements of teacher effectiveness? Phi Delta Kappan, 69(2), 138-140.

Medley, D., Coker, H., & Soar, R. (1984). Measurement-based evaluation of teacher performance. New York: Longman.

Medley, D., & Crook, P. (1980). Research in teacher competency and teaching tasks. Theory into practice, 19(4), 294-301.

Medley, D., & Mitzel, H. (1958). A technique for measuring classroom behavior. Journal of Educational Psychology, 49(2), 86-92.

NAESP (1986). Proficiencies for principals kindergarten through eighth grade. Alexandria, VA: National Association of Elementary School Principals.

NAESP (1988). Effective teachers: Effective evaluation. Alexandria, VA: National Association of Elementary School Principals.

Notar, E. (1987). Principal as instructional manager: A meta-theory for evaluation of instruction. National Association of Secondary School Principals Bulletin, 71(502), 89-91.

O'Neill, K., & Shoemaker, J. (Eds.). (1989). A conversation between James Comer and Ronald Edmonds: Fundamentals of effective school improvement. Dubuque, IA: Kendall/Hunt Publishing.

Pembroke, E., & Goedert, E. (1982). What is the key to developing an effective teacher evaluation system? National Association of Secondary School Principals Bulletin, 66(458), 29-37.

Petrie, T. (1982). Ideas that hinder evaluation: Debunking the myths. National Association of Secondary School Principals Bulletin, 66(458), 52-55.

Popham, W. (1981, April 13-17). Teacher evaluation--the wrong tests for the right job. (Adapted from) a symposium presentation at a jointly sponsored session during the annual meetings of the National Council of Measurement in Education and the American Educational Research Association. Los Angeles, CA. (ERIC Document Reproduction Service No. ED 199 298)

Popham, W. (1988). Judgement-based teacher evaluation. In S. Stanley and W. J. Popham (Eds.), Teacher evaluation: Six prescriptions for success (pp. 56-77). Alexandria, VA: Association for Supervision and Curriculum Development.

Prince, J. (1983-84). Formative teacher evaluation: The crucial element in an outcome-based education program. In K. Klein (Ed.), Evaluation of teaching: The formative process (pp. 85-94). Center on Evaluation, Development, and Research. Hot Topics Series. Bloomington, IN: Phi Delta Kappa.

Redfern, G. (1964). How to appraise teaching performance. Columbus, OH: School Management Institute, Inc.

Redfern, G. (1980). Evaluating teachers and administrators: A performance objectives approach. Boulder,CO: Westview Press.

Redfern, G., & Hersey, P. (1980). Evaluation of teachers... Performance-improvement-commitments. The practitioner, 6(3), 1-17. (ERIC Document Reproduction Service No. ED 182 817)

Robinson, G. (1985). Effective schools research: A guide to school improvements. Concerns in education. Arlington: Educational Research Service.

Rosenshine, B. (1970). Evaluation of classroom instruction. Review of Educational Research, 40, 279-300.

Rosenshine, B., & Furst, N. (1973). The use of direct observation to study teaching. In R. Travers (Ed.), Second handbook of research on teaching (pp. 122-183). Chicago: Rand McNally.

Rupley, W., Wise, B., & Logan, J. (1986). Research in effective teaching: An overview of its development. In J. Hoffman (Ed.), Effective teaching of reading: Research and practice (pp. 1-36).Newark, DE: International Reading Association.

Russell, J., Mazzarella, J., White, T., & Maurer, S. (1985). Linking the behaviors of secondary school principals to school effectiveness: A focus on effective and ineffective behaviors. Eugene, OR: Center for Educational Policy and Management Division, University of Oregon.

Rutherford, W., Hord, S., & Thurber, J. (1984). Preparing principals for leadership roles in school improvement. Education and Urban Society, 17(1), 29-48.

Sadler, N. (1982). The appraisal interview: Management techniques for evaluating teachers. National Association of Secondary School Principals Bulletin, 66(458), 1-8.

Savage, J. (1982). Teacher evaluation without classroom observation. National Association of Secondary School Principals Bulletin, 66(458), 41-45.

Scriven, M. (1981). Summative teacher evaluation. In J. Millman (Ed.), Handbook of teacher evaluation (pp. 244-271). Beverly Hills, CA: Sage Publications.

Seeley, D. (1984). Who, when, what, where, why of educational leadership. The School Administrator, 41(11), 10-11.

Seyfarth, J., & Nowinski, E. (1987). Administrator feedback can improve classroom instruction. National Association of Secondary School Principals Bulletin, 71(503), 47-49.

Smith, B. O. (1984). Forward to Measurement-based evaluation of teacher performance (pp. xii-xiv). New York: Longman.

Snyder, K. (1984). Preparing principals to manage productive schools: A neglected dimension of teacher education. Journal of Teacher Education, 35(2), 55-57.

Soar, R. (1972a). Teacher-pupil interaction. In J. R. Squire (Ed.), A new look at progressive education. Washington, DC: Association for Supervision and Curriculum Development.

Soar, R. (1972b). Teacher behavior related to pupil growth. International Review of Education, 18, 508-526.

Soar, R., Medley, D., & Coker, H. (1983). Teacher evaluation: A critique of currently used methods. Phi Delta Kappan, 65(4), 239-246.

Soar, R. S., & Soar, R. M. (1972). An empirical analysis of selected follow through programs: An example of a process approach to evaluation. In I. Gordon (Ed.), Early childhood education (pp. 229-261). Chicago: National Society for the Study of Education.

Stow, S., & Sweeney, J. (1981). Developing a teacher performance evaluation system. Educational Leadership, 38(7), 538-541.

Sweeney, J. (1982a). Research synthesis on effective school leadership. Educational Leadership, 395), 346-352.

Texas Education Agency (1987). Texas teacher appraisal system orientation manual (1987-88). Austin, TX: Texas Education Agency, Division of Management Assistance and Personnel Development.

Turner, B. (1983). (Pamphlet advertising the) KEDS Desegregation Assistance Center. Kent,OH: Kent State University.

Turner, R. (1986). Teachers speak out about their evaluations. Learning '86, 15(2), 58-67.

Weller, D. (1985). The principal: Catalyst for promoting effective schooling. Action in Teacher Education, 7(3), 7-12.

Wise, A., Darling-Hammond, L., McLaughlin, M., & Lernstein, H. (1984). Teacher evaluation: A study of effective practice. Santa Monica, CA: Rand Corporation. (ERIC Document Reproduction Service No. ED 246 559)

Wood, C., & Pohland, P. (1979). Teacher evaluation: The myths and realities. In W. Duckett (Ed.), Planning for the evaluation of teaching (pp. 73-83). Bloomington, IN: Phi Delta Kappa.

Worner, W., & Stokes, R. (1987). A Virginia study: Instructional leadership: What are the activities and who performs them? National Association of Secondary School Principals Bulletin, 71(502), 49-56.

Zumwalt, K. (1982). Research on teaching: Policy implications in teacher education. Eighty-first yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press.