

1988

A study of teachers' opinions of alternative compensation plans

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Iowa State University, 1988

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A study of teachers' opinions of alternative compensation
plans

by

Donna Kay Wilkin

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
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1988

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CHAPTER I: INTRODUCTION

The nationwide emphasis on teacher accountability and excellence has spurred school districts throughout the country to implement various types of alternative compensation programs for teachers. In their broadest sense, alternative compensation plans provide incentives for the recruitment, professional development, and retention of highly qualified teachers (District of Columbia Public Schools, 1984). Merit pay, monetary and nonmonetary incentives, and career ladders, are examples of performance-based plans which compensate teachers differently according to the quality of their work; supplemental pay plans compensate teachers for extra work outside school hours (Flannelly & Palaich, 1985). By 1985, twenty-six states had either established state wide alternative compensation plans or had passed legislation allowing districts to develop their own plans (Bray et al., 1985).

In 1987 the Iowa legislature appropriated approximately fifty million dollars for performance-based and supplemental pay to teachers for the 1987-88 school year (Iowa General Assembly House File 499, 1987). Under this legislation, each district which submitted a plan that was approved by the state Department of Education

received \$82.66 per pupil to enact its plan. For the 1987-88 school year, 428 districts out of 436 total districts received state approval for their plans. Arrowhead Area Education Agency (AEA) 5 in Fort Dodge, Iowa, assisted the 45 school districts which it serves in developing their Phase III plans. (A description of the services and activities provided by this Phase III Program will be described in Chapter III.) The teachers in these 45 school districts were the subjects of this study. Their responses to two surveys (one prior to the Phase III activities and one following those activities) provided the data for this research.

Despite the national proclivity to adopt alternative compensation plans, critics caution that the average longevity of such programs is less than five years (Porwoll, 1979). Recent studies suggest that two of the factors contributing to the failure of alternative compensation plans are (a) the lack of teacher involvement in the development of the plan (Murnane & Cohen (1985), Ogletree (1985), and Boyles & Vrochta, (1986) and (b) a poor match between the type of plan adopted and the types of teachers in the district (Ogletree, 1985).

However, little research has been conducted to determine teacher preference for alternative compensation

plans and the reward and evaluation components of those plans. Additionally, few studies have investigated whether teachers with certain characteristics prefer different types of alternative compensation plans than teachers with other characteristics. And no evidence is apparent which indicates whether teachers who participate in the development of their district's plan (which involves attending workshops addressing the research on alternative compensation plans) subsequently view alternative compensation programs differently than teachers who are not directly involved in the development of their district's plan. Such information could be utilized by districts to design plans with the potential to remain in effect longer than five years.

Statement of the Problem

This study addressed the problem of the lack of information regarding teacher preference for alternative compensation plans. The issue is both current and critical, for there is a need to know what teachers think about pay based upon performance. Specifically, the researcher asked the following questions in the study.

1. What are teachers' opinions of the reward components of alternative compensation plans?

2. What are teachers' opinions of evaluation components of alternative compensation plans?
3. What are teachers' opinions of alternative compensation plans?
4. Do teachers with certain characteristics prefer different types of plans than teachers with other characteristics?
5. Do teachers who participate in the development of a district plan change their ratings of alternative compensation plans after their participation in the development of the plan?
6. Do teachers who do not participate in the development of a district plan change their ratings of alternative compensation plans after their district's plan has been developed?

Purposes of the Study

There were three primary purposes of the study. The first purpose was to determine teachers' opinions of alternative compensation plans including: (a) reward components, (b) evaluation components, and (c) overall type of plan adopted. The second purpose was to

determine whether teachers with certain characteristics prefer different types of plans than teachers with other characteristics. The third purpose of the study was to determine whether teachers' opinions of alternative compensation plans change after the development of their districts' plans.

Objectives of the Study

The specific objectives of the study are stated below. Objectives one through four refer to data collected prior to districts initiating activities to develop alternative compensation plans. Objectives five and six refer to data collected both before and after districts initiated activities to develop alternative compensation plans.

1. To determine teachers' ratings of the reward components of alternative compensation plans
2. To determine teachers' ratings of the evaluation components of alternative compensation plans
3. To determine teachers' ratings of six alternative compensation plans: including "Merit Pay With Salary Schedule", "Merit Pay Without Salary Schedule", "Monetary Incentives", "Nonmonetary

Incentives", "Career Ladders", and "Supplemental Pay"

4. To determine whether teachers with certain characteristics differ in their ratings of types of alternative compensation plans from teachers with other characteristics. The teacher characteristics studied include:
 - a. years teaching experience
 - b. involvement in professional development
 - c. employment outside the school district
 - d. attitude toward changes in the school setting
 - e. perception of self as a teacher
 - f. gender
 - g. grade level taught
 - h. the interaction of gender and grade level taught

This objective will be addressed in Hypotheses #1 - 8.

5. To determine whether teachers who participate in the development of their districts' alternative compensation plans (which includes attending workshops addressing the research regarding alternative compensation plans) change their ratings of alternative compensation plans after

participating in the development of the plan.

This objective will be addressed in Hypothesis #9

6. To determine whether teachers who do not participate in the development of a district's alternative compensation plan change their ratings of alternative compensation plans after their district plans have been developed. This objective will be addressed in Hypothesis #10

Research Hypotheses

This study examined teachers' opinions of alternative compensation plans before and after districts initiated activities to develop alternative compensation plans.

(Those activities will be explained in Chapter III.) The six types of alternative compensation plans studied included: "Merit Pay With Salary Schedule", "Merit Pay Without Salary Schedule", "Monetary Incentives" , "Nonmonetary Incentives", "Career Ladders", and "Supplemental Pay".

H01: Prior to the development of a district's alternative compensation plan, there is no significant difference in mean teacher ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey)

for the following categories of teachers: (a) teachers with 0-3 years teaching experience, (b) teachers with 4-11 years teaching experience, (c) teachers with 12 -19 years experience, and teachers with 20 or more years experience (item 7 on the survey)

H02: Prior to the development of a district's alternative compensation plan, there is no significant difference in mean teacher ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) the following categories of teachers: (a) teachers who participate in 0-1 professional courses or workshops per year, and (b) teachers who participate in 2 or more professional courses or workshops per year (item 8 on the survey)

H03: Prior to the development of a district's alternative compensation plan, there is no significant difference in mean teacher ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) the following categories of teachers: (a)

teachers who are not employed outside the school district, (b) teachers who work outside the school district for enjoyment or to earn money for extras, and (c) teachers who work outside the school district in order to earn money for necessities (item 9 on the survey)

H04: Prior to the development of a district's alternative compensation plan, there is no significant difference in mean teacher ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) for the following categories of the variable "Attitude Toward Change in the Work Setting": (a) teachers who describe themselves as "Enthusiastic" or "Interested" in changes in their work setting, and (b) teachers who describe themselves as "Neutral", "Concerned", or "Very Concerned" about changes in their work setting (item 11 on the survey)

H05: Prior to the development of a district's alternative compensation plan, there is no significant difference in mean teacher ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey)

for the following categories of teachers: (a) teachers who perceive themselves as "Exceptional", (b) teachers who perceive themselves as "Above Average", and (c) teachers who perceive themselves as "Average" or "Below Average" (item 12 on the survey)

- H06: Prior to the development of a district's alternative compensation plan, male and female teachers (item 5 on the survey) do not differ significantly in their ratings of each alternative compensation plan (the rating portion of items 43-48 on the survey)
- H07: Prior to the development of a district's alternative compensation plan, teachers' ratings of each alternative compensation plan (the rating portion of items 43-48 on the survey) do not differ according to the grade level at which they teach (item 6 on the survey)
- H08: Prior to the development of a district's alternative compensation plan, there is no interaction effect between gender and grade level taught when examining teacher ratings of

each alternative compensation plan (the rating portion of items 43 - 48 on the survey)

H09: Teachers who participate in the development of their district's alternative compensation plan (item 4 on the survey) indicate no significant changes in their ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) before and after their participation in the development of the plans

H010: Teachers who do not participate in the development of their district's alternative compensation plan (item 4 on the survey) indicate no significant changes in their ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) before and after their participation in the development of the plan

Definition of Terms

The terminology used to describe alternative activities to develop alternative compensation plans is frequently confusing and conflicting. A term used by one district to describe a certain type of plan may be used by another district to describe a very different type of

plan. Therefore, the following definitions are provided (Tyler, Texas Independent School District, 1984).

Alternative Compensation - Payment for teachers which may include but is not solely based on the salary schedule
Career Ladders - Programs which establish several levels of career advancement for teachers (e.g., master teacher, apprentice, etc.) that tie each level to a higher salary, additional competencies and different combinations of responsibilities

Merit Pay - Payment for teachers based on either input criteria such as classroom performance, knowledge of subject matter, etc. or on outcomes of a teacher's efforts such as student test scores

Monetary Incentives - Financial compensation for teachers who meet certain established goals or objectives such as reducing absenteeism, acquiring new skills, or accepting difficult teaching assignments

Nonmonetary Incentives - Opportunities for professional improvement and activities as well as recognition and non-financial compensation for teachers who meet certain performance standards or objectives

Performance-based Compensation - Payment for teachers which is based either wholly or partly on work quality

Supplemental Pay - Additional payment to teachers for work after contract hours (e.g., curriculum development, staff training, coaching, etc.)

Assumptions

It was assumed that the Arrowhead AEA 5 Phase III Survey provided a valid appraisal of teacher characteristics and teacher preferences for alternative activities to develop. It was further assumed that the participating teachers gave candid responses to all questions on the survey.

Delimitations

The following factors limited the scope of the investigation:

1. The study was limited to public school teachers from forty-five school districts in Arrowhead Area Education Agency (AEA) 5 in north central Iowa
2. Teacher characteristics were determined by teacher's responses to multiple choice questions about themselves

3. The teacher characteristic "Attitude Towards Change" was determined by teachers' answers to only one question about this characteristic
4. Teachers identified as not participating in the development of an alternative compensation plan may have been indirectly involved in the development of their district's plan

CHAPTER II: REVIEW OF LITERATURE

Introduction

American education during the 1980s has been confronted with fervent and conflicting demands from the public. Citizens concerned about declining educational standards have called for a more demanding curriculum and better teachers. At the same time Americans worried about a sagging economy have demanded more fiscal efficiency from school districts and educational institutions. Simply put, American education has been challenged to do better and to cost less. In response to these political pressures, many states and local school districts have proposed new systems for compensating teachers. These new systems generally have incorporated the concept of paying teachers according to their performance -- a concept which has gained political support at the highest state and national levels (Kapel, et al., 1985). Witness the support for merit pay by Former Secretary of Education Bell (1963), the House Committee on Education and Labor (1983), and President Reagan (Washington, Post, 1983).

The National Commission on Excellence in Education (1983), recommended that:

Salaries for the teaching profession should be increased and should be professionally competitive, market sensitive, and performance-based. Salary, promotion, tenure, and retention decisions should be tied to an effective evaluation system that includes peer review so that superior teachers can be rewarded, average ones encouraged, and poor ones either improved or terminated. School boards, administrators, and teachers should cooperate to develop career ladders for teachers that distinguish among the beginning instructor, the experienced teacher, and the master teacher. Master teachers should be involved in designing teacher preparation programs and in supervising teachers during the probationary years.

Yet, despite the burgeoning support from officials, many educators regard merit reform as more "cosmetic than cosmic" (Seib, 1984). Addressing the merit pay recommendations of the National Commission on Excellence, a vocational education teacher from Michigan wrote, "To think that merit pay would come close to solving any of the problems in education today is to think that a Band-Aid will cure heart disease" (Adkins, 1983). Perhaps more than any other area of educational reform, performance-based pay has created fervent supporters and detractors who find almost no common area of agreement in the controversy.

A review of the current literature regarding alternative compensation plans reveals three major areas of research critical to the development of this study:

- (a) research involving the types of alternative

compensation plans used by school districts, (b) research involving opinions of alternative compensation systems, and (c) research investigating teacher characteristics and/or the relationship of teacher characteristics to preference for alternative compensation plans. Each of these three areas will be addressed separately in this chapter.

Research on Types of Alternative Compensation Plans

In 1985 more than 99 percent of American public school teachers were employed in districts that utilized uniform salary scales. Under such contracts, a teacher's salary is determined exclusively by educational credentials and years teaching experience (Murnane & Cohen, 1985). However, by 1986 more than 300 state and local commissions had emphasized the need for changes in the structure of the teaching profession including providing more incentives for attracting and retaining talented persons in the profession (Duttweiler & Ramos-Cancel, 1986), and more than twenty states had placed some form of incentive-pay proposal on their legislative agendas (Education USA, 1986).

Merit pay, monetary incentives, nonmonetary incentives, and career ladders are the most prevalent types of performance-based alternative compensation

systems. Supplemental pay is generally not considered a performance-based system (Tyler, Texas Independent School District, 1984). Unfortunately, these terms are often used ambiguously and interchangeably even though the models differ significantly in their basic concepts.

In a study of 76 performance-based compensation plans in the United States, Boyles and Vrchota (1986) identified nine "success elements" which must be addressed before any success with a plan might be expected:

1. Planning - both long term and on-going
2. Organization - identifying the type of plan utilized
3. Participation - mandatory vs. non-mandatory and individual vs. group
4. Evaluators - administrators, peers, a committee, others
5. Evaluation Process - number of observations and conferences, criteria, self-evaluation
6. Incentive Plans: Financial - stipends, awards, advancement on salary schedule, extra pay for extra work, annual or permanent salary adjustments, amount paid
7. Incentive Plans: Nonfinancial - type of compensation, purpose, amount of money expended

8. Financial Resources - amount available, sources of funds
9. Plan Monitoring/Revisions - purpose, frequency, participants

In summary, Boyles and Vrchota concluded that:

There are many school districts applying the principles of performance-based compensation plans. Most of these plans are very new and some will or have failed. But many have and will continue to succeed.

Murnane and Cohen (1985) were not as optimistic in their view of merit pay as Boyles and Vrchota. In their conclusion of research involving six school districts using merit pay plans, Cohen and Murnane (1985) write that:

The very attributes of design and community that make merit pay successful in the short run tend to make it self-defeating in the long run. This does not mean that some forms of merit pay are not useful under some circumstances. It just means that merit pay is not by itself an enduring or an entirely satisfactory way to strengthen incentives for good teaching.

Merit Pay Plans

Merit pay plans generally involve performance-based salary increments or bonuses which are annually determined on the basis of teacher evaluation (Bacarach et al., 1984). The basic concept underlying most

merit-pay proposals is that teachers can be motivated to perform more effectively if some form of monetary reward is available for outstanding performance (Darling-Hammond, 1985). Such plans have a long and erratic history in American schools. A survey of 3,000 school districts by the Educational Research Service (1979) found that 4 percent of the respondents were using some kind of merit pay plan while 8 percent had once tried merit pay but had abandoned it. The major reason for the failure of these plans was that schools found it difficult to devise defensible criteria for meritorious teaching (Cohen & Murnane, 1985).

Other researchers (Duttweiler & Ramos-Cancel, 1986; Robinson, 1983) have found that the places where merit pay has survived for many years are typically small, fairly wealthy school districts to which the following conditions pertain:

1. Most teachers receive merit pay awards each year, although the amounts may vary. There are no quotas on the number of teachers eligible.

2. Base teachers' salaries are already professionally competitive; funding for basic salaries, improved evaluation, and merit pay awards are consistent and plentiful.

3. Performance evaluation is a small part of the overall determination; many other criteria are used.

These often include teacher initiatives in developing projects that contribute to the overall school program as well as group initiatives.

4. Award determinations are based on a carefully designed, comprehensive process that uses multiple sources of input and, often, multiple evaluators. Evaluators are well-trained, and substantial time is spent on evaluation. An appeals process is included.

5. Teachers are heavily involved in both the design and implementation of the merit pay system.

Most experts agree that unless these conditions can be achieved, merit pay plans are more likely to be counterproductive than helpful to retention and morale (Duttweiler & Ramos-Cancel, 1986).

Koeler (1985) found that the competition inherent in merit pay plans may interfere with the collegiality that is necessary within an effective school. Similarly, a study by Cramer (1983) concluded that, "Only disaster can result from the practice of using money to punish some teachers while giving 'merit' money to a handful of other teachers selected as superior". And Cohen and Murnane (1985) determined that merit pay did not appear to have

strong effects on improving teachers' classroom performance.

Monetary Incentives

Monetary incentives provide financial bonuses to teachers for meeting a district's personnel assignment, objectives or other goals (Flannelly & Palaich, 1985). The basic concept underlying monetary incentives is that teachers will more effectively help the district or school meet certain goals or solve certain problems if they receive additional payment to do so (Guernsey, 1986).

The best known plan of this type is the Houston Second Mile Plan which awards grants from \$150 to \$2,000 to teachers who further their professional development, have good attendance records, teach in high priority locations, and teach in subject areas for which there are insufficient numbers of teachers. This plan is not based on the individual evaluation of teachers (Miller & Say, 1982). Hatry and Greiner (1982) reported an improvement in Houston teachers' attendance and turnover and decreases in teacher vacancies two years into the plan. However, there was no effect on student achievement. Palaich and Flannelly (1984) suggest that monetary

incentives are not an effective way to permanently change the way most teachers perform in the classroom.

Merit incentives must also be regarded by teachers to be worth their efforts (Boyles & Vrchota, 1986). It has been suggested that incentive amounts range from five to 20 percent above base salary or at least \$1,000 to be considered sufficient (Hatry & Gruner, 1982). The incentives may be linked to the regular salary schedule, or the pay may be administered in a separate salary schedule (McQuire, C.K., 1984).

Nonmonetary Incentives

Nonmonetary compensation is generally for professional enrichment, or for enrichment in the classroom (Boyles & Vrchota, 1986). The concept behind most nonmonetary plans is that teachers are motivated by opportunities to develop professionally and to expand their responsibilities and autonomy (Ogletree, 1985). Nonmonetary rewards such as opportunities for personal and professional growth, better working conditions, increased recognition, and opportunities to work on challenging projects with colleagues may result in the most significant improvements in teaching performance (Dunwell, 1986). A report available through the ERIC Clearinghouse (1981) concludes that teachers are less

motivated by money than by the various intrinsic rewards available to them in the classroom; therefore, schools should adopt merit "praise" programs. Hatry and Gruner (1982) suggest that a "menu of awards" besides cash should be offered. They believe that nonmonetary programs can stimulate improved performance while providing incentives at a low cost to the district. The Catalina Foothills (Arizona) program utilizes Herzberg's Hygiene Motivation Theory as the basis for its program because nonmonetary compensation is viewed as an alternative to monetary compensation in providing opportunities for growth, achievement, advancement, and recognition (Frase, Hetzel, & Grant, 1982).

Career Ladders

The research is generally supportive of career ladder systems. The concept behind most career ladder proposals is that compensation and career structures should be re-designed so they provide incentives for professional development much like those of other professional occupations (Darling-Hammond, 1985). Studies have found that career ladder programs have improved the quality of instruction by separating teacher tasks and allowing for increased specialization (English, 1972), and that students have benefited from such programs because the

restructuring of teacher responsibilities has increased the potential for individual instruction (Ogletree & Kuzminsi, 1985).

Barro (1985) described four principal differences between career ladder plans and merit pay and incentive plans.

1. A career ladder plan offers a type of professional recognition not offered by merit pay or incentive plans. Promotion to each successively higher rank is considered an honor and presumably is advertised as such.

2. The special, non-teaching responsibilities associated with the higher ranks of a career ladder are likely to affect teachers' incentives to attain those ranks, but it cannot be assumed that the effect would be positive for all teachers.

3. Rewards under career ladder plans are likely to be permanent, but long waits may be required to become eligible for each successive promotion. The rewards under merit pay and incentive plans may be either permanent or temporary but, in either case, are likely to be accessible with less delay. These timing differences may affect the strength of the incentives considerably.

4. Under pure merit pay plans and most incentive plans, high-performing teachers remain in the classroom.

In contrast, under "true" career ladders, the best performers - "master" or "mentor" teachers - spend significantly more time in non-teaching roles. Although there is likely to be less of a short-term gain in classroom performance, the mentor/master role constitutes investment in the future -- time spent evaluating other teachers and helping them to improve.

In 1984, as a result of state legislation and appropriations, 48 school districts in Utah submitted career ladder plans to the State Office of Education (Murphy, 1984). The plans varied considerably from district to district; however, the following three characteristics were found in the majority of plans:

1. The career ladders consisted of either three or four steps (or promotion levels).
2. The promotions resulted in increased responsibility of work (job enlargement).
3. Non-competitive promotion was utilized for the first promotion on the ladder (i.e., all who met the standard were promoted). Competitive promotion was used for promotion to higher levels (i.e., the best qualified were promoted).

Other states including Tennessee, Florida, and California and numerous local districts including

Charlotte-Mecklenberg, North Carolina and Virginia Beach, Virginia have also implemented career ladder programs (Guernsey, 1986). One researcher concluded his study of career ladders with the following summary:

Career ladders have the potential to provide teachers intrinsic rewards in the form of recognition and status for excellent teachers; options for diverse work responsibilities without leaving the classroom entirely; opportunities for career advancement; career options within teaching and control over these options; opportunities to assist beginning teachers; greater collegial interaction with peers; the chance to use a wider spectrum of abilities; and opportunities for professional growth (Burden, 1985).

Supplemental Pay

Supplemental pay is the most commonly used form of alternative compensation. Also known as extra pay for extra duty, it may be earned for either supervisory duties (i.e., coaching teams, sponsoring clubs, chairing committees, etc.) or instructional duties (i.e., writing curriculum, developing materials, etc.) (Tyler, Texas Independent School District, 1984). Teachers may earn the money for working outside school hours during the school year or for working during the summer months. Districts vary in the rate of supplemental pay which is earned by teachers. Some districts base the pay on the teachers' regular rates of pay and others base it on the nature of the extra work (McQuire, 1984). Supplemental

pay is not considered a form of performance-based pay unless the pay is based on a teacher's performance of those extra duties.

Teachers' Opinions of Alternative Compensation Plans

Research regarding teachers' opinions of alternative compensation plans is scarce and inconclusive. The few studies which have been conducted generally have addressed only "merit pay", using the term generically to refer to all types of performance-based pay plans. Additionally, each study has utilized a different set of criteria for evaluation of the plans. Therefore, melding the data from the various studies into a comprehensive picture of teachers' opinions can be accomplished only by permitting a certain amount of ambiguity within the conclusions. This section will address the results of studies regarding teachers' opinions of three areas: (a) general types of alternative compensation plans, (b) reward components, and (c) evaluation components.

Opinions of General Types of Plans

In 1982, Phi Delta Kappa conducted a survey of teachers regarding teacher pay. Merit pay was opposed by a 2-1 ratio, 64 percent to 32 percent (Gallup, 1984). A previous poll conducted by NEA in 1971 had shown a similar finding (Calhoun & Protheroe, 1983). These

findings, however, contradict those of Rist (1983) who reported a "clear majority (63%) of teachers responding to a national poll agreed that teachers should be paid according to how well they perform in the classroom." In a 1985 study of Illinois teachers' opinions of compensation plans, Ogletree found that the majority of teachers (50%) opposed merit pay with 58 percent believing it would not enhance morale. On the subject of different types of merit pay plans, the majority (80%) rejected multiple salary schedules and varied salary increments and 50 percent rejected accelerated movement up the pay scale.

Historically both the American Federation of Teachers (AFT) and the National Education Association (NEA) have opposed any form of merit or incentive pay for teachers. Recently, however, both unions have found the merit pay issue more acceptable (Lee, 1987). Research indicates that when teacher organizations and school management cooperate in implementing a merit pay plan for teachers, the results can be positive (Calhoun & Protheroe, 1983).

In a study of Mississippi teachers' opinions of merit pay (Lee, 1987) found that 47.9 percent of teachers favored merit pay although only 8 percent agreed that the total salary increase for teachers should be based on merit. The two primary reasons stated for teacher

opposition to merit pay are: (a) the difficulty of evaluating teacher performance, and (b) the morale problems which might arise (Lee, 1987).

Opinions of Reward Components

Few studies have addressed the issue of teachers' opinions of reward components. However, in a study of teacher incentives and rewards, Mitchell (1983) makes the following conclusions regarding teachers' opinions of rewards and incentives:

1. Appropriate motivation plays a vital role in determining the quality of teacher work efforts.
2. Rewards, broadly conceived, are the most effective work motivators;
3. Policies that give primary attention to strengthening organization-level, purposive incentives have the greatest chance of improving teacher work performance.
4. Policies that facilitate the development of appropriate group-level, solidarity incentives will also significantly improve teacher work performance.
5. Among the individual-level incentives available to teachers, the predominant role is played by those which rely on intrinsic rewards.

6. While extrinsic rewards (like salary and comfortable working conditions) play a significant role in motivating teachers -- especially in their recruitment and retention-- they cannot be expected to produce intense engagement or high performance.

Cohen and Murnane (1985) found that teachers' opinions of merit pay change as the circumstances in which they operate change. Non-tenured teachers are more receptive to merit rewards than tenured teachers. And teachers in districts with a high proportion of good teachers prefer reward components which are finely graded and small in amount.

In Ogletree's study of teachers' opinions of merit pay plans, he concludes that, "Employees are more highly motivated where organizational expectation of rewards are tied to the achievement of specific goals and are open to as many employees as can attain the objective", and that, "Money spent on school reform might best be used to improve working conditions in the schools, smaller class sizes, safety and discipline, counseling services, parent participation, materials and books, tutorial services, smaller schools, etc., than providing minute bonuses to a limited few."

Opinions of Evaluation Components

In his survey of teachers' opinions of merit pay plans, Ogletree (1985) found that 75 percent of the teachers felt that teaching could not be objectively measured, and 67 percent did not feel merit pay could be awarded objectively. Additionally, 63 percent believed the criteria for evaluation could be political and 59 percent believed it could foster favoritism. Sixty-seven percent of the teachers rejected periodic performance on the National Teacher Examination or comparable examinations as a basis of merit pay. And teachers were adamantly against student performance as an evaluation criterion (80%).

In the area of instruction, 71 percent favored knowledge of subject area as a basis for evaluation and 45 percent favored positive relationships with students. While in the non-instructional domain only 45 percent supported professional growth and only 29 percent favored colleague relations as a criteria.

The teachers also did not support many other evaluation criteria. Only 30 percent favored attendance as a criterion, 50 percent favored teaching difficult to educate students and 33 percent supported teaching in areas where a teacher shortage exists.

On the question of who should evaluate teachers for the purpose of merit pay, 67 percent accepted a combination of administrator, colleague, and parent evaluation. And the majority (65%) said teachers should be evaluated once or twice a year with 83 percent receptive to merit pay as long as "teachers helped develop the rating and evaluative criteria".

Lee (1987) found that teachers believe there is no consistent, reliable, valid method of evaluating teacher performance, and Carl J. Megel of the American Federation of Teachers has stated that the true effectiveness of teachers cannot be fairly rated (Calhoun & Protheroe, 1983). However, Albert Shanker also of the American Federation of Teachers stated that the AFT would be willing to accept a merit pay plan "if evaluations were made by somebody that teachers had confidence in" (Shanker, 1985).

Forty-eight percent of Mississippi teachers preferred a statewide evaluation system designed by the State Department of Education while 32 percent of the teachers preferred to have local districts design their own systems. Forty-seven percent of the Mississippi teachers believed that peer evaluation should be a part of the evaluation process, 24 percent believed that student achievement should be a factor, 15 percent agreed that

teachers should take a test on subject matter to qualify for merit pay, and 67 percent agreed that teachers 60 years of age or older should meet the same evaluation criteria as other teachers.

In a study of the Virginia Beach, Virginia Career Service Plan, Cohen and Murnane (1985) found that the low rate of teacher participation in the program was due in part to teachers' negative opinions regarding the evaluation methods and criteria. In that district the merit pay decisions were made by a central office personnel administrator, and the evaluation criteria were not related to classroom work.

In another study of the Niskayuna, New York school district, Cohen and Murnane found that administrators had difficulties in making distinctions between outstanding teachers and those who were merely quite good. One administrator in the study told of rating a teacher as "outstanding" (the next to the top rating), rather than "exceptional" (the top rating). The teacher walked away and said, "If that's all you care, that's all you get." The researchers' concluded that merit pay plans in good districts seem to defeat themselves over time because the more uniformly good a teaching staff is, the more difficult it is to evaluate quality distinctions.

Additionally they found that honest merit ratings may create disincentives for teachers' improvement, and dishonest ratings may be more likely to produce positive results because inflated ratings are a defense against teacher discouragement and jealousy.

Research on Teacher Characteristics

The following two sections address the research on teacher characteristics. The first section reviews the literature regarding the relationship between teacher characteristics and opinions of alternative compensation plans. The second section addresses the general research on teacher characteristics.

Teacher Characteristics and Opinions of Merit Pay

Few studies have investigated whether preference for alternative compensation plans is dependent on certain teacher characteristics. However, the relationship between the grade level at which educators teach and their opinions of merit pay was examined in Lee's (1987) study of Mississippi teachers. Lee surveyed elementary (k - 6) and secondary (7 - 12) teachers regarding a variety of issues involving merit pay. His results revealed that 6 percent of elementary teachers agreed that the total salary schedule should be based on merit while 10 percent of the secondary teachers agreed with

the statement. Forty-four percent of the elementary teachers felt that a percentage of the total teacher pay raise should be made across the board and the rest should go for merit pay while 47 percent of the secondary teachers felt similarly.

Lee also determined that 44 percent of the elementary teachers agreed that peer evaluation should be a part of the process while 52 percent of the secondary teachers agreed with that premise. Elementary and secondary teachers did not differ in their opinions of the use of student achievement as a criterion for evaluation (24%); however, they did disagree on whether or not a competency test should be required to qualify for merit pay -- elementary (12%) and secondary (20%).

General Research on Teacher Characteristics

Although the literature contains minimal information regarding the relationship between teacher characteristics and opinions of alternative compensation plans, there is substantial research which addresses the relationship between teachers' characteristics and their opinions on a variety of other issues. Following is a brief review of the research on six teacher characteristics.

Gender

Teacher gender has long been a topic of educational research. However, the findings have changed dramatically during the last twenty years. As late as the 1960s and 1970s the research reported that women were less committed to their work than men (Hall, 1966), that they did not view teaching as a career (Mason, Dressel, and Bain, 1959), and that they deferred to men at work (Simpson and Simpson, 1969).

The new scholarship on women is undertaken from an opposite perspective. It suggests that the previous research on female teachers was misleading because it was based on stereotyped assumptions about women (Biklin and Shakeshaft, 1985). Several studies have determined that women and men are highly similar in their motivations and involvement with their jobs, in their job satisfaction, and in their perceived conflict between the demands of work and home (Grandjean and Bernal, 1979; Marrett, 1972; and Miller, 1979). Miller (1980) found that the actual job conditions, rather than gender, have the greatest effect on worker satisfaction. One gender difference, however, was described by Miller as "dramatic":

It seems to be the autonomy associated with complex work that produces job satisfaction for men. For women, complex work does not

necessarily imply autonomy; their subjective rewards come from the challenge and interest inherent in the tasks themselves, not freedom from control.

Years Teaching Experience

In a study of teachers' perceptions of their personal and professional development, Burden (1985) found that teachers describe different characteristics during identifiable periods in their careers. Developmental changes seem to occur in an ordered, hierarchical sequence with each year characterized by different types of changes. The changes occur gradually and are cumulative. At each stage there seems to be an increase of knowledge, leading to a change in attitude, which increases ability, and subsequently changes job performance. Other researchers have found similar developmental changes in teacher attitude and performance during the course of their careers (Fuller & Brown, 1975; Newman, 1979; Peterson, 1979).

Professional Development

Burden (1985) found that the major influences on teacher development were (a) other teachers and (b) contact with children. However, he also found that teachers who participate in staff development or other

professional workshops or courses indicate they benefit from those courses.

Lanier and Little (1986) described continuing education for teachers as "mediocre" and the prospects for change as "discouraging". Schlechty and Crowell (1983) found professional development programs to be programmatically isolated and politically weak. And McLaughlin and Marsh (1979) argue that staff development has grown in importance but not quality.

Cusick (1983) contends that involvement with professional development must compete with a host of other interests and obligations and that staff development takes second or third place behind other obligations. Christensen, Burke, Fessler, and Hagstrom (1983) found that little premium is placed in professional improvement in a career that offers few rewards and opportunities based on evolving skill, sophistication, and professional standing.

Employment Outside School District

The National Education Association (1980) reported that about half of all teachers work at other jobs (moonlight) to supplement their teaching salaries. However, Rosenfeld (1979) found that only 20 percent of all teachers hold second jobs. Lortie (1975) determined

that due to "front-loaded" salary scales, i.e., where there is no major change from beginning to experienced teacher salaries, many teachers must supplement their salaries to enhance their standard of living.

In a study involving Oklahoma teachers, Wisniewski and Kleine (1983) found that 31 percent held jobs outside the school system. Forty-eight percent of the male teachers in the state indicated they worked outside the school district and 23 percent of the females indicated likewise. They estimated their annual earnings at these jobs as approximately \$5,136.

The teachers' primary reasons for moonlighting were: (a) to pay debts (37%) and (b) to enhance the family standard of living (36%). The majority (58%) of teachers in the study did not feel that their supplemental employment hindered their teaching performance; however, 59 percent indicated that it did interfere with their participation in professional development workshops and courses. Wisniewski also concluded that the types of jobs taken are not generally conducive to high professional status, and that "teachers will engage in almost any employment that will supplement their income regardless of the social status involved".

Attitude Toward Change

Recent literature suggests that an examination of teachers' attitudes toward change cannot be adequately conducted without focusing on the context in which that change occurs. Runkel et al. (1980) writes that the response of teachers to change cannot be anticipated or understood without attention to the institutional factors that help determine the work-role behavior of teachers. Giacuinta (1975) suggests that variations in receptivity to change are associated with perceived risks to status--the higher one perceives the risks (and the lower the benefits) the lower his or her receptivity. Bridges (1968) developed a scale reflecting varying circumstances associated with change: degree of uncertainty, energy requirements, and amount of role change.

Wangen (1982) determined that teachers with high receptivity to change had the following characteristics: they were older, more experienced, and less mobile than other teachers; they were rated by other educators as "highly professional"; they had a higher sense of "power to influence decision-making outside of the classroom" than other teachers; and they demonstrated more "experimenting behavior" and stronger "group-identification" behavior than other teachers.

Self-Perception

The relationship between self-perception and attitude has been explored by educators, psychologists, sociologists and others. Some reviewers of these investigations have noted massive inconsistencies and contradictions in the literature (Wylie, 1974). For example, Gergen (1971) notes that while most research regards high self-esteem persons as ambitious and confident; some researchers have found a negative relationship between self-esteem and achievement motivation. Additionally, while much of the literature suggests a positive relationship between positive self-perception and competitiveness, some studies have found a negative relationship. One critic of self-perception literature commented on "the utter bankruptcy of it all" (Diggory, 1966).

Despite the inconclusiveness of much of the literature, there is strong support for the propositions that persons with a negative self-perception are generally more anxious to have others' acceptance and support and that they tend to view others negatively (Gergen, 1971). Additionally, a poor self-perception has been found to be associated with a sense of powerlessness and isolation in the work setting (Cedoline, 1982). And

has concluded that "Our aspirations depend on our estimates of self" (Gegen, 1971).

Summary

Although various forms of alternative compensation plans have been employed by school districts for decades, the research neither strongly supports nor condemns the concept of pay for performance. Researchers tend to agree theoretically with the premise, but they describe significant practical limitations with most types of plans. Career ladders is emerging as the newest and most publicized performance-pay system; however, monetary incentives and merit pay are also utilized in many districts. Nonmonetary incentives generally have been found to be the most effective motivators for teachers, but supplemental pay remains the most prevalent type of payment aside from the salary schedule.

Studies indicate that teachers traditionally have not supported alternative compensation plans although their position appears to have reversed somewhat in recent years. Other studies reveal that teachers do not believe teaching can be objectively measured and that performance-based pay may create disincentives and increase competition while diminishing collegiality.

The research on teacher characteristics suggests some differences between secondary and elementary teachers'

opinions of alternative compensation plans. Secondary teachers are slightly more supportive than elementary teachers.

The general research on teacher characteristics indicates that teachers' attitudes towards a variety of educational issues may be dependent upon specific teacher characteristics and/or upon the context in which the teacher is working.

CHAPTER III: METHODS

The Sample

The population for the study was the approximately 1,400 teachers (kindergarten - twelfth grade) from the 45 school districts that comprise the Arrowhead AEA 5 region of Iowa. These districts participated in the Phase III Project provided by the AEA. The experimental group was comprised of the approximately 135 teachers (three from each district) who were identified by their administrators to participate in their districts' Phase III development committees. (The function of these committees will be explained in the Procedures section of this chapter.) The control group was comprised of the approximately 1,235 teachers who did not participate in their districts' Phase III committees. Each of the 1400 teachers was sent a pretest survey and a posttest survey. However, only 377 teachers returned both surveys (54 teachers in the experimental group, 312 in the control group, and 11 who did not indicate in which group they belonged).

Demographic Information

Following is the demographic information (items 4 - 12 on the survey) regarding the sample population:

1. More than four-fifths of the survey respondents were in the control group of the project (Table 1).

Table 1. Demographic Information Regarding Survey Participants: Participant (Experimental Group) or Nonparticipant (Control Group) in a District's Alternative Compensation Plan Development Committee N = 373

	f	%
Participant in Committee (experimental)	54	14.3
Nonparticipant (control)	312	82.8
Missing	11	2.9

2. Approximately two-thirds of the participants were females (Table 2).

Table 2. Demographic Information Regarding Survey Participants: Gender N = 377

	All		Experimental		Control	
	f	%	f	%	f	%
Male	116	30.8	19	35.2	96	30.9
Female	259	68.7	35	64.8	215	69.1
Missing	2	.5	0	00.0	1	00.0
Total	377	100.0	54	100.0	312	100.0

3. Over forty percent of the respondents were elementary teachers (Table 3).

Table 3. Demographic Information Regarding Survey
Participants: Grade Level Taught N = 373

	All		Experimental		Control	
	f	%	f	%	f	%
Elementary	163	43.2	23	42.6	135	43.3
Middle School/Jr. High	51	13.5	8	14.8	42	13.5
High School	9	26.3	11	20.4	87	27.9
Combination of Levels	60	15.9	9	16.7	48	15.4
Missing	4	1.1	3	5.6	0	00.0
Total	37	100.0	54	100.0	312	100.0

4. Approximately ninety percent of the teachers had taught for four or more years (Table 4).

Table 4. Demographic Information Regarding Survey
Participants: Years Teaching Experience N = 377

	All		Experimental		Control	
	f	%	f	%	f	%
1 - 3 years	42	11.1	5	9.3	35	11.2
4 - 11 years	111	39.4	10	18.5	100	32.1
12 - 19 years	113	30.0	24	44.4	87	27.9
20 or more years	103	27.3	15	27.8	82	26.3
Missing	8	2.1	0	00.0	8	2.6
Total	377	100.0	54	100.0	312	100.0

5. A majority of respondents indicated they took between two and five professional courses or workshops per year (Table 5).

Table 5. Demographic Information Regarding Survey
Participants: Professional Courses or
Workshops Taken Per Year N = 377

	All		Experimental		Control	
	f	%	f	%	f	%
0 - 1 per year	146	38.9	13	24.1	127	40.7
2 or more per year	229	60.7	41	76.0	183	58.7
Missing	2	.5	0	00.0	2	.6
Total	377	100.0	54	100.0	312	100.0

6. More than three-fifths of the respondents indicated they did not hold second jobs outside the school district (Table 6).

Table 6. Demographic Information Regarding Survey
Participants: Employment Outside District N =
377

	All		Experimental		Control	
	f	%	f	%	f	%
Not Employed Outside District	234	62.1	32	59.3	195	62.5
Enjoyment or Money for Extras	77	20.4	11	20.4	64	20.5
Money for Necessities	53	14.1	9	16.7	42	13.5
Missing	13	3.4	2	3.7	11	3.5
Total	377	100.0	54	100.0	312	100.0

7. The majority of respondents indicated they were "Enthusiastic" or "Interested" in changes in their work settings (Table 7).

Table 7. Demographic Information Regarding Survey
Participants: Attitude Toward Change in the
Work Setting N = 377

	All		Experimental		Control	
	f	%	f	%	f	%
Enthusiastic or Interested	217	57.6	35	64.8	176	56.4
Neutral or Concerned	160	42.4	19	35.2	136	43.6
Missing	0	0.0	0	0.0	0	0.0
Total	377	100.0	54	100.0	312	100.0

8. Eighty percent of the respondents viewed themselves as "Above Average" teachers (Table 8).

Table 8. Demographic Information Regarding Survey
Participants: Self Perception as a Teacher N
= 377

	All		Experimental		Control	
	f	%	f	%	f	%
Exceptional	40	10.6	6	11.1	32	10.3
Above Average	300	79.6	47	87.0	243	78.2
Average or Below Ave.	35	9.3	1	1.9	34	10.9
Missing	2	.5	0	0.0	0	.6
Total	377	100.0	54	100.0	312	100.0

The Instrument

Two surveys, a pretest (Appendix A) and a posttest (Appendix B), were utilized in the study. (Some portions of the surveys incorporated items from a survey developed by the Wilmington, Delaware school district). The pretest was comprised of 51 forced-choice questions divided into six sections. The first section (items 1-3) elicited teacher identification information for use in matching pretest and posttest surveys. That information included the last four digits of the teachers' social security numbers, their building assignments and the names of their districts. The second section was designed to elicit demographic information through the identification of nine personal and professional characteristics of the teachers (explained in the Sample section of this chapter). The third section consisted of 20 reward components (Table 9) which were to be rated on a five point scale from "Detrimental" to "Enhancing".

Table 9. Reward Components of Alternative Compensation Plans (Survey Items 13 - 32)

Item	Reward Component
13.	Compensation made on a basis other than a fixed salary schedule
14.	Recognition and appreciation expressed by the administration
15.	Tuition paid for graduate or college courses
16.	Experienced teachers paid to function as "mentors"
17.	Participation in a teacher exchange program with other districts or schools
18.	Opportunities for expanded roles/new dimensions for teachers
19.	Increased opportunities for professional growth
20.	Nonmonetary recognition for professional growth
21.	Increased compensation to teachers for continued professional growth
22.	Additional compensation to teachers in a subject area where there is a shortage
23.	Advanced study sabbaticals (at a reasonable funding level)
24.	Incentives for individuals or groups to work on special projects
25.	Opportunities for sharing a staff position
26.	Staff development opportunities outside the school day
27.	Release time for staff development activities
28.	A cash bonus for outstanding performance in a particular area
29.	Opportunities for participation in planning and decision-making
30.	Opportunities to counsel/advise students or groups of students
31.	Opportunities to observe other teachers to help them with classroom instruction, management and other concerns
32.	Extended contracts for staff to work on school-related matters

The fourth section elicited teachers' ratings of 10 evaluation components (Table 10) on a five point scale from "Detrimental" to "Enhancing".

Table 10. Evaluation Components of Alternative Compensation Plans (Survey Items 33 - 42)

-
1. Professional growth and the improvement of instruction is stressed
 2. Appropriate student growth is considered
 3. Professional growth objectives are jointly set by the staff member and the evaluator
 4. An evaluation process is used that is different for new teachers than experienced teachers
 5. A test of teachers' knowledge of subject matter is included
 6. An evaluation process is used that is different for those teachers whose performance is unsatisfactory
 7. An evaluation of staff is made only by administrators
 8. Peer evaluation is included with administrator evaluation
 9. Evaluation by students is included with administrator evaluation
 10. Evaluation of staff by trained evaluators outside of the district is included
-

The fifth section required teachers to rate six alternative compensation plans on a five point scale from "Highly Undesirable" to "Highly Desirable". The six plans included "Merit Pay With Salary Schedule", "Merit Pay Without Salary Schedule", "Monetary Incentives", "Nonmonetary Incentives", "Career Ladders", and

"Supplemental Pay". The sixth section required teachers to rank the six alternative compensation plans from 1 (most desirable) to 6 (least desirable).

The posttest survey was comprised of only the first, third, fourth, fifth, and sixth sections. The second section, demographic information, was eliminated because it was not considered necessary for the analysis of the posttest data. An additional difference between the pretest and posttest surveys was in the fifth section, the rankings of six alternative compensation plans, (the ranking portion of items 43-48). On the posttest this section was placed on a separate page rather than on the page with the fourth section as it had been on the pretest.

The Procedure

During the first week of September 1987 the pretest survey was sent by van mail from Arrowhead AEA 5 to every teacher in the 45 school districts within that region (approximately 1,400 teachers). The teachers were asked to return the surveys by September 10.

On September 10 the approximately 135 teachers participating in their districts' Phase III development committees (the experimental group) met for the first

time to begin the process of: (a) learning about alternative compensation plans and (b) developing plans for their districts. District Phase III committees generally consisted of teachers, administrators, and school board members or citizens. Each district's committee participated in the Phase III Project sponsored by Arrowhead Area Education Agency (AEA) 5 in Fort Dodge, Iowa. The project was designed to assist school districts in that AEA region in the development of performance-based and supplemental pay plans for submission to the State Department of Education for approval and subsequent funding.

An initial meeting of the Phase III Project was held at a hotel restaurant and included dinner (at the AEA's expense) and three speakers -- a representative of the Iowa State Teachers Association, a representative of the Iowa Department of Education involved with Phase III, and Dr. James Sweeney, Section Head of Education Administration at Iowa State University.

During the next three and a half months, the Phase III committee members participated in three day-long workshops (lasting from 9:00 a.m. to 3:00 p.m.) conducted by Dr. Sweeney. According to Dr. Sweeney, the purposes of the workshops were (a) to provide information

regarding performance-based and incentive pay plans, and (b) to encourage districts to try alternative pay plans.

The workshops' format included:

1. Formal presentations regarding the nature of various alternative compensation plans with an emphasis on merit pay and monetary compensation plans.
2. Opportunities for district committees to dialogue and plan
3. Opportunities for participants from various districts to dialogue in small groups
4. Information regarding criterion-referenced measures of student achievement as a basis for teacher evaluation.
5. Opportunities for questions and concerns to be voiced and discussed
6. Examples of sample Phase III plans with accompanying guidelines

Phase III plans were submitted to the State Department of Education for approval by January 1, 1988. Each of the 45 plans submitted by the districts in AEA 5 was approved.

During the third week of January, the posttest survey was sent to all teachers in both the experimental and control groups with the request that it be returned by the second week of February.

Design and Analysis of Data

A quasi-experimental design was utilized in the experimental portion of the study (Figure 1).

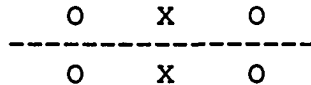


Figure 1. Quasi-experimental Design

Teachers' responses on the pretest to the rating and ranking portions of items 43-48 showed discrepancies; therefore, a chi-square test was run on items 43-48 to determine the relationship between teachers' ratings of plans and their rankings of plans. Analysis of the chi square test revealed a weak relationship between the two, and it was concluded that the ranking section on the pretest had been completed incorrectly by a significant number of teachers rendering it invalid. Therefore, before the posttest was administered the ranking section was rewritten with clearer directions and placed on a page separate from the rating section.

Descriptive statistics which provided frequencies, means, and standard deviations were computed to determine the relative value of the study variables. Teachers' ratings of the 20 reward components, the 10 evaluation components and the six alternative compensation plans were computed using descriptive statistics.

One-way analysis of variance tests were used to determine whether teachers with certain characteristics differ in their ratings of alternative compensation plans from teachers with other characteristics. The five characteristics studied included: years teaching experience, number of professional courses or workshops taken annually, employment outside the school district, attitude toward change, and self-perception as a teacher (Hypotheses 1 - 5). Analysis of variance was utilized to determine the interaction effect between gender and grade level taught for the variable teacher ratings of alternative compensation plans (Hypothesis 6, 7, and 8). A t-test (pairs) was run to determine whether teachers who participate in the development of a district's plan show significant changes in their ratings of types of alternative compensation plans after the development of the plan (Hypothesis 8). And a t-test (pairs) was run to determine whether teachers who do not participate in the

development of a plan show significant changes in their ratings of alternative compensation plans after the development of their districts' plans (Hypotheses 9).

CHAPTER IV: FINDINGS

This chapter is divided into four sections: Teacher Ratings of Reward Components of Alternative Compensation Plans; Teacher Ratings of Evaluation Components of Alternative Compensation Plans; Teacher Ratings of Alternative Compensation Plans; and Tests of Hypotheses. The first three sections address the first three objectives of the study (stated in Chapter I), and the fourth section addresses the last three objectives of the study.

Teacher Ratings of Reward Components of Alternative
Compensation Plans

This section addresses objective #1 of the study: to determine teachers' ratings of the reward components of alternative compensation plans prior to districts' initiating activities to develop alternative compensation plans. Survey items 13 - 32 asked teachers to rate twenty reward components (see "Instruments" section of Chapter III) on a scale from 1 = "Detrimental" to 5 = "Enhancing". The pretest means and standard deviations for teachers' ratings of reward components are provided in Table 11. The frequency distributions are provided in Appendix C.

The reward component "Increased Compensation to Teachers for Continued Professional Growth" (item 21 on the survey) received the highest rating ($M = 4.40$; $SD = .72$). The reward component with the lowest rating was item 22, "Additional Compensation to Teachers in a Subject Area Where There is a Present Shortage of Teachers" ($M = 2.99$; $SD = 1.22$).

Table 11. Pretest Means and Standard Deviations for Reward Components of Alternative Compensation Plans (Items 13 - 32 on the Survey)

Item	Reward Components	Mean	SD
13.	Other Than Fixed Compensation	3.04	1.15
14.	Recognition by Administration	3.89	1.22
15.	Tuition for College Courses	4.27	1.03
16.	Teachers Paid as "Mentors"	3.72	.92
17.	Teacher Exchange Programs	3.20	.99
18.	Expanded Roles/Shared Positions	3.81	.79
19.	Professional Growth Activities	4.38	.66
20.	Nonmonetary recognition	3.46	1.09
21.	Money for Professional Growth	4.40	.72
22.	Extra Pay for Teacher Shortage	2.99	1.22
23.	Sabbaticals	3.72	.88
24.	Incentives for Special Projects	4.17	.73
25.	Opportunities to Share Positions	3.45	.90
26.	Sharing Staff Positions	3.56	.96
27.	Release Time for Staff Dev.	4.25	.71
28.	Cash Bonus for Performance	3.23	1.28
29.	Planning Opportunities	4.25	.65
30.	Counseling/Advising Studnets	3.71	.78
31.	Observing/Helping Other Teachers	3.45	.98
32.	Extended Contracts	4.39	.74

Teacher Ratings of Evaluation Components of Alternative Compensation Plans

This section addresses objective #2 of the study: to determine teachers' ratings of the evaluation components of alternative compensation plans. Teachers were asked to rate 10 evaluation components from 1 = "Detrimental" to 5 = "Enhancing". The pretest means and standard deviations for ratings of evaluation components of alternative compensation plans are provided in Table 12. Appendix D provides the frequency distributions for this section of the pretest survey.

The Evaluation component receiving the highest rating was item 33, "Professional Growth and the Improvement of Instruction is Stressed" ($M = 4.14$; $SD = .70$). The evaluation component receiving the lowest rating was item 38, "An Evaluation Process is Used that is Different for Those Teachers Whose Performance is Unsatisfactory" ($M = 2.62$; $SD = 1.05$).

Table 12. Pretest Means and Standard Deviations for Evaluation Components of Alternative Compensation Plans (Items 33 - 42)

Item	Evaluation Components	Mean	SD
33.	Professional Growth Stressed	4.18	.70
34.	Student Growth Considered	3.60	.97
35.	Growth Objectives Jointly Set	4.06	.81
36.	Evals Different for New Teachers	3.25	1.04
37.	Test of Subject Matter Included	2.74	1.12
38.	Different Form for Unsatisfactory	2.59	1.05
39.	Evaluation Only by Administrators	2.74	1.15
40.	Peer Evaluation Included	2.98	1.13
41.	Student Evaluation Included	2.68	1.07
42.	Outside Evaluators Included	3.26	1.11

Teacher Ratings of Alternative Compensation Plans

This section addresses objective #3 of the study: to determine teachers' ratings of six alternative compensation plans. The rating portion of survey items 43 - 48 asked teachers to rate six alternative compensation plans on a five point scale from 1 = "Highly Undesirable" to 5 = "Highly Desirable". The types of plans included: Merit Pay With Salary Schedule, Merit Pay Without Salary Schedule, Monetary Incentives, Nonmonetary Incentives, Career Ladders, and Supplemental Pay. The pretest survey means and standard deviations for teachers' ratings of the plans are provided in

Table 13. Appendix E provides the frequency distributions for this section of the pretest survey.

The type of plan which received the highest rating was Supplemental Pay ($M = 3.86$; $SD = 1.03$). The type of plan receiving the lowest rating was Merit Pay Without Salary Schedule ($M = 1.80$; $SD = .98$).

Table 13. Pretest Means and Standard Deviations for Teacher Ratings of Alternative Compensation Plans (The Rating Portion of Items 43 - 48 on the Survey)

Item	Type of Plan	Mean	SD
43.	Merit Pay With Salary Schedule	2.78	1.29
44.	Merit Pay W/O Salary Schedule	1.80	.98
45.	Monetary Incentives	3.80	.96
46.	Nonmonetary Incentives	3.35	1.02
47.	Career Ladders	3.58	.93
48.	Supplemental Pay	3.86	1.03

Inferential Statistics

Hypotheses

This section reports findings on the ten hypotheses tested in this study (objectives 4, 5, and 6). The tests involve the study of teachers' ratings of six alternative compensation plans: "Merit Pay With Salary Schedule", "Merit Pay Without Salary Schedule", "Monetary

Incentives", "Nonmonetary Incentives", "Career Ladders", and "Supplemental Pay".

Hypotheses testing

Research Hypothesis One was designed to determine whether teachers in four categories of "Years Teaching Experience" differ in their ratings of each alternative compensation plan.

H01: Prior to districts' initiating activities to develop alternative compensation plans, there is no significant difference in teachers' ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) between teachers in the following categories: (a) teachers with 0-3 years teaching experience, (b) teachers with 4-11 years teaching experience, (c) teachers with 12 -19 years experience, and teachers with 20 - 41 years experience (item 7 on the survey.)

The average ratings for each plan provided by teachers in the different categories of teaching experience are presented in Table 14. Appendix F presents the results of the one-way analysis of variance test of the null hypothesis for each plan (i.e., for the means for each row of the table). The results revealed no statistically significant differences for any plan. The null hypothesis was not rejected.

Table 14. Pretest average ratings of alternative compensation plans by categories of years teaching experience

TYPE OF PLAN ^a	YEARS TEACHING EXPERIENCE											
	0 - 3			4 - 11			12 - 19			20 - 41		
	M	SD	n	M	SD	n	M	SD	n	M	SD	n
43	2.72	1.30	36	2.83	1.29	95	2.70	1.27	105	2.79	1.31	90
44	1.94	1.15	36	1.81	.95	93	1.74	.98	105	1.79	.96	89
45	3.80	.68	35	3.80	1.05	94	3.70	1.01	105	3.94	.87	90
46	3.36	.96	36	3.34	1.06	94	3.25	1.01	105	3.44	1.05	89
47	3.36	.87	36	3.60	.95	95	3.69	.98	104	3.49	.90	90
48	3.89	1.26	36	3.96	.88	94	3.80	1.10	105	3.77	.97	90

^a Survey item number representing the type of alternative compensation plan

Survey Item No.	Type of Plan
43	Merit Pay With Salary Schedule
44	Merit Pay Without Salary Schedule
45	Monetary Incentives
46	Nonmonetary Incentives
47	Career Ladders
48	Supplemental Pay.

Research Hypothesis Two was developed to determine whether teachers in two categories of "Number of Professional Courses or Workshops Taken Per Year" differ in their ratings of each alternative compensation plan.

H02: Prior to districts' initiating activities to develop alternative compensation plans, there is no significant difference in teachers' ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) between teachers in the following categories: (a) teachers who participate in 0-1 professional courses or workshops per year, and (b) teachers who participate in 2 or more professional courses or workshops per year (item 8 on the survey).

The average ratings for each plan provided by teachers in the different categories of teaching experience are presented in Table 15. Appendix F presents the results of the one-way analysis of variance test of the null hypothesis for each plan (i.e., for the means for each row of the table). Statistical significance was found in two instances. In the first case, teachers who participated in two or more professional courses or workshops per year rated "Merit Pay Without Salary Schedule" higher than teachers who took zero or one professional course or workshop per year. The test was significant at the .05 level. In the second case, teachers who participated in zero or one professional course or workshop per year rated "Supplemental Pay" higher than teachers who participated in two or more professional courses or workshops per year. The test was significant at the .01 level.

Table 15. Pretest average ratings of alternative compensation plans by categories of professional courses or workshops taken per year

TYPE OF PLAN ^a	PROFESSIONAL COURSES OR WORKSHOPS TAKEN PER YEAR					
	0 - 1			2 or More		
	M	SD	n	M	SD	n
43	2.64	1.24	129	2.87	1.31	202
44	1.61	.88	128	1.92	1.02	200**
45	3.81	.95	127	3.79	.97	202
46	3.38	.98	128	3.32	1.06	201
47	3.54	.92	129	3.61	.95	201
48	4.00	.94	129	3.77	1.07	201*

^a Survey item number representing the type of alternative compensation plan

Survey Item No.	Type of Plan
43	Merit Pay With Salary Schedule
44	Merit Pay Without Salary Schedule
45	Monetary Incentives
46	Nonmonetary Incentives
47	Career Ladders
48	Supplemental Pay.

*Significant at the .05 level.

**Significant at the .01 level.

Research Hypothesis Three was designed to determine whether teachers in three categories of "Employment Outside School District" differ in their ratings of each alternative compensation plan.

H03: Prior to districts' initiating activities to develop alternative compensation plans, there is no significant difference in teacher ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) between teachers in the following categories: (a) teachers who are not employed outside the school district, (b) teachers who work outside the school district for enjoyment or to earn money for extras, and (c) teachers who work outside the school district in order to earn money for necessities (item 9 on the survey).

The average ratings for each plan provided by teachers in the different categories of attitude toward change are presented in Table 16. Appendix F presents the results of the analysis of variance test of the null hypothesis (i.e., for the means for each row of the table). No statistical significance was found. The null hypothesis was not rejected.

Table 16. Pretest average ratings of alternative compensation plans by categories of employment outside school district

TYPE OF PLAN ^a	EMPLOYMENT OUTSIDE SCHOOL DISTRICT								
	Not Employed Outside District			For Enjoyment/ To Earn Money For Extras			To Earn Money For Necessities		
	M	SD	n	M	SD	n	M	SD	n
43	2.68	1.27	208	3.06	1.30	66	2.87	1.35	47
44	1.77	1.00	208	1.98	1.05	66	1.74	.82	47
45	3.72	.99	206	3.83	.99	66	4.00	.78	47
46	3.36	1.04	207	3.23	.93	65	3.21	1.06	47
47	3.56	.92	207	3.58	.90	66	3.66	1.05	47
48	3.85	1.10	207	3.83	.94	66	3.94	.82	47

^a Survey item number representing the type of alternative compensation plan. N = 377

Survey Item No.	Type of Plan
43	Merit Pay With Salary Schedule
44	Merit Pay Without Salary Schedule
45	Monetary Incentives
46	Nonmonetary Incentives
47	Career Ladders
48	Supplemental Pay.

Research Hypothesis Four was developed to determine whether teachers in two categories of "Attitude Toward Change" differ in their ratings of each alternative compensation plan.

HO4: Prior to districts' initiating activities to develop alternative compensation plans, there is no significant difference in teachers' ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) between teachers in the following categories for the variable "attitude toward change": (a) teachers who describe themselves as "Enthusiastic" or "Interested" in changes in their work setting, and (b) teachers who describe themselves as "Neutral", "Concerned", or "Very Concerned" about changes in their work setting (item 11 on the survey).

The average ratings for each plan provided by teachers in the different categories of attitude toward change are presented in Table 17. Appendix F presents the results of the one-way analysis of variance test of the null hypothesis for each plan (ie., for the means for each row of the table). Statistical significance was found in one instance. Teachers who indicated they are "Enthusiastic" or "Interested" in changes in their work settings rated "Merit Pay Without Salary Schedule" higher than teachers who indicated they are "Neutral", "Concerned", or "Very Concerned" about changes in their work settings. The test was significant at the .05 level.

Table 17. Pretest ratings of alternative compensation plans by categories of attitude toward change in the work setting

TYPE OF PLAN ^a	ATTITUDE TOWARD CHANGE IN THE WORK SETTING					
	Enthusiastic/Interested			Neutral/Concerned/ Very Concerned		
	M	SD	n	M	SD	n
43	2.87	1.28	189	2.66	1.29	144
44	1.92	.99	186	1.65	.95	144*
45	3.85	.93	187	3.73	1.00	144
46	3.39	1.03	189	3.35	1.02	142
47	3.62	.87	188	3.52	.9	144
48	3.83	1.03	189	3.90	1.02	143

^a Survey item number representing the type of alternative compensation plan

Survey Item No.	Type of Plan
43	Merit Pay With Salary Schedule
44	Merit Pay Without Salary Schedule
45	Monetary Incentives
46	Nonmonetary Incentives
47	Career Ladders
48	Supplemental Pay.

*Significant at the .05 level.

Research Hypothesis Five was developed to determine whether teachers in three categories of "Self-perception as a Teacher" differ in their ratings of each alternative compensation plan.

H05: Prior to districts' initiating activities to develop alternative compensation plans, there is no significant difference in teachers' ratings of each alternative compensation plan (the ratings portion of items 43 - 48 on the survey) between teachers in the following categories: (a) teachers who perceive themselves as "Exceptional", (b) teachers who perceive themselves as "Above Average", and (c) teachers who perceive themselves as "Average" or "Below Average" (item 12 on the survey).

The average ratings for each plan provided by teachers in the different categories of self-perception as a teacher are presented in Table 18. Appendix F presents the results of the one-way analysis of variance test of the null hypothesis for each plan (ie., for the means for each row of the table). In two instances statistical significance was found. In the first case, teachers who described themselves as "Above Average" rated "Nonmonetary Incentives" higher than teachers who described themselves as "Average" or "Below Average". The test was significant at the .01 level. In the second case, teachers who described themselves as "Above Average" rated "Supplemental Pay" higher than

teachers who described themselves as "Exceptional". The test was significant at the .05 level.

Table 18. Pretest average ratings of alternative compensation plans by categories of self-perception as a teacher

TYPE OF PLAN ^a	SELF-PERCEPTION AS A TEACHER								
	Exceptional			Above Average			Average/ Below Average		
	M	SD	n	M	SD	n	M	SD	n
43	3.03	1.42	37	2.72	1.27	265	2.97	1.32	29
44	2.05	1.20	37	1.78	.94	263	1.76	1.09	29
45	3.68	1.18	37	3.81	.92	263	3.86	1.06	29
46	3.22	1.10	36	3.43	.99	264	2.76	1.15	29**
47	3.54	1.24	37	3.60	.91	264	3.45	.78	29
48	3.43	1.12	37	3.92	1.02	264	3.83	.89	29*

^a Survey item number representing the type of alternative compensation plan

Survey Item No.	Type of Plan
43	Merit Pay With Salary Schedule
44	Merit Pay Without Salary Schedule
45	Monetary Incentives
46	Nonmonetary Incentives
47	Career Ladders
48	Supplemental Pay.

*Significant at the .05 level.

**Significant at the .01 level.

Research Hypothesis Six was developed to determine whether males differ from females in their ratings of each alternative compensation plan. The plans were rated from 1 (Highly Undesirable) to 5 (Highly Desirable).

HO6: Prior to districts' initiating activities to develop alternative compensation plans, male and female teachers (item 5 on the survey) do not differ significantly in their ratings of each alternative compensation plan (the rating portion of items 43-48 on the survey).

Two-way analysis of variance was used to test the null hypothesis for each plan (Appendix G). The means and standard deviations for the ratings of males and females are shown in the bottom row of Tables 19 through 24. Gender was found to be significant for each of the four plans as follows: males rated "Merit Pay With Salary Schedule" higher than females (Table 19); and females rated "Nonmonetary Incentives" (Table 20) and "Career Ladders" (Table 21) higher than males (.05 level of significance); and males rated "Merit Pay Without Salary Schedule" higher than females (.01 level of significance) (Table 22). The null hypothesis was rejected.

Table 19. Pretest means and standard deviations of a two-way analysis of variance test of ratings of "Merit Pay With Salary Schedule" (Item 43) by gender by grade taught

GRADE LEVEL TAUGHT	GENDER								
	Males			Females			Overall		
	M	SD	n	M	SD	n	M	SD	n
Elementary	2.60	1.64	15	2.72	1.33	130	1.86	1.22	145
Junior High	3.09	1.24	23	2.55	1.09	22	1.67	1.25	45
Senior High	3.11	1.79	44	2.77	1.28	39	1.80	1.42	83
Combination Of Levels	3.25	1.41	16	2.33	1.30	30	1.78	1.27	46
Overall	3.05	1.34	98	2.66	1.24	221	2.78	1.28	319

Table 20. Pretest means and standard deviations of a two-way analysis of variance test of ratings of "Nonmonetary Incentives" (Item 46) by gender by grade taught

GRADE LEVEL TAUGHT	GENDER								
	Males			Females			Overall		
	M	SD	n	M	SD	n	M	SD	n
Elementary	3.13	.95	15	3.61	.98	130	3.56	.92	145
Junior High	3.04	1.10	23	3.41	.90	22	3.22	.98	45
Senior High	3.25	1.00	44	3.08	.87	39	3.17	.95	83
Combination Of Levels	2.56	1.12	16	3.57	.94	30	3.22	1.03	46
Overall	3.07	1.09	98	3.49	.92	221	3.36	.87	319

Table 21. Pretest means and standard deviations of a two-way analysis of variance test of ratings of "Career Ladders" (Item 47) by gender by grade taught

GRADE LEVEL TAUGHT	GENDER								
	Males			Females			Overall		
	M	SD	n	M	SD	n	M	SD	n
Elementary	2.73	1.03	15	3.65	.92	130	3.55	.97	145
Junior High	3.48	1.00	23	3.45	.90	22	3.47	.92	45
Senior High	3.66	.98	44	3.67	.89	39	3.66	.92	83
Combination Of Levels	3.50	1.04	16	3.80	.99	30	3.70	.90	46
Overall	3.45	1.01	98	3.65	.90	221	3.59	.93	319

Table 22. Pretest means and standard deviations of a two-way analysis of variance test of ratings of "Merit Pay Without Salary Schedule" (Item 47) by gender by grade taught

GRADE LEVEL TAUGHT	GENDER								
	Males			Females			Overall		
	M	SD	n	M	SD	n	M	SD	n
Elementary	2.13	1.00	15	1.82	.95	130	1.86	.97	145
Junior High	1.83	1.05	23	1.50	.90	22	1.67	.95	45
Senior High	1.95	1.10	44	1.62	.92	39	1.80	1.03	83
Combination Of Levels	2.06	1.11	16	1.63	.91	30	1.78	.91	46
Overall	1.97	1.09	98	1.73	.92	221	1.80	.97	319

Table 23. Pretest means and standard deviations of two-way analysis of variance test of ratings of "Monetary Incentives" (Item 45) by gender by grade taught

GRADE LEVEL TAUGHT	GENDER								
	Males			Females			Overall		
	M	SD	n	M	SD	n	M	SD	n
Elementary	3.47	1.00	15	3.77	.93	130	3.74	.96	145
Junior High	4.17	1.04	23	3.55	.98	22	3.87	.99	45
Senior High	3.84	.98	44	3.64	1.04	39	3.75	1.02	83
Combination Of Levels	4.25	.90	16	3.73	.80	30	3.91	.84	46
Overall	3.93	1.00	98	3.72	.94	221	3.78	.96	319

Table 24. Pretest survey results of two-way analysis of variance test of ratings of "Supplemental Pay" (Item 4) by gender by grade taught

GRADE LEVEL TAUGHT	GENDER								
	Males			Females			Overall		
	M	SD	n	M	SD	n	M	SD	n
Elementary	3.67	1.05	15	3.82	.95	134	3.81	1.00	149
Junior High	4.04	1.01	23	3.71	.99	21	3.89	1.03	44
Senior High	3.96	1.07	45	3.88	1.01	41	3.92	.94	86
Combination Of Levels	3.88	.97	16	4.00	1.03	31	3.96	.98	46
Overall	3.92	1.03	99	3.85	.98	227	3.87	.99	326

Research Hypothesis Seven was developed to determine whether teachers at various grade levels differ in their ratings of each alternative compensation plan. Grade level taught refers to the following four categories: (a) elementary, (b) middle school or junior high, (c) high school, or (d) a combination of levels. Ratings of each alternative compensation plan refers to teachers ratings of six alternative compensation plans from 1 (the most desirable type of plan) to 6 (the least desirable type of plan).

H07: Prior to districts' initiating activities to develop alternative compensation plans, teachers' ratings of each alternative compensation plan (the rating portion of items 43-48 on the survey) do not differ according to the grade level at which they teach (item 6 on the survey).

Two-way analysis of variance was used to test the null hypothesis (Appendix G). The means and standard deviations for the ratings of grade level taught are shown in the right hand columns of Tables 19 through 24. The variable grade level taught was not statistically significant in any of the tests.

Research Hypothesis Eight was developed to determine whether there is an interaction effect between gender and grade level taught for the dependent variable of teachers' ratings of each alternative compensation plan. Grade level taught refers to the following four categories: (a) elementary, (b) middle school or junior high, (c) high school, or (d) a combination of levels. Ratings of each alternative compensation plan refers to teachers' ratings of six alternative compensation plans from 1 (the most desirable type of plan) to 6 (the least desirable type of plan).

H08: Prior to districts' initiating activities to develop alternative compensation plans, there is no interaction effect between gender and grade level taught when examining teacher

ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey).

The means and standard deviations for the ratings of males and females by grade level taught are shown in Tables 19 through 24. Two-way analysis of variance was used to test the null hypothesis (Appendix G). An interaction of the two variables was significant at the .05 level in two instances. In the first case, female elementary and female junior high teachers and those who taught a combination of levels rated "Nonmonetary Incentives" higher than males who taught at those levels; however, males who taught at the senior high level rated "Nonmonetary Incentives" higher than females at that grade level (Table 20).

The second interaction effect was found at the .05 level for ratings of "Career Ladders" (Table 21). Females who taught at the following three grade levels: elementary, senior high, and a combination of levels, rated "Career Ladders" higher than males who taught at those grade levels. However, male junior high teachers rated "Career Ladders" higher than female junior high teachers.

Research Hypothesis Nine was designed to determine whether teachers who participate in the development of

their district alternative compensation plans (the experimental group) change their ratings of each alternative compensation plan after participating in the development of their district's alternative compensation plan.

H09: Teachers who are members of their districts' committees to develop alternative compensation plans (item 4 on the survey) indicate no significant changes in their ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) before and after the development of the plans.

A t-Test Groups was run using the experimental and control groups' pretest survey ratings for each type of alternative compensation plan. The results indicated there were no significant differences between the two groups' ratings of any plan prior to the development of the district alternative compensation plans.

A t-Test Pairs was used to test the null hypothesis (Table 25). Changes at the .05 level of significance were found in teachers' ratings of "Merit Pay With Salary Schedule" and "Monetary Incentives". Teachers who participated in the development of their district's alternative compensation plans rated "Merit Pay With Salary Schedule" and "Monetary incentives" significantly higher on the posttest than on the pretest survey.

Table 25. Pretest and posttest results of the t-Test (pairs) of ratings (1 - low to 5 - high) of alternative compensation plans for experimental and control groups

Type of Plan ^a	Experimental (N=45)				Control (N=267)			
	M	SD	t-Value	Prob.	M	SD	t-Value	Prob.
43								
Pre ^b	2.67	1.41	-2.04	.048*	2.79	1.26	-1.83	.069
Post ^c	3.09	1.13			2.94	1.25		
44								
Pre	1.73	1.03	-1.71	.095	1.83	.98	.94	.347
Post	1.93	1.13			1.76	.93		
45								
Pre	3.87	.87	2.38	.022*	3.79	.96	-.15	.884
Post	3.51	1.16			3.81	1.00		
46								
Pre	3.42	1.10	-.39	.701	3.33	1.02	-2.63	.009**
Post	3.49	1.06			3.52	.93		
47								
Pre	3.64	.96	-.17	.868	3.57	.95	-.59	.554
Post	3.67	.88			3.61	.94		
48								
Pre	3.89	1.15	-.50	.617	3.85	1.01	-4.13	.000***
Post	3.98	1.00			4.13	.89		

^a Survey item number for type of plan

Survey Item No.	Type of Plan
43	Merit Pay With Salary Schedule
44	Merit Pay Without Salary Schedule
45	Monetary Incentives
46	Nonmonetary Incentives
47	Career Ladders
48	Supplemental Pay.

^bPre = Results of pretest survey.

^cPost = Results of posttest survey.

*Significant at the .05 level.

**Significant at the .01 level.

***Significant at the .001 level.

Research Hypothesis Ten was designed to determine whether teachers who do not participate in the development of their district's plan (the control group) significantly change their ratings of each alternative compensation plan after the development of their district's plans.

H010: Teachers who are not members of their districts' committees to develop alternative compensation plans (item 4 on the survey) indicate no significant changes in their ratings of each alternative compensation plan (the rating portion of items 43 - 48 on the survey) before and after the development of the plans.

A t-Test Pairs was used to test the null hypothesis (Table 25). Teachers who did not participate in the development of their districts' plans (the control group) rated "Nonmonetary Incentives" higher on the posttest than they had on the pretest (.01 level of significance). Additionally, they rated "Supplemental Pay" higher on the posttest than they had on the pretest (.001 level of significance).

CHAPTER V: CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Increasing numbers of school districts are moving beyond the traditional salary schedule and implementing various types of alternative compensation plans for teachers (Bray et al., 1985). The most prevalent types of plans include: merit pay, monetary incentives, nonmonetary incentives, career ladders, and supplemental pay (Duttweiler & Ramos-Cancel, 1986). Performance-based pay plans base teachers' pay wholly or partly on work quality or performance and include all of the aforementioned types of plans except supplemental pay. Supplemental pay is generally regarded as extra pay for extra work (Tyler, Texas Independent School District, 1984).

Authorities have indicated that teacher input is an essential element in the development of a successful alternative compensation plan (Flannelly & Palaich, 1985; Boyles & Vrchota, 1986). However, few studies have closely examined the issue of teachers' opinions of alternative compensation plans.

The purposes of this study were: (a) to determine teachers' ratings of alternative compensation plans and of their reward and evaluation components; (b) to

determine whether teachers with certain characteristics prefer different types of alternative compensation plans than teachers with other characteristics; and (c) to ascertain whether teachers' ratings of alternative compensation plans change after the development of their districts' plans.

Conclusions Related to Teachers' Ratings of Alternative
Compensation Plans and Their Reward And Evaluation
Components

The first objective of the study was to determine teachers' ratings of the reward components of alternative compensation plans prior to the development of their district alternative compensation plans. The reward component which was rated highest (on a scale of 1 = Detrimental to 5 = Enhancing) on the pretest survey was "Increased compensation to teachers for continued professional growth". The component which was rated the lowest was "Additional compensation to educators in a subject area where there is a present shortage of teachers".

The second objective of the study was to determine teachers' ratings of the evaluation components of alternative compensation plans prior to the development of their district alternative compensation plans.

Teachers' highest rated evaluation component on the pretest survey was "Professional growth and improvement of instruction is stressed". The lowest rated evaluation component was "An evaluation process is used that is different for those teachers whose performance is unsatisfactory".

The third objective of the study was to determine teachers' ratings of six alternative compensation plans prior to the development of district alternative compensation plans. Following is the list of the six plans based on teachers' ratings (from highest to lowest) on the pretest survey: "Supplemental Pay"; "Monetary Incentives"; "Career Ladders"; "Nonmonetary Incentives"; "Merit Pay With Salary Schedule"; "Merit Pay Without Salary Schedule".

Discussion

Teachers preferred reward and evaluation components which stressed professional growth. These results appear consistent with previous research which indicates that teacher attrition is related to a lack of opportunity for professional growth (Rosenholtz & Smylie, 1983; District of Columbia School District, 1984; and Flannelly & Palaich, 1984).

The teachers' responses may suggest that they regard themselves as inadequately prepared in certain areas, and/or that they view alternative compensation programs as viable opportunities for enhancement of their professional skills.

The teachers were least supportive of components which focused on issues other than professional growth such as extra pay for working in an area in which there is a teacher shortage, a different evaluation system for unsatisfactory teachers, and tests of subject matter knowledge. Teachers may have perceived these components as secondary to or interfering with an emphasis on professional growth and, therefore, rated them unfavorably.

The teachers' ratings of alternative compensation plans were consistent with reports of teachers' ratings of plans nationwide. Merit pay was rated lowest on this survey as it has been in other studies (Gallup; Ogletree; 1984, 1985). The glaring absence of successful merit pay programs to serve as prototypes may have led the participants in this study to oppose developing such plans in their districts. Additionally, the teachers may have regarded the potential negative effects of merit pay (e.g., competitiveness, inadequate evaluation, lowered

morale, etc.) to outweigh the potential benefits (e.g., additional money for outstanding teachers, a compensation system which is similar to other professions, etc.).

Conclusions Related To Teacher Characteristics and Ratings of Alternative Compensation Plans

The fourth objective of the study was to determine whether teachers with certain characteristics differ in their ratings of alternative compensation plans from teachers with other characteristics. Hypotheses 1 through 8 were included in this objective.

The teacher characteristic examined in Hypothesis 1 was "Years Teaching Experience". Four categories of this variable were studied: 0-4 years experience; 5-11 years experience; 12-19 years experience; and 20-41 years experience. There were no significant differences among categories for ratings of alternative compensation plans.

The teacher characteristic examined in Hypothesis 2 was "Number of Professional Courses or Workshops Taken Per Year". The two categories of this variable were: 0-1 courses or workshops per year; and 2 or more courses or workshops per year. Teachers who participated in no courses or workshops or one course or workshop per year rated "Supplemental Pay" higher than teachers who

participated in two or more courses or workshops per year. Additionally, teachers who participated in two or more courses or workshops per year rated "Merit Pay Without Salary Schedule" higher than teachers who took no courses or one course or workshop per year.

"Employment Outside the School District" was the teacher characteristic studied in Hypothesis 3. The three categories of the variable were: "Not Employed Outside the District"; "Employed Outside the School District for Enjoyment or in Order to Earn Money for Extras"; and "Employed Outside the School District in Order to Earn Money for Necessities". There were no significant differences between categories for ratings of alternative compensation plans.

The teacher characteristic studied in Hypothesis 4 was "Attitude Toward Change in the Work Setting". The two categories of the variable were: teachers who described themselves as "Enthusiastic" or "Interested"; and teachers who described themselves as "Neutral", "Concerned", or "Very Concerned". Teachers who indicated they were "Enthusiastic" or "Interested" in changes in their work setting rated "Merit Pay Without Salary Schedule" higher than teachers who indicated they were "Neutral", "Concerned", or "Very Concerned".

"Self-perception as a Teacher" was the teacher characteristic studied in Hypothesis 5. The three categories of the variable were: "Exceptional"; "Above Average"; and "Average" or "Below Average". Teachers who described themselves as "Above Average" rated "Nonmonetary Incentives" higher than teachers who described themselves as "Average" or "Below Average". Additionally, teachers who described themselves as "Above Average" rated "Supplemental Pay" higher than teachers who described themselves as "Exceptional".

Gender was the teacher characteristic studied in Hypothesis 6. Males rated "Merit Pay With Salary Schedule" and "Merit Pay Without Salary Schedule" higher than females. And females rated "Nonmonetary Incentives" and "Career Ladders" higher than males.

The teacher characteristic addressed in Hypothesis 7 was "Grade Level Taught". The four categories of the variable were: elementary; middle school or junior high; high school; and a combination of levels. There were no significant differences between categories for teacher ratings of alternative compensation plans.

Hypothesis 8 examined the interaction between gender and grade level taught for ratings of alternative compensation plans. Female elementary and junior high

teachers and females who taught a combination of levels rated "Nonmonetary Incentives" higher than males who taught at those grade levels. However, male senior high teachers rated "Nonmonetary Incentives" higher than female senior high teachers.

Additionally, female elementary and senior high teachers and those who taught a combination of levels rated "Career Ladders" higher than males who taught at those levels. However, male junior high teachers rated "Career Ladders" higher than female junior high teachers.

Discussion

The results of the tests involving teacher characteristics indicate that some characteristics are significant factors in teachers' ratings of alternative compensation plans. "Number of Professional Courses or Workshops Taken Per Year", "Attitude Toward Change in the Work Setting", and "Self-perception as a Teacher" were statistically significant factors; however, "Years Teaching Experience" and "Employment Outside the District" were not significant factors.

"Years Teaching Experience" was not found to be a significant factor in this study; however, other researchers have concluded that teachers' attitudes

towards a variety of issues change during different stages of their careers (Fuller & Brown, 1975; Newman, 1979; Peterson, 1979). One may speculate that because the whole notion of alternative compensation plans was relatively new to most teachers in the study, even experienced teachers had not had time to formulate, test, and reformulate their opinions of the concept. Perhaps because both novice and experienced teachers were considering this issue for the first time, their ratings were closer than they might have been on a number of other issues.

The findings of the test involving "Professional Courses or Workshops Taken Per Year" substantiate the work of Burden (1985) which indicates that teachers' attitudes change as a result of involvement in professional growth programs. Teachers who participated in two or more professional courses per year rated merit pay significantly higher than teachers who were less involved in professional growth activities. Perhaps teachers taking professional courses acquired information about merit pay plans which influenced them favorably towards it. Or perhaps the teachers who participate in professional growth activities are more open to merit pay because they are less threatened by evaluation, more

committed to the profession, more self-confident, or simply superior educators than teachers who do not participate in many professional growth activities.

The results of the test involving "Employment Outside the School District" do not appear to be consistent with Wisniewski and Kleine's (1983) finding that teachers who have trouble providing necessities for their families will do almost anything to supplement their incomes. Perhaps the participants in this study viewed performance-based pay as less desirable than holding second jobs.

The test involving "Attitude Toward Change in the Work Setting" substantiates previous research indicating that teachers with a high receptivity to change are willing to consider new ideas and take greater risks than teachers with a low receptivity to change (Wangen, 1982; Runkel, 1980).

The findings of the test involving "Self-perception as a Teacher" may indicate that teachers with above average self-concepts are reinforced more by intrinsic motivators ("Nonmonetary Incentives") than are teachers with average or below average self-concepts. Or perhaps teachers with lower self-perceptions are simply not accustomed to receiving nonmonetary rewards in their

jobs and, therefore, have little appreciation for their importance.

A second finding of the test may indicate that teachers with very high self-concepts do not view "Supplemental Pay" as an important aspect of their careers (perhaps most of their time and effort goes into classroom/lesson preparation) while teachers with above average self-concepts perceive extra duty pay as a viable option in their careers.

The results of the test involving gender were consistent with Miller's (1980) conclusion that job rewards for women come from the "challenge and interest inherent in the tasks themselves..." ("Nonmonetary Incentives"). Additionally, the findings involving gender indicate that women may be more open to a total restructuring of the system ("Career Ladders") than men and/or that women view "Career Ladders" as a means of opening doors to advancement within an administratively male-dominated system. Furthermore, the results of this test may suggest that men are more open to competitive plans ("Merit Pay Without Salary Schedule") than are women.

Because there were no significant differences between the ratings of teachers at different grade levels, one

may assume that teachers at all levels share similar perceptions about the different types of plans and that the impact of the plans is seen as affecting teachers at all grade levels in similar ways. This is consistent with Lee's (1987) findings.

The results of the first interaction effect could suggest that female elementary and junior high teachers and male senior high and combination-level teachers are more competitive, more self-confident and/or have more confidence in their administrators' abilities to successfully implement merit pay plans than do male elementary and junior high teachers and female senior high and combination-level teachers.

The results of the second interaction effect could suggest that male elementary and senior high and female junior high and combination teachers are more motivated by professional growth opportunities and recognition than are female elementary and senior high and male junior high and combination-level teachers.

Conclusions Related to Pretest and Posttest Ratings of Alternative Compensation Plans

The fifth objective of the study was to determine whether teachers change their ratings of alternative compensation plans after the development of district

alternative compensation plans. Hypotheses 9 and 10 were included in this objective.

Hypothesis 9 examined the pretest and posttest ratings of teachers who participated in the development of their districts' alternative compensation plans (the experimental group). These teachers rated "Merit pay With Salary Schedule" and "Monetary Incentives" higher after the development of their districts' alternative compensation plans than they had before the development of their districts' alternative compensation plans.

Hypothesis 10 examined the pretest and posttest ratings of teachers who did not participate in the development of their districts' alternative compensation plans (the control group). These teachers rated "Nonmonetary Incentives" and "Supplemental Pay" higher after the development of their districts' plans than they had before the development of the plans.

Discussion

The results of Hypothesis 9 provide support for utilizing inservice programs as a means of facilitating changes in teachers' attitudes. The alternative compensation workshops conducted by Dr. James Sweeney of Iowa State University emphasized merit pay and monetary incentive plans. Both of these types of plans showed

significant increases in ratings by teachers who attended the workshops.

The results of Hypothesis 10 suggest that teachers who are not directly involved in developing a district alternative compensation plan are affected by the process. Although these teachers did not change their attitudes towards "Merit Pay" or "Monetary Incentives" as did the experimental group, they did increase their ratings of two other types of alternative compensation plans, "Nonmonetary Incentives" and "Supplemental Pay". It may be speculated that the process of change in which the districts were engaged along with the second-hand workshop information gained from teachers actively engaged in the process contributed to a generally more positive attitude towards alternative compensation plans. The general improvement in attitude may have been reflected on the posttest surveys by higher ratings of "Supplemental Pay" and "Nonmonetary Incentives" -- the two types of plans which could be regarded as the least threatening or as presenting the least changes to the traditional system.

General Discussion

The results of this study suggest several noteworthy considerations regarding teachers' opinions of

alternative compensation plans. First, teachers want a plan that focuses on professional growth. They reject reward and evaluation components which address other types of issues.

Secondly, teachers prefer the type of alternative compensation plan with which they are most familiar ("Supplemental Pay"). Third, some characteristics of teachers are significant in determining their preference for alternative compensation plans. Those characteristics include their gender, the interaction of gender and grade level taught, the number of professional courses or workshops they take annually, their attitude toward changes in the work setting, and their self-perceptions as teachers.

Fourth, the process of developing an alternative compensation plan appears to affect teachers' opinions of such plans. Attendance at workshops emphasizing "Merit Pay" and "Monetary Incentives" improved teachers' ratings of these two types of plans. Teachers not attending the workshops did not change their ratings of these two types of plans; however, they did increase their ratings of two other types of plans ("Supplemental Pay" and "Nonmonetary Incentives"). One could speculate that this was due to the increased focus on alternative

compensation within the district. Although these teachers were not influenced by the workshops to reconsider the merits of "Monetary Incentives" and "Merit Pay", the emphasis on developing a new plan may have influenced them to regard the more familiar types of plans more favorably.

Recommendations

This project leads to three recommendations for research in the study of alternative compensation plans.

1. This study examined teachers' opinions of alternative compensation plans before and after the development of their districts' plans. A similar study of their opinions after the plans have been in operation for a year or two would provide a valuable addendum to the study.
2. Preference for alternative compensation plan was found to be dependent upon gender. Additional studies examining this variable more closely could explain why such differences persist at a time when sexual equality is supposedly being addressed in education today.
3. The effect of teacher inservice workshops was studied in this project. Experimental studies of the impact of such training on teacher

attitudes and behavior could provide districts with helpful information regarding strategies for implementing changes within a district.

APPENDIX A:

PRETEST SURVEY

ARROWHEAD AEA 5 PHASE III PROJECT SURVEY

1. Please write the last 4 digits of your social security number: _____ (This is used only for statistical coding purposes and will not be used to identify you by name.)

2. Building: _____

3. School District: _____

Please circle the appropriate answer.

4. Are you a member of your district's Phase III committee? (1) Yes (2) No

5. Sex: (1) Male (2) Female

6. Grade level: (1) Elementary (2) Middle/Junior High (3) High School (4) Combination of 1, 2 and/or 3

7. Total number of years teaching experience as of June 1, 1987: _____

8. In general, to what extent do you participate in professional growth activities outside contract hours? (e.g., college and staff development courses, workshops, etc.)

(1) 0-1 courses/workshops per year (2) 2-5 courses/workshops per year (3) 6 or more courses/workshops per year

9. If you are employed outside the school district (summer or during school year), what is the primary purpose for such employment?

(1) I am not employed outside the district (2) For enjoyment/professional satisfaction (3) To earn money for "extras" (4) To earn money for necessities

10. To what extent do you find teaching personally satisfying?
- (1) Always satisfying (2) Frequently satisfying
 (3) Occasionally satisfying (4) Seldom satisfying
 (5) Never satisfying
11. In general, how receptive are you to changes in your work setting (e.g., sudden change in teaching assignment, change in principal, etc.)? Which characteristic most accurately represents your feelings?
- (1) Enthusiastic (2) Interested/open
 (3) Sometimes positive/sometimes negative
 (4) Concerned (5) Very concerned
12. How do you perceive yourself as a teacher?
- (1) Exceptional (2) Above average
 (3) Average (4) Below Average

PERFORMANCE-BASED AND SUPPLEMENTAL PAY COMPONENTS

Following are components of performance-based and supplemental pay plans. If you were developing a plan, how would you rate each component? Use the following scale.

Detrimental - Counterproductive to a workable and desirable plan. (1)

Somewhat Detrimental - Generally negative effects. Not recommended for a workable and desirable plan. (2)

Uncertain - Unsure of effects on plans. (3)

Somewhat Enhancing - Generally positive effects. Recommended for a workable and desirable plan. (4)

Enhancing - Very beneficial to a workable and desirable plan. (5)

- _____ 13. Compensation made on a basis other than a fixed salary schedule.
- _____ 14. Recognition and appreciation expressed by the administration.

- ___ 15. Tuition paid for graduate or college courses.
- ___ 16. Experienced teachers paid to function as "mentors": help new teachers improve their skills and knowledge.
- ___ 17. Participation in a teacher exchange program with other districts or schools (e.g., teacher in district A changes positions with teacher in district B).
- ___ 18. Opportunities for expanded roles/new dimensions for teachers (e.g., shared positions, special projects, etc.).
- ___ 19. Increased opportunities for professional growth.
- ___ 20. Non-monetary recognition for professional growth.
- ___ 21. Increased compensation to teachers for continued professional growth.
- ___ 22. Additional compensation to educators in a subject area where there is a present shortage of teachers.
- ___ 23. Advanced study sabbaticals (at a reasonable funding level).
- ___ 24. Incentives for individuals or groups to work on special projects.
- ___ 25. Opportunities for sharing a staff position, each with part-time responsibilities.
- ___ 26. Staff development opportunities outside the school day.
- ___ 27. Released time for staff development activities.
- ___ 28. A cash bonus for outstanding performance in a particular area.
- ___ 29. Opportunities for participation in planning and decision-making (e.g., programs, curriculum, textbooks, etc.).

- ___ 30. Opportunities to counsel/advise students or groups of students.
- ___ 31. Opportunities to observe other teachers to help them with classroom instruction, management and other concerns.
- ___ 32. Extended contracts for staff to work on school-related matters (e.g., curriculum, textbook selection, staff development, etc.).

COMPONENTS OF EVALUATION SYSTEM

Following are components of various supervision/evaluation systems. Please rate the effect of each component on an evaluation system.

- ___ 33. Professional growth and the improvement of instruction is stressed.
- ___ 34. Appropriate student growth is considered.
- ___ 35. Professional growth objectives are jointly set by the staff member and the evaluator.
- ___ 36. An evaluation process is used that is different for new teachers than experienced teachers.
- ___ 37. A test of teachers' knowledge of subject matter is included.
- ___ 38. An evaluation process is used that is different for those teachers whose performance is unsatisfactory.
- ___ 39. An evaluation of staff is made only by administrators.
- ___ 40. Peer evaluation is included with administrator evaluation.
- ___ 41. Evaluation by students is included with administrator evaluation.
- ___ 42. Evaluation of staff by trained evaluators outside of the district is included.

PERFORMANCE-BASED AND SUPPLEMENTAL PAY PLANS

Following are 6 examples of performance-based and supplemental pay plans. On the left, please rank them from 1 (the plan which is least desirable) to 6 (the plan which is most desirable).

RANK

- _____ 43. Merit Pay With Salary Schedule: Pay for all teachers is based on teaching effectiveness in the classroom. Salary is determined by a combination of evaluation of teaching performance and the salary schedule.
- _____ 44. Merit Pay Without Salary Schedule: Pay for all teachers is based on teaching effectiveness in the classroom. Salary is determined annually by evaluation of teaching performance. Pay is based only on performance.
- _____ 45. Monetary Incentives: Pay is based on the salary schedule, but additional pay may be earned for meeting certain established objectives (e.g., reducing staff absenteeism, accepting difficult teaching assignments, increasing student test scores, etc.). The money may be earned by individual teachers or by an entire staff for meeting school-wide goals.
- _____ 46. Non-monetary Incentives: Pay is based solely on the salary schedule. However, opportunities are available for professional growth, recognition, and expanded roles for teachers who meet certain goals or objectives.
- _____ 47. Career Ladders: Pay may be based on the salary schedule. However, a teacher may elect to enter the career ladder structure. In this case pay is based on the level achieved on the ladder (e.g., master teacher, apprentice, etc.). Higher levels are earned through teaching experience, evaluations of performance, professional growth, out-of-class contributions to the district, etc.

- _____ 48. Supplemental Pay: Pay is based on the salary schedule. However, additional pay may be earned for work outside contract hours (e.g., supervision of students before or after school, work on curriculum committees in the summer, coaching, etc.). Pay is not based on performance.

APPENDIX B:

POSTTEST SURVEY

ARROWHEAD AEA 5 PHASE III PROJECT SURVEY - (POSTTEST)

1. Please write the last 4 digits of your social security number: _____ (This is used only for statistical coding purposes and will not be used to identify you by name.)
2. Building: _____
3. School District: _____

Post test: numbers 4 through 12 are deleted.

PERFORMANCE-BASED AND SUPPLEMENTAL PAY COMPONENTS

Following are components of performance-based and supplemental pay plans. If you were developing a plan, how would you rate each component? Use the following scale.

Detrimental - Counterproductive to a workable and desirable plan. (1)

Somewhat Detrimental - Generally negative effects. Not recommended for a workable and desirable plan. (2)

Uncertain - Unsure of effects on plan. (3)

Somewhat Enhancing - Generally positive effects. Recommended for a workable and desirable plan. (4)

Enhancing - Very beneficial to a workable and desirable plan. (5)

- ___ 13. Compensation made on a basis other than a fixed salary schedule.
- ___ 14. Recognition and appreciation expressed by the administration.
- ___ 15. Tuition paid for graduate or college courses.
- ___ 16. Experienced teachers paid to function as "mentors": help new teachers improve their skills knowledge.

- ___ 17. Participation in a teacher exchange program with other districts or schools (e.g., teacher in district A changes positions with teacher in district B).
- ___ 18. Opportunities for expanded roles/new dimensions for teachers (e.g., shared positions, special projects, etc.).
- ___ 19. Increased opportunities for professional growth.
- ___ 20. Non-monetary recognition for professional growth.
- ___ 21. Increased compensation to teachers for continued professional growth.
- ___ 22. Additional compensation to educators in a subject area where there is a present shortage of teachers.
- ___ 23. Advanced study sabbaticals (at a reasonable funding level).
- ___ 24. Incentives for individuals or groups to work on special projects.
- ___ 25. Opportunities for sharing a staff position, each with part-time responsibilities.
- ___ 26. Staff development opportunities outside the school day.
- ___ 27. Released time for staff development activities.
- ___ 28. A cash bonus for outstanding performance in a particular area.
- ___ 29. Opportunities for participation in planning and decision-making (e.g., programs, curriculum, textbooks, etc.).
- ___ 30. Opportunities to counsel/advise students or groups of students.

- ___ 31. Opportunities to observe other teachers to help them with classroom instruction, management and other concerns.
- ___ 32. Extended contracts for staff to work on school-related matters (e.g., curriculum, textbook selection, staff development, etc.).

COMPONENTS OF EVALUATION SYSTEM

Following are components of various supervision/evaluation systems. Please rate the effect of each component on an evaluation system.

- ___ 33. Professional growth and the improvement of instruction is stressed.
- ___ 34. Appropriate student growth is considered.
- ___ 35. Professional growth objectives are jointly set by the staff member and the evaluator.
- ___ 36. An evaluation process is used that is different for new teachers than experienced teachers.
- ___ 37. A test of teachers' knowledge of subject matter is included.
- ___ 38. An evaluation process is used that is different for those teachers whose performance is unsatisfactory.
- ___ 39. An evaluation of staff is made only by administrators.
- ___ 40. Peer evaluation is included with administrator evaluation.
- ___ 41. Evaluation by students is included with administrator evaluation.
- ___ 42. Evaluation of staff by trained evaluators outside of the district is included.

PERFORMANCE-BASED AND SUPPLEMENTAL PAY PLANS

RATING

Following are 6 examples of performance-based and supplemental pay plans. Please rate the desirability of each plan.

- _____ 43. Merit Pay With Salary Schedule: Pay for all teachers is based on teaching effectiveness in the classroom. Salary is determined by a combination of evaluation of teaching performance and the salary schedule.
- _____ 44. Merit Pay Without Salary Schedule: Pay for all teachers is based on teaching effectiveness in the classroom. Salary is determined annually by evaluation of teaching performance. Pay is based only on performance.
- _____ 45. Monetary Incentives: Pay is based on the salary schedule, but additional pay may be earned for meeting certain established objectives (e.g., reducing staff absenteeism, accepting difficult teaching assignments, increasing student test scores, etc.). The money may be earned by individual teachers or by an entire staff for meeting school-wide goals.
- _____ 46. Non-monetary Incentives: Pay is based solely on the salary schedule. However, opportunities are available for professional growth, recognition, and expanded roles for teachers who meet certain goals or objectives.
- _____ 47. Career Ladders: Pay may be based on the salary schedule. However, a teacher may elect to enter the career ladder structure. In this case pay is based on the level achieved on the ladder (e.g., master teacher, apprentice, etc.). Higher levels are earned through teaching experience, evaluations of performance, professional growth, out-of-class contributions to the district, etc.

- _____ 48. Supplemental Pay: Pay is based on the salary schedule. However, additional pay may be earned for work outside contact hours (e.g., supervision of students before or after school, work on curriculum committees in the summer, coaching, etc.). Pay is not based on performance.

APPENDIX C:

RATINGS OF REWARD COMPONENTS OF ALTERNATIVE
COMPENSATION PLANS

Table C.1. Teachers' Ratings of the Reward Component
 "Compensation Made on a Basis Other Than a
 Fixed Salary Schedule" (Item 13 on survey).
 N = 377

Rating	f	%
(1) Detrimental	47	12.5
(2) Somewhat Detrimental	61	16.2
(3) Uncertain	127	33.7
(4) Somewhat Enhancing	102	27.1
(5) Enhancing	34	9.0
Pretest Mean:	3.04	Std. Dev.: 1.15

Table C.2. Teachers' Ratings of the Reward Component
 "Recognition and Appreciation Expressed by
 the Administration" (Item 14 on survey). N =
 277

Rating	f	%
(1) Detrimental	24	6.4
(2) Somewhat Detrimental	37	9.8
(3) Uncertain	47	12.5
(4) Somewhat Enhancing	117	31.1
(5) Enhancing	150	39.8
Pretest Mean:	3.89	Std. Dev.: 1.22

Table C.3. Teachers' Ratings of the Rewards Component
 "Tuition Paid for Graduate or College
 Courses" (Item 15 on survey). N = 377

Rating	f	%
(1) Detrimental	12	3.2
(2) Somewhat Detrimental	19	5.0
(3) Uncertain	30	8.0
(4) Somewhat Enhancing	102	27.1
(5) Enhancing	3	.8
Pretest Mean:	4.29	Std. Dev.: 1.03

Table C.4. Teachers' Ratings of the Reward Component
 "Experienced Teachers Paid to Function as
 Mentors" (Item 16 on survey). N = 377

Rating	f	%
(1) Detrimental	8	2.1
(2) Somewhat Detrimental	27	7.2
(3) Uncertain	96	25.5
(4) Somewhat Enhancing	173	45.9
(5) Enhancing	70	18.6
Pretest Mean:	3.72	Std. Dev.: .92

Table C.5. Teachers' Ratings of the Reward Component
 "Participation in a Teacher Exchange Program
 with Other Districts or Schools" (Item 17 on
 survey). N = 377

Rating	f	%
(1) Detrimental	28	7.4
(2) Somewhat Detrimental	38	10.1
(3) Uncertain	173	45.9
(4) Somewhat Enhancing	104	27.7
(5) Enhancing	33	8.8
Pretest Mean: 3.20	Std. Dev.: .92	

Table C.6. Teachers' Ratings of the Reward Component
 "Opportunities for Expanded Roles/New
 Dimensions for Teachers (e.g., Shared
 Positions, Special Projects, etc.)" (Item 18
 on survey). N = 377

Rating	f	%
(1) Detrimental	6	1.6
(2) Somewhat Detrimental	9	2.4
(3) Uncertain	97	25.7
(4) Somewhat Enhancing	20	54.1
(5) Enhancing	60	15.9
Pretest Mean: 3.81	Std. Dev.: .99	

Table C.7. Teachers' Ratings of the Reward Component
 "Increased Opportunities for Professional
 Growth" (Item 19 on survey). N = 377

Rating	f	%
(1) Detrimental	2	.5
(2) Somewhat Detrimental	4	1.1
(3) Uncertain	14	3.7
(4) Somewhat Enhancing	183	48.5
(5) Enhancing	172	45.6
Pretest Mean:	4.39	Std. Dev.: .66

Table C.8. Teachers' Ratings of the Reward Component
 "Nonmonetary Recognition for Professional
 Growth" (Item 20 on survey). N = 377

Rating	f	%
(1) Detrimental	25	6.6
(2) Somewhat Detrimental	41	10.9
(3) Uncertain	103	27.3
(4) Somewhat Enhancing	146	38.7
(5) Enhancing	59	15.6
Pretest Mean:	3.46	Std. Dev.: 1.09

Table C.9. Teachers' Ratings of the Reward Component
 "Increased Compensation to Teachers for
 continued Professional Growth" (Item 21 on
 survey). N = 377

Rating	f	%
(1) Detrimental	3	.8
(2) Somewhat Detrimental	3	.8
(3) Uncertain	24	6.4
(4) Somewhat Enhancing	153	40.6
(5) Enhancing	192	51.2
Pretest Mean:	4.40	Std. Dev.: .72

Table C.10. Teachers' Ratings of the Reward Component
 "Additional Compensation to Teachers in a
 Subject Area Where There Is a Present
 Shortage of Teachers" (Item 22 on survey).
 N = 377

Rating	f	%
(1) Detrimental	49	13.0
(2) Somewhat Detrimental	87	23.1
(3) Uncertain	110	29.2
(4) Somewhat Enhancing	80	21.2
(5) Enhancing	49	13.0
Pretest Mean:	3.00	Std. Dev.: 1.22

Table C.11. Teachers' Ratings of the Reward Component
 "Advanced Study Sabbaticals (At a Reasonable
 Funding Level)" (Item 23 on survey). N =
 377

Rating	f	%
(1) Detrimental	8	2.1
(2) Somewhat Detrimental	18	4.8
(3) Uncertain	110	29.2
(4) Somewhat Enhancing	175	46.4
(5) Enhancing	65	17.2
Pretest Mean:	3.72	Std. Dev.: .88

Table C.12. Teachers' Ratings of the Reward Component
 "Incentives for Individuals or Groups to
 Work on Special Projects" (Item 24 on
 survey). N = 377

Rating	f	%
(1) Detrimental	3	.8
(2) Somewhat Detrimental	7	1.9
(3) Uncertain	36	9.5
(4) Somewhat Enhancing	209	55.4
(5) Enhancing	121	32.1
Pretest Mean:	4.17	Std. Dev.: .73

Table C.13. Teachers' Ratings of the Reward Component
 "Opportunities for Sharing a Staff Position"
 (Item 25 on survey). N = 377

Rating	f	%
(1) Detrimental	8	2.1
(2) Somewhat Detrimental	36	9.5
(3) Uncertain	156	41.4
(4) Somewhat Enhancing	127	33.7
(5) Enhancing	47	12.5
Pretest Mean:	3.45	Std. Dev.: .91

Table C.14. Teachers' Ratings of the Reward Component
 "Staff Development Opportunities Outside the
 School Day" (Item 26 on survey). N = 377

Rating	f	%
(1) Detrimental	11	2.9
(2) Somewhat Detrimental	46	12.2
(3) Uncertain	86	22.8
(4) Somewhat Enhancing	184	48.8
(5) Enhancing	46	12.2
Pretest Mean:	3.56	Sd. Dev.: .96

Table C.15. Teachers' Ratings of the Reward Component
 "Released Time for Staff Development
 Activities" (Item 27 on survey). N = 377

Rating	f	%
(1) Detrimental	1	.3
(2) Somewhat Detrimental	8	2.1
(3) Uncertain	29	7.7
(4) Somewhat Enhancing	194	51.5
(5) Enhancing	141	37.4
Pretest Mean:	4.24	Std. Dev.: .71

Table C.16. Teachers' Ratings of the Reward Component "A
 Cash Bonus for Outstanding Performance in a
 Particular Area" (Item 28 on survey). N =
 377

Rating	f	%
(1) Detrimental	49	13.0
(2) Somewhat Detrimental	54	14.3
(3) Uncertain	105	27.9
(4) Somewhat Enhancing	93	24.7
(5) Enhancing	72	19.9
Pretest Mean:	3.23	Std. Dev.: 1.28

Table C.17. Teachers' Ratings of the Reward Component
 "Opportunities for Participation in Planning
 and Decision-making" (Item 29 on survey). N
 = 377

Rating	f	%
(1) Detrimental	2	.5
(2) Somewhat Detrimental	3	.8
(3) Uncertain	23	6.1
(4) Somewhat Enhancing	220	58.4
(5) Enhancing	127	33.7
Pretest Mean:	4.24	Std. Dev.: .65

Table C.18. Teachers' Ratings of the Rewards Component
 "Opportunities to Counsel/Advise Students or
 Groups of Students" (Item 30 on survey). N
 = 377

Rating	f	%
(1) Detrimental	4	1.1
(2) Somewhat Detrimental	7	1.9
(3) Uncertain	140	37.1
(4) Somewhat Enhancing	166	44.0
(5) Enhancing	57	15.1
Pretest Mean:	3.70	Std. Dev.: .78

Table C.19. Teachers' Ratings of the Reward Component
 "Opportunities to Observe Other Teachers to
 help Them With Classroom Instruction,
 Management and Other Concerns" (Item 31 on
 survey). N = 377

Rating	f	%
(1) Detrimental	17	4.5
(2) Somewhat Detrimental	32	8.5
(3) Uncertain	137	36.3
(4) Somewhat Enhancing	142	37.7
(5) Enhancing	45	11.9
Pretest Mean:	3.45	Std. Dev.: .98

Table C.20. Teachers' Ratings of the Reward Component
 "Extended Contracts for Staff to Work on
 School-related Matters" (Item 32 on survey).
 N = 377

Rating	f	%
(1) Detrimental	3	.8
(2) Somewhat Detrimental	6	1.6
(3) Uncertain	22	5.8
(4) Somewhat Enhancing	155	41.1
(5) Enhancing	190	50.4
Pretest Mean:	4.39	Std. Dev.: .74

APPENDIX D:

PRETEST RATINGS OF EVALUATION COMPONENTS OF ALTERNATIVE
COMPENSATION PLANS

Table D.1. Teachers' Ratings of the Evaluation Component
 "Professional Growth and the Improvement of Instruction
 is Stressed" (Item 33 on survey). N = 377

Rating	f	%
(1) Detrimental	1	.3
(2) Somewhat Detrimental	9	2.4
(3) Uncertain	31	8.2
(4) Somewhat Enhancing	215	57.0
(5) Enhancing	119	31.6
Pretest Mean:	4.18	Std. Dev.: .70

Table D.2. Teachers' Ratings of the Evaluation Component
 "Appropriate Student Growth is Considered"
 (Item 34 on the survey). N 377

Rating	f	%
(1) Detrimental	12	3.2
(2) Somewhat Detrimental	36	9.5
(3) Uncertain	103	27.3
(4) Somewhat Enhancing	164	43.5
(5) Enhancing	60	15.9
Pretest Mean:	3.55	Std. Dev.: .97

Table D.3. Teachers' Ratings of the Evaluation Component
 "Professional Growth Objectives Are Jointly
 Set by the Staff Members and the Evaluator"
 (Item 35 on survey). N = 377

Rating	f	%
(1) Detrimental	3	.8
(2) Somewhat Detrimental	11	2.9
(3) Uncertain	60	15.9
(4) Somewhat Enhancing	186	49.3
(5) Enhancing	115	30.5
Pretest Mean:	4.06	Std. Dev.: .81

Table D.4. Teachers' Ratings of the Evaluation Component
 "An Evaluation Process Is Used that Is
 Different for New Teachers than Experienced
 Teachers" (Item 36 on survey). N = 377

Rating	f	%
(1) Detrimental	21	5.6
(2) Somewhat Detrimental	59	15.6
(3) Uncertain	145	38.5
(4) Somewhat Enhancing	104	27.6
(5) Enhancing	46	12.2
Pretest Mean:	3.25	Std. Dev.: 1.04

Table D.5. Teachers' Ratings of the Evaluation Component
 "A Test of Teachers' Knowledge of Subject
 Matter is Included" (Item 37 on survey). N
 =377

Rating	f	%
(1) Detrimental	70	18.6
(2) Somewhat Detrimental	65	17.2
(3) Uncertain	153	40.8
(4) Somewhat Enhancing	66	17.5
(5) Enhancing	21	5.5
Pretest Mean:	2.74	Std. Dev.: 1.12

Table D.6. Teachers' Ratings of the Evaluation Component
 "An Evaluation Process Is Used That Is
 Different for Those Teachers whose
 Performance Is Unsatisfactory" (Item 38 on
 survey). N = 377

Rating	f	%
(1) Detrimental	68	18.0
(2) Somewhat Detrimental	93	25.0
(3) Uncertain	152	40.9
(4) Somewhat Enhancing	42	11.1
(5) Enhancing	17	4.6
Pretest Mean:	2.59	Std. Dev.: 1.05

Table D.7. Teachers' Ratings of the Evaluation Component
 "An Evaluation of Staff Is Made Only by
 Administrators" (Item 39 on survey). N = 377

Rating	f	%
(1) Detrimental	61	16.2
(2) Somewhat Detrimental	105	27.9
(3) Uncertain	100	26.5
(4) Somewhat Enhancing	88	23.3
(5) Enhancing	20	5.3
Pretest Mean: 2.74	Std. Dev.: 1.15	

Table D.8. Teachers' Ratings of the Evaluation Component
 "Peer Evaluation Is Included with
 Administrator Evaluation" (Item 40 on
 survey). N = 377

Rating	f	%
(1) Detrimental	56	14.9
(2) Somewhat Detrimental	57	15.2
(3) Uncertain	114	30.2
(4) Somewhat Enhancing	132	35.0
(5) Enhancing	15	4.0
Pretest Mean: 2.98	Std. Dev.: 1.13	

Table D.9. Teachers' Ratings of the Evaluation Component "Evaluation by Students Is Included with Administrator Evaluation" (Item 41 on survey). N = 377

Rating	f	%
(1) Detrimental	65	17.2
(2) Somewhat Detrimental	88	23.3
(3) Uncertain	130	24.5
(4) Somewhat Enhancing	80	21.8
(5) Enhancing	9	2.4
Pretest Mean: 2.68	Std. Dev.: 1.07	

Table D.10. Teachers' Ratings of the Evaluation Component "Evaluation of Staff by Trained Evaluators Outside of the District Is Included" (Item 42 on survey). N = 377

Rating	f	%
(1) Detrimental	33	8.8
(2) Somewhat Detrimental	48	12.7
(3) Uncertain	128	34.0
(4) Somewhat Enhancing	119	31.6
(5) Enhancing	46	12.2
Pretest Mean: 3.26	Std. Dev.: 1.11	

APPENDIX E:

PRETEST RATINGS OF ALTERNATIVE COMPENSATION PLANS

Table E.1. Teachers Ratings of the Alternative
Compensation Plan "Merit Pay With Salary
Schedule" (Item 43 on the survey). N = 377

Ratings	f	%
(1) Highly Undesirable	70	18.6
(2) Undesirable	80	21.2
(3) Uncertain	68	18.0
(4) Desirable	84	22.3
(5) Highly Desirable	31	8.2

Table E.2. Teachers' Ratings of the Alternative
Compensation Plan "Merit Pay Without Salary
Schedule". (Item 44 on the survey). N = 377

Rating	f	%
(1) Highly Undesirable	172	45.6
(2) Undesirable	76	20.2
(3) Uncertain	58	15.4
(4) Desirable	23	6.1
(5) Highly Desirable	1	.3

Table E.3. Teacher ratings of the Alternative Compensation Plan "Monetary Incentives", (Item 45 on the survey). N = 377

Rating	f	%
(1) Highly Undesirable	13	3.4
(2) Undesirable	15	4.0
(3) Uncertain	69	18.3
(4) Desirable	163	43.2
(5) Highly Desirable	71	18.8

Table E.4. Teacher Ratings of the Alternative Compensation Plan "Nonmonetary Incentives" (Item 46 on the survey). N = 377

Rating	f	%
(1) Highly Undesirable	18	4.8
(2) Undesirable	55	14.6
(3) Uncertain	80	21.2
(4) Desirable	150	39.8
(5) Highly Desirable	28	7.4

Table E.5. Teacher Ratings of the Alternative Compensation Plan "Career Ladders" (Item 47 on the survey). N = 377

Rating	f	%
(1) Highly Undesirable	11	2.9
(2) Undesirable	25	6.6
(3) Uncertain	103	27.3
(4) Desirable	147	39.0
(5) Highly Desirable	46	12.2

Table E.6. Teacher Ratings of the Alternative Compensation Plan "Supplemental Pay" (Item 48 on the survey). N = 377

Rating	f	%
(1) Highly Undesirable	12	3.2
(2) Undesirable	23	6.1
(3) Uncertain	59	15.6
(4) Desirable	143	37.9
(5) Highly Desirable	95	25.2

APPENDIX F:

PRETEST RESULTS OF ONE-WAY ANALYSIS OF VARIANCE

Table F.1. Pretest results of analysis of variance tests of ratings of alternative compensation plans by years teaching experience

Type of Plan	df	Sum of squares	Mean square	F Ratio	F Prob.
Merit Pay With Salary Schedule					
Between Groups	3	1.05	.35	.21	.890
Within Groups	322	537.76	1.67		
Total	325	538.81			
Merit Pay Without Salary Schedule					
Between Groups	3	1.08	.36	.38	.767
Within Groups	319	309.41	.97		
Total	322	310.51			
Monetary Incentives					
Between Groups	3	2.81	.94	1.03	.381
Within Groups	320	291.33	.91		
Total	323	294.14			
Nonmonetary Incentives					
Between Groups	3	1.77	.59	.55	.646
Within Groups	320	340.88	1.07		
Total	323	342.65	.88		
Career Ladders					
Between Groups	3	3.57	1.91	1.35	.257
Within Groups	321	282.12	.88		
Total	324	285.70			
Supplemental Pay					
Between Groups	3	2.02	.67	.64	.590
Within Groups	321	338.29	1.05		
Total	324	340.31			

Table F.2. Pretest results of analysis of variance tests of ratings of alternative compensation plans by professional courses or workshops taken per year

Type of Plan	df	Sum of squares	Mean square	F Ratio	F Prob.
Merit Pay With Salary Schedule					
Between Groups	1	4.19	4.19	2.53	.113
Within Groups	329	545.27	1.66		
Total	330	549.46			
Merit Pay Without Salary Schedule					
Between Groups	1	7.29	7.29	7.77	.006**
Within Groups	326	306.02	.94		
Total	327	313.31			
Monetary Incentives					
Between Groups	1	.07	.06	.07	.791
Within Groups	327	301.88	.92		
Total	328	301.95			
Nonmonetary Incentives					
Between Groups	3	.21	.21	.19	.658
Within Groups	327	345.98	1.06		
Total	328	346.19			
Career Ladders					
Between Groups	3	.33	.33	.37	.543
Within Groups	328	287.97	.88		
Total	329	288.29			
Supplemental Pay					
Between Groups	1	4.12	4.12	3.95	.048*
Within Groups	328	341.47	1.04		
Total	329	345.59			

*Significant at the .05 level.

**Significant at the .01 level.

Table F.3. Pretest results of analysis of variance tests of ratings of alternative compensation plans by employment outside school district

Type of Plan	df	Sum of squares	Mean square	F Ratio	F Prob.
Merit Pay With Salary Schedule					
Between Groups	2	7.76	3.88	2.30	.099
Within Groups	318	528.41	1.66		
Total	320	536.17			
Merit Pay Without Salary Schedule					
Between Groups	2	2.62	1.31	1.34	.262
Within Groups	315	306.68	.97		
Total	317	309.30			
Monetary Incentives					
Between Groups	2	3.11	1.55	1.68	.188
Within Groups	316	292.39	.93		
Total	318	295.50			
Nonmonetary Incentives					
Between Groups	2	2.18	1.09	1.04	.354
Within Groups	316	330.93	1.05		
Total	318	333.11			
Career Ladders					
Between Groups	2	.41	.21	.24	.790
Within Groups	317	277.79	.88		
Total	319	278.20			
Supplemental Pay					
Between Groups	2	.36	.18	.17	.846
Within Groups	317	339.03	1.07		
Total	319	339.39			

Table 4. Pretest results of analysis of variance tests of ratings of alternative compensation plans by attitude toward change

Type of Plan	df	Sum of squares	Mean square	F Ratio	F Prob.
Merit Pay With Salary Schedule					
Between Groups	1	3.54	3.54	2.14	.145
Within Groups	331	548.02	1.66		
Total	332	551.56			
Merit Pay Without Salary Schedule					
Between Groups	1	5.77	5.77	6.06	.014*
Within Groups	328	312.43	.95		
Total	329	318.20			
Monetary Incentives					
Between Groups	1	1.19	1.19	1.30	.255
Within Groups	328	302.25	.92		
Total	329	303.44			
Nonmonetary Incentives					
Between Groups	1	.66	.66	.63	.429
Within Groups	329	348.38	1.06		
Total	330	349.05			
Career Ladders					
Between Groups	1	.84	.84	.96	.327
Within Groups	330	288.12	.87		
Total	331	288.05			
Supplemental Pay					
Between Groups	1	.42	.42	.40	.530
Within Groups	330	347.21	1.05		
Total	331	347.63			

*Significant at the .05 level.

Table 5. Pretest results of analysis of variance tests of ratings of alternative compensation plans by self-perception as a teacher

Type of Plan	df	Sum of squares	Mean square	F Ratio	F Prob.
Merit Pay With Salary Schedule					
Between Groups	2	4.07	2.04	1.22	.296
Within Groups	328	546.83	1.67		
Total	330	550.90			
Merit Pay Without Salary Schedule					
Between Groups	2	2.58	1.29	1.34	.264
Within Groups	326	314.97	.97		
Total	328	317.55			
Monetary Incentives					
Between Groups	2	.69	.35	.37	.690
Within Groups	326	302.67	.93		
Total	328	303.36			
Nonmonetary Incentives					
Between Groups	2	12.33	6.17	5.98	.003**
Within Groups	326	336.17	1.03		
Total	328	348.50			
Career Ladders					
Between Groups	2	.65	.33	.37	.691
Within Groups	327	287.80	.88		
Total	329	288.45			
Supplemental Pay					
Between Groups	2	7.88	3.94	3.80	.024*
Within Groups	327	339.70	1.04		
Total	329	347.59			

*Significant at the .05 level.

**Significant at the .01 level.

APPENDIX G:

PRETEST RESULTS OF TWO-WAY ANALYSIS OF VARIANCE

Table G.1. Pretest survey results of analysis of variance test of ratings of alternative compensation plans by gender by grade level taught

Type of Plan	df	Sum of squares	Mean Square	F-Value	F Prob.
Merit Pay With Salary Schedule					
Gender	1	8.07	8.07	5.00	*.026
Grade Level Taught	3	1.61	.58	.33	.802
Interaction	3	6.63	2.21	1.37	.258
Merit Pay Without Salary Schedule					
Gender	1	6.70	6.70	7.02	** .008
Grade Level Taught	3	4.01	1.34	1.40	.242
Interaction	3	1.00	.03	.03	.990
Monetary Incentives					
Gender	1	2.81	2.81	3.04	.082
Grade Level Taught	3	1.34	.45	.48	.700
Interaction	3	6.47	2.16	2.34	.074
Non-monetary Incentives					
Gender	1	5.42	5.42	5.59	*.019
Grade Level Taught	3	4.15	1.38	1.43	.235
Interaction	3	10.25	3.42	3.53	*.015
Career Ladders					
Gender	1	4.19	4.19	4.88	*.028
Grade Level Taught	3	3.25	1.09	1.26	.287
Interaction	3	7.96	2.65	3.09	.027
Supplemental Pay					
Gender	1	.06	.06	.06	.808
Grade Level Taught	3	.89	.30	.28	.839
Interaction	3	1.74	.58	.55	.647

*Significant at the .05 level.

**Significant at the .01 level.

BIBLIOGRAPHY

- Adkins, Gary A. (1983). Pros and Cons and Current Status of Merit Pay in the Public Schools. Paper presented at the annual meeting of the West Virginia Association of Teacher Educators.
- Bacarach, S., et al. (1984). Paying for Better Teaching: Merit Pay and Its Alternatives. Organizational Analysis and Practice Monograph Series. Ithaca, New York: O.A.P., Inc.
- Barro, S. M. (1985). The Logic of Teacher Incentives. Washington, D. C.: The National Association of State Boards of Education.
- Bell, T. (1983). Twenty keys to successful merit rating. The American School Board Journal, 146 13-14.
- Biklin S. & Shakeshaft, C. (1985). The New Scholarship on Women. In Handbook for Achieving Sex Equity Through Education (pp. 44-52). Baltimore, Maryland: Johns Hopkins University Press.
- Boyles, N., & Vrchota, D. (1986). Performance-based Compensation Models: Status and Potential for Implementation. Des Moines, Iowa: Iowa Assoc. of School Boards.
- Bray, J. L., Flakus-Mosqueda, P., Palaich, R. M., & Wilkins, J. S. (1985). New Directions for State Teacher Policies. Denver, Colorado: Educational Commission of the States.
- Bridges, E. M. (1968). The measurement problem in teacher receptivity to change. Administrator's Notebook. New York: Praeger.
- Burden, P. R. (1985). Career ladders: Retaining academically talented teachers. In H. C. Johnson, Jr., Merit, Money, and Teachers' Careers. Lanham, Maryland: University Press of America.
- Calhoun, F. S., & Protheroe, N. J. (1983). Merit Pay Plans for Teachers: Status and Description. ERS, Arlington, Virginia.

- Cedoline, A. J. (1982). Job Burnout in Public Education: Symptoms, Causes, and Survival Skills. New York: Teachers College Press, Columbia University.
- Christensen, J., Burke, P., Fessler, R., & Hagstrom, D. (1983). Stages of Teachers' Careers: Implications for Professional Development. ERIC ED 244 955.
- Cohen, D. K., & Murnane, R. J. (1985). The Merits of Merit Pay. The National Institute of Education. Washington, D. C.: Stanford University, California Institute for Research on Educational Finance and Governance.
- Committee on Education and Labor, U. S. House of Representatives. (1983). Merit Pay Task Force Report. Washington, D. C.: U. S. Government Printing Office.
- Cramer, J. (1983). Yes, merit pay can be a horror, but a few school systems have done it right. The American School Board Journal, 19, 28-34.
- Cusick, P. A. (1983). The Egalitarian Ideal and the American High School: Studies of Three Schools. New York, New York: Longman.
- Darling-Hammond, L. (1985). Peer Review in the Contest of Teacher Professionalism. Paper prepared for the American Federation of Teachers Executive Council, San Francisco.
- Diggory, J. C. (1966). Self-Evaluation: Concepts and Studies. New York, New York: John Wiley.
- District of Columbia Public Schools. (1984). A Study of Teacher Incentives for the District of Columbia Public Schools: Summary Report. Washington, D. C.: District of Columbia Public Schools.
- Dunwell, R. R. (1986). Merit, Motivation, and Mythology. Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education, Chicago, Illinois.

- Duttweiler, P. & Ramos-Cancel, M. L. (1986). Perspectives on Performance-Based Incentive Plans. Southwest Educational Development laboratory. Washington, D. C: Office of Educational Research and Improvement.
- Educational Research Services (ERS). (1979). Merit Pay for Teachers. Arlington, Virginia: ERS.
- Education USA. (1986). Mentor results mixed. Education USA, 10, 157.
- English, F. (1972). Differentiated staffing: Reform or revolution. In J. D. Cooper (Ed.), Differentiated Staffing; Pros and Cons (p. 31). Philadelphia, Pennsylvania: W.B. Saunders.
- Eric Clearinghouse on Educational Management (1981). Merit Pay Research Action Brief 15. (Available through National Institute of Education, Washington, D. C., also through ERIC ED 199 828).
- Flannelly, E. & Palaich, R. (1985). Policy Guide to Teacher Reward Systems. National Institute of Education. Washington D. C.: Spencer Foundation, Chicago, Illinois.
- Frase, L. E., Hetzel, R. W., & Grant, R. T. (1982). Merit Pay: A Research Based Alternative in Tuscon. Phi Delta Kappan, 64, 266-269.
- Fuller, F. F., & Brown, O. H. (1975). Becoming a teacher. In Teacher Education, the Seventy-fourth Yearbook of the National Society for the Study of Education. Chicago, Illinois: University of Chicago Press.
- Furtwengler, C. (1985, November). Tennessee's Career Ladder Plan: They said it couldn't be done. Educational Leadership, 7, 50-55.
- Gallup, A. (1984, November). The Gallup Poll of teachers' attitudes toward the public schools. Phi Delta Kappan, 66, 97-107.
- Giacquinta, J. B. (1975). Status, risk, and receptivity to innovations in complex organizations. Sociology of Education, 2, 38-58.

- Grandjean, B. & Bernal, H. H. (1979). Sex and centralization in a semiprofession. Sociology of Work and Occupations, 6, 84-102.
- Gregen, K. (1971). The Concept of Self. New York: Holt, Rinehart, & Winston.
- Guernsey, M. A. (1986). Review of Related Literature and Research: History of Merit Pay, Differentiated Staffing, and Incentive Pay Programs. ERIC ED 267 513.
- Hall, O. (1966). The social structure of the teaching profession. In F. W. Lutz and J. J. Azzarelli (Eds.), The Struggle for Power in Education. New York: Center for Applied Research in Education.
- Hatry, H. P. & Gruner, J. M. (1982). Issues in Teacher Incentive Plans. Washington, D. C.: The Urban Institute.
- Iowa General Assembly. (1987). House File 499. Des Moines, Iowa.
- Jordon, K. F., & Borkow, N. B. (1983). Merit pay for Elementary and Secondary School Teachers: Background Discussion and Analysis of Issues. Congressional Research Service #835415.
- Kapel, M. S., Whitford, B., Benningfield, M. Brooks, T. & Liedtke, J. (1985). Linking career ladders with demonstration schools: A Proposed Comparative Model. Journal of Teacher Education, 36, 3.
- Koeler, V. (1985). National overview: Career-Ladder and merit pay plans. In C. Clark (Ed.), Proceedings of the Preventative Law Institute on Career-Ladders/Merit Pay. Austin, Texas: Southwest Educational Development Laboratory.
- Lanier, J. E., & Little, J. W. (1986). Research on teacher education. In Handbook of Research on Teaching Third Edition. New York: American Educational Research Association.
- Lee, B. E. (1987). Perceptions of Mississippians Regarding Merit Pay for Educators. A Research Study. Gulf Coast Center for Applied Research, Biloxi, Mississippi.

- Lortie, D. (1975). Schoolteacher: A Sociological Study. Chicago, Illinois: University of Chicago Press.
- McLaughlin, M. W. & Marsh, D. D. (1979). Staff development and change. In A. Lieberman & L. Miller (Eds.), Staff Development: New Demands, New Realities, New Perspectives. New York: Columbia University, Teachers College Press.
- McQuire, C. K. (1984). The Costs of Performance Pay Systems. Chicago, Illinois: Education Commission of the States.
- Marrett, C. B. (1972). Centralization in female organizations: Reassessing the evidence. Social Problems, 19, 348-357.
- Mason, W., Dressel, R. J., and Bain, R. K. (1959). Sex roles and the career orientations of beginning teachers. Harvard Educational Review, 29, 370-383.
- Miller, E. & Say, E. (1982, December). In Houston the Second Mile Plan attacks four issues of concern. Phi Delta Kappan, 8, 270-271.
- Miller, J. (1980, October). Individual and occupational determinants of job satisfaction: A focus on gender differences. Sociology of Work and Occupations, 3, 366-377.
- Miller, J. (1979). Women and work: The psychological effects of occupational conditions. American Journal of Sociology, 85, 66-94.
- Mitchell, D. E. (1983). Work Orientation and Job Performance: The Cultural Basis of Teaching Rewards and Incentives. California University, Riverside; National Institute of Education, Washington, D. C.
- Murnane, R. & Cohen, D. K. (1985). Merit Pay and the Nature of the Employment Relationship: Lessons from Public School Systems. National Institute of Education, Washington, D. C.; Stanford University, California Institute for Research on Educational Finance and Governance.

- Murphy, M. J. (1984). Analysis of Utah Career Ladder Plans. Utah State Office of Education, Salt Lake City, Utah.
- National Commission on Excellence. (1983). A Nation at Risk: An Imperative for Reform. Washington D. C.: The Commission.
- National Education Association. (1980). Survey of NEA Members, 1980. NEA Research Memo. Washington, D.C.: National Education Association.
- Newman, K. K. (1979). Middle-aged experienced teachers' perceptions of their career development (Doctoral dissertation, The Ohio State University, 1978). Dissertation Abstracts International. (University Microforms No. DEL 79-02196).
- Ogletree, E. J. (1985). Teachers' and Administrators' Opinion of Merit Pay. ERIC ED 264 194.
- Ogletree, E., & Kuzminsi, E. (1985). Differentiated Staffing: Pros and Cons. ERIC ED 191 132.
- Palaich, R. & Flannelly, E. (1984). Incentives: Improving Teacher Quality Through Incentives. Washington, D. C.: Department of Education.
- Peterson, A. R. (1979). Career patterns of secondary school teachers: An exploratory interview study of retired teachers (Doctoral dissertation: The Ohio State University, 1978). Dissertation Abstracts International (University Microforms No. DEL 79-02204).
- Porwoll, P. J. (1979). Merit Pay for Teachers. Educational Research Services, Arlington, Virginia.
- Rist, M. C. (1983). Our nationwide poll: Most teachers endorse the merit pay concept. The American School Board Journal, 9, 5-15.
- Robinson, G. (1983). Paying Teachers for Performance and Productivity: Learning from Experience. ERS, Arlington, Virginia.
- Rosenfeld, C. (1979, February). Multiple job holding holds steady in 1978. Monthly Labor Review, 102, 59-61.

- Rosenholtz, S. J. & Smylie, M. A. (1983). Teacher Compensation and Career Ladders: Policy Implications from Research. Paper commissioned by the Tennessee General Assembly's Select Committee on Education, Nashville, Tennessee.
- Runkel, P. J., Wyant, S. H., Bell, W. E., & Runkel, M. (1980). Organizational Renewal in a School District. Center for Educational Policy and Management, Eugene, Oregon.
- Schlechty, P. & Crowell, D. (1983). Understanding and managing staff development in an Urban School System. University of North Carolina, Chapel Hill, North Carolina.
- Seib, K. (1984). How the laws of acodynamics work to prevent change. The Chronicle of Higher Education, 51, 172.
- Shanker, A. T. (1985). School merit pay commissions: Some essential considerations. The American School Board Journal, 9, 33-34.
- Simpson, R. L., & Simpson, I. H. (1969). Women and beaurocracy. In Martin Etzioni (Ed.), The Semi-Professions (pp. 196-265). Princeton, New Jersey: Princeton University Press.
- Spencer, D. (1986). Contemporary Women Teachers. New York: Longman.
- Tyler, Texas Independent School District. (1984). A Survey of Alternative Salary Plans for Teachers. Independent School District. Tyler, Texas.
- Wangen, N. R. (1982). The Relationship of Receptivity to Change to Personal Characteristics and Organizational Perceptions of Teachers in Small Schools. Paper presented to the American Educational Research Association, New York.
- Washington Post. (1983, May 22). Washington Post, p.4A.
- Wisniewski, R. & Kleine, P. (1983). Teacher Moonlighting: An Unstudied Phenomenon. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Canada.

Wylie, R. C. (1974). The Self Concept, Volume 1.
Lincoln, Nebraska: University of Nebraska Press.