# A DESCRIPTIVE AND EXPLORATORY STUDY OF PEER COACHING AND SELECTED FACTORS IN THE WORKING ENVIRONMENT OF ELEMENTARY, MIDDLE, AND HIGH SCHOOL TEACHERS IN A LARGE SUBURBAN VIRGINIA PUBLIC SCHOOL SYSTEM

by

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(ABSTRACT)

Experts have suggested that a restructuring of the organization of schools is one way to improve the teaching profession. One way to bring about such a restructuring is to allow teachers the opportunity to build collegial relationships. Advocates of peer coaching believe that it can be used to bring about this opportunity to build collegial relationships and allow for the restructuring of schools in order to create a more professional working environment in which teachers work and learn together. This restructuring should decrease isolation of teachers by creating a working environment of trust and allowing for greater resources sharing among the teachers. In turn, teachers' levels of job satisfaction should increase which ultimately should result in better teaching. However, there is little, if any, empirical support for this claim. Administrators who are interested in restructuring schools need information about the implications of building such collegial relationships on the profession of teaching and the working environment of the school.

In order to provide this information, 565 teachers in a large suburban Virginia public school system that had implemented peer coaching for a two-year period were surveyed. A questionnaire was used to document the teachers' levels of job satisfaction and perceived usefulness of peer coaching, as well as their perceptions about the degree to which trust and sharing of resources (interactions) existed in their schools.

The data collected from the questionnaire was entered into a computer using the Statistical Package for the Social Sciences (SPSS$^{x}$). Specifically, descriptive statistics (means and standard deviations) and Pearson product-moment correlations were used to describe selected variables and explore interrelationships between the variables. Analysis of variance (ANOVA) was used to determine to what extent differences existed between elementary, middle, and high school teachers on the selected variables in the study.

Based on the results, the teachers agreed that peer coaching was useful and that they trusted each other. Their participation in resources sharing tended to be more infrequent than frequent. They were satisfied with their teaching jobs. Further, it was found that pairs of the variables were positively and moderately correlated except for a weak correlation between resources sharing and job satisfaction. This meant that, on the whole, the more

useful teachers found peer coaching, the more satisfied they were with their jobs, along with perceiving greater degrees of trust and resources sharing. No differences were found to exist among the three levels of teachers on the usefulness of peer coaching or job satisfaction. All levels differed on the degree of trust that existed in their school. Middle school teachers differed from elementary on the frequency of resources sharing.

In conclusion, peer coaching appears to have reduced isolation among the teachers and provided teachers the opportunity to learn about their teaching on the job. Further training in feedback skills and group process skills along with more opportunities to observe one another are recommended as ways to further reduce isolation and create conditions in which teachers are more able to collaboratively solve problems.

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## DEDICATION

This study is dedicated to the memory of my father, , who instilled in me the desire to pursue academic endeavors and set high standards for such pursuits.

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# CHAPTER I

## INTRODUCTION

The current reform movement in education, which began in 1983 with the publication of A Nation at Risk: The Imperative for Educational Reform, has focused its attention on the profession of teaching. State and local education agencies have responded to this attention on the profession of teaching by implementing a variety of legislative and administrative measures such as merit pay, career ladders, mentor teacher programs, and other types of incentive programs (see Appendix A). This pressure for education reforms related to the teaching profession continued as evidenced by the efforts of the Holmes Group (1986) and the Carnegie Task Force on Teaching as a Profession (1986).

Today, the second wave of education reform is underway, with an emphasis on restructuring schools. Those who are interested in improving the teaching profession are being asked to investigate ways to create the kinds of environments that maximize growth for teachers as well students (Michaels, 1988). Creating opportunities for teachers to build collegial relationships has been suggested as one way to restructure schools in order to provide a professional environment in which teachers work and learn together (Cooper, 1986; Carnegie Task Force on

Teaching as a Profession, 1986; Little, 1982; Joyce and Showers, 1980, 1981, 1982, 1987, 1988; Lieberman, 1988; Lieberman and Miller, 1984; Showers, 1984a, 1984b, 1985; Shalaway, 1985; Blumberg, 1980).

In most school environments, the conditions are such that teachers tend to work in isolation from each other (Goodlad, 1984; Miles, 1965; Lortie, 1975; Lieberman and Miller, 1984; Sarason, 1971; Wildman and Niles, 1987b). This isolation in the workplace tends to inhibit teachers from using other teachers as sources of job-related knowledge and skills. However, several studies have shown that teachers view other teachers as effective sources of job-related knowledge and skills (Bacharach, Bauer,and Shedd, 1986; Blumberg, 1980; Sergiovanni and Starratt, 1979; Haller, 1968; Lortie, 1975; Kottkamp, Provenzo, and Cohn, 1986).

Peer coaching is believed to be a way to increase teacher professionalism (Shalaway, 1985; Wildman and Niles, 1987b; Joyce in Brandt, 1987); encourage collegial relationships (Joyce in Brandt, 1987; Finn, 1986; Joyce and Showers, 1982); and facilitate teachers' learning on the job (Showers, 1985; Joyce and Showers, 1980). Advocates of peer coaching believe that it can be used to build collegial relationships which restructure the organization of schools in such a way as to improve the teaching profession. Such a restructuring should decrease isolation

of teachers by creating a working environment of trust and allowing for greater sharing of resources among teachers. In turn, teachers' levels of job satisfaction may increase, which ultimately may result in better teaching.

## Problem Statement

Given that experts have suggested that a restructuring of schools is essential to the development of a professional environment for teaching, one way to bring about such a restructuring is to allow teachers the opportunity to build collegial relationships. Advocates of peer coaching believe that it can be used to bring about this restructuring of schools in order to provide a more professional working environment in which teachers work and learn together. However, at this point in time, there is little, if any, empirical support for this claim. Administrators and teachers who are interested in restructuring schools need information about the implications of building such collegial relationships on the teaching profession and the environment of the school.

## Purpose of Study

The aim of this study was to gather empirical data from a sample of teachers in a public school system that had implemented peer coaching for a two-year period in order to provide support for the above claim. The primary

purpose of this study was to document these teachers' levels of job satisfaction and their perceptions about the usefulness of peer coaching, as well as their perceptions about the degree to which trust and sharing of resources exists in their schools. A secondary purpose was to explore the interrelationships among these variables in order to determine if teachers who perceived peer coaching as more useful also perceived greater degrees of trust and resources sharing, as well as had higher job satisfaction than teachers who perceived peer coaching as less useful. More specifically, the following questions about teachers who worked in a peer coaching environment were answered:

1. What are teachers' perceptions about each of the following:
    a. the usefulness of peer coaching?
    b. the degree of trust that exists in their schools?
    c. the frequency of sharing of resources that takes place in their schools?
    d. their level of job satisfaction?
2. Are the above four variables related?
3. Are there differences among elementary, middle, and high school teachers on any of the above variables?

Significance of Study

If restructuring schools is one way to improve the profession of teaching, administrators need information about the implications of such restructuring on teaching and the professional environment of the school. Peer coaching has been suggested as a viable means by which to restructure schools in order to improve the profession of teaching (Shalaway, 1985; Joyce in Brandt, 1987; Showers, 1985; Wildman and Niles, 1987b; Finn, 1986; Joyce and Showers, 1980, 1982). Joyce and Showers (1988) discuss the enormity of the implications of implementing peer coaching and stress the need for more studies about peer coaching.

Hawley, Evertson, and Smylie (1985a) established the importance of research on teachers' opportunities to learn and the creation of conditions to support effective teaching practices. They also felt that the reform era provides an opportune time to investigate various policies, programs, and practices intended to improve teacher quality and effectiveness.

Finally, an extensive search of the literature on peer coaching failed to produce any definitive data on the implications of peer coaching at the elementary, middle, and high school levels.

In attempting to provide support for this claim, this study will offer empirical data that administrators and

teachers can use as they plan ways to improve the professional environment in which teachers work and learn.

## Limitations of the Study

The study was limited to an investigation of the teachers in 12 schools in a Virginia public school system who had been involved in peer coaching for two years. Because a randomized sample was not selected, caution should be used in making external generalizations beyond this select group.

## Definitions

Job Satisfaction - A summary of the teacher's assessment of his/her total rewards in teaching (Lortie, 1975).

Trust - The degree to which the teacher perceives interpersonal relationships as characterized by an assured reliance or confident dependence on other teachers in the school.

Interactions - The actions and/or behaviors of two or more teachers that involve an exchange of job-related knowledge and skills; resources sharing.

Peer Coaching - A process in which teachers assist each other in negotiating the distance between acquiring new skills or teaching strategies and applying them skillfully and effectively to instruction (Showers, 1985).

Intrinsic Rewards - Rewards that are self-administered by the individual, rather than distributed by others.

Collegial - The bringing together of the combined judgment and expertise of a group of professionals (Roper and Hoffman, 1986).

Restructuring - Changing the organization of schools in order to create a collegial environment for teachers that supports their learning about teaching.

## Overview of Chapters

Following this introduction, the specifics of the study are presented in Chapters II through V. Chapter II contains a review of the related research and literature. Chapter III contains descriptions of the subjects for survey, the instrumentation, procedures, and analyses used for the investigation. Chapter IV contains the results of the analyses of the data. Finally, Chapter V presents a summation of the findings along with conclusions and recommendations.

# CHAPTER II

## REVIEW OF LITERATURE

Advocates of peer coaching believe that it is a means by which to build collegial relationships in the workplaces of teachers. Further, they believe that collegial relationships can enhance the professional environment in which together teachers teach and learn about teaching. Using survey research, this study investigated the peer coaching component of a large Virginia public school system along with selected variables related to the professional working environment through the perceptions of the participating teachers.

The first section of this chapter describes the restructuring of the teaching profession as it relates to the current reform movement in education. The remaining sections of the chapter review the theoretical bases for the selected variables in the study. These variables are: (1) peer coaching, (2) trust, (3) sharing of resources, and (4) teacher job satisfaction. Throughout the chapter, research studies are discussed that relate specifically to these variables.

Restructuring the Profession of Teaching

The reform movement in education in the United States began with the publication of A Nation at Risk: The Imperative for Educational Reform (1983). Wiggins (1986) stated that following this report came a spate of over 30 others. A subsequent report by the National Commission for Excellence in Teacher Education A Call for Change in Teacher Education (1985) set the stage for more reform reports that addressed the reform movement's relationship to teacher education and the teaching profession. Spurred by this report and previous others, public school teachers came under the close scrutiny of both policy experts and the general public. As a result of the growing interest and concern about the profession of teaching, three national reports emerged: Tomorrow's Teachers (1986), A Nation Prepared: Teachers for the 21st Century (1986), and Time for Results: The Governors' 1991 Report on Education (1986).

A recent monograph prepared by the National School Boards Association (NSBA) called Good Teachers: An Unblinking Look at Supply and Preparedness (1987) summarizes the recommendations of these three reports as they relate to the profession of teaching (see Appendix B). In this summary, the first category of recommendations deals with the organization of schools as an area in which to bring about improvements in the

profession of teaching. Respectively, the Holmes Group, the Carnegie Task Force, and the National Governors' Association recommend making schools better places in which teachers work and learn, restructuring schools in order to provide a professional environment for teaching, and redesigning the organization of schools in order to create more productive working and learning environments for teachers (Cooper, 1987). In each case, the recommendations suggest organizational changes in schools that would professionalize teaching by improving the environment in which teachers teach and learn to teach.

Some national policy experts suggest that allowing teachers the opportunity to build collegial relationships is one way to begin to change the working environment of teachers. Specifically, the Carnegie Task Force was quoted in the National School Boards Association monograph (1987) as saying:

> Because professionals themselves are expected to have the expertise they need to do their work, organizations that employ professionals are not typically based on the authority of supervisors, but rather on collegial relationships among professionals (p.9).

Opportunities to build such collegial relationships are in short supply in our nations' schools but in demand

by our nations' teachers. According to Hawley, Smylie, and Evertson in the National Governors' Association report Time for Results (1986), teachers want opportunities for professional growth and affiliation with colleagues. Specifically, teachers indicate that they would like opportunities to observe one another (Goodlad, 1984; Bacharach, Bauer, and Shedd, 1986; Koppich, Gerritz, and Guthrie, 1986) and to learn from one another both formally and informally (Holly, 1977; Wu, 1987; Little, 1982; Feiman-Nemser and Floden, 1986; Wildman and Niles, 1987b; Johnson and Johnson, 1987; Bacharach, et al., 1986; Koppich, et al., 1986).

Yet, the structure of most schools inhibits teachers' opportunities to build collegial relationships. In his comprehensive study A Place Called School (1984), Goodlad describes the absence of collegial relationships based on the physical properties of most schools. He states that teachers spend much of their time in "classroom cells." Lieberman and Miller (1984) contrast teaching to other professions and conclude that "teaching does not provide for a shared culture based on the movements from knowledge to experience in the company of one's peers" (p.4). Thus, Sarason's (1971) description of teaching as a "lonely profession" appears appropriate. Role performance invisibility is a property of educational organizations described by Miles (1985). He viewed classrooms as the

"production departments" of education where teachers teach (perform). Yet, their performance in the classroom is relatively invisible to other teachers. Wildman and Niles (1987b) conducted an intensive study of 20 pairs of teachers in a mentoring program. The mentors had been teachers from four to thirty years. They found that the median opportunity to observe other teachers was only three times; several teachers had never observed a colleague.

Lortie (1975) referred to teacher isolation in his 1975 Dade County study. He noted that the teaching enterprise suffers from a lack of technical knowledge which confirms Jackson's (1968) belief that teachers form their repertoire of teaching skills alone in the confines of their classrooms by the trial-and-error method. This creates a situation where teachers practice without feedback and learn from their own experiences. Feiman-Nemser (1983) stated that after about five years of teaching in this isolated environment, some teachers' skills levels stabilize and they resist efforts to change. Showers (1982) believed that if left in the isolation of their classrooms, teachers may become more and more proficient in their skills as well as in their mistakes.

Building collegial relationships, as opposed to remaining isolated from each other, is a concept for which teachers feel they want more opportunities and which research supports for the professional development and

growth of teachers. Changes in the structure of educational organizations are called for if the workplace conditions and resources of teaching are to provide opportunities for continued professional development and growth through collegial relationships.

A recent issue of ASCD's newsletter Update (January, 1988) discussed the frequent use of the term "restructure" in the context of the reform movement and pointed out the lack of a clear definition of this term. In this article, Michael Cohen of the National Governors' Association explained what he believes to be the common element in all the attempts to restructure schools. He is quoted as saying that any restructuring activities "should be grounded in how they improve school productivity and student achievement" (p.6). He urged experimentation with alternative structures that would organize schools for better productivity, with an emphasis on teacher collegiality.

## Peer Coaching

Joyce and Showers, in their latest book Student Achievement through Staff Development (1988), propose peer coaching as an intervention that may organize schools for better productivity via teacher collegiality. They explain that a major purpose of coaching is the "implementation of innovations to the extent that determination of effects on

students is possible" (p. 83). Other purposes of coaching include building communities of teachers who continuously engage in the study of teaching; developing the shared language and common understandings necessary for collegial problem solving; and providing the necessary follow-up to training when acquiring new skills and strategies.

Joyce and Showers (1988) further state that coaching programs are characterized by several conditions:

1. Attaching coaching programs to training programs and extending the training received into the workplace.
2. Including in coaching programs a community of learners (teachers) who are engaged in:
   a. the continuous study of teaching, curriculum, and academic content.
   b. a set of continuing relationships and experiences for self-help that serves educational improvement.
3. Experimenting with and exploring appropriate uses of newly acquired skills and strategies.
4. Separating coaching relationships completely from evaluation cycles.

The basic mechanics of coaching are relatively simple (Joyce and Showers, 1988). First, coaches are involved in a common training experience. In the training setting, they not only learn new knowledge, skills, and strategies,

but a common language and shared understanding about the new practice(s). In other words, this stage includes studying the new skills, seeing them demonstrated, practicing them and learning to provide feedback to each other as they experiment with the skills.

Coaching becomes more complex in the next stage because it involves the mutual examination of appropriate uses of a new teaching skill in the classroom. Teachers help each other analyze the use of the new skill as it relates to selecting concepts to teach, organizing teaching materials, teaching students to adjust to new strategies, and creating lessons. In this stage, coaches begin to operate together in the exploratory cycle through analysis, study, hypothesis-forming and hypothesis-testing.

Finally, Joyce and Showers (1980) identified the components of training and their level of impact on the trainers (see Figure 1). Based on their analysis of over 200 studies on the effectiveness of various kinds of training methods, they concluded that transfer of training is not impacted until the addition of the feedback component. However, the addition of the coaching component noticeably increases the degree of transfer of training (see Table 1). From their research on training and coaching, they concluded that if these components were combined into training programs for teachers, the outcomes would be considerable at all levels of impact.

| Components of Training | Levels of Impact |
|---|---|
| 1. Theory | 1. Awareness |
| 2. Modeling | 2. Awareness and Knowledge |
| 3. Practice | 3. Skill Development |
| 4. Feedback | 4. Skill Development and Transfer |
| 5. Coaching | 5. Transfer of Training |

Figure 1. Training components and levels of impact. Summarized from "Improving Inservice Training: The Messages of Research" by B. Joyce and B. Showers, 1980, Educational Leadership, 37, pp. 379-385.

Table 1

Effect Sizes for Training Outcomes by Training Components

| Training Components and Combinations | Training Outcomes | | |
|---|---|---|---|
| | Knowledge | Skill | Transfer |
| Information | .63 | .35 | .00 |
| Theory | .15 | .50 | .00 |
| Demonstration | 1.65 | .26 | .00 |
| Theory Demonstration | .66 | .86 | .00 |
| Theory Practice | 1.15 | | .00 |
| Theory Demonstration Practice | | .72 | .00 |
| Theory Demonstration Practice Feedback | 1.31 | 1.18 | .39 |
| Theory Demonstration Practice Feedback Coaching | 2.71 | 1.25 | 1.68 |

From Student achievement through staff development (p.71) by B. Joyce and B. Showers, 1988, New York: Longman. Copyright 1988 by Longman. Reprinted by permission.

The majority of research studies about peer coaching conducted thus far have dealt with two major issues: transfer of training and norms of collegiality and experimentation (Joyce and Showers, 1988). Most of the studies related to transfer of training have investigated the differences between coached and uncoached teachers in the areas of frequency of practice of newly acquired skills (Showers, 1982); appropriate use of newly acquired skills (Showers, 1982, 1984a); retention of knowledge about and skill with a newly acquired skill (Baker and Showers, 1984); teaching students new models (Showers, 1984); and the degree of cognition regarding the purpose and use of new skills (Showers, 1982, 1984a).

Joyce and Showers (1988) believe that coaching may facilitate development of the norms of collegiality discussed by Little (1982). However, they stated that the data gathered on this issue were less formal than that on transfer of training. So far, the major finding has been that coaching may help build the capacity for other kinds of change among those who have participated in a coaching program. Joyce and Showers believe that "by building permanent structures for collegial relationships, schools organize themselves for improvement in multiple areas" (p. 90). Further, they stated that there is still a lack of information about "how coaching programs function to create such norms [of collegiality and experimentation] or

if existing norms create favorable climates for coaching programs" (p. 90). This study will provide a better understanding of the implications of building collegial relationships through such programs as coaching and the professional growth and development of teachers who continue to teach and learn to teach together.

Trust

In their paper "Improving Teacher Quality and Effectiveness: Issues for the 80s," Hawley, Evertson, and Smylie (1985b) state that:

> Across the nation, policies, programs, and practices are being developed and implemented that have the potential to restructure the the teaching profession in dramatic ways. We have at this time...the opportunity to examine the effects of these initiatives in practice not only to assess their impact on the work and productivity of teachers, but to generate important new knowledge about the teaching profession that can help us address issues of teacher quality and effectiveness (p. 6).

Further, they identified two priorities which were to continuously enhance the competence of teachers and to establish conditions in the workplace that facilitate the use of that competence.

As previously stated, research on the transfer of training associated with peer coaching suggests that it is a way to enhance the competency of teachers by affording them the opportunity to add to their repertoire of teaching skills. However, certain conditions may need to be present in the workplace to better ensure that this competency is effectively used in ways that, ultimately, impact on student achievement. One of these conditions is trust. Trust becomes a paramount issue in relation to peer coaching because peer coaching implies restructuring of the workplace (change), experimentation with new skills in the presence of a peer (innovation), and the giving and receiving of critical feedback (risk-taking). In addition many theorists view trust as a key variable in both individual and group development (Berzok, 1978; Jones, 1982).

Restructuring the workplace, as it relates to trust, addresses the issue of isolation. The teaching profession continues to be characterized by teacher isolation. Teachers have come to believe that successful teachers are autonomous and independent (Hawley, et al., 1985b). When they remain autonomous and independent, teachers are left to rely on trial-and-error learning, memories of strategies used by teachers that they had in school, and learning from experience, all of which Buchmann and Schwille (1983) believe are limiting and possibly counterproductive to

teacher improvement. Further, teachers fear that asking for assistance from other teachers implies incompetency (Lortie, 1975; Bishop, 1977; Glidewell, Tucker, Todt, and Cox, 1983).

These authors also stated that peer coaching involves teachers in analyzing the use of newly learned skills/strategies and experimenting with these skills in the classroom in the presence of students as well as a peer. This situation involves what Mink, Mink, and Owen (1987) referred to as contract trust. Within a norm of contract trust, people come to perceive the environment as safe, reliable, and predictable. This frees them to concentrate their energies on the tasks and goals. Yet, because of the lack of previous opportunities to observe one another, again due to isolation, peer coaches may lack the generalized expectancy that Rotter (1976) stated is based on previous positive reinforcement. Stated another way, Kegan and Rubenstein (1972) believe that to develop trust for a specific object (person, thing, situation, et cetera), one needs to have sufficient predictability of that object. It is only when people (teachers) feel reliance on and expectancy of positive reinforcement from another person (peer coach) that risks are taken with the intent of achieving some goal which is not seen as certain (Deutsch in Berzok, 1978). In peer coaching this uncertainty is found in the exploratory cycle or during

problem-solving sessions when teachers collaborate during the feedback stage after an observation. By separating peer coaching from evaluation cycles, Joyce and Showers have attempted to address this issue.

Taken together, restructuring and innovation can be viewed from the organizational level. As indicated in his study, Hilfiker (1969) found a significant relationship between trust and school system innovativeness (rank order correlation = .905, $p < .01$, N=589) which led him to conclude that trust is one interpersonal norm that may be among the most important variables to consider when initiating and maintaining innovation in educational organizations.

In giving and receiving feedback, a norm of trust is essential if people are to feel free to take the risks frequently involved in sharing personal reactions and ideas about one another's performance. This willingness is what Mink et al. (1987) referred to as <u>self-disclosure trust</u>. The giving and receiving of critical feedback about one's behavior and performance in the classroom is a major component of the peer coaching cycle. This activity has been identified as a means to increase the competency and effectiveness of teachers in the workplace (Hawley et al., 1985b); to encourage the growth process of individuals and groups (Jones, 1982); to increase interdependent relationships (Gibb, 1972); and to contribute to

problem-solving (Mink et al., 1987). As stated earlier, in the context of the schools as workplaces, teachers do not often have many opportunities to provide one another with feedback related to their teaching skills. Without this opportunity, teachers lack skills that are necessary to provide and receive useful, critical feedback. Peer coaching's emphasis on the use of feedback may contribute to creating an environment for teachers in which they have the opportunity to learn and problem-solve together, develop one another's competence, and ultimately, attain high levels of productivity and creativity (Mink, et al., 1987).

The Johari Window (Luft, 1973) provides a tool for understanding trust as an important factor in the restructuring (change), experimentation (innovation), and feedback (risk-taking) related to peer coaching. According to this model, relationships can be compared to a window with four panes (see Figure 2). Each pane represents a pool of information which is either available or unavailable to those involved in any relationship. The size of each pane is determined by "how much each person knows, which in turn is related to how willing and able each person is to share information (self-disclosure) and to listen to others share (receptivity to feedback)" (Mink et al., 1987, p. 66).

Pane 1, the OPEN area, contains information which is shared by all members of the group.

Pane 2, the BLIND area, contains information known to all members of the group except one.

Pane 3, the HIDDEN area, contains information that one member knowingly hides from the others on the team.

Pane 4, the UNKNOWN area, contains repressed information - that which is unknown to anyone.

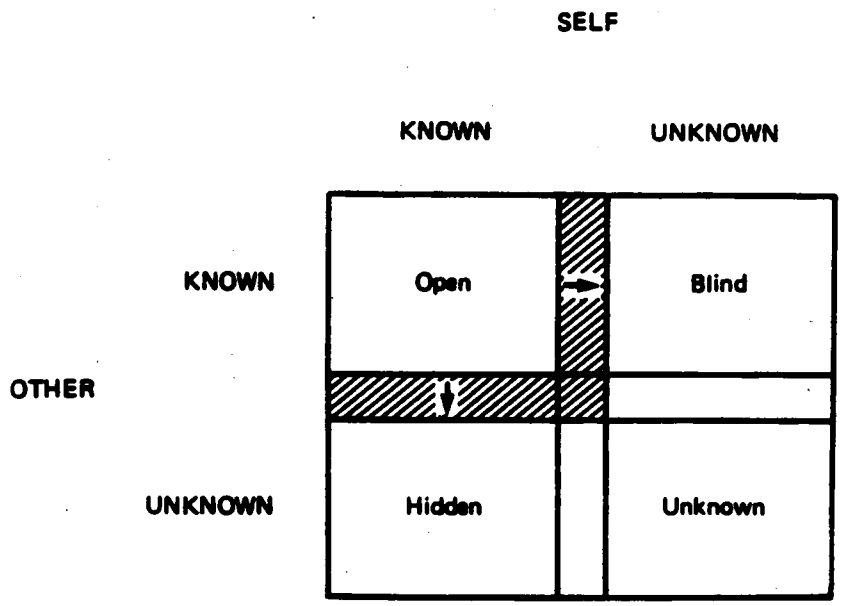


Figure 2. The Johari window. From Groups at work (p. 68) by O.G. Mink, B.P. Mink, and K. Owen, 1987, Englewood Cliffs, NJ: Educational Technology Publications.

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As peer coaches participate in change, experimentation, and the exchange of critical feedback in a trusting environment, they may become more likely to take risks which acts to release information into the "Open" window from the "Blind" and "Hidden" windows. This releases information (energy) which facilitates the potential for productivity, more and higher quality of sharing, real learning and problem-solving, and the development of competence and creativity.

Sharing of Resources (Interactions)

"Education...works best when schools create working environments that facilitate teacher interactions and that foster the exchange of ideas and insights" (Futrell, 1987). These interactions and exchanges between and among teachers have been identified as characteristic of schools highly involved in formal programs of staff development (Little, 1982) and schools that support and stimulate the professional development of teachers (Feiman-Nemser, 1983; Wildman and Niles, 1987b).

As stated earlier, teachers have indicated that they view other teachers as effective sources of job-related knowledge and skills (Johnson and Johnson, 1987; Bacharach et al., 1986; Feiman-Nemser and Floden, 1986; Rosenholtz and Smylie, 1984) and would like more opportunities to work and learn from other teachers (Wildman and Niles, 1987b;

Goodlad, 1984; Bacharach, et al, 1986; Holly, 1982; Little, 1982; Wu, 1987; Johnson and Johnson, 1987; Koppich et al., 1986; Feiman-Nemser and Floden, 1986). However, in most schools, there are few opportunities for teachers to engage in the interactions and exchanges of insights that contribute to the professional development of teachers (Firestone, et al., 1987; Goodlad, 1984; Lortie, 1975; Sarason, 1971; Miles, 1985; Roper and Hoffman, 1986; Brophy in Smith, 1986; McFaul and Cooper, 1984; Sparks, 1983; Brandt, 1987; Feiman-Nemser, 1983; Feiman-Nemser and Floden, 1986; Glickman, 1984-5); Rosenholtz and Smylie, 1984; Koppich et al., 1986).

Little (1982) investigated the ways that the social organization of teachers' workplaces relates to their involvement in learning on the job both formally and informally. Using observations and interviews, she inventoried 105 teachers' interactions with each other, administrators, specialists, and staff developers. From this illustrative inventory, Little found four classes of interactions which she termed critical practices of adaptability. These classes of interactions provide:

1. specific support for discussion of classroom practice,
2. mutual observation and critique,
3. shared efforts to design and prepare instructional materials, and

4. shared participation in the business of instructional improvement.

Further, Little identified 18 specific interactions which were frequently observed in the schools in her study which had been characterized as highly involved in staff development activities (see Appendix F). Little concluded that the school as a workplace with prevailing patterns of interactions can be a major factor that fosters the professional growth of its teachers. She termed this prevailing pattern of interactions the "norms of collegiality."

Feiman-Nemser (1983) views these norms of collegiality as an important component in schools which can provide a context for teachers' learning; i.e., on-the-job learning. These norms refer to the expectation that improving one's teaching is a collective undertaking. This collective undertaking provides a collegial endeavor that is likely to improve teaching skills and provide an opportunity for teachers to become reflective about their teaching (Wildman and Niles, 1987b).

Reflective thinking about teaching is based on a broad and in-depth understanding of what is happening in the classroom (Wildman and Niles, 1987b). Peer coaching provides an opportunity for teachers to assist one another in gathering objective data upon which this reflection can be based. In peer coaching, teachers are trained in

observation and feedback skills. These trained coaches then observe and gather objective accounts of one another's teaching skills; these in turn are documented in the feedback stage. The systematic, sequential nature of this observation and feedback cycle may help bring their knowledge of their own teaching into a form that allows for reflection. Yet, most teachers remain unaware of many of their own teaching behaviors and are not trained to analyze their own classroom pedagogy (Good and Brophy and Medwid in McFaul and Cooper, 1984).

## Teacher Job Satisfaction

Much of the literature and research on teacher job satisfaction suggests that teachers are typically intrinsically motivated (Lortie, 1975; Wood, 1978; Roberson, Keith, Page, 1983; Page and Page, 1982; Bishop, 1977). Further, intrinsic rewards, or lack of them, impact on teachers' decisions to stay, or leave, the teaching profession (Rosenholtz and Smylie, 1984; Hawley, Smylie, and Evertson, 1985b; Bredeson, Fruth, and Kasten, 1983; Chapman and Hutcheson, 1982; Litt and Turk, 1983).

Pinder (1987) defines intrinsically motivated behavior as "behavior that is performed for its own sake, rather than for the purpose of acquiring any material or social rewards" (p. 110). As a result, intrinsic job outcomes occur (Lawler in Pinder, 1984) which relate to either the

satisfaction or dissatisfaction of higher level or growth needs. These higher level growth needs are comparable to Herzberg's motivation needs and Maslow's self-actualization needs as illustrated in Figure 3. In any event, the satisfaction of these growth needs are "self-administered by the individual, rather than distributed by others" (Pinder in Organ, 1987). Moreover, Hackman and Lawler (1971) propose that satisfying higher order needs may be both the result of effective performance and an incentive to continued effort to perform effectively.

Although some would argue that it is difficult to separate intrinsic and extrinsic outcomes (Dyer and Parker, 1975) and that some outcomes may appeal to both higher and lower level needs (Pinder, 1987), for the purpose of this study, intrinsic rewards refer to those rewards that satisfy a teacher's growth needs.

Hawley, Evertson, and Smylie's (1985a) research on enhancing teacher effectiveness established the importance of research on teacher opportunities to learn on the job and the creation of conditions in the schools as workplaces that support effective teaching practice. Hawley (1985) identified 12 different incentives that work organizations can employ to enhance workers' attainment of growth or higher level needs. These include: mechanisms for monitoring performance and providing feedback, pleasant working conditions, pay and fringe benefits, socialization

| Maslow Categories (Hierarchy) | | Herzberg Factors (Implied Hierarchy) |
|---|---|---|
| 1. Physiological Needs | H | 1. Working Conditions |
| | Y | |
| 2. Safety Needs | G | 2. Salary and Benefits |
| (material) | I | |
| Safety Needs | E | Supervision |
| (interpersonal) | N | |
| | E | |
| 3. Affiliation, love, | M | 3. Fellow Workers |
| social needs | O | |
| | T | |
| 4. Self-esteem needs | I | 4. Recognition |
| (feedback from others) | V | |
| | A | Advancement |
| Self-esteem needs | T | Responsibility |
| (self-confirming) | O | |
| 5. Self-actualization | R | 5. Job Challenge |
| | S | |

Figure 3. A Comparison of Basic Motivation Categories Proposed by Maslow and Herzberg. Adapted from Organizational psychology, (p. 86), by E.H. Schein, 1980, Englewood Cliffs, NJ: Prentice-Hall. Copyright 1980 by Prentice-Hall, Inc. Adapted by permission.

to organizational ideologies, nature of supervision, control of status difference, job enlargement, professional or individual autonomy, opportunities to shape organizational goals and procedures, opportunities for social interaction, peer group evaluation, possibilities for dismissal.

The typical structure of educational organizations has served to inhibit teachers' access to many of these incentives. More specifically, Hawley (1985) identified the isolation of teachers from their peers as a key impediment to teachers' access to these incentives. Rosenholtz and Smylie (1984) stated that "policy initiatives targeted at educational improvement are therefore less likely to succeed if problems of teacher isolation remains unaddressed" (p. 156). Therefore, restructuring the workplace of teachers so that teacher isolation is reduced may be one way to increase teacher job satisfaction which results from the opportunity to fulfill growth needs.

The interest in improving the teaching profession has centered on four priorities: (1) recruitment and retention, (2) improvement of instruction, (3) creation of conditions that facilitate the effective use of competence, and (4) motivation (Hawley, et al., 1985b). With the possible exception of the first priority, peer coaching appears to address each of these priorities. Additionally,

peer coaching takes into account teachers' perceived intrinsic needs (motivation) and goals (growth opportunities). Peer coaching attempts to provide incentives relevant to these needs or goals which include opportunities to work with and learn from other teachers through observation and feedback, increased competence that impacts on student achievement, and training relevant to their needs which raises teachers' perceived levels of efficacy and satisfaction.

Studies have shown that in collegial work settings recognition of competence by administrators and peers (Cohen, 1973; Chapman and Hutcheson, 1982) and leadership and challenging opportunities (Chapman and Lowther, 1982; Cohen, 1973) increased teacher job satisfaction. Peer coaching may increase the likelihood that teachers will believe that they <u>can</u> attain these incentives. Collegial settings contribute to teachers' motivation to improve and to help others improve (Rosenholtz and Smylie, 1984).

In summary, teachers are thought to be intrinsically motivated. When teachers are more able to work and learn together in a collegial setting, they are more likely to be satisfied. Peer coaching allows for opportunities which research has shown may impact on teacher job satisfaction.

Chapter Summary

Restructuring the teaching profession has become a reform issue for educational organizations. One way to bring about this restructuring that has been suggested by policy experts, teachers, and researchers is to create structures that allow teachers the opportunity to build collegial relationships in the context of their workplaces (schools). Peer coaching may be one way to build such collegial relationships within a trusting environment that allows for frequent participation in interactions which have been identified as contributing to the professional growth of teachers. With opportunities to grow and learn together, teachers may be able to enhance their teaching skills in such a way that they experience more job satisfaction and become better teachers which, ultimately, impacts on student achievement.

# CHAPTER III

## METHOD

The purpose of this study was to investigate, through the perceptions of teachers who had participated in peer coaching for two years, the nature of selected elements in their working and learning environment. The research questions guiding this investigation were:

1. What are teachers' perceptions about:
   a. the usefulness of peer coaching?
   b. the degree of trust that exists in their schools?
   c. the frequency of sharing of resources that takes place in their schools?
   d. their level of job satisfaction?
2. Are the above four variables related?
3. Are there differences among elementary, middle, and high school teachers on any of the four variables?

This chapter includes a discussion of the subjects, the instrumentation, procedures, and, finally, the data analyses.

Population and Subjects

A large suburban public school system in Virginia was selected as the site for this study. This system has an instructional staff of more than 3,000 who provide an education opportunity to over 40,000 students. The school facilities within this system include twenty-seven elementary schools, nine middle schools, and eight high schools. For community demographic data, see Appendix C.

Since August, 1985, 565 teachers in 12 schools in this school system have participated in a staff development program called T.E.E. (Toward Education Excellence). One component of this program is peer coaching, the primary variable in this study.

During the 1985-86 school year, every teacher in the system's 44 schools participated in T.E.E. and received training in peer coaching. At the discretion of the principal, 12 schools elected to participate in T.E.E. II (formerly T.E.E.) for the 1986-87 academic year. This second stage involved further training and participation in peer coaching for 565 teachers which included 287 elementary, 164 middle, and 114 high school teachers in eight elementary schools, three middle schools, and one high school. These 565 teachers became the target population for the study. Permission was granted by the

the system's Director of Research and Evaluation to study these teachers who had participated in peer coaching for two years (see Appendix D).

## Instrumentation

The survey-research method was used to investigate selected variables related to the professional environment of teachers who are involved in peer coaching. A questionnaire was used to gather empirical data from these 565 teachers in order to support the claim that peer coaching builds collegial relationships and allows for the restructuring of the organization of schools that will provide a more professional working environment in which teachers work and learn.

The questionnaire reflected the variables in the study and was the basis for the answers to the three research questions of the study. Therefore, it contained four distinct, multi-itemed sections along with a section for assessing demographics (see Appendix E). One section dealt with the teachers' perceptions of the usefulness of peer coaching. The second and third sections were used to document the degree of trust in the schools and the frequency of critical interactions that take place between and among the teachers. The fourth section of the questionnaire was included to describe the level of teacher

job satisfaction. Additionally, a fifth section was included to gather demographic information.

Peer Coaching Scale. This section of the questionnaire was developed to answer the question "What are teachers' perceptions about the usefulness of peer coaching?" It was developed by the researcher from information provided by the developer of T.E.E. and from the literature on peer coaching as it relates to the theories of Bruce Joyce and Beverly Showers (1980, 1981, 1982, 1987, 1988). It contained 20 items, with responses based on a 5 point scale (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree, 5=not applicable). Each item related to the usefulness of peer coaching with the terminology varied to create both positive and negative statements. Because this portion of the questionnaire was developed by the researcher, study-specific reliability was calculated. This yielded a high Cronbach's alpha coefficient of .89.

Trust. This section of the questionnaire provided the answer to "What are teachers' perceptions about the degree of trust that exists in their schools?" It was devised from a portion of an instrument called TORI that was originally developed by Gibb (1978) to measure the primary aspects of trust. These aspects included trust, openness, realization, and interdependence; hence the name TORI. This original instrument was further subdivided into eight

subscales with questions about these four aspects as they relate to self and to others. For the purpose of this study, the items on trust and openness as they relate to others were used to create the trust scale, which contained 17 items with responses that ranged from 1=strongly disagree to 4=strongly agree.

Parker (1983) tested the reliability and validity of the TORI scale by comparing it with several other instruments as well as comparing the eight TORI subscales with each other. He found the "Trust Other" scale to be somewhat reliable (split half Spearman Brown = .68, n = 41) and the "Openness Other" scale to be moderately reliable (test-retest reliability = .701, n = 20; split half Spearman Brown = .52, n = 41). For the purpose of this study, the wording of the items was changed to specifically relate to teachers involved in peer coaching. Therefore, study-specific reliability was calculated and resulted in a high Cronbach's alpha coefficient of .86.

Resources Sharing Scale. This section of the questionnaire was developed by the researcher to answer the question "What are teachers' perceptions about the degree of sharing of resources that exists in their schools?" Specifically, these questions were related to the interactions that take place between and among the teachers in their schools. Little (1982) inventoried teachers' interactions that took place in six schools with 105

teachers and administrators. From this inventory, she determined 18 critical interactions related to school success and adaptability (see Appendix F).

The sharing scale contained 18 items in which the teachers surveyed indicated the frequency with which the participated in the 18 critical interactions that were identified in Little's study (1982). Responses were giv on a five-point scale ranging from "infrequent" to "frequent." Because this portion of the questionnaire w developed by the researcher, scale reliabilities were calculated and yielded a high Cronbach's alpha (.92).

Job Satisfaction Scale. This portion of the questionnaire provided the answer to "What are teachers' perceptions about their level of job satisfaction?" It originally developed by Hackman and Oldham (1974) for th Job Diagnostic Survey. Their scale contained 14 items, each item was related to a seven point foil that ranged from 1=extremely dissatisfied to 7=extremely satisfied. The internal consistency reliability was satisfactory (r = .76). Kuhns (1986) adapted these same items to specifically relate to the teaching profession and shortened the rating scale to four points ranging from 1=extremely dissatisfied to 4=extremely satisfied. Her data resulted in a high Cronbach's alpha (.86). For the purpose of this study, items related to salary, fringe benefits, and other intrinsic rewards were omitted, lea

11 items on the job satisfaction scale. The study-specific reliabilities for this portion of the questionnaire yielded a Cronbach's alpha coefficient of .87.

Demographic Information. Another distinct part of the questionnaire asked the teachers to provide demographic data relating to experience, age, sex, and educational background. This data was purely descriptive in nature and used to provide a profile of the subjects as summarized in Table 2.

## Procedures

A pilot test was conducted prior to distributing the questionnaire to the subjects under study. This was an attempt to evaluate the face validity of the various scales in the questionnaire. A group of approximately 25 teachers with limited experience in peer coaching including five experienced peer coaches and trainers were asked to respond to the items and make comments as to their clarity and relevance. As a result, several items were deleted or reworded and certain features of the instrument were revised.

Prior to the distribution date, a memo was sent from the Director of Research and Evaluation and the Staff Development Coordinator to the twelve principals. Its purpose was to make them aware of the upcoming distribution (see Appendix G).

Survey packets were compiled and personally distributed to the mailboxes of the 565 teachers in the 12 schools. Each packet contained a memo from the system's Director of Research and Evaluation and the Staff Development Coordinator which encouraged teacher participation (see Appendix H). An individual letter from the researcher and members of the research committee was also included that explained the purpose of the study and promised confidentiality (see Appendix I). The questionnaire and a coded NCS Trans Optic answer sheet were enclosed in the packets (see Appendices E and J). The coding contained an identification number for each school and for the individual teachers in each school. This was for the purpose of follow-up procedures in cases of non-respondents. Finally, a pencil and self-addressed stamped envelope were included to encourage a prompt return.

Approximately three weeks after the requested return date, non-respondents were identified based on the coding described earlier. They were sent a second survey packet that contained a letter requesting that they respond (see Appendix K). In the event that they chose not to respond they were asked to provide their reason(s) for not completing the questionnaire. This was used to estimate the potential existence of non-response bias.

Analyses

The raw data obtained from the questionnaires were analyzed using the Statistical Package for the Social Sciences (SPSS$^{X}$). Reliability of each subscale of the questionnaire was determined. The research questions were analyzed separately according to various statistical procedures deemed appropriate for this study. The questions and corresponding analyses were as follows:

Research Question 1: What are teachers' perceptions about each of the following:

a. the usefulness of peer coaching?
b. the degree of trust that exists in their schools?
c. the frequency of sharing of resources that takes place in their schools?
d. their level of job satisfaction?

Descriptive statistics (means and standard deviations) were used to establish overall levels for each scaled variable. This provided a description of the teachers' overall degree of perceived usefulness of peer coaching, degree of trust, degree of resources sharing, and job satisfaction.

Research Question 2: Are the above four variables related?

Pearson correlations were used to determine the magnitude and direction of the relationships between each pair of the variables in the study.

Research Question 3: Are there differences among elementary, middle, and high school teachers on any of the above variables?

Analysis of variance procedures were conducted to determine whether differences existed among the teachers at the three levels.

## Chapter Summary

Twelve schools in a large Virginia public school system were used as the source of investigation because of the existence of peer coaching. Five hundred sixty-five teachers were surveyed using an instrument containing distinct questions relating to the variables in the study. Distribution and collection of the instruments were conducted personally by the researcher with the support of the system's offices of Research and Evaluation and Staff Development. The data were analyzed to answer the research questions. Results are presented in Chapter IV, followed by conclusions and recommendations in Chapter V.

# CHAPTER IV

# RESULTS

This study was an investigation of peer coaching and selected variables related to the working and learning environment of the teachers in 12 schools in a large Virginia public school system. To assess the information related to three questions that guided the study, responses from 379 teachers who had been involved in peer coaching for two years were analyzed. Questionnaire items related to the usefulness of peer coaching, trust, sharing of resources (interactions), and job satisfaction. This chapter contains a discussion of the response rate and a description of the subjects. The remaining sections provide the results of the data analyses for each research question.

## Response Rate

Five hundred sixty-five teachers in 12 schools in a large Virginia public school system were the subjects for this study. These schools represented all schools out of 44 in the system that selected to continue an originally mandated peer coaching program for a second year. As illustrated in Figure 4, 471 teachers returned the questionnaire (565 minus 94 non-respondents). Of these

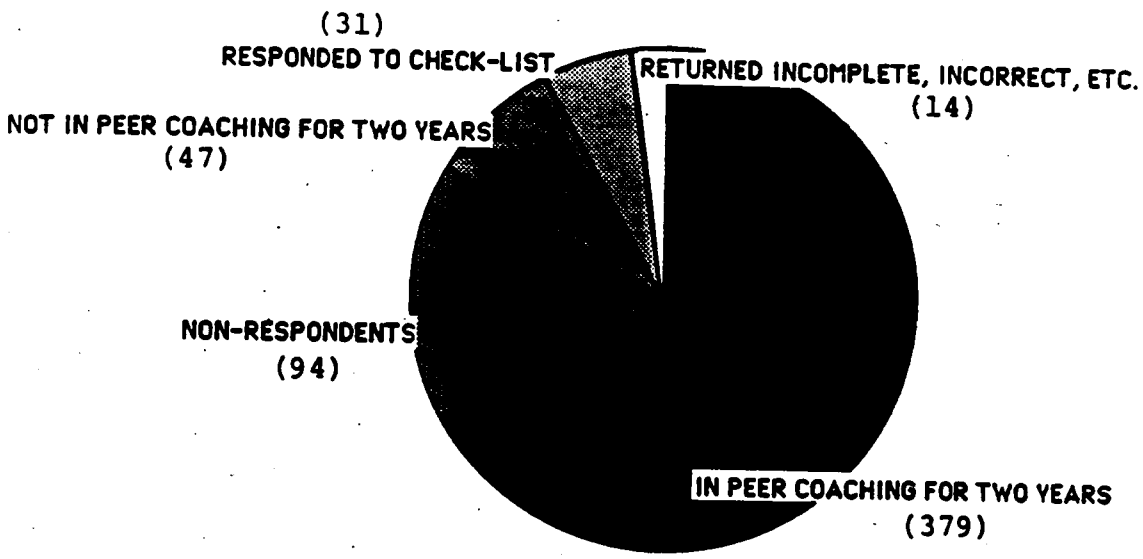



Figure 4. Response rate.

471, 92 questionnaires were deemed not usable for the following reasons:

1. Indicated less than two years in peer coaching (n = 47, 8%).
2. Inappropriately marked answer sheet or returned a blank answer sheet (n = 14, 3%).
3. Responded to the checklist but not the questionnaire included in the second mailing (n = 31, 6%).

The remaining 379 were deemed usable. This resulted in an overall response rate of 73%, based on a true population number of 518 (565 minus 47 not in peer coaching).

Non-responses. Questionnaire users should attempt to sample non-respondents in some manner to investigate the possibility of non-response bias (Berdie and Anderson, 1974). A cover letter was included in the second survey packet distributed to non-respondents from the initial distribution (see Appendix K). In the event that a teacher chose not to respond, he/she was asked to indicate the reasons(s) for not completing the questionnaire. Thirty-one non-respondents used the checklist provided. Typical reasons given for not responding included:

1. I did not feel that the questionnaire pertained to me.
2. I did not want to take the time necessary to complete the questionnaire.

3. I felt that I might be identified and did not want my responses known to others.

Of these 31 non-respondents, nine (29%) were elementary teachers, eight (26%) were middle school teachers, and fourteen (45%) were high school teachers. Non-responding elementary teachers typically indicated that they did not see themselves as being involved in peer coaching. Middle school teachers indicated concerns about being identified with their responses and lack of time. The majority of high school non-respondents were guidance counselors who did not feel that the questionnaire pertained to them and/or did not see themselves as being involved in peer coaching, in spite of the fact that they had received training in peer coaching as stated by the Staff Development Coordinator. Lack of time and concern about being identified with the responses were also reasons given by high school teachers.

Overwhelmingly, female non-respondents were more prevalent than male non-respondents (81% and 19% respectively). However, these percentages closely approximated the distribution in the sample (86% females; 14% males).

Because there is no adequate method for assessing potential non-response bias, a proxy method is to compare responses between early and late respondents. There were no significant differences on the variables of peer

coaching, trust, sharing of resources, or job satisfaction between initial respondents and respondents to the second distribution. The t-tests used to compare the means of the four variables are in Appendix L.

## Description of Subjects

Ten demographic questions were included in the questionnaire in order to provide a demographic profile of the respondents. As indicated in Table 2, the subjects included 197 (52%) elementary teachers, 119 (31%) middle school teachers, and 63 (17%) high school teachers. The majority of the teachers were between 36-40 years old. They had been in teaching for approximately 11-15 years, with the majority having earned a Bachelors degree (68%) and one quarter a Masters degree (26%).

## Findings

The major research questions of the study were investigated based on the analyses of the responses to the four sections of the questionnaire which represented the four variables in the study. First, the order of the four-point scales for peer coaching, trust, and job satisfaction was reversed from the order as given on the survey instrument. This was done so that high values were associated with positive responses. Then, four total scores were calculated for each teacher and, to make these

Table 2

Demographic Profile of Subjects

| | Total 379 | | Elementary 197 | | Middle 119 | | High School 63 | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| **Sex** | | | | | | | | |
| Female | 326 | 86 | 185 | 94 | 96 | 81 | 45 | 71 |
| Male | 51 | 13 | 10 | 5 | 23 | 19 | 18 | 29 |
| **Race** | | | | | | | | |
| Black | 16 | 4 | 7 | 4 | 8 | 7 | 1 | 2 |
| White | 358 | 94 | 187 | 95 | 109 | 92 | 62 | 98 |
| **Age** | | | | | | | | |
| 20-35 | 152 | 40 | 89 | 45 | 46 | 39 | 17 | 27 |
| 36-50 | 183 | 48 | 81 | 41 | 61 | 51 | 41 | 65 |
| 51-60+ | 44 | 12 | 27 | 14 | 12 | 10 | 5 | 8 |
| **Years of Teaching Experience** | | | | | | | | |
| 1-5 | 50 | 13 | 35 | 18 | 9 | 8 | 6 | 10 |
| 6-10 | 89 | 24 | 48 | 25 | 30 | 25 | 11 | 18 |
| 11-15 | 104 | 28 | 51 | 26 | 32 | 27 | 21 | 33 |
| 16-20 | 77 | 20 | 36 | 18 | 27 | 23 | 14 | 22 |
| 21+ | 58 | 15 | 26 | 13 | 21 | 17 | 11 | 17 |
| **Degree Earned** | | | | | | | | |
| Bachelors | 258 | 68 | 139 | 71 | 80 | 67 | 39 | 62 |
| Masters | 100 | 27 | 50 | 25 | 30 | 25 | 20 | 32 |
| Masters+ | 20 | 5 | 7 | 4 | 9 | 8 | 4 | 6 |

scores more relevant and interpretable in terms of the original Likert values, total scores were converted back to one-to-four scaled scores. Specifically, the responses from each teacher were summed and divided by the number of items responded to by the teachers in a given scale. The mean scores for the four variables are shown in Table 3.

Research Question 1(a): What are teachers' perceptions about the usefulness of peer coaching?

The mean score for peer coaching (2.8) closely approximated an original scale value of "3," indicating that on average teachers "agree" that peer coaching is useful to them in their schools.

More specifically, the peer coaching scale contained six items about the usefulness of observing other teachers. Ninety-five percent of the teachers agreed that peer coaching offers a good opportunity to observe a variety of teaching techniques. (NOTE: Throughout this and remaining sections, agreement is based on the percentage of teachers who "agreed" or "strongly agreed" with the questionnaire item). More than 50% agreed that observations by another teacher were stressful, but 85% agreed that observations by another teacher were non-threatening. Three-fourths of the teachers agreed that observations by another teacher caused students to behave differently, but they still felt that these observations

Table 3

Total Mean of Usefulness of Peer Coaching, Trust, Sharing of Resources (Interactions), and Teacher Job Satisfaction

| Variable | Mean Score* | SD |
|---|---|---|
| Peer Coaching | 2.8 | .37 |
| Trust | 2.9 | .34 |
| Sharing of Resources | 2.4 | .75 |
| Teacher Job Satisfaction | 3.2 | .45 |

*Mean scores based on scaled responses with the following end points:

Peer Coaching and Trust: (1)Strongly Disagree to (4)Strongly Agree

Sharing of Resources: (1)Infrequently to (5)Frequently

Job Satisfaction: (1)Extremely Dissatisfied to (4)Extremely Satisfied

provided useful data. When they were not provided release time to schedule observations and/or feedback conferences, 63% of the teachers agreed that the observations/feedback sessions were productive.

Seven questions on the peer coaching scale were related to giving and receiving feedback. Figure 5 compares the extent of agreement with specific questions about feedback activities in peer coaching. As indicated, larger percentages of the teachers agreed that they received useful critical feedback (62%), found other teachers' opinions useful (86%), and made use of critical feedback (80%) as compared to the percentages of teachers who agreed that they were hesitant to provide critical feedback (56%) and had learned to give useful critical feedback (55%).

Several items investigated the school-wide implications of peer coaching. The results indicated that 85% of the teachers agreed that peer coaching enhanced their understanding of curricula different from their own. Further, 62% agreed that due to peer coaching, they had gained new perspectives on other roles in the school. However, the extent of agreement (53%) and disagreement (46%) concerning whether peer coaching helped build enthusiasm among the teachers was about the same.

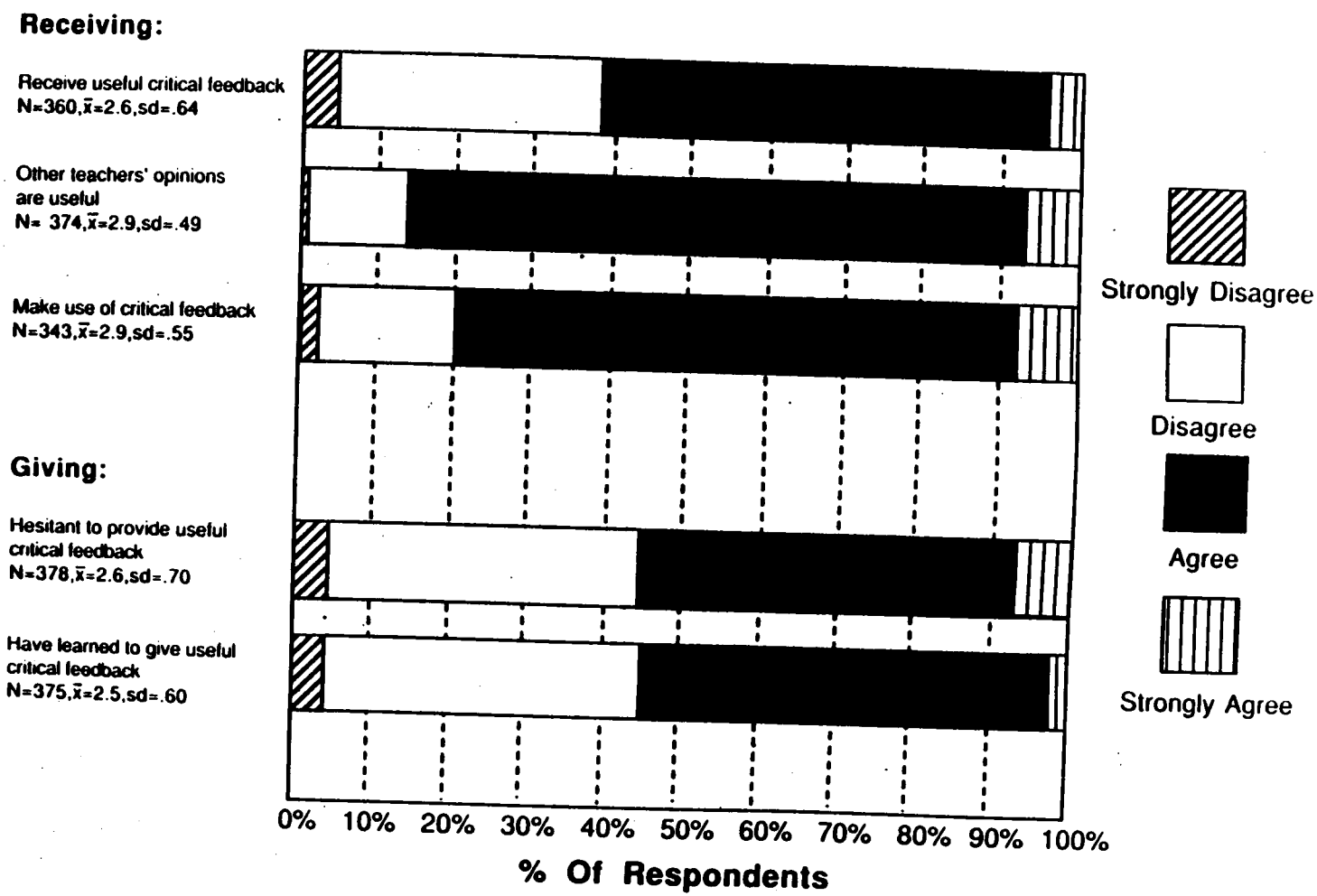



Figure 5. Comparison of giving and receiving feedback in peer coaching.

Research Question 1 (b): What are teachers' perceptions about the level of trust that exists in their schools?

The mean for trust (2.9) indicated a close approximation to the scale value of "3 = agree," signifying that, on average, teachers agreed that trust existed among the teachers in their schools.

Two items on the trust scale related to listening. When teachers were asked if other teachers in their schools listened to them, 91% agreed. When asked if the teachers in their schools were really interested in what others had to say, 87% agreed that they were not really interested.

Additionally, 91% agreed that, as individuals, teachers had a real sense of knowing who they were and 88% agreed that other teachers had a high opinion of their contributions to the teaching staff. On the other hand, 60% agreed that the teachers knew each other well.

Eighty-nine percent of the teachers agreed that the teachers cared for each other as individuals and that they treated each other as important members of the teaching staff. Eighty-one percent agreed that other teachers were task-oriented to the point that caring for each other as individuals was of less concern. Further, 77% agreed that they were respected on the basis of how well they performed their given tasks.

When asked about expressing positive and negative feelings, 89% of the teachers agreed that negative feelings

were likely to be expressed at some point; 69% agreed that it was easy to express feelings if they were positive, but not if they were negative. Eighty-five percent agreed that if teachers felt negative they kept it to themselves.

Research Question 1 (c): What are teachers' perceptions about the frequency with which they participate in the sharing of resources through interactions?

The overall mean score for sharing of resources (2.4) fell almost at the mid-point on the scale (3) which indicated that, on average, teachers perceived the frequency of resources sharing to be about equally infrequently and frequently. As compared to other interactions, teachers perceived themselves as participating more frequently with other teachers in the following activities (based on the fact that over 50% of the teachers responded "3" or greater):

1. Discuss classroom practices (74%)
2. Talk openly about what I am learning or want to learn about teaching (64%)
3. Persuade others to try an idea/approach (57%)
4. Receive training provided by other teachers (51%)
5. Receive feedback about teaching from others (50%)

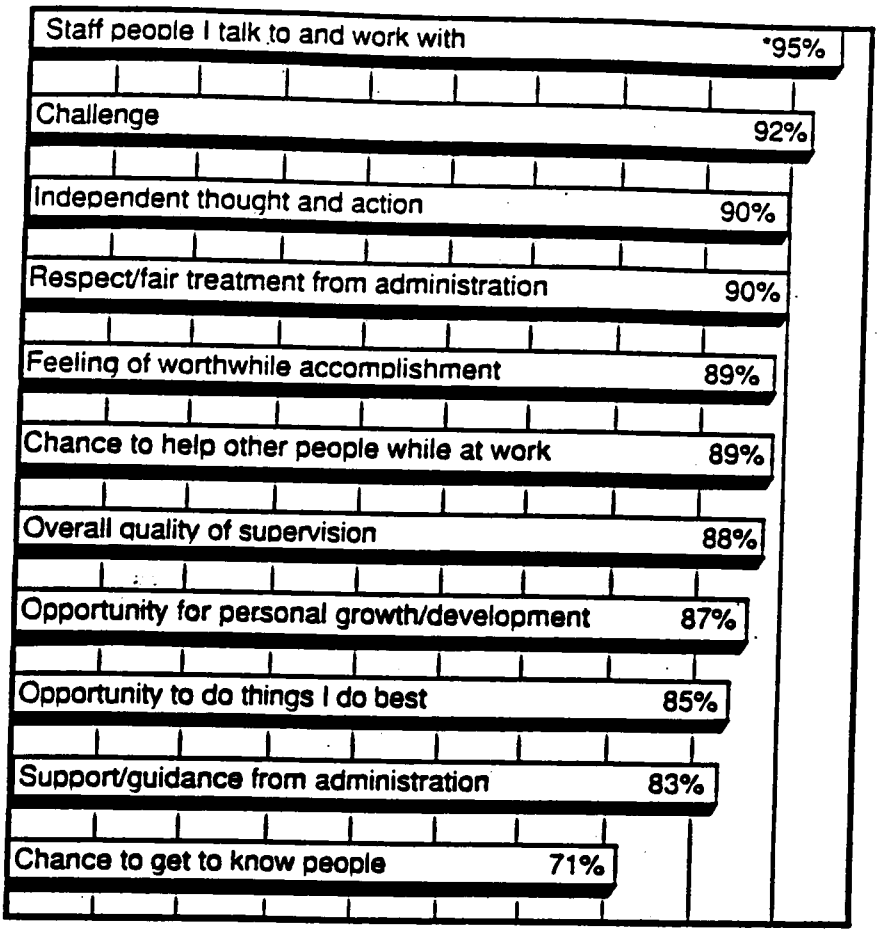
   Review/discuss existing lesson plans (50%)

Those activities in which teachers perceived themselves to be less frequently involved with other teachers (based on the fact that less than 50% responded "3" or greater) were:

1. Analyze the practices and effects of teaching (49%)
2. Design/prepare teaching materials (43%)
3. Prepare lesson plans with other teachers (42%)
4. Teach other teachers informally (40%)
5. Make collective agreements to test an idea (38%)
6. Design curriculum units (36%)
7. Provide feedback (34%)
   Observe other teachers (34%)
   Invite others to observe (34%)
8. Observed by other teachers (31%)
9. Design inservice programs (26%)
10. Teach others formally (17%)

Research Question 1 (d): What are teachers' perceptions about their level of job satisfaction?

The mean score for job satisfaction (3.2) slightly exceeded the scale value of 3 = "satisfied," indicating that teachers were satisfied with their teaching jobs. Figure 6 indicates the relative satisfaction perceived by the teachers on the 11 items that were used to assess the level of job satisfaction. This ranking is based on the percentage of teachers who indicated 3 = "satisfied" or 4 = "extremely satisfied" as their response to each item.




***Percentage who were "satisfied" or "extremely satisfied."**

**Figure 6.- Factors contributing to teacher job satisfaction.**

Research Question 2: What are the relationships between peer coaching, trust, sharing of resources, and job satisfaction?

To determine the relationships between the variables, a Pearson correlation was used. As indicated in Table 4, the variables in the study were moderately to somewhat moderately correlated in a positive direction. All relationships were found to be significant ($p < .0005$, one-tailed). There was a moderate relationship between trust and job satisfaction ($r = .52$) which indicated that the teachers who perceived higher levels of trust in their schools were also more satisfied with their work. The relationship between perceived levels of trust and usefulness of peer coaching, though not as strong ($r = .38$), indicated that teachers who agreed that peer coaching was useful also indicated that trust existed among the teachers with whom they worked.

The relationships of resources sharing with both peer coaching and trust were weaker still ($r = .30$ and .31 respectively) but indicated that teachers who perceived more frequent sharing of resources taking place in their schools also perceived peer coaching to be more useful and greater levels of trust among the teachers in their schools. Peer coaching and job satisfaction were moderately correlated ($r = .31$) indicating that as teachers perceived a greater degree of usefulness of peer coaching,

Table 4

Intercorrelations
Among the Four Variables

| Variables | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Peer Coaching | | .38* | .30* | .31* |
| 2. Trust | | | .31* | .52* |
| 3. Sharing of Resources | | | | .19* |
| 4. Job Satisfaction | | | | |

*p < .0005 (one-tailed)

they were more satisfied with their teaching job. The weakest among the possible pairs of variables was that found between sharing of resources and job satisfaction ($r = .19$).

Research Question 3: Are there differences among elementary, middle, and high school teachers on any of the four variables under study?

In order to determine the answer to this research question, analysis of variance (ANOVA) procedures on the overall mean scores of the variables were used (see Table in Appendix M). As illustrated in Table 5, the results indicated that a significant difference ($F = 13.883$, $p < .0005$) existed in perceived levels of trust across the three levels of elementary, middle, and high schools. Additionally, a significant difference ($F = 10.713$, $p < .0005$) was found in the perceived frequency of sharing of resources (interactions) across the three levels. No significant differences existed in teachers' perceptions about the usefulness of peer coaching or level of job satisfaction across the three school levels.

Since there were unequal numbers of teachers at the three levels, Bartlett's test for homogeneity of variance was conducted and yielded results that indicated that the assumption of homogeneity of variance had not been violated.

Table 5

Differences on Variables
of Elementary, Middle and High School Levels

| Variable | Mean(sd) | F | p |
|---|---|---|---|
| Peer Coaching | 2.8(.37) | 1.322 | .2875 |
| Elementary | 2.8(.35) | | |
| Middle | 2.7(.42) | | |
| High School | 2.8(.34) | | |
| Trust | 2.9(.34) | 13.883 | .0000 |
| Elementary | 3.0(.32) | | |
| Middle | 2.9(.35) | | |
| High School | 2.7(.35) | | |
| Sharing of Resources | 2.4(.75) | 10.713 | .0000 |
| Elementary | 2.5(.76) | | |
| Middle | 2.1(.68) | | |
| High School | 2.4(.75) | | |
| Job Satisfaction | 3.2(.45) | 1.387 | .2364 |
| Elementary | 3.2(.42) | | |
| Middle | 3.1(.48) | | |
| High School | 3.1(.45) | | |

If found to be significant, the F statistic may only be interpreted as meaning that there is at least one level that is different from the rest. To determine which levels were significantly different from the others, multiple comparison procedures were conducted. Hinkle, Wiersma, and Jurs (1979) recommend using the Scheffe` test when sample sizes are unequal. One advantage of the Scheffe` test is that the chance of a Type I error is minimized. However, the Scheffe' is more prone to Type II errors and will account for the smallest number of significant differences (Ferguson, 1976).

The results of the Scheffe` test indicated that all three levels differed significantly from each other on perceived levels of trust. Comparisons of these differences on selected trust issues are shown in Figure 7. To further investigate the trust differences among the three levels, the Chi-Square test was conducted. In each case, the results yielded a significant relationship ($p < .05$). Middle school teachers differed significantly from elementary teachers on perceived frequency of sharing of resources (interactions). Specific sharing of resources differences between these two levels are illustrated in Figure 8. Again, the Chi-Square test was used to substantiate these differences which yielded a significant relationship ($p < .05$).

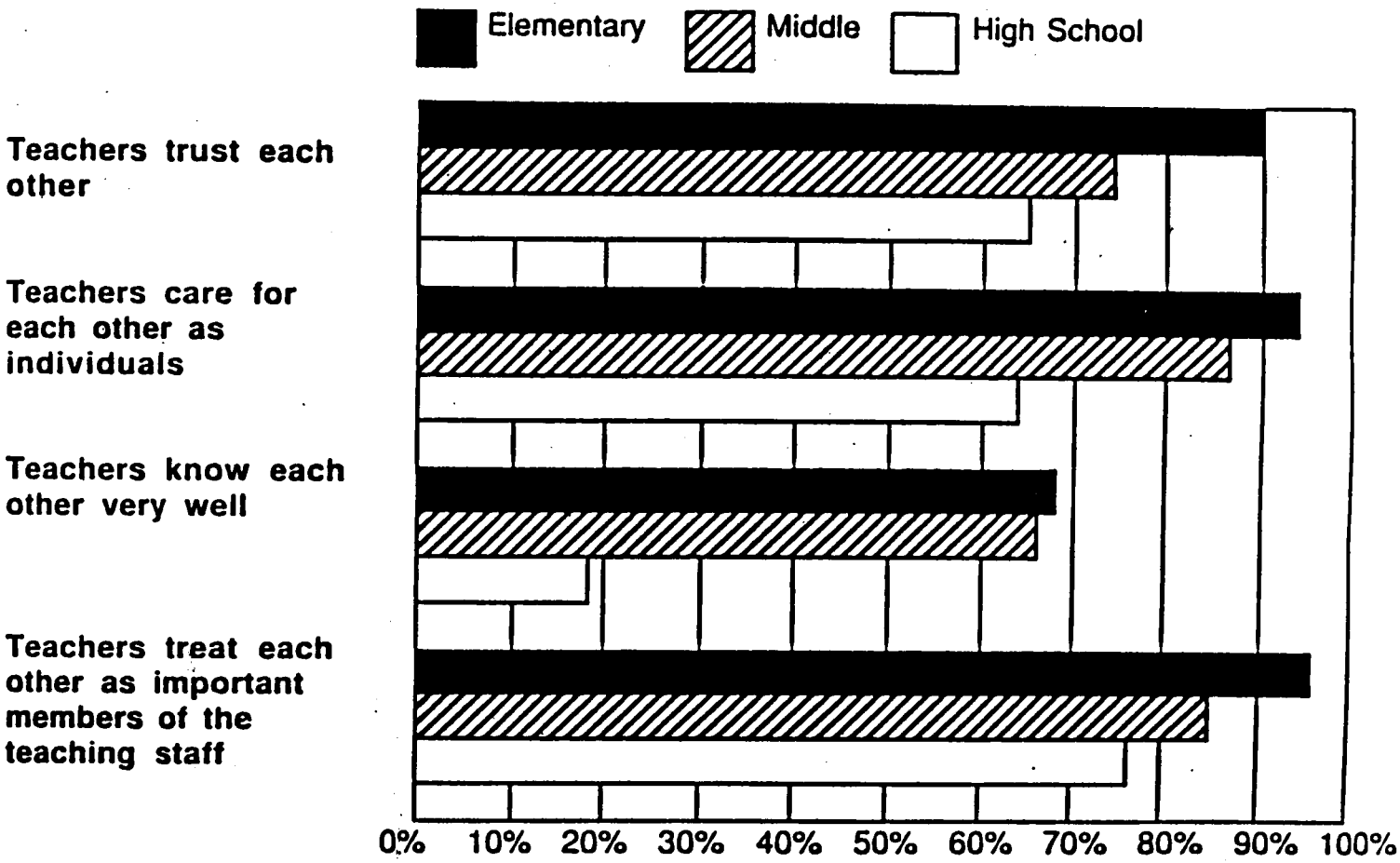



Figure 7. Trust differences - Elementary, middle, and high school teachers.

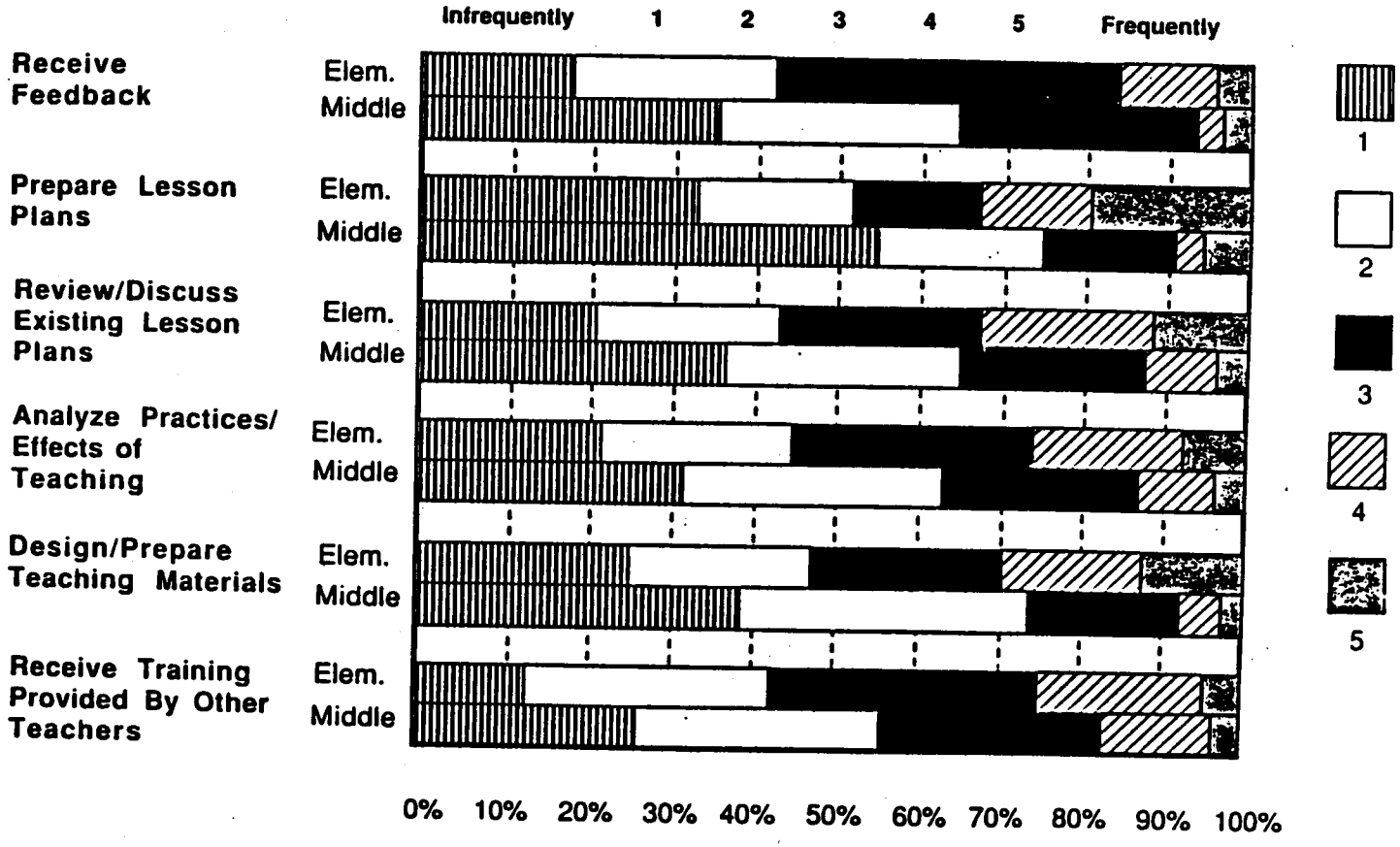



Figure 8. Differences between elementary and middle school teachers on sharing of resources with other teachers.

## Chapter Summary

Overall, teachers agreed that peer coaching was useful and that trust existed in their schools. They participated in critical interactions slightly more infrequently than frequently and were satisfied with their jobs. Each pair of the four variables was related positively, with low to moderate correlations. There were differences among the three school levels in the extent of trust that existed in the schools. Middle school teachers perceived less frequent participation in sharing of resources than did elementary teachers. No differences were found to exist in perceived usefulness of peer coaching or job satisfaction.

Chapter V presents conclusions based on the summation of the results along with recommendations and suggestions for further study.

# CHAPTER V

## SUMMARY AND CONCLUSIONS

The 1980's have been subjected to pressures for educational reform since the publication of A Nation at Risk (1983). The restructuring of the teaching profession was and continues to be a major reform issue. The opportunity to build collegial relationships has been suggested as a way to restructure the teaching profession in order to professionalize the working and learning environment of teachers. Advocates of peer coaching suggest that it provides a means by which to build these collegial relationships (Showers, 1985; Joyce and Showers, 1980, 1982, 1988; Shalaway, 1985; Brandt, 1987; Finn, 1986).

The purpose of this study was to describe and explore selected variables in the working and learning environment of teachers who had participated in peer coaching for two years. The variables included usefulness of peer coaching, trust, sharing of resources, and job satisfaction. The teachers responded to a four-part questionnaire which contained a section for each variable and 10 additional demographic questions. These responses became the means by which to answer the research questions of the study.

In this chapter, conclusions drawn from the results of the analyses are presented along with a discussion of reasoned hypotheses based on the data. Finally, speculations and implications stemming from the data are presented. The remaining sections of the chapter include overall conclusions and recommendations based on the research findings with a closing section on recommendations for further study.

## Conclusions

### Usefulness of Peer Coaching

Overall, teachers agreed that peer coaching was useful. This perceived usefulness centered around the opportunities to observe other teachers, the feedback received from other teachers, and the school-wide implications of peer coaching activities.

Observations and Feedback in Peer Coaching. The observation and feedback cycle is believed to be a crucial component of the peer coaching cycle (Joyce and Showers, 1988). In implementing peer coaching in a school system, scheduling time for observations may appear to be problematic because the "workplace of teachers was organized long before anyone anticipated that the lifelong study of teaching would be necessary" (Joyce and Showers, 1987, p. 22). However, the findings from this study

indicated that teachers, to a great extent, perceived the benefits of observing one another in such a way that they were able to overlook the negative aspects of scheduling observations. The arrangements for scheduling observations were decided upon by the participating teachers and their administrators. Usually, observations were scheduled during planning periods, or occasionally the teachers were relieved from their classroom duties by specialists or administrators. According to the system's Staff Development Coordinator, no paid substitutes were used. This is consistent with Joyce and Showers' (1987) recommendation that costless options be tried first leaving the use of released time for necessary training.

Even though most of the scheduling for observations had been planned by the participating teachers, the teachers indicated that compatibility in the coaching teams was a problem. In most of the schools, planning periods dictated how the coaches were paired with little or no consideration given for personality types or other factors. Showers (1985) found in her study that the teachers' concerns about compatibility had not negatively impacted the degree of transfer of training nor their ability to collaborate and problem-solve. It would appear that the same was true for the teachers under study since they felt that because of peer coaching they were more aware of their own teaching effectiveness, and, as the

next section indicates, they perceived the feedback received from a coach as useful.

In peer coaching, teachers both give and receive feedback. The findings associated with giving and receiving feedback implied that the teachers tended to view the feedback that they received more useful than the feedback that they gave to other teachers. The implication is that there may be a need for more training in giving feedback. This need for continued training, particularly in feedback skills, is consistent with the results of the peer coaching program implemented in the Fort Worth (TX) Independent School District (Leggett and Hoyle, 1987) and substantiates the claim of Showers (1985) and Joyce and Showers (1988) that as feedback progresses from a technical stage to a more complex stage of mutual examination and exploration subsequent training in feedback skills becomes necessary.

It is interesting to note that when the words "critical" or "negative" appeared in items related to feedback, a relatively large number of teachers chose to respond 5 = "not applicable." For example, when teachers were asked whether they had learned to make use of critical feedback given to them by a coach, 36 (10%) indicated 5 = "not applicable." Nineteen (5%) marked "5" as their response to "I receive useful critical feedback from my peer coach." These teachers may have viewed the word

"critical" as implying "negative," in which case "not applicable" would have been appropriate considering that their training in T.E.E. had stressed that negative feedback was inappropriate.

School-wide Implications of Peer Coaching. Although there was no clear indication that peer coaching helped build enthusiasm among the teachers, almost three-fourths of the teachers indicated that peer coaching helped build constructive teacher communications. Moreover, they perceived that peer coaching enhanced their understanding of curricula different from their own and that, due to peer coaching, they had gained new perspectives on other roles in the school.

Isolation from professional knowledge results in a fragmented instructional program (Rosenholtz and Kyle, 1984) and is given as one reason why most schools do not improve (Glickman, 1984-85). Given that the findings from the study implied that peer coaching strengthened communication between and among teachers and created an awareness of others' curricula and roles within the school, it appears that peer coaching may create the conditions necessary for expanding the leadership team in schools and creating "an open, collaborative mode of work to replace teacher isolation" (Lieberman, 1988, p. 7).

Trust

Teachers agreed, on average, that trust existed among the teachers in their schools. This level of trust seemed to vary based on individual versus group trust, caring for others as individuals versus respect based on tasks and performance, and negative versus positive feelings.

Individual and Group Trust. Teachers perceived that when they talked as individuals, other teachers listened to them. However, as a group, the teachers were not really interested in what other teachers had to say. In addition, teachers felt that they had a real sense of knowing who they were and that other teachers held high opinions of their contributions to the teaching staff. Yet, they indicated that the teachers in their schools did not really know each other very well as individuals.

The indications were that, as individuals, the teachers agreed that trust existed, but when asked to indicate the level of trust that existed among the teachers as a group, the agreement appeared not to be as strong. This suggests that the trust level, based on the teachers' perceptions, may already be encouraging the growth processes of individuals and, with time and group process skills training, may begin to encourage the processes of group growth (Jones, 1982).

Caring and Respect for Other Teachers. In spite of perceiving that the teachers in their schools may not be interested in what others have to say, the teachers cared for each other as individuals and treated each other as important members of the teaching staff. Yet, they felt that other teachers were task-oriented to the point that caring for each other as individuals was of less concern. They also based their respect for one another on how well they performed their given tasks.

Taken together, these results related to caring and respect for each other seem to suggest that the teachers did care for each other, but the tasks they were given to perform were as important, and at times more important, than caring for others. With the concern being more on given tasks than on caring for each other as individuals, the level of trust that exists in these twelve schools, as perceived by the teachers, may be enhancing the competence of the teachers and establishing conditions in the workplace that can facilitate the use of that competence (Hawley et al., 1985b). However, the lack of concern for each other as individuals could act as an obstacle to the giving and receiving of feedback which involves risk-taking and self-disclosure that can lead to increased interdependency (Gibb, 1972) and collaborative problem-solving (Mink et al., 1987).

Feedback and Trust. Teachers indicated that when they had negative feelings, they were likely to be expressed at some point. However, they also indicated that if teachers felt negative, they kept it to themselves and that it was easy to express feelings if they were positive but not if they were negative.

The implications are that teachers do express negative and positive feelings but that they tend to be less willing to express negative feelings and may choose to wait before they do so. This hesitancy may be related to the indication that teachers in peer coaching were hesitant to provide useful critical feedback to other teachers, thus substantiating the need for further training in feedback skills and more opportunities to practice expressing feelings that might be construed as negative by others.

Listening to others (receptivity to feedback) and the willingness and ability to share information (self-disclosure) are important to building trust between and among individuals (Mink et al., 1987). The results of the analysis of the responses to the items on the trust scale related to these two concepts were not definitive enough to draw clear conclusions about the impact of trust on the teachers' problem-solving capacities and adaptability to change.

Furthermore, the trust scale appears to have been problematic to the respondents. This was evidenced by the

number of times that trust items were left blank and/or the respondents were unable to decide on one answer and gave two answers which resulted in missing values for analysis purposes. There are several plausible explanations for this problem. During the pilot test, several respondents indicated that they felt the trust scale contained sensitive, personal items. Further, some of the items did not clearly indicate whether they were positive or negative in direction. Therefore, it is recommended that revisions be made on certain items or a different trust scale be considered for use in future studies.

Sharing of Resources through Interactions

The interactions in which teachers perceived the most frequent participation with other teachers centered around activities that involved dialogue. These types of interactions are similar to those which Wildman and Niles (1987b) suggest provide the emotional and technical support that is necessary for professionals to be able to reflect about their practice. Put another way, other teachers are seen as an important part of a teacher's reflective process. However, Wildman and Niles might argue that the teachers' perceptions as to how frequently they observe each other points to a missing link in the reflective

process since the observations are the act upon which to base dialogue about teaching practice.

Further, the activities perceived to be occurring more frequently indicate that teachers in peer coaching have an opportunity to talk about teaching practices that includes analysis, feedback, persuasion, review, and training. Therefore, peer coaching appears to increase the likelihood that teachers can develop a shared technical language and common understandings about their teaching practices and techniques which have been identified as instrumental in improving the teaching profession (Lortie, 1975; Showers, 1985; Feiman-Nemser, 1983; Jackson, 1968; Sarason, 1982; Wildman and Niles, 1987; Wildman, Niles, McLaughlin, and Magliaro, 1987; Little, 1982).

The frequency of interactions related to feedback supports an earlier indication that giving feedback is more problematic to teachers than receiving feedback. Specifically, teachers viewed themselves as participating more frequently in receiving feedback than in providing others with feedback. Thus, this situation re-emphasizes the possible need for further training in giving feedback.

## Teacher Job Satisfaction

Teachers in peer coaching were satisfied with their teaching jobs. They were particularly satisfied with the staff people with whom they worked and talked. In other

studies, teachers indicated that they would like more opportunity to use other teachers as sources of job-related knowledge and skills (Bacharach, et al., 1986; Holly, 1982; Little, 1982; Johnson and Johnson, 1987; Wildman and Niles, 1987b; Feiman-Nemser and Floden, 1986) because they felt that it would improve their own teaching effectiveness. The teachers in peer coaching seem to have this opportunity to make use of other teachers as resources as indicated by the relatively high frequency of involvement in the critical interactions that involved dialogue. Additionally, having other teachers provide feedback and opinions about their teaching appeared to have contributed to the usefulness of peer coaching. In other words, peer coaching provided opportunities for teachers to talk to one another about their teaching. The teachers perceived this dialogue to be useful and frequent. Thus, it would appear that teacher isolation, which typically blocks teachers' access to incentives for higher level needs, may be lessened among the teachers in peer coaching.

Studies have shown that teacher job satisfaction was increased by challenging opportunities (Chapman and Lowther, 1982; Cohen, 1973). The teachers in peer coaching were satisfied with the amount of challenge in their job. Challenge is considered to be a high level growth need as well as intrinsically motivating. Thus, peer coaching seems to provide a means by which to satisfy these needs

that may result in both more effective teacher performance and an incentive to continue to perform effectively. Ultimately, this continuous cycle of motivation to perform effectively should impact positively on student achievement.

Administrative support has been found to be a significant factor in creating norms of collegiality (Little, 1982; Bird and Little, 1985) and implementing peer coaching in schools (Showers, 1984). Although not a major variable in this study, it was assumed by the researcher that since the principals of the 12 schools had elected to continue with project T.E.E. II, administrative support was involved. The implications from the data analysis suggested that this was a legitimate assumption since the teachers in peer coaching were satisfied with the respect and fair treatment as well as the support and guidance that they received from the administration.

Getting to know other people on the job was perceived to be less satisfying to the teachers than the other people with whom they worked and to whom they talked. In terms of building collegial relationships and developing a shared technical language, peer coaching allows for the kind of dialogue that is more likely to increase the teachers' competence and facilitate the application of this increased competence (Hawley et al., 1985b) and decrease the chance that the talk is merely "experience swapping" or talk that

deals with topics unrelated to curriculum, instructional content, or teaching methods (Lortie, 1975; Feiman-Nemser and Floden, 1986).

Relationships between Variables

Most of the relationships between the pairs of variables were positively and moderately correlated with the exception of a weak correlation between sharing of resources and job satisfaction.

The strongest relationship was between trust and job satisfaction. This relationship indicated that teachers in peer coaching were more satisfied with their jobs when they perceived a greater degree of trust among the teachers in their schools. Further, the teachers were satisfied with the staff people to whom they talked and with whom they worked but were relatively less satisfied with the chance to get to know people at work. The teachers indicated that they cared for one another but that this caring centered around the respect they had for each other's performance. They also indicated that teachers were task-oriented to the point that caring for others was of less concern.

The implication of this relationship suggests that the teachers trusted each other based on their professional relationships. This is consistent with the concept of contract trust which Mink et al. (1987) believe is what occurs when people perceive the environment as safe,

reliable, and predictable in a way that frees them to concentrate on their tasks and goals. Thus, the trust level among the teachers seems to be impacting the environment of their schools in a way that increases competence and that facilitates the use of this increased competence (Hawley et al., 1985b).

Teachers in peer coaching appeared to have less of what Mink et al. (1987) call self-disclosure trust. This refers to a norm of trust that is necessary if people feel free to take risks that are involved in sharing personal reactions and ideas about another's performance. The relationship between trust and job satisfaction suggests that more training in feedback skills may be appropriate in order to increase the level of self-disclosure trust.

When teachers perceived peer coaching to be more useful, they tended to agree that trust existed among the teachers in their schools. Over three-fourths of the teachers agreed that observations by other teachers were non-threatening. Further, they agreed that other teachers' opinions about their teaching were useful, the teachers treated each other as important members of the teaching staff, and other teachers had a high opinion of their contributions to the teaching staff.

The implications from these findings suggest that when teachers in peer coaching observe one another, in a non-threatening setting, they begin to value the

effectiveness of others' teaching as well as their own. In addition, the teachers respected each other on how well they performed their given tasks. Roper and Hoffman (1986) stated that this mutual respect is the main ingredient for good partnerships.

Through this recognition of each others' effectiveness, teachers in peer coaching may be able to become more interdependent. Gibb (1972) believes that when people become more interdependent in the working environment, they become less competitive. With an awareness of each other's effectiveness in a non-competitive environment, teachers who have been involved in peer coaching may be more receptive to incentive programs such as merit pay, performance-based pay, or others as shown in Appendix A.

## Differences in School Levels

Based on the teachers' perceptions as indicated by the responses to the questionnaire, there were significant differences among elementary, middle, and high school teachers on trust and between elementary and middle school teachers on sharing of resources. Trust differences existed based on the degree to which teachers cared for each other as individuals, how well they knew each other, and how they treated each other. In spite of these differences, all three levels indicated that they were

satisfied with their jobs and perceived similar degrees of usefulness of peer coaching.

The typical structure of high schools both temporally and instructionally may help to explain why the high school teachers in peer coaching indicated that they did not know each other very well. However, in spite of this, they indicated that they were satisfied with their jobs and they were no different from elementary or middle school teachers on the frequency with which they participated in critical interactions or the usefulness of peer coaching. The implications are that this lack of not knowing each other well had no significant impact on the high school teachers' potential to grow professionally or their competence in ways that might negatively affect student achievement.

However, Holly (1977) found that teachers valued situations where they could "really get to know" people as individuals and have others see them as individuals. She also found that this situation contributed to a non-threatening environment in which the teachers felt free to be themselves. Thus, for the teachers under study, the fact that they did not see themselves as knowing each other very well, particularly high school teachers, may impede their taking the risks associated with acquiring new teaching strategies.

Significant differences related to the frequency of resources sharing (interactions) were found to exist

between elementary and middle school teachers. Middle school teachers perceived less participation in receiving feedback about their teaching than elementary teachers. As stated earlier, feedback is a crucial component of peer coaching (Joyce and Showers, 1988). Although not significantly different from elementary and high school teachers, the middle school teachers' perceptions about the usefulness of peer coaching was lower. It may be that their perceptions about the usefulness of peer coaching might be impacted positively by more involvement in the feedback cycle of peer coaching which has been suggested based on other findings in the study.

Three other areas of differences in resources sharing between elementary and middle school teachers centered around opportunities to talk to other teachers. The implication is that these middle school teachers do not appear to be participating with other teachers in dialogue of the type that could increase the reflection time that Wildman and Niles (1987b) suggest is critical to the growth and development of teachers. Therefore, it is recommended to make available to middle school teachers in peer coaching more opportunities to engage in interactions that center on dialogue about teaching practices.

## Implications

Teacher isolation has been a consistent problem and one that many feel impedes the growth and development of teachers (Goodlad, 1984; Miles, 1985; Lortie, 1975; Lieberman and Miller, 1984; Sarason, 1971). Opportunities to observe other teachers (Goodlad, 1984; Bacharach, Bauer, and Shedd, 1986; Koppich, Gerritz, and Guthrie, 1986) and opportunities to consult with other teachers (Holly, 1982; Wu, 1987; Little, 1982; Feiman-Nemser and Floden, 1986; Johnson and Johnson, 1987; Bacharach et al., 1986; Koppich et al., 1986) are ways by which to reduce isolation. Further, teachers have indicated that they would like more opportunities to observe and work with other teachers. The probability that isolation of teachers may be reduced by participating in peer coaching is indicated by the findings related to the usefulness of observing other teachers, the improved communication across instructional areas, and dialogue about tasks and performance. The results of the job satisfaction assessment indicated that the teachers were satisfied with the other teachers with whom they worked and suggested that because these teachers were less isolated they were more satisfied.

Feiman-Nemser (1983), Wildman and Niles (1987b), and Little (1982) have indicated various ways that teachers learn to teach on the job. Based on the results of this study, teachers involved in peer coaching worked in an

environment that can be characterized as conducive to learning on the job. This is evidenced by the fact that they have opportunities to be more aware of their own effectiveness and contributions to the teaching staff, they make use of the feedback that is provided by other teachers, observations are a way to learn about various teaching techniques, and they talk openly about what they are learning and want to learn about teaching.

Since observations are the basis for much of this learning on the job, and the teachers did not indicate that they frequently participated in observations relative to other interactions, it is recommended that further ways be found that would free the teachers to be able to observe each other more frequently. If released time via paid substitutes is not a viable option, video-taping and self-analysis has been suggested as an alternative way that teachers can learn about their own teaching by developing observation skills and having opportunities to analyze teaching. As a result, teachers are better able to describe teaching and learning in a form that is appropriate for reflection (Wildman and Niles, 1987b).

It has been reported that teachers often lack training and certain analytical skills needed for working in a problem-solving mode with peers (Blumberg, 1980; Harris, 1976). Teachers in peer coaching appear to fit this description based on the findings related to feedback and

the expressing of negative feelings. Additionally, Wildman and Niles (1987b) stated that to be reflective about teaching requires substantial training. Therefore, it is recommended that further training be developed that is intended to improve the teachers' feedback skills, allow them to be more reflective about their teaching, and enhance their ability to solve problems collaboratively.

One way to begin to develop this training is to employ certain strategies and/or interventions from the field of organization development (OD). Schmuck and Miles (1971) in their book Organization Development in Schools define OD as a "planned and sustained effort to apply behavioral science for system improvement, using reflexive, self-analytic methods" (p.2). Specific OD strategies/interventions that relate to the needs of teachers in peer coaching might include process observation, active listening, and giving and receiving feedback as described in McKeen and White (1986).

Video-taping the teachers at the feedback conference is a viable means by which teachers may begin to analyze their feedback skills. Wildman and Niles (1987b) found that video-taping followed by self-analysis was a useful technique to illustrate to teachers that their conclusions about themselves were often judgmental. When forced to support these conclusions using the objective data on the tape, teachers may find that there is little evidence to

support their conclusions about their discomfort with giving feedback to other teachers.

Some theorists view trust as a key variable in both individual and group development (Berzok, 1978; Jones, 1982). The results of this study indicate that teachers in peer coaching appeared to be growing individually but less as a group. They did indicate that peer coaching had helped to build constructive communications among the teachers. However, it is recommended that more opportunities be made available in which the teachers can begin to train each other informally and work together more often in developing instructional materials in a group setting. Holly (1977) found that teachers wanted the opportunity to work with other teachers in inservice type activities and that these activities were more meaningful when they were self-chosen, informal, and participatory activities with other teachers.

Activities such as these coupled with training in the skills of problem-solving and team-building (McKeen and White, 1986) are likely to provide a safe and trusting environment that promotes group growth (Jones, 1982) in a way that teachers may begin to develop the self-disclosure trust that Mink et al. (1987) believe facilitates the release and development of a group's potential for productivity.

## Recommendations for Further Study

1. Retention of teachers is of interest to those involved in improving the profession of teaching. A follow-up study in five to ten years is recommended in order to ascertain if the teachers' involvement in peer coaching influenced their decisions to stay in teaching.
2. The case study approach has been suggested as a way to more fully investigate contextual factors in the environment (Schiffer, 1980). Two or three coaching teams at each level (middle, elementary, and high school) could be selected as subjects for case studies.
3. As teachers learn to teach, they progress through stages of development (Feiman-Nemser, 1983; Glickman, 1980,1987). These stages generally coincide with years of experience. It is recommended to repeat this study and investigate differences among teachers at various stages of development and/or years of experience.
4. In addition to identifying the 18 critical interactions that characterize schools where norms of collegiality and experimentation prevail, Little (1982) suggested that these interactions could be further defined by their range, focus, inclusivity (actors and location),

reciprocity, concreteness, and frequency.

It is recommended that an instrument be developed whereby these critical interactions could be further investigated.

5. In order to understand to what extent peer coaching impacts the other variables in the study, it is recommended to conduct a comparative study by surveying teachers in schools where peer coaching was not continued for the second year.
6. Path analysis is recommended as a way to establish the directionality of causation among the four variables in the study.

In conclusion, this study was an attempt to provide useful information to administrators, teachers, and policy-makers about the influences of peer coaching on the environment of the schools and teachers' opportunities to build collegial relationships. According to Barth (1980), these collegial relationships, or teacher-to-teacher relationships, help determine the quality of education within a school.

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# APPENDICES

# APPENDIX A

## INCENTIVE PROGRAMS - 1986

A state-by-state chart of incentive programs implemented as of December, 1986 (Career Ladder Clearinghouse, 1986, p. 9).

# INCENTIVE PROGRAMS - 1986

| | Local Initiative Only | Pilots with State Funding and/or Assistance | Full Implementation of State Program | State Program Under Development | Discussion No Legislative Action Pending | Type of Program |
|---|---|---|---|---|---|---|
| Alabama | | | | X | | Career Ladder |
| Alaska | | | | | | |
| Arizona | | X | | | | Career Ladder |
| Arkansas | | (Not Funded) | | | | Career Development |
| California | | | X | | | Mentor Teacher |
| Colorado | | X | | | | Teacher Incentive/ Career Ladder |
| Connecticut | | X | | | | Teacher Incentive |
| Delaware | | X | | | | Career Development |
| Florida | | | X (1) | X (2) | | (1) School Incentive; (2) Career Ladder |
| Georgia | | | | X | | Career Ladder |
| Hawaii | | | | | X | |
| Idaho | | | | (Not funded) | | Career Compensation |
| Illinois | | X | | | | Teacher Incentive |
| Indiana | | X | | | | Teacher Incentive |
| Iowa | | | | | | |
| Kansas | X | | | | | Teacher Incentive |
| Kentucky | | X | | | | Career Ladder |
| Louisiana | | X (1987) | | | | Career Ladder/ School Incentive |
| Maine | | X | | | | Tiered Certification Incentive |
| Maryland | X | | | | | Career Development Incentive |
| Massachusetts | | | X | | | Teacher Incentive |
| Michigan | | | | | X | |
| Minnesota | X | | | | | Teacher Incentive |
| Mississippi | | | X | | | Teacher Incentive |
| Missouri | | | X | | | Career Ladder |
| Montana | | | | | | |
| Nebraska | | | | X | | Career Ladder |
| Nevada | | | | | X | |
| New Hampshire | X | | | | | Teacher Incentive |
| New Jersey | | | X | | | Teacher Incentive |
| New Mexico | | | | | X | |
| New York | | | X | | | Teacher Incentive |
| North Carolina | | X | | | | Career Ladder |
| North Dakota | | | | | | |
| Ohio | | | | | X | Career Ladder |
| Oklahoma | X | | | | | Teacher Incentive |
| Oregon | X | | | | | Teacher Incentive |
| Pennsylvania | | | X | | | Teacher Incentive |
| Rhode Island | X | | | | | Teacher Incentive |
| South Carolina | | X (1) | X (2) | | | (1) Teacher Incentive; (2) School Incentive |
| South Dakota | | | | | X | |
| Tennessee | | | X | | | Career Ladder |
| Texas | | | X | | | Career Ladder |
| Utah | | | X | | | Career Ladder |
| Vermont | X | | | | | Teacher Incentive |
| Virginia | | X | | | | Career Ladder/ Teacher Incentive |
| Washington | | | X | | | Mentor Teacher |
| West Virginia | | | | X | | Teacher Incentive |
| Wisconsin | | X | | | | Career Ladder/ Teacher Incentive |
| Wyoming | | | | | X | |

*Southern Regional Education Board*

## APPENDIX B

### A COMPARISON OF RECOMMENDATIONS IN THE HOLMES GROUP, CARNEGIE TASK FORCE AND NATIONAL GOVERNORS' ASSOCIATION 1986 REPORTS ON TEACHING

A comparative summary of the recommendations concerning the improvement of the teaching profession made in three national reports published in 1986 (Cooper, 1987, p. 10). Reprinted, with permission, from the National School Boards Association. Copyright 1987. All rights reserved.

A Comparison of Recommendations in The Holmes Group, Carnegie Task Force and National Governors' Association 1986 Reports on Teaching

| "Tomorrow's Teachers" The Holmes Group | "A Nation Prepared" The Carnegie Task Force | "Time for Results" National Governors' Association |
|---|---|---|
| **Organization of Schools** | | |
| Make schools better places for teachers to work and learn | Restructure schools to provide a professional environment for teaching | Redesign the organization of schools to create more productive working and learning environments |
| **Organization of the Teaching Profession** | | |
| Recognize differences in teachers' work | Restructure the teaching force; introduce a new category of lead teacher | Redesign the structure of the teaching career |
| **Teacher Salaries** | | |
| | Make teachers' salaries and career opportunities competitive with those of other professions | Improve teacher compensation at entry and throughout the career |
| **Teacher Incentives/Student Performance** | | |
| | Relate incentives for teachers to school-wide student performance, and provide schools with technology services and staff essential to teacher productivity | Align teacher incentives with school-wide student performance |
| **Teacher Professional Standards** | | |
| Create standards of entry into the profession. | Create a National Board for Professional Teaching Standards | Create a national board to define teacher standards |
| **Teacher Education** | | |
| Make the education of teachers intellectually more solid | Require a bachelors' degree in Arts & Sciences as a prerequisite for the study of teaching | Rebuild the system of teacher education |
| Connect schools of education with public schools | Develop a new professional curriculum in graduate schools of education leading to a master in teaching degree | Define the body of professional knowledge and practice that teachers must have |
| **Teacher Recruitment** | | |
| | Mobilize the nation's resources to prepare minority youngsters for teaching careers | Recruit able teacher candidates |
| | | Improve teacher mobility (through transferable state licenses & credit for teaching in other districts) |
| **State Regulation of Schools** | | |
| | | Establish a "loose/tight" approach to state and local regulation of schools |
| | | Establish the concept of educational bankruptcy (which gives states the power to intervene in the operation of failing local school districts) |

# APPENDIX C

## COMMUNTIY DEMOGRAPHIC INFORMATION

A summary of the demographics of the community in which the study was conducted. 1980 census data about the population, education, occupations, and income levels are included.

# COMMUNITY DEMOGRAPHIC INFORMATION

| | |
|---|---|
| **1980 Population Characteristics:** | |
| All Persons | 141,372 |
| Male | 69,525 |
| Female | 71,847 |
| Age | |
| Under 18 | 45,454 |
| 18 to 64 | 89,404 |
| 65 and over | 6,514 |
| White | 125,841 |
| Nonwhite | 15,531 |
| **1980 Education Characteristics:** | |
| Persons 25 and older | 79,664 |
| Elementary (%) | 12.2 |
| High School (%) | 31.3 |
| College (%) | 23.4 |
| **1980 Occupation Characteristics:** | |
| Managerial and Professional Speciality Occupations: | |
| Executive, Administrative & Managerial | 9,658 |
| Professional Specialty | 9,454 |
| Technical, Sales & Administrative Support Occupations: | |
| Technicians and Related Support | 2,489 |
| Sales | 8,250 |
| Administrative support (including clerical) | 13,491 |
| Service Occupations: | |
| Private Household | 228 |
| Protective Service | 1,019 |
| Other Service | 4,316 |
| Farming, Forestry, & Fishing Occupations | 424 |
| Precision Production, Craft & Repair Occupations | 10,039 |

1980 Occupation Characteristics (cont.)

| | |
|---|---|
| Operators, Fabricators, & Laborers: | |
| Machine Operators, Assemblers, & Inspectors | 4,834 |
| Transportation & Material Moving | 2,679 |
| Handlers, Equipment Cleaners, Helpers, Laborers | 2,658 |

1980 Income Characteristics:

| | |
|---|---|
| Total Families | 38,549 |
| <$10,000 | 3,418 |
| $10,000-$14,999 | 3,449 |
| $15,000-$19,999 | 5,030 |
| $20,000-$24,999 | 6,456 |
| $25,000-$34,999 | 11,107 |
| $35,000-$49,999 | 6,615 |
| $50,000 or more | 2,591 |
| Median Income ($) | 25,752 |
| Mean Income ($) | 27,763 |
| Total Households | 45,821 |
| Median Income ($) | 23,924 |
| Mean Income ($) | 25,919 |

## APPENDIX D

## LETTER OF PERMISSION

The letter of permission from the Director of Research and Evaluation of a Virginia public school system, who gave initial approval to conduct the study in the system.

July 13, 1987

[illegible]
[illegible]
Alex[illegible]

Dear Ms. Hall:

I am writing to inform you that your request to conduct a research study involving a sample of our teachers has been approved. Please be advised however that the following conditions apply:

1. Participation by any teacher included in the sample will be completely voluntary.

2. You will keep all individual responses confidential and will present the results in summary form only.

3. You agree to allow us to have input into decisions regarding the sample size and the sampling procedures.

4. You agree to allow us to have input into decisions regarding the specific questions asked on the survey in accordance with our own information needs relative to coaching and teacher evaluation.

5. You agree to provide us with a copy of the results.

6. You refrain from referring to the " County Public Schools" by name in any reports and/or presentations unless permission to do so is granted in the future by the school system.

I think we discussed these points in our previous phone conversations, however if you have questions feel free to give me a call. We look forward to working with you.

Sincerely,

Director, Research and Evaluation

CKC/pbs

cc:

# APPENDIX E

## THE SURVEY QUESTIONNAIRE

## TEACHER QUESTIONNAIRE

### PART I

This part of the questionnaire is designed for you to describe your experiences with peer coaching and your perceptions of selected elements of the environment in which you work. Your responses, along with those of other teachers in the system, will provide a description of a professional environment in which teachers work and learn together. In order for this description to be accurate and meaningful, it is important that you answer as thoughtfully and frankly as possible. Read the instructions and each question carefully. Please set aside 20-25 uninterrupted minutes to provide thoughtful responses.

Instructions:

Read each question carefully. Select the number that represents the response you have chosen. Using the pencil provided, fill in the corresponding number on the answer sheet, being careful to completely blacken in only one circle for each item. Be sure that the number of the question matches the number on the answer sheet. If you decide to change a response, please be sure to erase completely. **AT NO TIME SHOULD YOU BLACKEN IN THE "A," "B," OR "O" COLUMNS ON THE ANSWER SHEET.**

After completing all of the questions, place the questionnaire and answer sheet in the self-addressed stamped envelope and return no later than December 11, 1987.

Thank you for your time and consideration.

---

Based on your experience with peer coaching, to what extent do you agree or disagree with each of the following statements:

1 = strongly agree  2 = agree  3 = disagree  4 = strongly disagree  5 = not applicable

1. Peer coaching offers a good opportunity to observe a variety of teaching techniques.
2. Observations of my teaching by another teacher are non-threatening.
3. I am hesitant to provide useful critical feedback to other teachers.
4. Peer coaching helps build enthusiasm among the teachers.
5. Feedback from another teacher is judgmental.
6. In my coaching team, compatibility is a problem.
7. I feel that peer coaching is just "one more thing to do.
8. Peer coaching helps build constructive teacher communications.
9. Being observed by another teacher is stressful.
10. I have learned to make use of critical feedback given to me by a coach.
11. Observations and/or follow-up conferences are productive even when they are scheduled without release time.
12. Because of peer coaching, I am more aware of the effectiveness of my own teaching techniques.
13. Peer coaching enhances my understanding of curricula different from my own.
14. I have learned to give critical feedback to other teachers.
15. When I observe another teacher, I find it difficult to relate to a subject area when it is different from my own subject area.
16. Observations still provide useful data even though having peer observers in classrooms may cause students to behave differently.
17. I receive useful critical feedback from my peer coach.
18. Due to peer coaching, I have gained new perspectives on other roles in the school.
19. Other teachers' opinions of my teaching are useful.
20. Teacher observations cause the observed teacher to "put on a show.

---

Based on your teaching experience at this school, to what extent do you agree or disagree with each of the following statements:

1 = strongly agree  2 = agree  3 = disagree  4 = strongly disagree

21. Teachers in my school trust each other.
22. Teachers in my school are task-oriented to the point that caring for each other as individuals is of less concern.
23. Teachers in my school seem to have a real sense of knowing who they are.

OVER

Page 2

1 = strongly agree 2 = agree 3 = disagree 4 = strongly disagree

24. Teachers in my school seem to care for each other as individuals.
25. Teachers are respected on the basis of how well they perform their given tasks.
26. Other teachers have a high opinion of my contributions to the teaching staff.
27. It is easy to tell who the "in" people are among the teachers in my school.
28. Other teachers in this school listen to the things that I say.
29. The teachers treat each other as important members of the teaching staff.
30. Teachers in my school are not really interested in what others have to say.
31. In this school, we know each other well.
32. Whenever the teachers in my school have negative feelings, they are likely to be expressed at some point.
33. Teachers in my school are afraid to be open and honest with each other.
34. In my school, if teachers feel negative they keep it to themselves.
35. The teachers in my school are spontaneous and uninhibited when they are around each other.
36. In my school, it is easy to express feelings if they are positive but not if they are negative.
37. Teachers keep secrets in this school.

---

Please indicate the frequency with which you participate with other teachers in your building in each of the following:

Infrequently 1 2 3 4 5 Frequently

38. I receive feedback about my teaching from other teachers.
39. I prepare lesson plans with other teachers.
40. I persuade other teachers to try an idea/approach.
41. I am involved with other teachers in designing inservice programs.
42. I review/discuss existing lesson plans with other teachers.
43. I analyze the practices and effects of teaching with other teachers.
44. I teach other teachers informally.
45. I am involved with other teachers in designing curriculum units.
46. I talk openly about what I am learning or want to learn about teaching.
47. I provide other teachers with feedback about their teaching.
48. I design and prepare teaching materials with other teachers.
49. I teach other teachers formally.
50. I am observed by other teachers.
51. I make collective agreements with other teachers to test an idea.
52. I observe other teachers.
53. I discuss classroom practices with other teachers.
54. I receive training provided by other teachers.
55. I invite other teachers to observe me.

---

Thinking about your teaching experience in this school, to what extent are you satisfied or dissatisfied with each of the following aspects of your job?

1 = extremely satisfied 2 = satisfied 3 = dissatisfied 4 = extremely dissatisfied

56. The degree of respect and fair treatment I receive from my administration.
57. The overall quality of the supervision I receive in my work.
58. The amount of support and guidance I receive from the administration.
59. The opportunity(ies) for personal growth and development.
60. The feeling of worthwhile accomplishment I get from doing my job.
61. The amount of independent thought and action I can exercise in my job.
62. The amount of challenge I perceive in my job.
63. The opportunity I have to do things that I do best.
64. The chance to get to know other people while I am on the job.
65. The staff people I talk to and work with on my job.
66. The chance to help other people while I am at work.

The next ten questions will provide helpful information in developing an overall profile of the respondents to this questionnaire. Please respond to each of the following questions based on your own experience and knowledge:

67. At what level do you presently teach:
1: elementary 2: middle 3: high school

68. At what grade level do you presently teach:
1: K-2 2: 3-5 3: 6-8 4: 9-12

69: What is your major subject area (select only the one that requires the most of your time):
1: Language Arts/English
2: Math
3: Social Studies
4: Science
5: Physical Education/Health
6: Arts/Humanities/Music
7: Special Education
8: Self-contained classroom (elementary)
9: Other

70. Age:
1: 20-25 2: 26-30 3: 31-35 4: 36-40 5: 41-45 6: 46-50 7: 51-55 8: 56-60 9: Over 60

71. Sex:
1: Female 2: Male

72. Race:
1: White 2: Black 3: Hispanic 4: Asian 5: Other

73. Highest degree earned:
1: Bachelors 2: Masters 3: Masters +30 4: CAGS 5: Doctorate

74. How many years have you been teaching in your present building?
1: Less than one year
2: One year
3: Two years
4: Three or more years

75. How many years have you been teaching in your present system?
1: Less than one year
2: One year
3: Two years
4: Three or more years

76. What is the total number of years that you have been teaching?
1: Less than one year
2: 1-5 years
3: 6-10 years
4: 11-15 years
5: 16-20 years
6: 21-25 years
7: More than 25 years

## APPENDIX F

## CRITICAL INTERACTIONS

A list of the critical interactions as identified in Little's study (1982) and found to be critical to the professional development of teachers as they work and learn together.

CRITICAL INTERACTIONS**

Design and prepare materials.
Design curriculum units.
Research materials and ideas for curriculum.
Prepare lesson plans.
Credit new ideas and programs.
Observe other teachers.
Analyze practices and effects.
Teach others informally.
Write curriculum.
Review/discuss existing lesson plans.
Persuade others to try an idea/approach.
Make collective agreements to test an idea.
Invite other teachers to observe.
Teach others in formal inservice.
Talk publicly about what one is learning or wants to learn.
Convert book chapters to reflect new approach.
Evaluate performance of principals.
Design inservice.

**Interactions identified by Little (1982) as critical to the professional development of teachers.

## APPENDIX G

### MEMO TO PRINCIPALS OF TWELVE SCHOOLS

A memo that was sent to the principals of the twelve schools in which the teachers had been involved in peer coaching for two years. It was intended to make them aware of the survey and to solicit their support.

November 19, 1987

TO: Selected Principals

FROM:

RE: Survey on Peer Coaching and Teacher Evaluation

On or around November 30, Ms. Libby Hall from VPI will be distributing a survey concerning peer coaching and teacher evaluation to your faculty. We strongly urge you to encourage your teachers to complete the survey and return it to Ms. Hall. The responses will be used not only for research purposes at VPI, but also to evaluate our peer coaching and teacher evaluation efforts here in

Ms. Hall will be placing the surveys in your teachers' mailboxes; you do not need to do anything other than ask your faculty to respond.

Thank you.

## APPENDIX H

### MEMO TO TEACHERS FROM DIRECTOR OF RESEARCH AND STAFF DEVELOPMENT COORDINATOR

A memo sent to each teacher in the initial survey packet. It was intended to encourage participation and indicate the system's support of the study.

November 19, 1987

Dear Teacher:

Enclosed you will find a survey from Jerry Niles and Libby Hall of Virginia Polytechnic Institute and State University that asks you some questions about peer coaching and teacher evaluation. We are writing to ask you to please support this effort by taking a few minutes to complete the survey and mail it to Ms. Hall.

The information that you provide will serve a dual purpose. It will contribute to VPI's ongoing research to better understand teaching and the conditions within which teachers work. It will also be used to evaluate recent peer coaching and teacher evaluation efforts in County.

We have worked very closely with Dr. Niles and his colleagues at VPI over the past several years. His efforts on behalf of teachers and the teaching profession are both important and sincere. We encourage you to complete and return the survey in that light.

Thank you.

Sincerely,

## APPENDIX I

### COVER LETTER TO SOLICIT TEACHER ASSISTANCE

The cover letter that was sent to each teacher in the initial survey packet. It was intended to explain the purpose of the study and encourage response. In addition, confidentiality was promised.

November 30, 1987

Dear Colleague,

It is our belief and research supports that the teacher's workplace sets the stage for continued learning and growth in teaching. Because of the variety of programs that have been implemented in your school system (peer coaching, for example), we feel that a study based on your perceptions of the environment where you teach will enhance our understanding of a professional environment in which teachers can teach and learn to teach together.

The enclosed questionnaire will be the basis for a study that will describe such a professional environment. Your help and a few minutes of your time will provide the necessary data for such a study. Please respond to all items in the questionnaire and return it in the envelope provided by December 11, 1987.

Each survey is coded only for identification purposes that will facilitate necessary follow-up procedures when surveys are not returned by the requested date and a second request to respond is necessary. At no time will the results be reported in a way that identifies you, your school, or your school system. This assures you a high degree of confidentiality. If you wish a copy of the results, please write to the above address.

We appreciate your taking the time from your busy schedule to share your valuable ideas by completing and returning the questionnaire promptly. Thank you.

Sincerely,

**Libby Hall**
**Graduate Student**
**Virginia Tech**

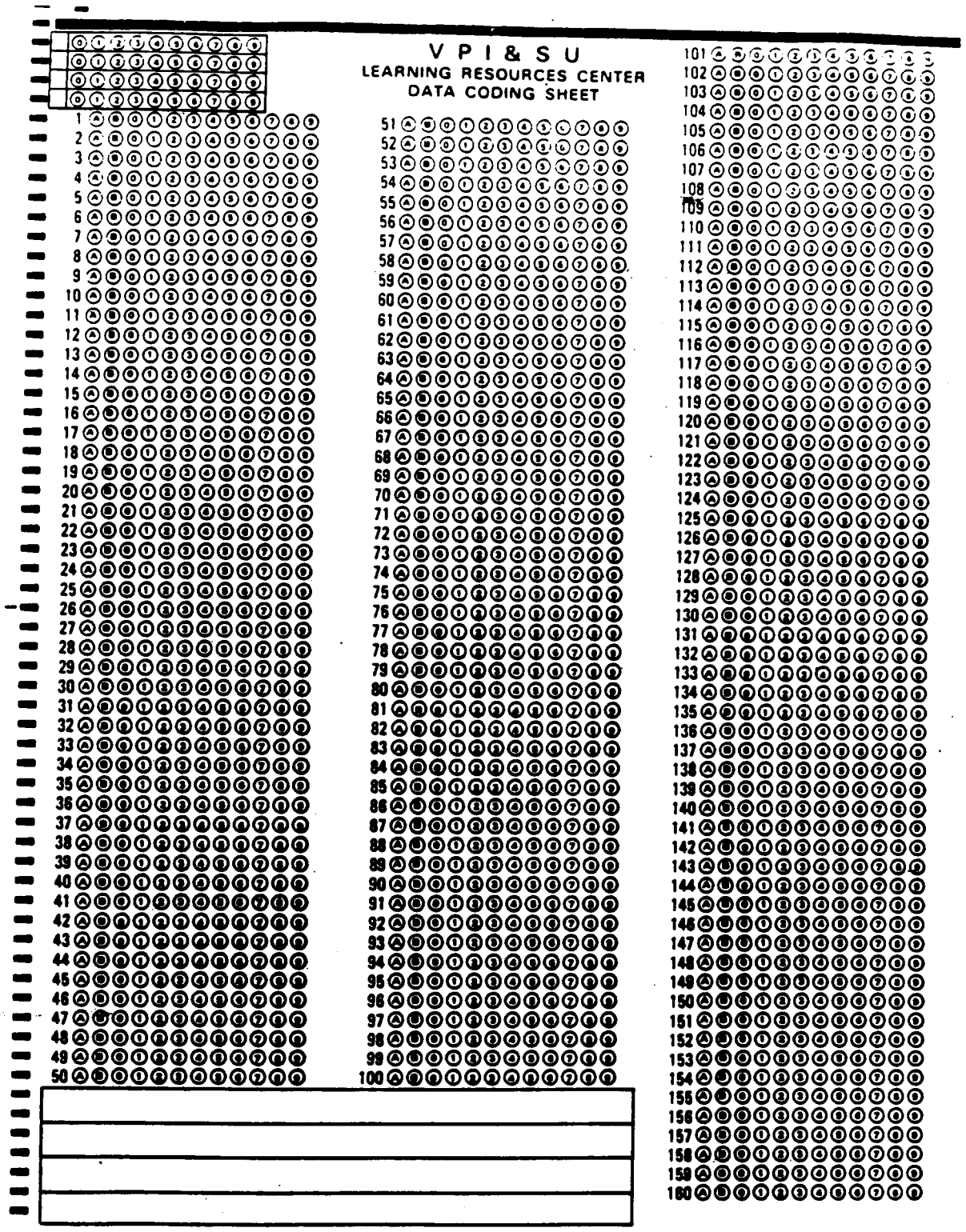
**Ronald L. McKeen**
**Professor of Education**
**Virginia Tech**

**Jerome A. Niles**
**Professor of Education**
**Virginia Tech**

## APPENDIX J

### NCS TRANS OPTIC ANSWER SHEET

The data coding sheets that were included for the purpose of marking responses. Each answer sheet was coded for the purpose of identification when follow-up procedures were necessary.


V P I & S U
LEARNING RESOURCES CENTER
DATA CODING SHEET

## APPENDIX K

## FOLLOW-UP LETTER TO SOLICIT TEACHER ASSISTANCE

Letter distributed to the 205 non-respondents from the initial distribution of survey packets. The letter encouraged participation in the study and contained a checklist for those choosing not to complete the questionnaire to provide their reason(s) for not doing so.

January 4, 1988

Dear Colleague,

Happy New Year! Shortly before Christmas vacation, you received a questionnaire that is to be the basis for a study of the professional environment in which teachers teach and continue to learn to teach together. At this point in time, I have not received your completed questionnaire. I am aware that this is an especially busy time of year, but I would appreciate your taking a few minutes to complete the enclosed questionnaire and return it to me by January 13, 1988.

Your contribution to this study is valuable. However, in the event that you choose not to complete this survey packet, please indicate your reason(s) for not doing so below:

____ I did not feel that the questionnaire pertained to me.

____ I did not want to take the time necessary to complete the questionnaire.

____ I felt that I might be identified and did not want my responses known to others.

____ Generally speaking, I do not feel that questionnaires are accurate.

____ I am not involved in peer coaching.

____ I do not think peer coaching is useful.

____ Other reason(s) _____

_____

_____

Thank you for taking the time to provide your important ideas to this endeavor. Using the enclosed self-addressed stamped envelope, return the completed questionnaire with the answer sheet or this letter no later than Wednesday, January 13, 1988. Best wishes for a prosperous 1988!

Sincerely,

Libby Hall

## APPENDIX L

### COMPARISON OF 1st AND 2nd DISTRIBUTION MEANS OF MAJOR VARIABLES

Results of t-tests conducted to determine if there were significant differences on mean scores of the four variables between respondents to the first and second distributions of the questionnaire. As the table indicates, there were no significant differences; therefore, respondents to both distributions were included in the data analysis.

Table 8

Comparison of 1st and 2nd Distribution Means on Major Variables

| Variable | Number of Cases | Mean | SD | t | 2-Tail Probability |
|---|---|---|---|---|---|
| Peer Coaching | | | | | |
| Distribution 1 | 313 | 2.8 | .37 | -1.63 | .106 |
| Distribution 2 | 66 | 2.8 | .37 | | |
| Trust | | | | | |
| Distribution 1 | 313 | 2.9 | .34 | .61 | .542 |
| Distribution 2 | 66 | 2.9 | .35 | | |
| Sharing of Resources | | | | | |
| Distribution 1 | 313 | 2.3 | .75 | -.65 | .515 |
| Distribution 2 | 65 | 2.4 | .77 | | |
| Job Satisfaction | | | | | |
| Distribution 1 | 313 | 3.2 | .44 | .31 | .760 |
| Distribution 2 | 66 | 3.1 | .48 | | |

## APPENDIX M

### ANALYSIS OF VARIANCE ON MAJOR VARIABLES AMONG ELEMENTARY, MIDDLE AND HIGH SCHOOL LEVELS

Results of analysis of variance procedures to determine if there were significant differences on mean scores of the four variables among elementary, middle, and high school teachers. As the table indicates, there were no significant differences in mean scores of peer coaching or job satisfaction. There were significant differences in mean scores of trust and sharing of resources (interactions).

Table 8

Analysis of Variance on Major Variables among Elementary, Middle and High School Levels

| SCALE | SS | df | MS | F | p |
|---|---|---|---|---|---|
| Peer Coaching | | | | | |
| Between | .367 | 2 | .183 | 1.322 | .2875 |
| Within | 51.998 | 375 | .139 | | |
| Trust | | | | | |
| Between | 3.049 | 2 | 1.525 | 13.883 | .0000 |
| Within | 41.147 | 375 | .110 | | |
| Sharing of Resources | | | | | |
| Between | 11.586 | 2 | 5.793 | 10.713 | .0000 |
| Within | 202.790 | 375 | .541 | | |
| Job Satisfaction | | | | | |
| Between | .552 | 2 | .276 | 1.387 | .2364 |
| Within | 74.583 | 375 | .199 | | |

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