THE IMPACT OF A COLLEGIAL PEER COACHING TEACHER-TRAINING PROGRAM UPON PALM BEACH COUNTY TEACHERS' SENSE OF SELF-EFFICACY

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by

Marion Weil

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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. John J. Hunt, Department of Educational Leadership, and has been approved by the members of her supervisory committee. It was submitted to the faculty of the College of Education and was accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

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Finally, I dedicate this dissertation to my husband, Walter--the most learned man I know. His thirst for knowledge, truth, intellectual pursuits, and the practicality of what we learn serves as a wonderful example of lifelong learning.

ABSTRACT

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The Palm Beach County School District, FL, (District) has introduced collegial peer coaching as one element of staff development in making training more effective for school improvement practices. The purpose of this research was to ascertain the effects of collegial peer coaching on teachers' perception of self-efficacy. Developing skills to improve student achievement is the goal of inservice training for teachers. Teacher efficacy requires practice and refinement in order for teachers to gain executive control over newly-learned strategies. No empirical evidence exists regarding the effects of collegial peer coaching on teacher behaviors.

The Teacher Locus of Control Scale was administered in a two-group study to determine whether teachers' sense of

self-efficacy was impacted significantly by involvement in collegial peer coaching, years of teaching experience, teaching grade level, or by geographic location (work site) in the District. The treatment group subjects (collegial peer coaches, n=102) and control group subjects (teachers not involved in collegial peer coaching, n=102) were surveyed in a pre- and posttest application to test the hypotheses.

Results of the study indicate that teachers' sense of self-efficacy is impacted significantly by collegial peer coaching and by geographic location within the District ($p < .05$). A significant interaction effect was found between collegial peer coaching status and teaching grade level ($p < .05$).

Recommendations include the development of learning-enriched environments, coupled with efficacy training for teachers, to enhance an understanding of how teacher attitudes and beliefs affect student achievement. All District teachers should receive training in collegial peer coaching to facilitate the change process. Opportunities to demonstrate, model, practice, observe, and coach one another empower teachers to gain executive control of models of teaching strategies.

The change process takes time. Teachers' sense of self-efficacy will develop on individual bases. We must be

patient and trust that growth will occur for our efforts in the school improvement process.

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CHAPTER I

INTRODUCTION

Background of the Study

The restructuring of America's school systems to align them with the goals of America 2000 has become the focus of educational reform in the Palm Beach County School District, Florida (School Improvement Plan Guidelines, 1993). The Department of Education for the State of Florida has adopted Blueprint 2000, which incorporates all of the national goals for school improvement (1992). Collaborative efforts of School Advisory Councils, consisting of members from within the school district, business and industry partners, parents, local citizenry, and students, have led to the design of school improvement plans specific to the needs of individual schools in addressing the goals of both state and federal mandates (1992). Four ingredients of school improvement include: (1) the enhancement of teachers' skills, (2) systematic curriculum renovations, (3) refinement of the organization, and (4) a commitment from parents and citizens as stakeholders in the school improvement

process (Saphier & King, 1985). All school improvement plans in the Palm Beach County School District include staff development components (School Improvement Plans, 1993). These are formulated precisely to foster mastery of teaching techniques to meet the stated goals of each school. The identified inservice programs are based upon school data for student achievement (School Improvement Plans, 1993). Staff development should be directly related to the goals in the school improvement plans (School Improvement Guidebook, 1993). These plans are influential in changing the school culture in paths desired by the School Advisory Councils (Anderson, 1989).

Little time, however, is usually given to reinforcement of newly-learned techniques. Learning occurs during staff development sessions (horizontal transfer), but teacher efficacy takes practice and refinement in order for teachers to gain executive control over the related strategies (Joyce & Showers, 1984). Recognizing the problem of skills application by teachers from the inservice setting to the work setting (the classroom), the Palm Beach County School District has introduced collegial peer coaching inservice training as an element of effective school improvement practices.

Statement of the Problem

Presently, there is no staff development follow-up for teachers to ascertain whether new knowledge or strategies learned are transferred to their classrooms to enhance the school improvement process in the Palm Beach County School District. Teachers mostly operate in isolated classrooms, which allows them time for teaching and recordkeeping duties. Teacher isolation in work settings often eliminates creativity for motivating students, comradery, and support from fellow teachers that are essential for improvement of professional practices (Bird & Little, 1986). Ashton and Webb (1986) define teacher's sense of self-efficacy as perceived personal competence in motivating students. The research suggests that teamwork reduces the isolation, increases collegial inquiry and teacher self-efficacy, which advances the school improvement process (Lezotte, 1990).

When teachers are together for a shared mission, the goals of the mission are sharpened and avenues of resolution toward school improvement are paved (Greene, 1991). A cadre of collegial peer coaching teachers may lead the way toward an atmosphere of research-based collegial inquiry. The school improvement process will be fostered through a collaborative climate.

Purpose of the Study

The purpose of this study was to determine the effects of collegial peer coaching on teachers' perceptions of self-efficacy in the Palm Beach County School District.

Significance of Study

The reduction of teacher isolation in the work site will encourage participation in the school improvement process. Teachers can use self-reflective practices to solve problems, actively participate in the school improvement process, and increase their sense of self-efficacy (Leggett & Hoyle, 1987).

The Palm Beach County School District is divided into six areas: five geographical areas and one area for special schools and programs (such as adult and community education, vocational schools, exceptional student education). The question of whether collegial peer coaching leads to greater teacher self-efficacy can be analyzed on several independent variables. For example, will the survey responses for participants in the geographic areas of the school district differ significantly? Will the survey responses for the participants in different levels or types of schools (elementary, middle, high and vocational) differ

significantly? Will the survey responses for the participants in different grade levels differ significantly?

The staff development personnel of the Palm Beach County School District can use the findings of this study as a model for evaluating existing and future inservice activities and follow-up sessions to enhance the transfer of training to the work setting. The inclusion of a collegial support component during training and implementation stages, regardless of the inservice topic, will enhance continual school improvement efforts. The consideration given to the conclusions and future suggestions for study may involve continuation, refinement, or expansion of the collegial peer coaching process.

Lieberman and Miller (1981) assert that teachers' sense of self-efficacy is a motivating factor in school improvement for student achievement. The Effective Schools Professional Development Committee of Henry Wise Wood High School in Calgary, Canada established five principles for its plan of personal and professional growth. These are:

1. Teachers benefit from individual, small-group, and large-group professional development activities, so each must be encouraged in the school.

2. Professional development is most effective when undertaken voluntarily by individuals.

3. Growth activities should build upon the strengths, interests, and talents of each teacher and must be relevant.

4. Professional development activities can stimulate awareness in teachers of their level of skill development, leading to celebration and growth.

5. Growth can be enhanced through a collegial support system that values growth activities, provides moral support, and facilitates small groups (Paquette, 1987, p. 37).

The Yuba-Feather Elementary School of the Marysville Joint Unified School District reported that teacher empowerment through the peer coaching collaborative effort opened new doors for school improvement. Ownership of the change process for the collaborative peer coaches came through their system of "bottom-up, inside-out process of change and improvement" (Pillsbury, 1989). The Fort Worth (TX) Independent School District began the Mastery of Learning Keystone Project in 1984, which included collegial peer coaching as a follow-up to training. A teacher response to the coaching component zeroes in on the collaborative effort in a nonjudgmental environment:

> Even the best teachers get complacent, but when someone comes in to give nonjudgmental feedback, you are able to assess yourself. Instead of giving answers, it gives us information so we can

> determine and analyze our own strengths and weaknesses (Leggett & Hoyle, 1987, p. 62).

Joyce, Wolf, and Calhoun (1993) succinctly relate the processes of collaboration and school improvement efforts to teachers' sense of self-efficacy:

> When all spheres of the organization are able to generate and implement initiatives, the sense of efficacy of each member and each faculty should increase substantially. Cadre members play a major 'demonstration' role to help us learn this new way of living together. As they provide assistance to personnel and make the provision of information and clear communication part of their mission, they model the colleagueship and trust necessary to enable within- and across-sphere collaboration for school improvement (Joyce, Wolf, & Calhoun, 1993, p. 26).

If, as a consequence of this study, collegial peer coaching is found to enhance self-efficacy, then further studies may be conducted: does teacher self-efficacy correlate with student achievement when analyzed from a district-wide perspective, or from a school-based perspective, or from a grade level perspective (Hillman, 1984)? One of the goals of Blueprint 2000 (1992) is student achievement. Another study suggested from the findings of this experiment may be that of teacher self-efficacy and student self-efficacy, compared to actual student achievement.

The outcome of a study such as this may be of great import to those involved with the evaluation of

teacher behaviors. If, like the Consolidated High School District 230 in Palos Hills, Illinois, formal evaluations are eliminated for those in the collegial peer coaching process, what type of accountability for student achievement can be produced? No empirical evidence exists regarding the effects of supervision on teacher behaviors (Anderson, 1989). This type of study can provide measurable answers to the question of whether a collegial peer coaching process has a desired effect on teachers' sense of self-efficacy. Results of this study will enable the Palm Beach County School District to assess the effects of collegial peer coaching as one component employed in the restructuring effort for school improvement.

Hypotheses

Null Hypothesis #1: Collegial peer coaching has no effect on teachers' sense of self-efficacy.

Null Hypothesis #2: Participants' teaching grade level has no effect on teachers' sense of self-efficacy.

Null Hypothesis #3: Participants' years of teaching experience has no effect on teachers' sense of self-efficacy.

Null Hypothesis #4: Participants' geographic area (work site) within the District has no effect on teachers' sense of self-efficacy.

Definitions of Terms

The following definitions are provided for clarity throughout this document.

Collegial Peer Coaching

Confidential process of two or more professionals for self-reflective evaluation of teaching practices (Robbins, 1991).

Horizontal Transfer

Application of a skill to the work setting--classroom (Joyce, Weil, & Showers, 1992).

Self-Efficacy

Perceived personal competence in motivating students (Ashton & Webb, 1986).

Teacher Locus of Control

Teacher beliefs about personal ability to influence student performance and classroom situations (Sadowski & Woodward, 1981), as measured by the Teacher Locus of Control Scale.

Teaching Efficacy

Ability to motivate students. (Ashton & Webb, 1986).

Vertical Transfer

Adaption or refinement of a skill to the work setting (classroom) in order to solve a problem (Joyce, Weil, & Showers, 1992).

Delimitations of the Study

The scope of this study is limited to the collegial peer coaching process as it is used by the Palm Beach County School District. Although training was provided to all collegial peer coaches associated with this study, they received training at different times during the school year. Participants in this study were volunteers.

Assumptions

The following assumptions are made:

1. Participants in the collegial peer coaching process were chosen by principals at selected schools. Although volunteers were solicited, a few administrators appointed teachers to be involved in the training sessions. Appointees who remained in the program continued to do so voluntarily due to the after-work hours commitment necessary to participate fully in the collaboration process.

2. Teachers participating as control group members work under similar conditions as collegial peer coach participants in the same schools.
3. The definitions for self-efficacy and personal efficacy are the same--i.e., perceived personal competence in motivating students.
4. Enhanced self-efficacy results in greater transfer of training to the classroom setting.
5. Greater transfer of training to the classroom setting yields better classroom teaching.
6. Better classroom teaching enhances student performance/achievement, and, therefore, advances the school improvement process.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The purpose of this study was to determine the effects of a collegial peer coaching program upon teachers' sense of self-efficacy. This chapter will review the literature dealing with elements pertinent to this process, as it applies to the Palm Beach County School District: locus of control and types of coaching (challenge coaching; technical coaching; and collegial peer coaching--formal and informal). The difference between technical coaching and collegial peer coaching is addressed as a explanation for employing collegial peer coaching in the study. Participating teachers were guided through classroom management observation techniques for practice in the coaching process. Teachers received training in self-reflective and collegial peer coaching techniques to enhance the school improvement process. Literature is presented that supports empowerment of self and others as a backbone for increasing teachers' sense of self-efficacy through collegiality.

Collaborative Settings

Teachers have traditionally focused on what is the norm for the policies and practices within their organizations (Rosenholtz, 1991). They have learned to set norms in their classrooms based on the criteria set by administrators during classroom observation evaluations. The administrators of the Palm Beach County School District evaluate teachers with the Florida Performance Measurement System (FPMS) summative instrument. This observation tool is used to evaluate basic teacher competencies in Florida's public schools. These competencies include the following domains:

1. instructional organization and development,
2. presentation of subject matter,
3. communication: verbal and nonverbal, and
4. management of student conduct.

Accountability for student achievement is not an element of the FPMS summative evaluation (Summative Evaluation Instrument, 1987). Prior to the observation, a pre-observation guide is completed by the teacher for the administrator. Teachers use this form as the foundation for the basis of the observation lesson and evaluation (Pre-Observation Guide, 1986).

All of the skills necessary for effective teaching cannot be part of a single instrument (White, et al.,

1987). Continuous improvement opportunities in collaborative settings lead to greater self-efficacy for teachers, and result in greater student achievement in basic skills (Rosenholtz, 1991). Lanier and Little's (1986) research on teacher education found that collegiality in the workplace added to the wealth of internal and external resources, fostered shared decision making for solutions to curricular problems, and boosted teachers' sense of self-efficacy in individual and collaborative work.

Teachers' sense of self-efficacy is defined as self-confidence in the ability to motivate students. Ashton and Webb (1986) refer to this definition as sense of personal teaching efficacy. The difference between teaching efficacy and personal (or self) efficacy is the internalization of expectations for control in student achievement. Teaching efficacy, therefore, responds to external controls in motivating students to learn. Teachers who are not internally motivated stop the growth process for themselves and their students, lose energy, forget skills that can be incorporated into the classroom environment to foster student achievement, and may stultify that achievement by not taking risks in trying new methods to achieve the goals of the school improvement efforts (Robbins,

1992). Support from fellow educators and a school climate that promotes growth are necessary to improve practice. Two identified components essential to the school improvement efforts are: (1) a sense of perception to internalize what is necessary to accomplish the tasks at hand; and (2) the possession of flexible teaching skills with which to achieve those aims (Eisner, 1990). This involves the interaction of the individual and his/her meaningful environment.

Locus of Control

A crucial element of a collaborative educational culture is the belief that teachers assume responsibility for the instructional process, influence student performance and classroom situations, and are accountable for its outcomes. Guskey (1986) states, "Three major outcomes of staff development are change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the learning outcomes of students." Central to this conviction are these points of consideration: increasing students' ability to learn, using methods to make students more enabling, making students more powerful learners, and teaching students to teach themselves. An increased sense of professional skill and an increased sense of

self-efficacy are two of the benefits of a collegial peer coaching process (Robbins, 1993).

Belief in external control is perceived as control of event(s) by others, by fate, by chance, or by an unknown force. Belief in internal control is perceived as control of event(s) through one's own behavior. Belief in internal locus of control can provide individuals with a greater aptitude for efficacy (Phares, 1976).

McKinney presents a similar description. "Locus of control is an expectancy variable and deals with a cause-effect relationship, that is, a future event consequent to present actions. . . . It is defined primarily by its extremes, internal or external . . ." (1981, p. 364).

This study will focus on internal motivators. Collegial peer coaching self-reflective measures are used in the teaching process in order to increase student achievement, thereby enhancing the school improvement effort.

Types of Coaching

The following types of coaching are presented for a clear understanding of the process used in the District. Collegial peer coaching is one of several

types of coaching: challenge coaching, technical coaching, and collegial coaching.

Challenge Coaching

Challenge coaching is an ad-hoc team effort used to solve identified problems through planning and implementation in small groups (LeBlanc, 1987). Its focal point is to solve recurring problems in instructional design or delivery (Ackland, 1991).

Technical Coaching

Technical coaching is a formal process for transfer of training into classroom practice. It consists of five stages:

(1) pre-observation conference to set the stage of teaching observation;

(2) observation and data collection as agreed upon in the pre-observation conference;

(3) analysis and strategy session in which observers verbalize successful and non-successful strategies used, and what should be changed to improve the teacher's professional growth;

(4) feedback conference related to agreed upon observation techniques in pre-observation conference, to reinforce positive aspects of

the teacher's skills, and to provide direct assistance to the teacher if necessary; and

(5) post-conference analysis to contemplate the effectiveness of the technical coaching process. (Nielsen, 1993).

Collegial Peer Coaching

Collegial peer coaching consists of informal and formal components. The formal method refines the technical coaching process into a three-step model:

(1) pre-conference to set the stage for the observation by the coach of the inviting teacher;

(2) observation and data collection based solely on agreed upon strategies or techniques in pre-conference; and

(3) post-conference data analysis related to agreed upon observation techniques in pre-observation conference. There are three types of post-conferences: mirroring, collaborative, and expert. The type chosen by the inviting teacher depends on the relationship established with the collegial peer coach, and are not listed in a hierarchical manner. In mirroring, the observed teacher receives the collected data,

and analyzes the data alone. In a collaborative post-conference, the observed teacher is coached in self-reflective practices to analyze the data collected. In an expert conference, the coach often guides the observed teacher during the pre- and post-conferences in recalling or analyzing the techniques and strategies to be used or employed during the lesson (Robbins, 1991).

Technical Coaching Versus Collegial Peer Coaching

The difference between technical coaching and collegial peer coaching lies in the manner of feedback to the observed teacher. In technical coaching, the analysis and feedback are verbalized directly to the observed teacher--a process intimidating to teachers, akin to evaluative supervision (Gainey, 1990). In collegial peer coaching, the analysis and feedback--regardless of method chosen by the inviting teacher--are self-reflective, thereby strengthening the teacher's ability to internalize positive teacher behaviors for classroom use (Robbins, 1992).

Informal Collegial Peer Coaching

The informal culture of schools is based on development and cultivation of staff, skills--the soft S's. Teachers are concerned with personal style and the effect on relationships among faculties and in classrooms when they want to make a change (Schlecty & Vance, 1983). Personal comfort on the part of the collegial peer coaches is the key to continuance of the process. The buildup of trust among those involved takes away the stigma of severe criticism, and enables internalization of the techniques to foster improvement in the teaching process (Hunt, 1993). Teachers engage in informal collegial peer coaching in many ways throughout the school year. Curriculum development teams, study groups, interdisciplinary planning, departmental meetings, and instructional innovation team meetings are some of the collaborative gatherings that build trust among the participants. Professional dialogue in the cafeteria or teachers' lounge adds to the knowledge of the process of teaching to those involved, while building trust among the faculty members. The talk during these informal sessions focuses on " . . . three aspects of thinking which play an important role in the teacher's classroom performance: the teacher's planning, both before and

after instruction; the teacher's interactive thoughts and decisions while teaching; and the teacher's theories and beliefs" (Glatthorn, 1987, p. 31).

Rationale for Collegial Peer Coaching

The rationale for collegial peer coaching consists of seven elements which address the need for practices that:

1) break the isolation and draw upon the knowledge and expertise of others in the profession;

2) restructure the tradition of teacher isolation into collegial collaboration;

3) enable teachers to learn from each other in order to work more effectively and efficiently;

4) encourage teachers to work with other teachers for problem solving support;

5) provide practice and application of innovative skills for transfer into the classroom;

6) develop individualized staff development opportunities for on-the-job action research for teaching skills and relationships to student achievement; and

7) create a vehicle for continual improvement of self-efficacy through self-reflective strategies (Robbins, 1991).

Empowerment of Self and Others Through Collegiality

The culture of a school plays a major role in its ability to change for school improvement. Development and enjoyment of professional abilities are achieved in an atmosphere of collegiality, rather than in isolation (Anderson, 1993). Collegiality, trust or confidence, nonrestrictive environments encouraging experimentation, and tangible support are among the cultural norms that affect school improvement. "The degree to which these norms are strong appear to make a large difference in the ability of school improvement to have a lasting effect" (Lezotte, 1990).

Pajak (1993) posits the empowerment of self and others in this regard:

> Allowing people time to discuss common concerns and goals is itself empowering to some degree. Teachers, administrators, and others need opportunities to engage in conversations to begin transforming the social reality of schools. Because they have worked so long in isolation, however, most administrators and teachers are likely to need training and practice in working cooperatively with colleagues, members of the community, and students (p. 176).

The faculty of Mynderse Academy in Seneca Falls, New York participated in the National Education Association's Mastery in Learning project, designed for teacher collaboration, empowerment, and curriculum change. The project seemed to be floundering until the teachers gathered for dinner one evening. The atmosphere of "nurturing collaboration" ended their frustrations of isolation in their classrooms, and gave them time to share teaching experiences and expertise in a nonthreatening environment. The teachers continue to meet for dinner, and continue their collegiality and professional dialogue for student achievement and school improvement (Seymour & Seymour, 1992).

In 1987 teachers at Central School in Larchmont, New York, developed The Collegial Interaction Process, which included many of the steps in a formal collegial peer coaching process. These phases were:

(1) discussion of specific research-based effective teaching models;

(2) preconference with collegial peer coach to delineate the agreed upon general purpose and skill used in the lesson to be observed;

(3) observation and videotaping of the lesson; and

(4) self-analysis of the videotaped session.

The professional and personal needs of teachers were two themes that emerged from this process. Respect and affection for each other was an output of the inservice, and increased mutual trust among the participants. Evaluation of the process through personal interviews with the teachers revealed a common concern for the improvement of the teaching environment for both students and teachers (Anastos & Ancowitz, 1987).

Learning to be self-critical takes practice and involves risk taking. New challenges and demands require innovative approaches, especially during the process of restructuring schools for improvement (Ayers, 1993). Teachers benefit from colleagues who coach each other in acquiring new strategies and skills for greater student achievement through direct classroom observations incorporating preconferencing, data collection during observation, and nonevaluative feedback during postconferences (Leggett & Hoyle, 1987). In contrast with the evaluative approach of technical coaching, collegial peer coaching creates a protective climate for teachers to learn and practice new strategies and techniques through the use of self-reflective feedback, thereby enabling experimentation in the actual settings in which they teach.

Transfer of Training

Transfer of training from inservice staff development to the classroom is the desired outcome of coaching. This will depend on the follow-up support through coaching (Bird & Little, 1986). Teachers involved in such a process support each other in the internalization of specific teaching strategies (Fitzgerald, 1993). In a study measuring the effects of a peer coaching project using the Concerns Based Adoption Model, Hosack-Curlin found that collegial support improved integration of new strategies into teaching repertoires (1988). Vertical transfer of training to the classroom setting is exhibited by teachers in a collegial peer coaching process when they teach newly-learned strategies. They explain the purpose of the strategies, and the expected student behaviors resulting from use of the strategies (Showers, 1985).

Sense of Self-Efficacy

The Stokes County School System in North Carolina implemented a collegial peer coaching model to foster vertical transfer of training for use with math manipulatives and strategies during the summers of 1987-1989. A follow-up study revealed that

participants' initial concerns about personal efficacy decreased dramatically as the collegial peer coaching process continued. Participants effectively used the math manipulatives and strategies with their students, and reported greater self-confidence in their teaching. The collegial peer coaching process enabled teachers to feel greater control in teaching, and renewed their sense of self-efficacy (Williamson & Russell, 1990). Teachers should be encouraged to try innovative ideas and given time to practice and refine them in an atmosphere conducive to school improvement efforts (Goodlad, 1983). The National Center for Education Information's Profile of Teachers in the U.S.--1990 reported that the top two items contributing to respondents' development of competence as teachers were "my own teaching experience" and "other teachers."

A supportive relationship facilitates behavior change. Teachers must examine their own effectiveness for change to take place (Sweeney, 1983). Collegial peer coaching is one method to empower teachers to see, through self-reflective practices, how their skills and problem solving strategies can lead to a greater sense of self-efficacy (Little & McLaughlin, 1993).

Summary

The school improvement process contains many components. Saphier and King (1985) list enhancement of teachers' skills as one ingredient necessary for school improvement. Research on staff development indicates that teachers involved in a collegial peer coaching process are likely to keep and use new strategies and concepts (Showers, Joyce, & Bennett, 1987). Flanders (1990) sums up the involvement by teachers in the school improvement effort thusly: "If teacher participation in activities designed to improve education is to be successful, it should deal with tasks over which teachers exert control. These are problems, tasks, or programs which occur within the school and its immediate environment" (p. 89). The use of classroom management techniques as a vehicle for collaborative efforts among teachers within the District deals with events over which teachers have control--self-efficacy. The focus of this study was to evaluate the effects of a collegial peer coaching process upon teachers' sense of self-efficacy.

CHAPTER III

METHODOLOGY

Design of the Study

A review of the literature in Chapter II outlined the basis for teacher self-reflection through a collaborative coaching model. This model supports vertical transfer of training to the classroom setting, thereby increasing teachers' sense of self-efficacy. This chapter will describe the methodology used to examine the relationship between locus of control scores (self-efficacy) and training in collegial peer coaching, and between locus of control scores and demographic data of the respondents. The following sections in this chapter will describe the design of the study: (a) Subjects, (b) Procedures, (c) Instrumentation, (d) Data Collection, and (e) Data Analysis.

Subjects

The Palm Beach County School District approved the inservice training for collegial peer coaching in the Fall of 1992. All schools were invited to participate

in the collegial peer coaching staff development training. Forty-eight schools were selected by six area superintendents. A total of 204 subjects participated in the study--102 collegial peer coaches and 102 control group members.

Participants in the collegial peer coaching group were chosen through two methods: voluntary participation by the teachers, or failing that, involuntary assignment by administrator. Collegial peer coaches received staff development training in nonevaluative methods of self-reflective feedback to colleagues, which included the use of neutral voice tone and active listening skills. Techniques also included skills in refraining from giving advice. Training in collegial peer coaching included formal observational techniques for classroom management, such as verbal flow between teacher and students, classroom traffic patterns, and time-on-task for students. This process included a preconference with a pair of coaches that set the agreed upon guidelines for the session, data collection techniques, and nonevaluative feedback methods for a postconference. Teachers received training in practices such as inductive methods for stimulating critical thinking skills, collaborative

learning strategies, and student learning styles (Robbins, 1992).

Procedures

Permission was granted by the School District of Palm Beach County, Florida, Division of Research and Information Services, to conduct a two-group study as follows: all teachers involved in collegial peer coaching in the Palm Beach County School District (treatment group) were surveyed in a pre- and posttest application using a locus of control instrument to test the hypotheses (see Appendices C and E). The control group consisted of teachers not involved in collegial peer coaching; they were given the same pre- and posttests, but received no training. The treatment group received training in collegial peer coaching in formal four-day staff development sessions and five monthly follow-up sessions during the 1992-1993 school year. Application and implementation of informal and formal collegial peer coaching took place during the 1993-1994 school year.

Letters requesting participation (see Appendices B and D) and the locus of control instrument were mailed via school board inter-office routing to 140 collegial peer coaches in the Palm Beach County School District.

Administrators who participated in the staff development training were not surveyed. Identical letters and instruments were mailed via school board inter-office routing to all 751 teachers who met the criteria of teaching in the same schools, identical subject areas, and on the same grade levels as the collegial peer coaches. In order to receive sufficient return surveys for the study, all respondents were given the opportunity to receive inservice points toward renewal of professional certificates through the use of a research component. Respondents were asked to return the action research letters along with the completed survey instruments. A total of 102 collegial peer coaches responded to both pre- and posttest instruments. The same number of control group teachers (102) were selected from the respondents to both pre- and posttest instruments, matching them to the same schools and grade levels in which the collegial peer coaching teachers worked.

A return rate of 65 percent of collegial peer coaches was considered sufficient for this study. The actual return rate of collegial peer coaches was 73 percent.

Instrumentation

This researcher selected a locus of control scale with dichotomous items dealing with classroom management events, corresponding to the techniques taught in the collegial peer coaching training. The instrument has been obtained for use in this study from the developer, Dr. Janet Rose-Baele, of the Charleston County School District, Charleston, South Carolina (see Appendix B). Rose and Medway developed the Teacher Locus of Control Scale in 1981 to measure the internal and external components viewed by teachers as responsible for classroom events. The instrument has been externally validated by its developers in four studies administered to a total of 272 teachers from a school district serving 50,000 students. Items were reviewed by judges for classification as internally positive (I+) or internally negative (I-). Analysis of responses made by the participating teachers in the final version of the instrument clearly showed internal positive and negative subscales. All corrected item-total correlations were significant ($p < .01$) demonstrating internal consistency. The developers established that classroom behaviors characteristic of teachers whose responses were internally positive were those that maximized instructional efficiency (Rose &

Medway, 1981). The forced-choice items in the instrument are scored according to positive or negative internal patterns of teacher behaviors describing success and failure situations. Thomson and Handley (1990) report Kuder-Richardson formula 20 reliabilities of .78 and .71 for the negative and positive internal subscales of this instrument. Their study of elementary and secondary teachers demonstrates that teachers with a strong sense of self-efficacy model positive behavior for overcoming classroom problems and assume personal responsibility for student achievement. In contrast, externally controlled teachers usually blame outside factors, such as lack of parental support, inadequate physical plant, and other environmental factors for poor student achievement.

The internal subscales of the Teacher Locus of Control Scale have been identified as "teacher efficacy" in 1977 by Berman, McLaughlin, Bass, Pauly, and Zelman's study on Federal programs supporting educational change (cited in Thomson and Handley, 1990). Fourteen items describe positive or successful classroom events; fourteen items describe negative or failure situations. The instrument was scored with a positive point for each internally positive answer and

with a negative point for each internally negative answer, comprising the locus of control score.

The Teacher Locus of Control Scale was administered to 102 participants in the treatment group and to 102 participants in the control group. The pretest was given at the beginning of the 1993-1994 Spring semester. The collegial peer coaching teachers' group implemented the peer coaching process; the control group received no treatment. The posttest was given at the end of the semester.

Instruments were precoded for school identification by using the random number generator function of Lotus 1-2-3 spreadsheet software. Pre- and posttest instruments sent to collegial peer coaches were given a form number--coded with a P, followed by the school identifier. Similarly, pre- and posttest instruments sent to control group participants were given a form number--coded with an NP, followed by the school identifier. Demographic information, such as gender, location of school in District areas, teaching grade level, and years of teaching experience were included on the first page of the survey instrument.

This study used the internal and external dimensions of the Teacher Locus of Control instrument to measure the teachers' sense of self-efficacy at the

beginning and end of the semester to test the hypotheses stated above.

Data Collection

All pre- and posttests were returned via school board inter-office mail, using pre-addressed labels. All survey forms were anonymous to be consistent with the nonevaluative approach to collegial peer coaching. Turnaround time alloted for data collection was one month for the pretest and one month for the posttest.

Data Analysis

Analysis of covariance (ANCOVA) was used to test for main effects and significant interactions among the dependent and independent variables. The single outcome variable was teachers' sense of self-efficacy, as measured by scores on the Teacher Locus of Control instrument. The analysis of covariance (ANCOVA) was used to examine the relationships between:

1. Teachers' sense of self-efficacy and the treatment of collegial peer coaching;
2. Teachers' sense of self-efficacy and teaching grade levels of participants;
3. Teachers' sense of self-efficacy and years of teaching experience; and

4. Teachers' sense of self-efficacy and geographic area (work site) within the District.

The hypotheses were tested at the .95 confidence level. Data analysis was performed with SPSS/PC+ Student Software.

Chapter IV

RESULTS

Introduction

The purpose of this study was to examine the main effects and inter-relationships of teacher's sense of self-efficacy (as measured by locus of control scores) and training in collegial peer coaching, and of locus of control scores and demographic data of the respondents. This chapter will report the results of the research. The null hypotheses tested at a .05 level of significance were:

1. Collegial peer coaching has no effect on teachers' sense of self-efficacy.

2. Participants' teaching grade levels have no effect on teachers' sense of self-efficacy.

3. Participants' years of teaching experience has no effect on teachers' sense of self-efficacy.

4. Participants' geographic area (work site) within the District has no effect on teachers' sense of self-efficacy.

The study was conducted over a period of 18 weeks, using a pretest-posttest quasi-experimental design,

with a sample size of 204 subjects. The subjects consisted of two groups: 102 teachers who received training in collegial peer coaching, and 102 teachers who did not receive training in collegial peer coaching. The Teacher Locus of Control Scale pretests were administered to both groups at the beginning of a semester in January 1994. Posttests identical to the pretest were administered to both groups in April. The pretest scores were used as a covariate in analyzing the posttest scores.

Descriptive Statistics

Tables 1 to 3 contain frequencies of demographic data collected from the survey instrument. Participants teaching grade level, years of teaching experience, and geographic location within the school District correlate to the null hypotheses, and are three of the independent variables in the study. The fourth independent variable, coach status, has an n of 204--102 collegial peer coaches (experimental group), and 102 non-collegial peer coaches (control group).

Table 1

Number of Participants by Teaching Grade Level

N=204

Teaching Grade Level	n
Grades 1-5	83
Grades 6-8	40
Grades 9-12	81

Table 2

Number of Participants by Years of Teaching Experience

N=204

Years of Teaching Experience	n
Beginner to 5 years	45
6 to 11 years	63
12 or more years	96

Table 3

Number of Participants by Geographic Area in District

N=204

Geographic Area in District	n
Area 1	34
Area 2	42
Area 3	30
Area 4	28
Area 5	52
Area 6	18

Statistical Analyses

The following tables include frequencies, means, and standard deviations for experimental and control groups. The level of significance for the observed differences in means will be addressed in this chapter in the Analysis of Covariance section.

Table 4 includes frequencies, means, and standard deviations for experimental and control groups on the dependent measure--locus of control scores.

Table 4

Pre-Posttest Means and Standard Deviations by Group

(N=204)

Group	Pretest			Posttest		
Coach Status	n	x	SD	n	x	SD
Experimental Group	102	2.12	3.51	102	5.28	4.69
Control Group	102	2.06	3.43	102	3.87	3.66

Tables 5 and 6 contain frequencies, means, and standard deviations of locus of control scores for experimental (N=102) and control (N=102) groups by teaching grade levels.

Table 5

Pre-Posttest Means and Standard Deviations by Teaching Grade Level--Experimental Group

(N=102)

Experimental Group	Pretest			Posttest		
Teaching Grade Level	n	x	SD	n	x	SD
Grades 1-5	41	2.53	3.29	41	5.97	3.62
Grades 6-8	21	2.70	3.93	21	4.28	5.29
Grades 9-12	40	1.40	3.45	40	5.10	5.30

Table 6

Pre-Posttest Means and Standard Deviations by Teaching Grade Level--Control Group

(N=102)

Control Group	Pretest			Posttest		
Teaching Grade Level	n	x	SD	n	x	SD
Grades 1-5	42	3.35	3.09	42	4.92	3.07
Grades 6-8	19	2.73	4.14	19	5.57	4.25
Grades 9-12	41	0.43	2.74	41	2.00	3.14

Tables 7 and 8 contain frequencies, means, and standard deviations of locus of control scores for experimental (N=102) and control (N=102) groups by years of teaching experience.

Table 7

Pre-Posttest Means and Standard Deviations by Years of Teaching Experience--Experimental Group

(N=102)

Experimental Group	Pretest			Posttest		
Years of Teaching Experience	n	x	SD	n	x	SD
Beginner to 5 years	20	2.20	3.23	20	5.50	4.76
6 to 11 years	31	1.41	3.53	31	5.09	4.83
12 or more years	51	2.52	3.59	51	5.31	4.67

Table 8

Pre-Posttest Means and Standard Deviations by Years of Teaching Experience--Control Group

(N=102)

Control Group	Pretest			Posttest		
Years of Teaching Experience	n	x	SD	n	x	SD
Beginner to 5 years	25	2.84	3.50	25	3.64	3.66
6 to 11 years	32	2.31	3.60	32	3.78	3.62
12 or more years	45	1.46	3.23	45	4.06	4.02

Tables 9 and 10 contain frequencies, means, and standard deviations of locus of control scores for experimental (N=102) and control (N=102) groups by geographic area in the District.

Table 9

Pre-Posttest Means and Standard Deviations by Geographic Area of the School District

Experimental Group

(N=102)

Experimental Group	Pretest			Posttest		
Geographic Area	n	x	SD	n	x	SD
Area 1	17	1.35	3.10	17	1.94	4.37
Area 2	19	4.26	2.99	19	6.84	3.83
Area 3	16	2.12	4.25	16	5.18	4.60
Area 4	13	1.92	3.98	13	7.84	4.33
Area 5	27	1.40	2.88	27	4.00	4.64
Area 6	10	1.60	3.89	10	8.30	3.23

Table 10

Pre-Posttest Means and Standard Deviations by Geographic Area of the School District

Control Group

(N=102)

Control Group	Pretest			Posttest		
Geographic Area	n	x	SD	n	x	SD
Area 1	17	0.70	3.73	17	2.17	1.50
Area 2	23	3.82	3.77	23	6.47	2.50
Area 3	14	3.07	3.22	14	3.64	2.02
Area 4	15	2.73	1.98	15	5.93	4.89
Area 5	25	0.80	3.31	25	1.64	3.61
Area 6	8	0.87	1.95	8	3.50	3.50

Table 11 includes frequencies, means, and standard deviations for experimental and control groups on pretest and posttest locus of control scores by teaching grade levels.

Table 11

Pre-Posttest Means and Standard Deviations by Teaching Grade Levels

Experimental and Control Groups

(N=204)

	Pretest			Posttest		
Experimental Group	n	X	SD	n	X	SD
Grades 1-5	41	2.53	3.29	41	5.97	3.62
Grades 6-8	21	2.71	3.93	21	4.28	5.29
Grades 9-12	40	1.40	3.45	40	5.10	5.30
	Pretest			Posttest		
Control Group	n	X	SD	n	X	SD
Grades 1-5	42	3.35	3.09	42	4.92	3.07
Grades 6-8	19	2.73	4.14	19	5.57	4.25
Grades 9-12	41	.43	2.74	41	2.00	3.14

A paired t-test was performed to determine if there was a difference between the means of the pretest and posttest scores. This test is appropriate because subjects from the treatment group were matched with control group subjects by schools and teaching grade levels. The pretest mean and standard deviation were, respectively, 2.0980 and 3.466. The posttest mean and standard deviation were, respectively, 4.5784 and

34.261. The scores were found to be significantly different [$t(203)=7.52$, $p < .05$].

Analysis of Covariance

Testing the Null Hypotheses

Analysis of covariance was used to determine differences due to main effects on posttest locus of control scores using the pretest locus of control scores as the covariate. Employment of this method allowed for determination of possible differences in locus of control scores (teacher's sense of self-efficacy) due to participation in collegial peer coaching (coach status), teaching grade level, years of teaching experience, and geographic area (area) in the District.

For null hypothesis 1, there were statistically significant differences in adjusted mean posttest locus of control scores due to participation in collegial peer coaching ($p < .05$). The null hypothesis was rejected. The data in Table 4 indicate that locus of control scores for subjects in the experimental group (collegial peer coaches) were higher than those in the control group (non-collegial peer coaches) on the posttest. The results of the analysis of covariance are shown in Table 12.

Table 12

Analysis of Covariance of Posttest by Collegial Peer Coaching

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	16.322	.000
Main Effects Coach Status	98.858	1	98.858	5.990	.015
Explained	368.254	2	184.127	11.156	.000
Residual	3317.491	201	16.505		
Total	3685.745	203	18.156		

For null hypothesis 2, there were no statistically significant differences in adjusted mean posttest locus of control scores due to teaching grade level ($p > .05$). The null hypothesis was not rejected. The results of the analysis of covariance are shown in Table 13.

Table 13

Analysis of Covariance of Posttest by Teaching Grade Level

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	16.094	.000
Main Effects Teaching Grade Level	68.489	1	34.245	2.046	.132
Explained	337.886	3	112.629	6.728	.000
Residual	3347.859	200	16.739		
Total	3685.745	203	18.156		

For null hypothesis 3, no statistically significant differences were found in adjusted mean posttest locus of control scores due to years of teaching experience ($p > .05$). The null hypothesis was not rejected. The results of the analysis of covariance are shown in Table 14.

Table 14

Analysis of Covariance of Posttest by Years of Teaching Experience

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	15.800	.000
Main Effects Years of Teaching Experience	6.371	2	3.186	.187	.830
Explained	275.768	3	91.923	5.391	.001
Residual	3409.978	200	17.050		
Total	3685.745	203	18.156		

For null hypothesis 4, statistically significant differences were found in adjusted mean posttest locus of control scores due to geographic area in the school district ($p < .05$). The null hypothesis was rejected. A post hoc test of multiple comparisons between means was performed using the Tukey procedure. Results of this test confirmed that the differences between means due to geographic area were significant between Area 1 and Areas 6, 2, and 4, and between Area 5 and Areas 6, 2, and 4 ($p < .05$). The results of the ANCOVA are shown in Table 15.

Table 15

Analysis of Covariance of Posttest by Geographic Area in School District

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	18.630	.000
Main Effects Geographic Area	567.721	5	113.544	7.852	.000
Explained	837.118	6	139.520	9.649	.000
Residual	2848.628	197	14.460		
Total	3685.745	203	18.156		

Two-way ANCOVA tests were performed on posttest locus of control scores, using pretest locus of control scores as a covariate, to determine possible interaction effects of coaching status and teaching grade level, coaching status and years of teaching experience, and coaching status and geographic area.

A significant interaction effect between coaching status and teaching grade level ($p < .05$) was found. The results of the two-way analysis of covariance are shown in table 16.

Table 16

Analysis of Covariance of Posttest by Collegial Peer Coaching and by Teaching Grade Level

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	16.928	.000
Main Effects Coach Status Teaching Grade Level	98.795 68.426	1 2	98.795 34.213	6.208 2.150	.014 .119
Coach Status X Teaching Grade Level	113.989	2	56.995	3.581	.030
Explained	550.669	6	91.778	5.767	.000
Residual	3135.076	197	15.914		
Total	3685.745	203	18.156		

An examination of group means in Tables 5 and 6 show that the difference in means between experimental and control groups was consistent for grades 1-5 and grades 6-8. The difference in means for grades 9-12 is much larger with the experimental group being much higher than the control group. Therefore, the treatment seems to be more effective for grades 9-12.

No significant interactions were found between years of teaching experience and coach status, nor

between coach status and geographic area in the District ($p > .05$). See tables 17 and 18.

Table 17

Analysis of Covariance of Posttest by Years of Teaching Experience and by Collegial Peer Coaching

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	16.072	.000
Main Effects	102.298	3	34.099	2.034	.110
Years of Teaching Experience	3.440	2	1.720	.103	.903
Coach Status	95.927	1	95.927	5.723	.018
Years of Teaching Experience X Coach Status	12.004	2	6.002	.358	.699
Explained	383.698	6	63.950	3.815	.001
Residual	3302.047	197	16.762		
Total	3685.745	203	18.156		

Table 18

Analysis of Covariance of Posttest by Collegial Peer Coaching and by Geographic Area in School District

N=204

Source of variation	Sum of Squares	DF	Mean Square	F	p
Covariate Pretest	269.396	1	269.396	19.541	.000
Main Effects Coach Status Area	683.900 116.179 585.042	6 1 5	113.983 116.179 117.008	8.268 8.427 8.487	.000 .004 .000
Coach Status X Area	99.282	5	19.856	1.440	.212
Explained	1052.578	12	87.715	6.363	.000
Residual	2633.167	191	13.786		
Total	3685.745	203	18.156		

Summary

This chapter reported results of statistical analyses of the four null hypotheses:

Null Hypothesis 1: Collegial peer coaching has no effect on teachers' sense of self-efficacy.

Null Hypothesis 2: Participants' teaching grade levels have no effect on teachers' sense of self-efficacy.

Null Hypothesis 3: Participants' years of teaching experience has no effect on teachers' sense of self-efficacy.

Null Hypothesis 4: Participants' geographic area (work site) within the District has no effect on teachers' sense of self-efficacy.

The hypotheses were tested at the .95 confidence level. Results were that hypotheses 2 and 3 were not rejected ($p > .05$), and hypotheses 1 and 4 were rejected ($p < .05$). Interaction effects on locus of control (teachers' sense of self-efficacy) posttest scores, with pretest scores as a covariate, indicated significance ($p < .05$) between collegial peer coaching and teaching grade level. Tables in this chapter contained descriptive statistics (frequencies, means, standard deviations), and analyses of covariance.

The following chapter will discuss the results of these analyses. The implications of this study for future planning for staff development will also be addressed in the following chapter.

Chapter V

CONCLUSIONS

Summary

This study investigated the impact of a collegial peer coaching teacher-training program upon Palm Beach County teachers' sense of self-efficacy. A review of the literature addressed the differences between technical coaching and collegial peer coaching. This served as a foundation for introducing collegial peer coaching in the Palm Beach County School District to foster collaborative, trusting work environments.

A quasi-experimental design was used to collect data from 204 subjects--102 collegial peer coaches, a return rate of 73 percent (treatment group), and 102 non-coaching teachers (control group). The subjects were matched according to schools in which they worked and grade levels on which they taught. In a pre-posttest design, the Teacher Locus of Control instrument asked for demographic information on the first page. Pages two through four contained 28 classroom events, and asked participants to select one of two possible reasons for the outcome of the

classroom event. (See Appendices C and E). These answers were rated either internally positive or internally negative. Pretests were administered to both groups at the beginning of the semester. Posttests were administered to both groups at the end of the semester. Data collection took approximately one month for the pretest and one month for the posttest. Results of a paired t-test indicated a significant difference ($p < .05$) between the means of the pretest and posttest scores. Posttest scores were analyzed using analysis of covariance (ANCOVA) with the pretest as covariate.

This chapter summarizes the findings of the study. It also addresses limitations of the study, and reflects upon implications for future planning of staff development and further research.

The following hypotheses examined the significance of the impact of a collegial peer coaching teacher-training program upon Palm Beach County teachers' sense of self-efficacy:

Hypothesis 1

Participation in collegial peer coaching (coaching status) was found to be statistically significant with differences in adjusted mean posttest locus of control scores ($p < .05$). See Tables 4 and 12 for means and

ANCOVA results. By reducing teacher isolation in the classroom settings through self-reflective and collegial peer coaching techniques, teachers in the treatment group revisited staff development training skills together, transferred them to the work sites, and thereby raised their sense of self-efficacy. This finding was consistent with the Napa/Vacaville Project wherein collegial peer coaching was found to be critical to increases in knowledge/use of teaching strategies and a growing sense of efficacy (Robbins & Wolfe, 1987).

Hypothesis 2

Teaching grade level of participants did not have a significant effect on locus of control scores ($p > .05$).

Hypothesis 3

Years of teaching experience of participants did not have a significant effect on locus of control scores ($p > .05$).

Hypothesis 4

Participants' geographic area (work site) in the school district was found to be statistically significant with differences in adjusted mean posttest locus of control scores ($p < .05$). See tables 9 and 10, and 15 for means and ANCOVA results. This finding

supports the reorientation of school cultures toward collaborative efforts for collegial study and problem solving for enhancement of the school improvement process (Joyce, Bennett & Rolheiser-Bennett, (1990).

2-Way Interaction Effect

A significant interaction effect between coaching status and teaching grade level was found to be significant ($p < .05$). See table 16. The difference in means for grades 9-12 is much larger for collegial peer coaches than for non-collegial peer coaches, see tables 5 and 6. School improvement efforts are centering strategies around curriculum integration, not fragmented subject knowledge (Murphy, 1991). This may indicate that collegial peer coaches perceive a greater sense of self-efficacy regardless of their teaching grade levels. These findings are supported by Murphy (1991), who reports that empowerment of teachers for school improvement efforts can be achieved by breaking down the barriers of structural isolation through sustained collaborative efforts of teachers working together. No additional significant two-way interaction effects were found.

Limitations

It is possible that the findings of this study are limited to the collegial peer coaching process as it is used in the Palm Beach County School District. The District covers 2,400 square miles, has 127 schools, has 125,000+ students, supports an annual growth of approximately 5,000 students, and employs approximately 8,000 teachers. The results of this study may differ if replicated in a smaller school district.

Another limiting factor may be that the number of participants from the geographic areas of the District was unequal. This may have occurred because the subject population was drawn from respondents who returned both the pretest and posttest instruments.

Conclusions

The research indicates that the collegial peer coaching process facilitates collegiality, trust, collaboration among teachers, and cognitive growth. Collegial peer coaches assist each other in defining areas for improvement through specific indicators: observing each other in newly-acquired skills, providing data based on the observations, and coaching each other in nonevaluative methods of self-reflective techniques. This, in turn, leads to self-evaluation

for continual improvement (Martin, 1994; McLaughlin, 1993; Routman, 1991). As measured by the Teacher Locus of Control Scale, the results of this study indicate that participation in the collegial peer coaching process raises one's sense of self-efficacy--cognitive growth.

Recommendations

This study examined the impact of a collegial peer coaching teacher-training program upon Palm Beach County teachers' sense of self-efficacy. The following recommendations are made based on the results of this study and a review of related literature, as it pertains to teachers:

1. All teachers should be involved in the school improvement process, not just those who sit on the school advisory councils. Change is a process, not an event. We need to develop all stakeholders as we develop the organization. DuFour (1991) found that the school improvement process requires some change in existing conditions. These changes can be accomplished only by people who are willing to change.
2. Efficacy training should be included as part of a district's school improvement efforts. Teachers

will develop an understanding of how their attitudes and beliefs affect student achievement, including the belief that all children can learn (Johnson, 1994).

3. The organizational culture of the school is the center of change. A learning-enriched environment must value the interconnection among shared school goals, teacher learning, teacher collaboration, teachers' sense of self-efficacy, and teachers' executive control of newly-acquired skills (Fullan & Stiegelbauer, 1991). Collegial peer coaching facilitates the change process for teachers, and should be included in all staff development plans for the school improvement process.

4. Continual evaluation of elements of staff development components is crucial to their continuance, refinement, enhancement, or abandonment. A study should follow this one to focus on the amount of release time provided for peer observation and collaboration. This is essential to the collegial peer coaching process, and gives teachers the opportunities to demonstrate, model, practice, observe, and coach one another (Routman, 1991).

5. Require follow-up activities in all staff development components to empower teachers to gain executive control of models of teaching strategies (Joyce, 1990). An analysis of follow-up activities, and administrative support for those activities, should be conducted to determine why the results in geographical areas of Palm Beach County School District were significant in this study.

6. Participants' geographic area (work site) in the school district was found to be statistically significant with differences in adjusted mean posttest locus of control scores ($p < .05$). These scores indicated an advance in teachers' sense of locus of control. The participants in Area 6, for example, may have received additional staff development offerings through Federal programs. A further study should be conducted to determine what types of staff development offerings were provided in each geographic area of the Palm Beach County School District during the 1993-1994 school year.

Final Recommendation

The change process takes time, and can be effective through new work-centered, practical activities for teachers, if they are given a chance to collaborate with one another about these activities (Zemelman, Daniels, & Hyde, 1993).

Costa and Garmston support this position:

> Efficacious people believe their efforts make a difference. They do not think that things just happen to them due to chance or luck. When a situation needs a resolution, they take an active, responsive posture rather than a passive, blaming one. They are optimistic, self-actualizing, and self-modifying. Theorists have identified at least two important characteristics of efficacy: an individual's belief that she can successfully execute the behavior required to influence outcomes and a secure belief in one's own coping abilities (1994, p. 133).

Finally, the scores of the Teacher's Locus of Control Scale instrument cannot be used for teacher performance evaluation. It is this researcher's position that we are developing teachers as we develop the District in its school improvement efforts. The Teacher Locus of Control Scale measures human development, not factory productivity. Management generally measures efficiency. We must remember that, in this study, we are measuring a personal sense of efficacy.

APPENDICES

APPENDIX A

LETTER OF AUTHORIZATION FOR STUDY

THE SCHOOL BOARD
OF PALM BEACH COUNTY, FLORIDA

DEPARTMENT OF RESTRUCTURING INITIATIVES
3390 FOREST HILL BOULEVARD
WEST PALM BEACH, FL 33406-5871

(407) 434-8529

DR. C. MONICA UHLHORN
SUPERINTENDENT
OF SCHOOLS

MEMORANDUM

TO: Marion Weil, Ed.S.
Manager, Teacher Education Center
Department of Restructuring Initiatives

FROM: Dr. Joe Abalos, Coordinator
Department of Restructuring Initiatives

SUBJECT: COLLEGIAL PEER COACHING STUDY

DATE: June 21, 1993

Per our conversation, please proceed with plans to undertake a study as part of the evaluation of the District's collegial peer coaching program. It is my understanding that this study will be proposed to your doctoral committee at Florida Atlantic University as your dissertation. The Teacher Locus of Control Scale, with Kuder-Richardson reliabilities of .78 and .71 for negative and positive internal subscales, is acceptable to the District as an evaluation instrument. Please include demographic information as part of the survey to be administered to the subjects in your study.

If you have any further questions, please contact me. Good luck on your study.

APPENDIX B

Pre-test Action Research Letter to Experimental Group

THE SCHOOL BOARD
OF PALM BEACH COUNTY, FLORIDA

RESEARCH & INFORMATION SERVICES
3340 FOREST HILL BLVD., SUITE C-320
WEST PALM BEACH, FL 33406-5869

(407) 434-8711

DR. C. MONICA UHLHORN
SUPERINTENDENT
OF SCHOOLS

TO: (Teacher's Name)
(Teacher's Work Location)

FROM: Marion Weil, Manager
Teacher Education Center

DATE: January 1994

SUBJECT: Action Research

You have been selected to participate in action research for staff development by the Teacher Education Center, Department of Restructuring Initiatives. As a collegial peer coach, your assistance is vital to help evaluate the effects of transfer of learning from the workshop to the classroom for Collegial Peer Coaching.

You will receive two survey forms--one attached to this letter, and an identical form in April 1994. **All** survey information is anonymous, and will be used for statistical analysis of the inservice program.

Inservice points will be awarded toward certificate renewal upon return of the second survey in April. Should you desire inservice points, please use the attached label to return this letter via PONY, along with the completed survey form, to the Teacher Education Center. The letter will be separated from the survey form by mail personnel.

Please take a few minutes now to complete the survey form, and return it by **February 8, 1994.** Results of the study will be published in the section of the Employee Focus sponsored by the Department of Restructuring Initiatives. Your role is essential to the District's commitment to staff development. Thank you.

Attachments

APPENDIX C

Pre-test Action Research Letter to Control Group

THE SCHOOL BOARD
OF PALM BEACH COUNTY, FLORIDA

RESEARCH & INFORMATION SERVICES
3340 FOREST HILL BLVD., SUITE C-320
WEST PALM BEACH, FL 33406-5869

(407) 434-8711

DR. C. MONICA UHLHORN
SUPERINTENDENT
OF SCHOOLS

TO: (Teacher's Name)
(Teacher's Work Location)

FROM: Marion Weil, Manager
Teacher Education Center

DATE: January 1994

SUBJECT: Action Research

You have been selected to participate in action research for staff development by the Teacher Education Center, Department of Restructuring Initiatives. At least one teacher from your school has participated in the Collegial Peer Coaching inservice component. Your assistance is vital to help evaluate the effects of transfer of learning from the workshop to the classroom for Collegial Peer Coaching.

You will receive two survey forms--one attached to this letter, and an identical form in April 1994. **All** survey information is anonymous, and will be used for statistical analysis of the inservice program.

Inservice points will be awarded toward certificate renewal upon return of the second survey in April. Should you desire inservice points, please use the attached label to return this letter via PONY, along with the completed survey form, to the Teacher Education Center. The letter will be separated from the survey form by mail personnel.

Please take a few minutes now to complete the survey form, and return it by **February 8, 1994.** Results of the study will be published in the section of the Employee Focus sponsored by the Department of Restructuring Initiatives. Your role is essential to the District's commitment to staff development. Thank you.

Attachments

APPENDIX D

Teacher Locus of Control Pre-Test Instrument

DEPARTMENT OF RESTRUCTURING INITIATIVES
TEACHER EDUCATION CENTER
3390 Forest Hill Blvd., B-218

Survey Form # DRITEC P-xxxxx

DIRECTIONS: Please circle the letter corresponding to the appropriate answer for each section below. When completed, please return entire form via PONY by **February 8, 1994** to the address on the last side of the survey.

DEMOGRAPHICS:

Gender:
a. female
b. male

School is in:
a. Area 1
b. Area 2
c. Area 3
d. Area 4
e. Area 5
f. Area 6

Teaching grade level:
a. K
b. 1
c. 2
d. 3
e. 4
f. 5
g. 6
h. 7
i. 8
j. 9
k. 10
l. 11
m. 12

Years of teaching experience
a. 0-2
b. 3-5
c. 6-8
d. 9-11
e. 12-14
f. 15 or more

Please continue to next page

Teacher Locus of Control Scale

1. When the grades of your students improve, it is more likely
   a. because you found ways to motivate the students, or
   b. because the students were trying harder to do well.

2. Suppose you had difficulties in setting up learning centers for students in your classroom. Would this happen
   a. because you lacked the appropriate materials, or
   b. because you didn't spend enough time in developing activities that go into the center?

3. Suppose your students did not appear to be benefitting from a more individualized method of instruction. The reason for this would probably be
   a. because you were having some problems managing this type of instruction, or
   b. because the students in your class were such that they needed a more traditional kind of approach.

4. When a student gets a better grade on his report card than he usually gets, is it
   a. because the student was putting more effort into his schoolwork, or
   b. because you found better ways of teaching that student?

5. If the students in your class become disruptive and noisy when you left them alone in the room for five minutes, would this happen
   a. because you didn't leave them interesting work to do while you were gone, or
   b. because the students were more noisy that day then they usually are?

6. When some of your students fail a math test, it is more likely
   a. because they weren't attending to the lesson, or
   b. because you didn't use enough examples to illustrate the concept.

7. Suppose you were successful at using learning centers with your class of 30 students. Would this occur
   a. because you worked hard at it, or
   b. because your students easily conformed to the new classroom procedures?

8. When a student pulls his or her grade up from a "C" to a "B," it is more likely
   a. because you came up with an idea to motivate the student, or
   b. because the student was trying harder to do well.

9. Suppose you are teaching a student a particular concept in arithmetic or math and the student has trouble learning it. Would this happen
   a. because the student wasn't able to understand it, or
   b. because you couldn't explain it very well?

10. When a student does better in school than he usually does, is it more likely
    a. because the student was trying harder, or
    b. because you tried hard to encourage the student to do better?

11. If you couldn't keep your class quiet, it would probably be
    a. because the students came to school more rowdy than usual, or
    b. because you were so frustrated that you weren't able to settle them down.

Please continue to next page

12. Suppose a play put on by your class was voted the "Best Class Play of the Year" by students and faculty in your school. Would it be
    a. because you put in a lot of time and effort as the director, or
    b. because the students were cooperative.

13. Suppose it was the week before Spring vacation and you were having some trouble keeping order in your classroom. This would more likely happen
    a. because you were putting extra effort into keeping the students under control, or
    b. because the students were more uncontrollable than usual.

14. If one of your students couldn't do a class assignment, would it be
    a. because the student wasn't paying attention during the class lesson, or
    b. because you gave the student an assignment that wasn't on his or her level?

15. Suppose you wanted to teach a series of lessons on Mexico, but the lessons didn't turn out as well as you have expected. This would more likely happen
    a. because the students weren't that interested in learning about Mexico, or
    b. because you didn't put enough effort into developing the lessons.

16. Suppose a student who does not typically participate in class begins to volunteer his or her answers. This would more likely happen
    a. because the student finally encountered a topic of interest to him or her, or
    b. because you tried hard to encourage the student to volunteer his or her answers.

17. Suppose one of your students cannot remain on task for a particular assignment. Would this be more likely to happen
    a. because you gave the student a task that was somewhat less interesting than most tasks, or
    b. because the student was unable to concentrate on his or her schoolwork that day?

18. Suppose you were unable to devise an instructional system as requested by the principal, which would accommodate the "needs of individual students" in your class. This would most likely happen
    a. because there were too many students in your class, or
    b. because you didn't have enough knowledge or experience with individualized instructional programs.

19. If the students in your class perform better than they usually do on a test, would this happen
    a. because the students studied a lot for the test, or
    b. because you did a good job of teaching the subject area?

20. When the appearance of a student in your class appears to be slowly deteriorating, it is usually
    a. because you weren't trying hard enough to motivate him or her, or
    b. because the student was putting less effort into his or her schoolwork.

21. Suppose a new student was assigned to your class, and this student had a difficult time making friends with his or her classmates. Would it be more likely
    a. that most of the other students did not make an effort to be friends with the new student, or
    b. that you were not trying hard enough to encourage the other students to be more friendly toward the newcomer?

Please continue to next page

22. If the students in your class performed better on a standardized achievement test given at the end of the year compared to students you had last year, it would probably be
    a. because you put more effort into teaching this year, or
    b. because this year's class of students were somewhat smarter than last year's.

23. Suppose, one day, you find yourself reprimanding one of your students more often than usual. Would this be more likely to happen
    a. because that student was misbehaving more than usual that day, or
    b. because you were somewhat less tolerant than you usually are?

24. Suppose one of your underachievers does his or her homework better than usual. This would probably happen
    a. because the student tried hard to do the assignment, or
    b. because you tried hard to explain how to do the assignment.

25. Suppose one of your students began to do better schoolwork than he usually does. Would this happen
    a. because you put much effort into helping the student do better, or
    b. because the student was trying harder to do well in school?

26. Suppose you ask two students to work together on an activity and the students were able to work together well. Is it more likely
    a. that they were some of your better students, or
    b. that you gave the students explicit instructions on what to do?

27. If a student who is usually very quiet begins to talk in class, it is more likely
    a. because the student finally found something that interests him or her, or
    b. because you tried hard to encourage the student to talk in class.

28. If the students in your class remained quiet when you left them alone for a few minutes, this would more likely happen
    a. because you knew how to keep them quiet when you are out of the room, or
    b. because the students were more controllable than usual.

Thank you for your cooperation in participating in this survey. Please return the completed survey form **by February 8, 1994** via PONY to:

DEPARTMENT OF RESTRUCTURING INITIATIVES
TEACHER EDUCATION CENTER
DAC, B-218

The Teacher Locus of Control Scale is used with written permission of its developer, Dr. Janet Rose-Baele, Charleston County School District, Department of Evaluation and Research.

APPENDIX E

Posttest Action Research Letter to
Experimental Group

THE SCHOOL BOARD
OF PALM BEACH COUNTY, FLORIDA

RESEARCH & INFORMATION SERVICES
3340 FOREST HILL BLVD., SUITE C-320
WEST PALM BEACH, FL 33406-5869

(407) 434-8711

DR. C. MONICA UHLHORN
SUPERINTENDENT
OF SCHOOLS

TO: (Teacher's Name)
(Teacher's Work Location)

FROM: Marion Weil, Manager
Teacher Education Center

DATE: April 1994

SUBJECT: Action Research--Part 2

In January, you were selected to participate in action research for staff development by the Teacher Education Center, Department of Restructuring Initiatives. The survey sent to you was the Teacher Locus of Control Scale. This instrument is being used to help evaluate the effects of the Collegial Peer Coaching training. Due to the anonymity of the survey, we do not know if you participated. We are grateful to those who assisted us with this research.

This is the second of the two surveys involved in the action research. The attached survey form is identical to the one you received in January. Please choose one answer for each question. This is a survey of perceptions, so no answer is either "right" or "wrong." All survey information is anonymous, and will be used only for statistical analysis of the inservice program.

Inservice points will be awarded toward certificate renewal upon return of the second survey in April. Should you desire inservice points, please use the attached label to return this letter via PONY, along with the completed survey form, to the Teacher Education Center. The letter will be separated from the survey form by mail personnel.

Please take a few minutes now to complete the survey form, and return it by **April 22, 1994.** Results of the study will be published in the section of the Employee Focus sponsored by the Department of Restructuring Initiatives. Your role is essential to the District's commitment to staff development. Thank you.

Attachments

APPENDIX F

Posttest Action Research Letter to Control Group

THE SCHOOL BOARD
OF PALM BEACH COUNTY, FLORIDA

RESEARCH & INFORMATION SERVICES
3340 FOREST HILL BLVD., SUITE C-320
WEST PALM BEACH, FL 33406-5869

(407) 434-8711

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Attachments

APPENDIX G

Teacher Locus of Control Posttest Instrument

DEPARTMENT OF RESTRUCTURING INITIATIVES
TEACHER EDUCATION CENTER
3390 Forest Hill Blvd., B-218

Survey Form # DRITEC P-xxxxx

DIRECTIONS: Please circle the letter corresponding to the appropriate answer for each section below. When completed, please return entire form via PONY by **April 22, 1994** to the address on the last side of the survey.

DEMOGRAPHICS:

Gender:
a. female
b. male

School is in:
a. Area 1
b. Area 2
c. Area 3
d. Area 4
e. Area 5
f. Area 6

Teaching grade level:
a. K
b. 1
c. 2
d. 3
e. 4
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Years of teaching experience
a. 0-2
b. 3-5
c. 6-8
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e. 12-14
f. 15 or more

Please continue to next page

Teacher Locus of Control Scale

1. When the grades of your students improve, it is more likely
   a. because you found ways to motivate the students, or
   b. because the students were trying harder to do well.

2. Suppose you had difficulties in setting up learning centers for students in your classroom. Would this happen
   a. because you lacked the appropriate materials, or
   b. because you didn't spend enough time in developing activities that go into the center?

3. Suppose your students did not appear to be benefitting from a more individualized method of instruction. The reason for this would probably be
   a. because you were having some problems managing this type of instruction, or
   b. because the students in your class were such that they needed a more traditional kind of approach.

4. When a student gets a better grade on his report card than he usually gets, is it
   a. because the student was putting more effort into his schoolwork, or
   b. because you found better ways of teaching that student?

5. If the students in your class become disruptive and noisy when you left them alone in the room for five minutes, would this happen
   a. because you didn't leave them interesting work to do while you were gone, or
   b. because the students were more noisy that day then they usually are?

6. When some of your students fail a math test, it is more likely
   a. because they weren't attending to the lesson, or
   b. because you didn't use enough examples to illustrate the concept.

7. Suppose you were successful at using learning centers with your class of 30 students. Would this occur
   a. because you worked hard at it, or
   b. because your students easily conformed to the new classroom procedures?

8. When a student pulls his or her grade up from a "C" to a "B," it is more likely
   a. because you came up with an idea to motivate the student, or
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9. Suppose you are teaching a student a particular concept in arithmetic or math and the student has trouble learning it. Would this happen
   a. because the student wasn't able to understand it, or
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10. When a student does better in school than he usually does, is it more likely
    a. because the student was trying harder, or
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11. If you couldn't keep your class quiet, it would probably be
    a. because the students came to school more rowdy than usual, or
    b. because you were so frustrated that you weren't able to settle them down.

Please continue to next page

12. Suppose a play put on by your class was voted the "Best Class Play of the Year" by students and faculty in your school. Would it be
    a. because you put in a lot of time and effort as the director, or
    b. because the students were cooperative.

13. Suppose it was the week before Spring vacation and you were having some trouble keeping order in your classroom. This would more likely happen
    a. because you were putting extra effort into keeping the students under control, or
    b. because the students were more uncontrollable than usual.

14. If one of your students couldn't do a class assignment, would it be
    a. because the student wasn't paying attention during the class lesson, or
    b. because you gave the student an assignment that wasn't on his or her level?

15. Suppose you wanted to teach a series of lessons on Mexico, but the lessons didn't turn out as well as you have expected. This would more likely happen
    a. because the students weren't that interested in learning about Mexico, or
    b. because you didn't put enough effort into developing the lessons.

16. Suppose a student who does not typically participate in class begins to volunteer his or her answers. This would more likely happen
    a. because the student finally encountered a topic of interest to him or her, or
    b. because you tried hard to encourage the student to volunteer his or her answers.

17. Suppose one of your students cannot remain on task for a particular assignment. Would this be more likely to happen
    a. because you gave the student a task that was somewhat less interesting than most tasks, or
    b. because the student was unable to concentrate on his or her schoolwork that day?

18. Suppose you were unable to devise an instructional system as requested by the principal, which would accommodate the "needs of individual students" in your class. This would most likely happen
    a. because there were too many students in your class, or
    b. because you didn't have enough knowledge or experience with individualized instructional programs.

19. If the students in your class perform better than they usually do on a test, would this happen
    a. because the students studied a lot for the test, or
    b. because you did a good job of teaching the subject area?

20. When the appearance of a student in your class appears to be slowly deteriorating, it is usually
    a. because you weren't trying hard enough to motivate him or her, or
    b. because the student was putting less effort into his or her schoolwork.

21. Suppose a new student was assigned to your class, and this student had a difficult time making friends with his or her classmates. Would it be more likely
    a. that most of the other students did not make an effort to be friends with the new student, or
    b. that you were not trying hard enough to encourage the other students to be more friendly toward the newcomer?

Please continue to next page

22. If the students in your class performed better on a standardized achievement test given at the end of the year compared to students you had last year, it would probably be
    a. because you put more effort into teaching this year, or
    b. because this year's class of students were somewhat smarter than last year's.

23. Suppose, one day, you find yourself reprimanding one of your students more often than usual. Would this be more likely to happen
    a. because that student was misbehaving more than usual that day, or
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24. Suppose one of your underachievers does his or her homework better than usual. This would probably happen
    a. because the student tried hard to do the assignment, or
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25. Suppose one of your students began to do better schoolwork than he usually does. Would this happen
    a. because you put much effort into helping the student do better, or
    b. because the student was trying harder to do well in school?

26. Suppose you ask two students to work together on an activity and the students were able to work together well. Is it more likely
    a. that they were some of your better students, or
    b. that you gave the students explicit instructions on what to do?

27. If a student who is usually very quiet begins to talk in class, it is more likely
    a. because the student finally found something that interests him or her, or
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28. If the students in your class remained quiet when you left them alone for a few minutes, this would more likely happen
    a. because you knew how to keep them quiet when you are out of the room, or
    b. because the students were more controllable than usual.

Thank you for your cooperation in participating in this survey. Please return the completed survey form **by April 22, 1994** via PONY to:

DEPARTMENT OF RESTRUCTURING INITIATIVES
TEACHER EDUCATION CENTER
DAC, B-218

The Teacher Locus of Control Scale is used with written permission of its developer, Dr. Janet Rose-Baele, Charleston County School District, Department of Evaluation and Research.

APPENDIX H

Miscellaneous Correspondence

460 Santa Clara Trail
Wellington, FL 33414-3922

July 12, 1993

Dr. Janet Rose-Baele
Charleston County School District
Department of Evaluation and Research
3 Chisolm Street
Charleston, SC 29401

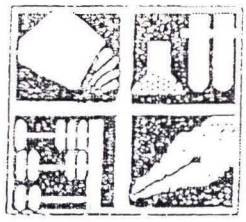
Dear Dr. Rose:

Thank you so much for your permission to use the Teacher Locus of Control Scale as the survey instrument in my doctoral studies at Florida Atlantic University. My plan to do a study for the Palm Beach County School Board, FL, has been approved by the school district. My proposal, Restructuring Education Through Staff Development: A Study of Teacher Self-Efficacy Through a Model of Collegial Peer Coaching, will be submitted to my doctoral committee later this month.

Your support of my studies is greatly appreciated.

Sincerely,

(Ms.) Marion Weil, Ed.S.



Charleston County School District
DEPARTMENT OF EVALUATION AND RESEARCH

TO: Marion Weil
Fax No. (407) 434-8903

FROM: Dr. Janet Rose-Baele
Fax No. (803) 724-7268
Phone: (803) 720-2969

No of Pages (incl. cover): 2

DATE: June 21, 1993

TIME: 11:30 p.m.

NUMBER OF PAGES: 2 plus cover

Teacher Locus of Control Scale

Erratum

Janet S. Rose and Frederic J. Medway presented their Teacher Locus of Control Scale as an appendix to their article "Measurement of Teachers' Beliefs in Their Control over Student Outcome," which appeared in the January/February 1981 issue of the *Journal of Educational Research* (74:185–190). Unfortunately three items were omitted from that scale. The appendix is reprinted in its entirety below.

APPENDIX A

Item	Biserial Item Correlations
1. When the grades of your students improve, it is more likely *I+* a. because you found ways to motivate the students, or b. because the students were trying harder to do well.	.30
2. Suppose you had difficulties in setting up learning centers for students in your classroom. Would this probably happen a. because you lacked the appropriate materials, or *I−* b. because you didn't spend enough time in developing activities to go into the center?	.41
3. Suppose your students did not appear to be benefitting from a more individualized method of instruction. The reason for this would probably be *I−* a. because you were having some problems managing this type of instruction, or b. because the students in your class were such that they needed a more traditional kind of approach.	.45
4. When a student gets a better grade on his report card than he usually gets, is it a. because the student was putting more effort into his schoolwork, or *I+* b. because you found better ways of teaching that student?	.38
5. If the students in your class became disruptive and noisy when you left them alone in the room for five minutes, would this happen *I−* a. because you didn't leave them interesting work to do while you were gone, or b. because the students were more noisy that day than they usually are?	.41
6. When some of your students fail a math test, it is more likely a. because they weren't attending to the lesson, or *I−* b. because you didn't use enough examples to illustrate the concept.	.31
7. Suppose you were successful at using learning centers with your class of 30 students. Would this occur *I+* a. because you worked hard at it, or b. because your students easily conformed to the new classroom procedure?	.29
8. When a student pulls his or her grade up from a "C" to a "B," it is more likely *I+* a. because you came up with an idea to motivate the student, or b. because the student was trying harder to do well.	.52
9. Suppose you are teaching a student a particular concept in arithmetic or math and the student has trouble learning it. Would this happen a. because the student wasn't able to understand it, or *I−* b. because you couldn't explain it very well?	.43
10. When a student does better in school than he usually does, is it more likely a. because the student was trying harder, or *I+* b. because you tried hard to encourage the student to do better?	.36
11. If you couldn't keep your class quiet, it would probably be a. because the students came to school more rowdy than usual, or *I−* b. because you were so frustrated that you weren't able to settle them down.	.51
12. Suppose a play put on by your class was voted the "Best Class Play of the Year" by students and faculty in your school. Would it be *I+* a. because you put in a lot of time and effort as the director, or b. because the students were cooperative	.25
13. Suppose it were the week before Easter vacation and you were having some trouble keeping order in your classroom. This would more likely happen *I−* a. because you weren't putting extra effort into keeping the students under	.39

Item	Biserial Item Correlations
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24. Suppose one of your underachievers does his or her homework better than usual. This would probably happen a. because the student tried hard to do the assignment, or *I+* b. because you tried hard to explain how to do the assignment.	.37
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26. Suppose you ask two students to work together on an activity and the students were able to work together well. Is it more likely a. that they were some of your better students, or *I+* b. that you gave the students explicit instructions on what to do?	.34
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28. If the students in your class remained quiet when you left them alone for a few minutes, this would more likely happen *I+* a. because you knew how to keep them quiet when you are out of the room, or b. because the students were more controllable than usual.	.33

Note: Internal alternatives are designated by an *I*. Positive event items are indicated by a plus sign, and negative event items are indicated by a minus sign.

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EDUCATION

Certified Professional Secretary (CPS)	1983	Professional Secretaries International Kansas City, MO
B.S. Secondary Education Magna Cum Laude	1986	City University of New York New York, NY
M.S. Computer Education	1988	Nova University Fort Lauderdale, FL
Ed.S. Educational Leadership	1991	Florida Atlantic University Boca Raton, FL
Ed.D. Educational Leadership	1995	Florida Atlantic University Boca Raton, FL

PROFESSIONAL EXPERIENCE

1987-Present — Palm Beach County School District, FL

Manager, Human Resource Development, Teacher Education Center, Department of Restructuring Initiatives.

Information Center Specialist--Data Management Services. Administrative functions, mainframe software management, manager/instructor for applicable software.

	Instructor, Word Processing Program, West Technical Education Center. Fulltime and evening adult education classes.
1990-1991	Guest Lecturer, Nova University, Education Undergraduate Program. Computer Education.
1988-1989	Adjunct, Nova University, GEM Program, Computer Technology.
1987	Guest Lecturer, Florida Atlantic University, Computer Technology, Educational Leadership program.
1975 and 1984	Licensed Secretary, New York City Board of Education. Administrative Assistant to Principal.
1983-1984	Regional Administrator, ROLM Corporation, Jericho, NY. Management and personnel functions.
1968-1983	Assistant to President, Water Transport Association, New York, NY. Liaison with United States Senators, Congressmen, and White House staff.
1966-1968	Assistant to Advertising Director, G. P. Putnam Publishing Company, New York, NY. Jacket-copy and administrative publishing duties.

PROFESSIONAL AFFILIATIONS

Adult and Community Education Network (ACENet)
South Florida Center for Executive Educators
Association for Supervision and Curriculum Development
National Staff Development Council
Florida Association of Staff Development

PROFESSIONAL AFFILIATIONS (continued)

Palm Beach County Reading Association
Palm Beach County Secondary Reading Association
American Educational Research Association
Florida Educational Research Association
International Business Education Association
National Business Education Association
Southern Business Education Association
Kappa Delta Pi
Phi Delta Kappa
CUNY BA Alumni Association
Nova University Alumni Association
Florida Atlantic University Alumni Association

HONORS AND AWARDS

Internship Award of Merit, Herbert H. Lehman College

Harry L. Glaser Scholarship for Outstanding Achievement in Business Education

National Business Education Association Award of Merit for Outstanding Achievement in Business Education

Service Award: West Technical Education Center