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ABSTRACT
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purpose of the grant was to provide teachers with support in implementing
standards-based education. Both treatment and control groups of teachers
received instruction in implementing standards-based education from the
school district. Teachers in the treatment group also received training in
cognitive coaching and coached each other monthly as they implemented the
standards. In addition, they received training in nonverbal classroom
management, which is a set of nonverbal techniques designed to help teachers
decrease the time spent managing in order to increase time spent helping
students achieve the standards. Thirty-six coaches received training to
provide teachers with feedback on their classroom management skills. Finally,
teachers in the project met in monthly dialogue groups across grade levels
with teachers from other schools to discuss their implementation of
standards. Teachers in the treatment group compared to teachers in the
control group increased significantly in teaching efficacy and attitudes
toward school culture. Based on these findings, this model appears to have
promise for increasing teacher professionalism and efficacy and helping
teachers to implement innovations. (Contains 89 references and 14 tables.)
(Author/SM)

THE EFFECTS OF COGNITIVE COACHING AND NONVERBAL CLASSROOM MANAGEMENT ON TEACHER EFFICACY AND PERCEPTIONS OF SCHOOL CULTURE

by

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Abstract

Teachers in this study participated in a three-year grant funded by the United States Department of Education Fund for Innovation in Education, Office of Educational Research and Improvement. The purpose of the grant was to provide teachers with support in implementing Standards-Based Education. Both treatment and control groups received instruction in implementing Standards-Based Education from the school district. Teachers in the treatment group also received training in Cognitive Coaching and coached each other monthly as they implemented the standards. In addition, they received training in Nonverbal Classroom Management, which is a set of nonverbal techniques designed to help teachers decrease the time spent managing in order to increase time spent helping students achieve the standards. Thirty-six coaches were also trained to provide teachers with feedback on their classroom management skills. Finally, teachers in the Project met in monthly Dialogue Groups across grade levels with teachers from other schools to discuss their implementation of standards.

Teachers in the treatment group compared to the control group increased significantly in teaching efficacy and attitudes toward school culture. Based on these findings, this model appears to have promise for increasing teacher professionalism and efficacy and helping teachers to implement an innovation.

Introduction

This study examined the relationship between aspects of training in Cognitive Coaching (Costa & Garmston, 1994) and Nonverbal Classroom Management (Grinder, 1996) and measures that were likely to be impacted by such training. It further assessed level of correlations between changes in treatment group participants and participants' extent of involvement in Cognitive Coaching. The study was conducted in the context of a quasi-experimental pretest-posttest design with two groups of teachers, one of which received training in Cognitive Coaching and Nonverbal Classroom Management over a three-year period. Teachers received training in Cognitive Coaching each of the three years of the project, and they received training in Nonverbal Classroom Management in years 2 and 3 of the project. In addition, thirty-six teachers received more intensive training in how to coach colleagues using the Nonverbal Classroom Management model in year 2. They were called Green Chair Coaches because they sat on green camping chairs when visiting classrooms.

Teachers in the project also met in monthly Dialogue Groups to engage in discussion about their implementation of Standards-Based Education. Both treatment and control group teachers received training in implementing Standards-Based Education over a three-year period.

The following sections provide brief reviews of the literature on Cognitive Coaching and Nonverbal Classroom Management. Following this are reviews of factors affecting efficacy and school culture.

Cognitive Coaching

Cognitive Coaching seeks to increase teacher efficacy and provide a climate in which teachers can interact more professionally and collaboratively. Teachers have coaching partners.

The coach first conducts a Planning Conference about an upcoming lesson, asking questions to help the teacher define goals, evidence of student achievement, teaching strategies, and the focus for data collection. Then, the coach observes the lesson and gathers the data requested by the teacher. After the observation, the coach conducts a Reflecting Conference with the teacher in which the coach shares the data and asks questions to guide the teacher in analyzing the data and applying insights to future lessons. Finally, the teacher who was observed serves as a coach for the teacher who coached him/her, and the sequence begins again (Costa & Garmston, 1994).

During the coaching process, the coach uses skills of rapport building, questioning, paraphrasing, and probing. Cognitive Coaching is "the supervisor's application of a set of strategies designed to enhance the teacher's perceptions, decisions, and intellectual functions. These inner thought processes are prerequisites to improving overt instructional behaviors which will, in turn, produce greater student learning" (Costa & Garmston, 1989, p. R-6). In the coaching process, "the target of change is teacher thought. This is important and rewarding because it is the invisible skills of teaching, the thinking processes that underlie instructional decisions, that produce superior instruction" (Garmston, 1991, p. 12). See Costa and Garmston (1994) for a full description of Cognitive Coaching.

A number of studies have investigated the effects of Cognitive Coaching. Positive effects have been shown with classroom teachers (Edwards & Newton, 1995), Title I teachers (Hagopian, Williams, Carrillo, & Hoover, 1996), curriculum consultants (Phillips, 1996), new teachers in mentoring situations (Barnett, 1995), university professors (Garmston & Hyerle, 1988), and in doctoral and master's programs for training educational leaders (Geltner, 1993).

Cognitive Coaching training combined with regular coaching cycles has resulted in

positive outcomes for classroom teachers in a number of research studies. Teachers trained in Cognitive Coaching expressed significantly higher satisfaction with teaching as a career than those who did not receive the training (Edwards & Newton, 1995). First year teachers receiving Cognitive Coaching grew significantly on a conceptual level question (Edwards, 1993). Teachers who completed more Interaction Sheets, i.e., journal pages about their coaching interactions, grew more in reflective thought as measured by the Reflective Pedagogical Thinking instrument (Simmons, Sparks, Starko, Pasch, & Colton, 1989) than those who completed fewer Interaction Sheets (Edwards, 1993).

One of the purposes of Cognitive Coaching is to increase teacher efficacy. Teachers who had used Cognitive Coaching for a longer period of time tended to have higher teaching efficacy than those who had used it for a shorter period of time, and teachers who had received training in Cognitive Coaching had higher teaching efficacy than a control group (Edwards & Newton, 1995). Another study found significant increases in efficacy in second-, third-, and fourth-year teachers (Krpan, 1997). Teachers perceived that participating in more coaching cycles resulted in greater impact on their thought processes (Foster, 1989). In addition, student teachers trained in Cognitive Coaching were more concerned about student learning and the needs and welfare of students, while control group teachers were more concerned with their performance (Burk, Ford, Guffy, & Mann, 1996).

Another goal of Cognitive Coaching is to change school culture and interactions with schools. Qualitative data have indicated that Cognitive Coaching tends to change teachers' relationships with the principal (Garmston, 1990), and that the coaching process tends to bring about greater enthusiasm for teaching in those who participate (Edwards & Newton, 1994 ;

Garmston, 1990).

Sommers (1991) found that as a result of Cognitive Coaching, teachers increased talk with colleagues about teaching, ceased to be concerned about the amount of work necessary to teach higher order thinking skills to students, improved in the direct instruction of thinking skills, liked the specific feedback and new ideas they received, reported increased collegiality, liked having other people in their classrooms, and recommended that other teachers become involved. Sparks and Bruder (1987) found that the coaching process tended to bring about greater staff cohesiveness. In a study of 172 supervising teachers who were trained in Cognitive Coaching and served as University Associates providing mentoring for student teachers, an increase in motivation to stay in teaching, improvement in communication skills, increase in their professional images, and increase in enthusiasm for teaching were found (Clinard, Ariav, Beeson, Minor, & Dwyer, 1995).

The relatively few experimental studies that have been conducted with Cognitive Coaching have yielded promising results; however, further work was needed to determine whether Cognitive Coaching accomplishes its intended outcomes, namely bringing about greater teacher efficacy and providing the climate in which teachers can interact more professionally and collaboratively.

Nonverbal Classroom Management

Studies of classroom management techniques abound. A number of classroom management theories and strategies have been proposed, widely used, and researched through the years. They have served to advance the field to the point where we are today. Nonverbal Classroom Management, however, is a newcomer to the field.

Grinder's ENVoY program of nonverbal classroom management (Grinder, 1996) was developed by studying the nonverbal behaviors of teachers who managed their classrooms effectively. As of this writing, Grinder has been in over 6,000 classrooms on three continents in order to study nonverbal strategies that effective classroom managers use. He identified thirty-one nonverbal strategies for managing student behavior and targeted the times during a lesson when they are most effective. The four phases of a lesson are: 1) Getting Their Attention; 2) Teaching; 3) Transition to Seatwork; and 4) Seatwork.

Grinder suggests that teachers remain still when asking for student attention. If teachers want students to stop what they are doing, the teachers will be most successful if they freeze their bodies, i.e., stop moving. He also suggests having teachers use "Above / Pause / Whisper" to get students' attention verbally. This means that the teacher speaks just above the vocal level of the class, pauses, and then drops the voice to a whisper.

During the teaching phase of the lesson, Grinder suggests that there are three ways to operate and three ways to let students know which way they are operating. There are times when the teacher is the only one talking, times when the teacher wants students to raise their hands, and times when the teacher wants students to speak out. The teacher can convey which rules are operating verbally, nonverbally, and with momentum. Grinder suggests communicating both verbally and nonverbally initially to convey 100% of the message by both saying, "Raise your hand if you know . . . . " and raising the hand. After several times, he suggests dropping the verbal message and conveying the message nonverbally with a raised hand. The teacher can drop both verbal and nonverbal messages when students are automatically raising their hands. This is called momentum. If students begin talking out, the teacher can go back to giving the verbal and

the nonverbal message together.

During transitions, Grinder suggests visually displaying Exit Directions so that students know what they are to do during the independent phase of the lesson. This would include what students are to do, materials they might need, what they are to do when they are finished, and other relevant information. After going over the Exit Directions, he suggests having the teacher stand still again for a suggested time of 20 seconds (less for lower grades) to allow students to go on task, rather than immediately moving around the room to help students. By doing this, students will be more likely to answer their questions themselves rather than depending on the teacher to re-explain the assignment.

During the seatwork time, Grinder suggests that the teacher move slowly around the room, using a quiet voice so as not to disturb students. When approaching a student, he suggests having the teacher approach from the side rather than from the front. He advocates no eye contact with a student so that the focus is entirely on the work. When a teacher is side by side with a student, he calls this "Influence," and when a teacher is in facing a student, particularly a student who is off task, he calls this "Power." Teachers are more likely to maintain the relationship with the student, according to Grinder, when the focus is on the work rather than on the student in a management situation.

In Green Chair Coach training, Grinder works with twelve teachers for five consecutive days. The teachers learn how to diagnose what is occurring nonverbally in a classroom and provide effective, supportive, and accurate feedback in such a way that the teacher receiving the feedback will most likely be receptive to it. Teachers who are being trained meet with Grinder for an hour before school starts. Then, during the school day, they observe a teacher for fifteen

minutes, provide feedback for fifteen minutes, and discuss strategies that were used for observing and giving feedback for fifteen minutes. They meet for at least two hours after school to process what they learned during the day and make plans for the next day. Studies addressing use of nonverbal communication in classroom management are discussed below.

In a study of communication behaviors that student teachers used in managing classrooms, Seaborn (1985) found that verbal communication was used in 80% of disciplinary incidents. Even though nonverbal communication was employed only 20% of the time, she suggested that it contributed more to the effectiveness of the communication than verbal communication. She also suggested that student teachers plan ahead in order to prevent disciplinary problems from occurring. In another study, inservice and preservice teachers were asked about the importance of nonverbal communication skills in relation to classroom management (Simmons, 1992). Both preservice and inservice teachers believed that voice volume, voice quality, teacher organization, and teacher appearance were important in communicating with students. Inservice teachers ranked eye contact and teacher movement around the room as being more important than preservice teachers believed they were.

Other studies have addressed the use of verbal and nonverbal communication in classroom management. Grubaugh (1989) suggested that teachers could adjust both nonverbal and verbal variables to increase control or relax control over a class. Grinder calls this "Power vs. Influence" and provides teachers with behavioral indicators so they can be aware of when they are in each mode and intentionally choose between the two. Grubaugh also advocated being sensitive to body language and facial expressions of students in order to anticipate discipline problems, gauge the mood of the class, and assess student understanding of a lesson.

A component of the Nonverbal Classroom Management program involved training coaches to provide positive feedback on teachers' classroom management. The importance of coaching in classroom management has been documented in several studies. One study found that teachers who received coaching following an inservice program on classroom management grew more in organizing instruction and dealing with disturbances than teachers who did not receive coaching. In addition, student time-on-task levels improved more in the classes of teachers who received coaching (Roelofs, Veenman, & Raemaekers, 1991). A subsequent study found coaching effects for organizing effective instruction and dealing with disturbances (Roelofs, Veenman, & Raemaekers, 1994). Another study found that when classroom management and coaching were practiced using a collegial approach, teacher self-efficacy improved (Low, 1989).

Effectiveness in classroom management has also been linked with teacher efficacy. One study (Melby, 1995) found that teachers with higher levels of efficacy less frequently judged students as having chronic behavior problems, expected student behavior to improve, were less likely to feel embarrassed or angry when students misbehaved, were more likely to like difficult students, and felt more confident in their abilities to manage difficult behavior. They also imposed fewer negative consequences on students when they misbehaved.

A research study based at Stanford University on the effects of the ENVoY Nonverbal Classroom Management program found positive outcomes for students as well as for teachers associated with Nonverbal Classroom Management. In this three-year study, Garfield (1998) found that teachers who were trained in ENVoY techniques and received coaching as they implemented them 1) were able to get the attention of the class more quickly; 2) had fewer students off task; and 3) sent fewer students to the principal's office for discipline referrals when

compared with a matched control group.

Teacher Efficacy

Three types of teacher efficacy have been measured. They are Teaching Efficacy

("Teachers can make a difference"), Personal Teaching Efficacy ("I can make a difference")

(Gibson & Dembo, 1984), and Outcome Efficacy ("I can make a difference with this particular

student") (Soodak & Podell, 1996). Results specific to each efficacy type are noted below.

A number of studies have shown positive outcomes for students as a result of teachers

having high levels of efficacy. In one study, higher levels of personal teaching efficacy correlated

with achievement in reading, language, and mathematics (Tracz & Gibson, 1986). In another

study, higher efficacy teachers showed less stress and higher internal locus of control than did

lower efficacy teachers (Greenwood, Olejnik, & Parkay, 1990). High teacher efficacy has been

associated with overall school effectiveness (Brookover & Lezotte, 1979), greater use of

cooperative learning (Dutton, 1990), and the use of fewer control tactics with students (Ashton,

Webb, & Doda, 1983). In one study, higher efficacy teachers showed less anger for student

misbehavior and academic failures and more willingly assumed responsibility for those failures

(Glenn, 1993). Low efficacy teachers spent almost 50% of their time in small group instruction,

while high efficacy teachers spent only 28% of their time teaching students in small groups

(Gibson & Dembo, 1984). Low efficacy teachers were also more likely to provide a student with

the answer, ask another student, or permit other students to call out the answer than high efficacy

teachers. In contrast, high efficacy teachers tended to lead students to the answer through

questioning, were less critical, and were more persistent in situations in which students initially

failed (Gibson & Dembo, 1984).

Other studies have suggested additional advantages for students of teachers with high efficacy. Teachers with higher efficacy at the middle school level were more enthusiastic, and their students earned higher grades (Newman, 1993). Podell and Soodak (1993) found that teachers with lower levels of efficacy tended to refer students from low socioeconomic status (SES) families to special education more frequently than did teachers with higher levels of efficacy. Parents were more involved in attending conferences, volunteering, and home tutoring in classrooms of high efficacy teachers, and higher efficacy teachers perceived that they had more support from parents than did lower efficacy teachers (Hoover-Dempsey, Bassler, & Brissie, 1987). Furthermore, teachers with high personal efficacy tended to emphasize the role of the teacher and the instructional program when they explained student success, de-emphasizing the effects of home environment (Hall, Hines, Bacon, & Koulinanos, 1992).

The interaction of higher levels of efficacy with more frequent interactions among teachers predicted higher levels of curricular change (Poole, 1987; Poole & Okeafor, 1989). Furthermore, teachers with higher levels of efficacy set more challenging goals for themselves and their students, persisted in the face of obstacles to learning, and took responsibility for student outcomes (Ross, 1995). In another study, teachers who had high personal and teaching efficacy more frequently increased students' end-of-year goals (Allinder, 1995) when working with students having mild disabilities. Teacher efficacy beliefs more strongly impacted their interactions with low-achieving students than high-achieving students (Midgley, Feldlaufer, & Eccles, 1989).

Coaching has been related to higher levels of teaching efficacy in several studies. Teacher observations of each other were linked with teacher collaboration toward increasing student

achievement, as well as with teacher efficacy (daCosta, 1995). When teachers had higher levels of efficacy, they were more able to enter into trusting relationships with colleagues in which they allowed the colleagues to observe them in their classrooms (da Costa & Riordan, 1996). One study linked student achievement with coaching. Student achievement was higher when teachers had more frequent interactions with their coaches and when they were more confident that what they were doing was effective (Ross, 1992). Other studies have linked teaching efficacy with satisfaction with teaching (Edwards, Green, & Lyons, 1996b; Edwards & Newton, 1995; Fritz, Miller-Heyl, Kreutzer, & MacPhee, 1995; Melby, 1995).

A number of strategies for developing teacher efficacy have been proposed. Increased teacher efficacy has resulted from team teaching, multi-age grouping, and a healthy school climate (Ashton, Webb, & Doda, 1983), perceptions of participation in decision-making (Grafton, 1993; Howat, 1990; Showers, 1980), participation in Outward Bound courses (Sills, 1993), and a partner school program that included action research (Lofgren, 1988). A positive correlation existed between beginning teachers' sense of efficacy and their perception that they were encouraged to experiment and try new things in their positions (Grafton, 1993).

Overall teacher efficacy also tended to be higher in more positive school environments. Teachers tended to have higher levels of efficacy where they were satisfied with their positions (Brissie, Hoover-Dempsey, & Bassler, 1988), where they would choose teaching as a career again if given the chance (Trentham, Silvern, & Brogdon, 1985), where they experienced less stress (Greenwood, Olejnik, & Parkay, 1990), where schools had well-behaved students (Fletcher, 1990), and where schools had students who achieved at higher levels (Beady & Hansell, 1981; Smylie, 1988). In addition, higher levels of efficacy existed when teachers interacted with peer

coaches (Ross, 1992), when teachers knew the expectations of teachers in grades above and below them (Hoover-Dempsey, Bassler, & Brissie, 1987), when they worked together to make instructional decisions (Miskel, McDonald, & Bloom, 1983), and when they worked together to coordinate the curriculum (Moore & Esselman, 1994; Raudenbush, Rowen, & Cheong, 1992; Rosenholtz, 1989a; 1989b). Teacher collaboration was also the subject of a study that found a significant relationship between teacher work preferences for collaboration and personal teaching efficacy (Morrison, Walker, Wakefield, & Solberg, 1994). One literature review (Peterson, 1997) linked four variables to school climate. They include teacher efficacy, collegiality, student achievement, and parent involvement.

Principal behaviors with regard to fostering efficacy in teachers have been studied (Hipp, 1996; Moore & Esselman, 1994). Those principal behaviors related to teaching efficacy were modeling behavior, inspiring group purpose, and providing contingent rewards. Those related to personal teaching efficacy were modeling behaviors and providing contingent rewards.

<center>School Culture</center>

A number of studies have found benefits for students of having schools with more positive cultures. Student motivation tends to be higher in schools in which strong cultures exist, and motivation and student achievement have been linked (Fryans & Maehr, 1990; Purkey, 1986; Thacker & McInerney, 1992). In addition, school cultures that had shared values, a core curriculum, and high levels of extracurricular involvement were associated with improved student academic performance and improved teacher job satisfaction, morale, and attendance. Another study found that when school cultures focused on accomplishment, recognition, and affiliation, teacher satisfaction and commitment resulted (Anderman, Belzer, & Smith, 1991). Teacher

motivation was positively associated with school culture (Cheng, 1993). Another researcher

(Barth, 1984) suggested that the nature of the relationships of the adults in a school had more

impact on the school's quality and characteristics and student achievement than any other factor.

Collaborative structures encouraged lasting school improvement (Fullan, 1992). Another

study found that when teachers had access to networks, worked collegially, and had more feelings

of professionalism, they also felt more efficacious and were more likely to view themselves as

agents rather than targets (L H Research, 1993). Teacher job satisfaction and commitment were

higher when leaders built strong cultures and ensured that the school was attractive as a

workplace (Anderman, Belzer, & Smith, 1991). In addition, instruction improved in schools in

which strong school cultures existed (Leggett & Hoyle, 1987; Little, 1982; Smith, 1986; Smith,

1987).

Little (1982) identified four practices of collaborative schools. They included 1) frequent

teacher talk about teaching; 2) observations and critique among teachers; 3) teacher collaboration

in developing curriculum; and 4) teacher instruction of each other in the area of pedagogy. She

added that when teachers shared a common language, focused on key concerns, gathered hard

evidence, interacted fully, acted predictably, and exhibited reciprocal respect, then successful,

nonthreatening relationships would develop. Rosenholtz (1989a; 1989b) found that in highly

collegial schools, students performed better, and teachers were more creative, had higher morale,

and worked longer hours. She also found that those teachers continually sought to improve,

shared instructional strategies, and worked together to ensure student academic progress.

Furthermore, teachers who taught in more democratic school settings and operated at higher

psychological levels tended to accept and implement innovative educational ideas at a higher level

(Evans & Hopkins, 1988).

<div style="text-align: center;">Method</div>

Participants.

Participants in this project were K-12 teachers from the largest school district in a western state's metropolitan area. The district included both urban and suburban areas, and comprised schools from low to high socioeconomic status. Participants were part of a three-year grant funded by the United States Department of Education Fund for Innovation in Education, Office of Educational Research and Improvement. The purpose of the grant was to assist teachers in implementing State Content Standards through Cognitive Coaching, Nonverbal Classroom Management, and monthly Dialogue Groups. The Dialogue Groups provided teachers with the opportunity to share ideas about implementing standards and to coach each other on either past or upcoming lessons. Two hundred forty teachers participated in the experimental group, and two hundred teachers participated in the control group. These groups were matched on the basis of socioeconomic level of the schools. Only data for those remaining in the study for the entire three years (138 treatment, 164 control) were analyzed in this study.

Table 1 shows that no significant differences existed between treatment and control groups on continuous variables other than that treatment participants had taken more inservice credits ($t = 3.97$, $p < .001$). Participants were in their mid-40's, on average, had taught approximately fifteen years, had been in their present positions approximately 6 1/2 years, had been at their present schools about 6 1/2 years, and had been in the school district for over 12 years. They had substitute taught approximately one year, received their most recent degrees in the mid-1980s, and had taken 4 semester hours in the last year.

The majority were female, Caucasian, and taught at the elementary level (Table 2). Most teachers had pursued education beyond the Bachelor's degree; however, the majority were not currently enrolled in a graduate level program. The control group contained significantly more participants from low socioeconomic schools than the treatment group ($\underline{t} = 7.56$, $\underline{p} = .02$). This difference was due to attrition in low SES schools in the treatment group. Most participants planned to teach the following year and would choose to go into teaching again, if given the choice. Most teachers did not teach multi-age classes.

Tables 1 and 2 here

Instruments.

Among the measures administered were the *Teacher Efficacy Scale*, (Gibson & Dembo, 1984), the *School Culture Survey* (Saphier & King, 1985), the *Paragraph Completion Method* (Hunt, Butler, Noy, & Rosser, 1978), the *Standards-Based Implementation Survey* (Seahorn, 1995), the *Learner-Centered Battery* (McCombs & Lauer, 1997), and the *Vincenz Empowerment Scale* (Vincenz, 1990). The first two measures are of interest in this study.

The *Teacher Efficacy Scale* (Gibson & Dembo, 1984) is a thirty-item self-report scale employing a 1 to 6 response scale. The subscales of teaching efficacy and personal teaching efficacy from the Gibson and Dembo (1984) instrument were used all three years of the study. Questions for the outcome efficacy subscale were added in the second year of the study from a paper by Soodak and Podell (1996). Questions related to teaching efficacy ask whether the respondent believes that teachers in general can make a difference with students. Sample

questions include, "A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement," and "The amount that a student can learn is primarily related to family background." Personal teaching efficacy (I can make a difference, or self-efficacy) is another subscale in the *Teacher Efficacy Scale* (Gibson & Dembo, 1984). Sample questions on this scale include "I have enough training to deal with almost any learning problem," and "My teacher training program and/or experience has given me the necessary skills to be an effective teacher." The third subscale is outcome efficacy, which focuses on making a difference with specific students. Sample questions include, 'If parents comment to me that their child behaves much better at school than he/she does at home, it would probably be because I have some specific techniques of managing his/her behavior which they may lack," and "When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student." Reliability coefficients are presented in Table 3.

Table 3 here

The *School Culture Survey* (Saphier & King, 1985) is a twenty-nine item self-report scale employing a 1 to 5 response scale. Teacher Professionalism and Goal Setting (.91), Administrator Professional Treatment of Teachers (.86), and Teacher Collaboration (.81) are the three subscales comprising the measure (Edwards, Green, & Lyons, 1996a). Sample questions from the Teacher Professionalism and Goal Setting subscale include, "Overall, we know what we stand for as a school," and "Staff members show initiative in developing new ideas for the school and seeing them come to life." Questions from the Administrator Professional Treatment of Teachers

subscale include,"I feel trusted and encouraged to make instructional decisions on my own . . .

and my boss backs me up when I do," and "I feel I am consulted about decisions to be made in

this school and that I am listened to and can influence policy." Questions from the Teacher

Collaboration subscale include, "We teach each other things we know about teaching," and "We

plan lessons and make materials together."

A separate information sheet asked for teacher gender, age, ethnicity, subject and level

taught, as well as other relevant demographic information.

Procedure.

All instruments were administered to experimental group participants in the training room

just before the training began in November, 1994 and ten months after the initial training in

September, 1995. Training was administered in central locations 29 months after the initial

training in spring, 1997. Instruments were administered to control participants at their schools in

a group setting shortly after the instruments were administered to experimental participants in the

first two years and concurrently in the last year. Logs were kept by the researcher of the number

of Cognitive Coaching cycles done, number of Dialogue Groups attended, and other relevant

variables for experimental group participants. Control group participants were compensated each

time they filled out the instruments because they participated after school hours. Experimental

group participants were compensated the last time they filled out the instruments because they

filled them out after school hours. The first two administrations for the experimental group were

during school hours.

Participants took approximately an hour to complete the instruments the first time they

were administered. During the second administration, the *Paragraph Completion Method* (Hunt

et al., 1978) and the *Vincenz Empowerment Scale* (Vincenz, 1990) were not given, and the

Standards-Based Implementation Survey (Seahorn, 1995) and the *Learner-Centered Battery*

(McCombs & Lauer, 1997) were added, so approximately an hour was still needed. In the third

administration of the instruments, participants took from 1 1/2 hours to 2 hours to complete all of

the instruments. They were administered in the following order: *Teacher Efficacy Scale*, (Gibson

& Dembo, 1984), *School Culture Survey* (Saphier & King, 1985), *Paragraph Completion*

Method (Hunt et al., 1978), *Standards-Based Implementation Survey* (Seahorn, 1995), *Vincenz*

Empowerment Scale (Vincenz, 1990), *Learner-Centered Battery* (McCombs & Lauer, 1997), and

demographic questionnaire.

Analyses.

Variable distributions were screened for outliers; test assumptions were evaluated in all

analyses. Repeated measures analyses of variance were used to assess differences in patterns of

change over time by group, thus, group by time effects were examined for evidence of an effect of

treatment. The sphericity assumption was met for all analyses. Correlations reflected the

associations between growth and participation in Cognitive Coaching opportunities for the

treatment group. T-tests were used to determine differences between teachers who received

Green Chair Coach training and those who did not receive the training. Gain scores were

calculated by subtracting year 1 scores from year 3 scores.

Results

Table 4 presents means and standard deviations by group for efficacy subscales. Also

listed are skewness and kurtosis for the three subscales. Teachers who received training in

Cognitive Coaching and Nonverbal Classroom Management and attended monthly Dialogue

Groups showed significant growth in teaching efficacy over time ($F = 25.74$, $p < .001$), and when

compared with a control group ($F = 7.16$, $p < .001$) (See Table 5). Differences were significant

between years 1 and 2 and 1 and 3, but not years 2 and 3. Group differences were also found in

personal teaching efficacy and outcome efficacy, but the pattern of change over time did not differ

for treatment and control groups (Table 5). No significant differences due to socioeconomic

status were found.

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Tables 4 and 5 here

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Means, standard deviations, skewness, and kurtosis by time and by group for school

culture are presented in Table 6. Teachers who participated in the treatment group grew

significantly on all three subscales of the *School Culture Survey* when compared with a control

group (Table 7). Significant differences were also found for socioeconomic status (SES) with

Teacher Professionalism and Goal Setting (Low = 3.59, SE = .076; Middle = 3.49, SE = .063;

High = 3.80, SE = .069) and Administrator Professional Treatment of Teachers (Low = 3.66, SE

= .071; Middle = 3.47, SE = .058; High = 3.67, SE = .065).

Those in the treatment group also grew significantly in career satisfaction in comparison

with the control group ($F = 5.61$, $p < .004$) and satisfaction with position between years 1 and 3

($F = 4.99$, $p = .026$), although overall scores were not significant ($F = 1.62$, $p = .20$). (See Tables

8 and 9.) It should be noted that satisfaction variables were severely skewed, which could effect

the results found in the repeated measures analyses.

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To examine effects of level of involvement in Cognitive Coaching and Nonverbal

Classroom Management, gains of treatment group participants were correlated with extent of use

variables. Teaching efficacy scores were correlated with frequency of paraphrasing (r [136] =

.19, p = .03), frequency of use of questioning skills (r [137] = .22, p = .009), frequency of

coaching students (r [137] = .17, p = .05), frequency of coaching parents (r [136] = .24, p =

.005), and frequency of use of coaching skills (r [137] = .24, p = .05). (See tables 10 and 11.)

Level of personal teaching efficacy was correlated with frequency of coaching parents (r [136] =

.21, p = .02).

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Gains on the Teacher Professionalism and Goal Setting subscale of the *School Culture*

Survey (Saphier & King, 1985) correlated with frequency of building rapport (r [135] = .18, p =

.04), number of Cognitive Coaching cycles (r [130] = .19, p = .03), and satisfaction and

perceived change as a result of participation in Nonverbal Classroom Management (r [134] = .19,

p = .03). High scores on the Administrator Professional Treatment of Teachers subscale

correlated significantly with number of Cognitive Coaching cycles (r [131] =.19, p = .03) and

satisfaction and perceived change as a result of Nonverbal Classroom Management (r [135] =.24,

p = .005). High scores on the Teacher Collaboration subscale correlated with frequency of

building rapport (r [136] = .23, p = .008), number of Cognitive Coaching cycles (r [131] = .25, p

= .004), and satisfaction and perceived change as a result of both Cognitive Coaching ($\underline{r}$ [135] = .25, $\underline{p}$ < .003) and Nonverbal Classroom Management ($\underline{r}$ [135] = .24, $\underline{p}$ = .006). (See Tables 12 and 13.) Growth on all three subscales correlated with satisfaction with and perceived change as a result of Nonverbal Classroom Management.

Tables 12 and 13 here

Table 14 compares Green Chair Coaches with other teachers who remained in the project for three years. As can be seen, teachers who received training to be Green Chair Coaches scored significantly higher on the nineteen listed variables.

Discussion

These results indicate that the interventions of Cognitive Coaching and monthly Dialogue Groups resulted in increases in Teaching Efficacy and School Culture for participants. Teachers in the treatment group also showed more favorable attitudes toward teaching as a career. It should be noted that while effects were significant, effect sizes were small.

In addition, growth occurred between years 1 and 2 and between years 1 and 3. Nonverbal Classroom Management was introduced in year 2, and these results seem to indicate that the effects are more attributable to the intervention of Cognitive Coaching than to Nonverbal Classroom Management. Furthermore, high scores in both teaching efficacy and school culture correlated with use of coaching skills. However, gain scores on school culture subscales correlated with reported change and satisfaction as a result of Nonverbal Classroom Management. In addition, significant differences were noted between teachers who received training to become

Nonverbal Classroom Management Coaches and those who did not receive this training, suggesting that this intervention might have impacted the variables listed. Another interpretation is that the teachers who received the training were already functioning at high levels in these areas.

While Nonverbal Classroom Management did not appear to affect the two instruments in this study, it is possible that other instruments may be affected by this intervention. Garfield's findings (Garfield, 1998) that Nonverbal Classroom Management impacted student time on task, transition time, and number of referrals of students to the office for disciplinary measures seem to indicate that this intervention may affect student behaviors more than teacher self-reports.

Results support findings in the literature showing positive outcomes for teachers as a result of Cognitive Coaching. And, the greater the extent of participation, the higher the scores. This latter finding has been suggested by proponents of Cognitive Coaching, but has not previously been substantiated.

Although effect sizes were small, Cognitive Coaching and Nonverbal Classroom Management appear to have had positive effects on teachers involved in the study. These results are consonant with qualitative studies which suggest that the processes impacted teacher sense of efficacy, school culture, and satisfaction (Strunk, Edwards, Rogers, & Swords, 1998).

In a perfect world, all teachers in the project would have coached each other weekly, perhaps even daily, and principals would have continually modeled coaching behaviors. In reality, many teachers in the project expressed feelings of being overwhelmed by trying to learn coaching and nonverbal management skills in addition to learning how to implement Standards-Based Education, even though the coaching and classroom management skills were intended to support

implementation of Standards-Based Education. Most principals did not attend the trainings because they needed to remain at school while their teachers attended since trainings were offered during the school day. Teachers also had other priorities besides coaching, such as engagement in Master's level programs, family concerns, and other areas needing their time and attention. Not every teacher in the project coached on a consistent basis, and not every teacher attended Dialogue Groups regularly. The findings are notable given the sporadic participation on the part of some teachers.

Another limitation of this study was its quasi-experimental nature. An ideal research design would be experimental with random assignment to treatment conditions; however, it is difficult to mandate all teachers in a school to engage in one particular process such as coaching. In addition, this project spanned three years, and it can be difficult to force teachers to keep a single focus for that long a time. On one hand, it is difficult to hold a faculty's attention on one thing over a long period of time with so many competing priorities. On the other hand, change takes time, and in order to bring about the most lasting change, ongoing training over time is necessary.

In spite of the limitations, the interventions of Cognitive Coaching, Nonverbal Classroom Management, and monthly Dialogue Groups are worth continued use and investigation. If a true experimental study were possible, this would be the ideal. If it were possible to mandate regular coaching cycles and to ensure that coaching was always done at the highest levels, we could expect stronger effects of treatment.

Future research on Cognitive Coaching could focus on the effects of this intervention on students, although the results may not be immediate. How do teacher interactions with students

change over time as teachers internalize Cognitive Coaching skills? What happens to student achievement when teachers regularly use the coaching model with students and teach students to coach each other? What happens to student satisfaction with teachers? What happens to student thinking skills? How do teacher-student relationships change at the various grade levels as a result of teacher use of coaching skills? How do teacher interactions with parents change? Does parent satisfaction with the teacher and with the school increase when teachers use coaching skills with them and with their children?

Future research on Nonverbal Classroom Management could also investigate its effects on students. Do students begin to use nonverbals that their teachers use as a result of seeing teachers model them? How does that affect their relationships with peers? How do teacher-student relationships change as a result of teachers using influence more frequently than power? Do teachers and students have fewer absences? Is there an increase in student learning because more material is covered? What happens to student self-esteem? What happens to teacher-parent relationships?

In a world in which the teacher is increasingly challenged by overcrowding, violence in the school, inadequate funding, and lack of public support, Cognitive Coaching and Nonverbal Classroom Management may provide means of changing school culture and creating an educational community in which teachers believe they can make a difference.

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Table 1

Background Variables by Group

Variable	Treatment			Control				
	X̄	SD	n	X̄	SD	n	t	p
Age	45.83	7.96	138	44.93	9.24	164	.91	.36
Years of Teaching Experience	14.47	8.62	138	15.23	8.91	164	-.76	.45
Years in Present Position	6.30	6.91	138	6.89	7.11	163	-.72	.47
Years at Present School	6.33	6.85	138	7.11	6.87	164	-.99	.33
Years in District Schools	12.35	7.99	138	12.81	8.40	164	-.49	.63
Grade Level Taught	3.67	2.37	137	4.04	2.63	160	-1.26	.21
Number of Years Subbing	1.05	2.06	137	1.08	1.90	164	-.13	.90
Year Most Recent Degree Was Awarded	1982.75	9.06	133	1984.73	9.59	159	-1.80	.07
Number of Semester Hours in the last Year	4.32	5.78	136	4.29	5.68	164	.05	.96
Number of Inservice Credits in the Last Year	2.57	2.42	130	1.54	2.04	163	3.97	.001

Table 2

Background Information by Group

Variable	Treatment (%)	Control (%)	N	Chi-Square	p
Gender					
Male	2.0	4.6	302	2.13	.17
Female	43.7	49.7			
Ethnicity					
Asian/Pacific Islander	.7	.3	302	5.10	.40
Native American/ Alaskan	.3	.0			
Hispanic	.7	2.3			
Black	.3	.7			
Caucasian	43.4	51.0			
Jewish	.3	.0			
Ethnicity					
Caucasian	43.4	51.0	302	.15	.81
Others	2.3	3.3			
Level of School					
Elementary	40.4	45.7	302	1.14	.57
Middle School	3.3	5.3			
Senior High	2.0	3.3			

table continues

Table 2 (Continued)

Background Information by Group

Variable	Treatment (%)	Control (%)	N	Chi-Square	p
Level of Education					
≤ B. S.	6.0	7.3	302	2.00	.37
≤ M. S.	18.5	17.9			
≤ Doctorate	21.2	29.1			
Enrolled in Graduate School Program					
Yes	4.7	6.6	301	.34	.59
No	41.2	47.5			
Socioeconomic Status of School					
Low	8.7	18.5	298	7.56	.02
Middle	19.5	20.5			
High	16.8	16.1			
Multiage					
Yes	17.1	14.6	164	.61	.50
No	32.0	36.0			

Table 2 (Continued)

Background Information by Group

Variable	Treatment (%)	Control (%)	$\underline{N}$	Chi-Square	$\underline{p}$
Plan to Teach Next Year					
Yes	43.1	51.5	299	5.49	.06
No	1.3	2.7			
Maybe/					
Undecided	1.3	0.0			
Would Choose Teaching Again					
Yes	40.1	46.8	297	.47	.79
No	3.7	5.7			

Table 3

Internal Consistencies of Study Measures

Measure	α	items	$\underline{n}$
Teacher Efficacy Scale			
Teaching Efficacy	.82	12	292
Personal Teaching Efficacy	.81	9	299
Outcome Efficacy	.73	7	299
School Culture Survey			
Teacher Professionalism and Goal Setting	.93	10	298
Administrator Professional Treatment of Teachers	.89	8	299
Teacher Collaboration	.87	6	301

Table 4

<u>Teacher Efficacy Scale</u> Subscale Means and Standard Deviations by Group and Time

Subscale	Treatment			Control		
	T1	T2	T3	T1	T2	T3
Teacher Efficacy						
$\overline{X}$	3.82	4.03	4.28	3.64	3.69	3.80
SD	.62	.69	.71	.65	.62	.76
n	125	125	125	138	138	138
Skewness	-.24	-.26	-.78	-.23	.08	-.05
Kurtosis	-.20	-.24	1.45	-.24	-.16	.53
Personal Teaching Efficacy						
$\overline{X}$	4.52	4.70	5.00	4.56	4.61	4.90
SD	.56	.54	.65	.60	.57	.57
n	125	125	125	138	138	138
Skewness	-.18	-.12	-1.76	-.13	-.24	-.76
Kurtosis	-.16	-.64	7.22	-.29	-.37	.55
Outcome Efficacy						
$\overline{X}$		4.71	4.88		4.40	4.55
SD		.61	.66		.71	.73
n		127	127		147	147
Skewness		-.42	-.84		-.45	-.56
Kurtosis		.29	1.67		.25	.60

<u>Note.</u> Scale was 1 to 6, where 1 = Strongly Disagree and 6 = Strongly Agree.

Table 5

Analyses of Variance of *Teacher Efficacy Scale* Subscales by Time, Group, and Socioeconomic Status

Source of Variance	Teaching Efficacy			Personal Teaching Efficacy			Outcome Efficacy		
	F	p	eta²	F	p	eta²	F	p	eta²
Within Subjects									
Time[a]	25.74	.001	.091	76.75	.001	.230			
1 vs 2	46.93	.001	.154	118.51	.001	.316			
2 vs 3	.23	.635	.001	12.98	.001	.048	14.84	.001	.052
1 vs 3	61.32	.001	.177	123.79	.001	.301			
Time x SES	1.16	.326	.009	.02	.999	.000			
1 vs 2	1.95	.144	.015	.03	.968	.001			
2 vs 3	.22	.804	.002	.01	.997	.001	.67	.514	.005
1 vs 3	1.47	.231	.010	.04	.963	.001			
Time x Group	7.16	.001	.027	2.54	.080	.010			
1 vs 2	13.09	.001	.048	3.82	.052	.015			
2 vs 3	.01	.912	.001	.59	.442	.002	.81	.776	.001
1 vs 3	13.39	.001	.045	1.73	.190	.006			
Between Subjects									
SES	.50	.610	.004	1.56	.212	.012	.09	.916	.001
Group	27.20	.001	.096	.73	.393	.003	14.90	.001	.053
SES x Group	1.82	.165	.014	.47	.624	.004	5.23	.006	.038

[a]Time refers to study years 1, 2, and 3. Outcome efficacy was not assessed in year 1.

Table 6

School Culture Survey Subscale Means and Standard Deviations by Group and Time

Subscale	Treatment			Control		
	T1	T2	T3	T1	T2	T3
Teacher Professionalism and Goal Setting						
X̄	3.48	3.66	3.70	3.70	3.66	3.61
SD	.81	.83	.81	.69	.73	.81
n	119	119	119	143	143	143
Skewness	-.63	-.61	-.84	-.81	-.44	-.58
Kurtosis	.17	.08	.67	.96	-.36	-.09
Administrator Professional Treatment of Teachers						
X̄	3.54	3.66	3.65	3.69	3.64	3.43
SD	.71	.77	.81	.68	.69	.82
n	124	124	124	143	143	143
Skewness	-.92	-.85	-.92	-1.17	-.31	-.58
Kurtosis	.94	.65	.78	2.27	-.56	-.13
Teacher Collaboration						
X̄	3.30	3.54	3.69	3.41	3.39	3.33
SD	.76	.86	.91	.81	.78	.87
n	126	126	126	144	144	144
Skewness	-.44	-.23	-.66	-.44	-.14	-.39
Kurtosis	-.13	-.84	.11	-.18	-.43	-.42

Note. Scale was 1 to 5, where 1 = Almost Never and 5 = Almost Always.

Table 7

Analyses of Variance of *School Culture Survey* Subscales by Time, Group, and Socioeconomic Status

Source of Variance	Teacher Professionalism and Goal Setting			Administrator Professional Treatment of Teachers			Teacher Collaboration		
	F	p	eta²	F	p	eta²	F	p	eta²
Time	1.39	.250	.005	2.92	.055	.011	4.24	.015	.016
1 vs 2	1.50	.222	.006	2.97	.086	.011	6.23	.011	.024
2 vs 3	1.24	.267	.005	2.85	.093	.011	.31	.578	.001
1 vs 3	.09	.768	.001	6.21	.013	.021	3.34	.069	.012
Time x SES	2.19	.069	.017	3.00	.018	.022	1.35	.251	.010
1 vs 2	3.38	.036	.026	3.87	.022	.029	.89	.414	.007
2 vs 3	.47	.625	.004	1.53	.219	.012	2.11	.123	.016
1 vs 3	4.50	.012	.031	4.34	.014	.029	1.11	.330	.008
Time x Group	5.47	.004	.021	6.13	.002	.023	9.07	.001	.033
1 vs 2	8.84	.003	.033	9.60	.002	.035	14.58	.001	.052
2 vs 3	.63	.430	.002	.28	.598	.001	.01	.958	.001
1 vs 3	10.68	.001	.037	11.54	.001	.039	14.58	.001	.049
Between Subjects									
SES	5.81	.003	.043	3.50	.032	.026	1.67	.191	.012
Group	1.17	.280	.005	.08	.779	.001	1.24	.266	.005
SES x Group	6.25	.002	.047	3.53	.031	.026	8.49	.001	.060

Table 8

Indicators of Satisfaction Means and Standard Deviations by Treatment Group and Time

| | Treatment | | | Control | | |
	T1	T2	T3	T1	T2	T3
Satisfaction with Teaching as a Profession						
$\overline{X}$	4.29	4.31	4.57	4.46	4.48	4.38
SD	.95	.85	.70	.79	.70	.84
n	121	121	121	145	145	145
Skewness	-1.88	-1.79	-2.17	-1.99	-1.83	-1.86
Kurtosis	4.14	4.44	6.76	5.62	5.39	3.97
Satisfaction with Position						
$\overline{X}$	4.24	4.35	4.34	4.49	4.43	4.30
SD	.88	.98	.94	.76	.82	1.01
n	123	123	123	145	145	145
Skewness	-1.45	-2.04	-1.94	-2.28	-1.83	-1.55
Kurtosis	2.57	4.29	4.22	7.77	4.13	1.86

Note. [a]Scale was 1 to 5, where 1 = Very Dissatisfied and 5 = Very Satisfied.

Table 9

Analyses of Variance of Indicators of Satisfaction by Time, Group, and Socioeconomic Status

Source of Variance	Satisfaction with Teaching as a Profession			Satisfaction with Position		
	F	p	eta^2	F	p	eta^2
Within Subjects						
Time	1.63	.197	.006	.63	.532	.002
1 vs 2	3.09	.080	.012	.52	.472	.002
2 vs 3	.008	.931	.001	.76	.385	.003
1 vs 3	1.52	.219	.005	1.58	.210	.006
Time x SES	.17	.955	.001	.85	.493	.006
1 vs 2	.31	.736	.002	.80	.449	.006
2 vs 3	.01	.986	.001	.91	.406	.007
1 vs 3	.13	.881	.001	.79	.455	.006
Time x Group	5.61	.004	.021	1.62	.198	.006
1 vs 2	8.94	.003	.033	3.09	.080	.012
2 vs 3	1.92	.167	.007	.001	.994	.001
1 vs 3	12.48	.001	.042	4.99	.026	.017
Time x SES x Group	2.61	.035	.020	.40	.808	.003
1 vs 2	1.44	.239	.011	.16	.857	.001
2 vs 3	3.92	.021	.029	.67	.511	.005
1 vs 3	1.15	.318	.008	.03	.968	.001
Between Subjects						
SES	1.57	.207	.012	.87	.419	.007
Group	.30	.587	.001	2.42	.121	.009
SES x Group	.82	.441	.006	1.52	.221	.011

Table 10

Correlations of *Teacher Efficacy Scale* Subscales with Use of Cognitive Coaching Skills

	Frequency of Paraphrasing			Frequency of Questioning			Frequency of Coaching Students		
	r	p	n	r	p	n	r	p	n
Teaching Efficacy									
Final Score	.19	.03*	136	.22	.009**	137	.17	.05*	137
Gain Score	.16	.07	132	.10	.25	133	.04	.68	133
Personal Teaching Efficacy									
Final Score	.14	.09	136	.08	.38	137	.03	.71	137
Gain Score	.11	.19	132	.06	.51	133	.02	.83	133
Outcome Efficacy									
Final Score	.04	.65	136	.03	.70	137	-.02	.83	137
Gain Score	.08	.35	127	.12	.19	128	.07	.46	128

*p < .05. **p < .01. ***p < .001.

Table 11

Correlations of *Teacher Efficacy Scale* Subscales with Frequency of Coaching Parents and Frequency of Use of Coaching Skills

	Frequency of Coaching Parents				Frequency of Use of Coaching Skills		
	r	p	n		r	p	n
Teaching Efficacy							
Final Score	.24	.005**	136		.24	.05*	137
Gain Score	.15	.09	132		.08	.35	133
Personal Teaching Efficacy							
Final Score	.21	.02*	136		.15	.09	137
Gain Score	.05	.56	132		.05	.53	133
Outcome Efficacy							
Final Score	.02	.81	136		.02	.82	137
Gain Score	.008	.93	127		.05	.56	128

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 12

Correlations of the *School Culture Survey* Subscales with Frequency of Building Rapport and Number of Cognitive Coaching Cycles

	Frequency of Building Rapport			Number of Cognitive Coaching Cycles		
	r	p	n	r	p	n
Teacher Professionalism and Goal Setting						
Final Score	.18	.04*	135	.19	.03*	130
Gain Score	.12	.18	128	-.04	.67	123
Administrator Professional Treatment of Teachers						
Final Score	.08	.34	136	.19	.03*	131
Gain Score	.04	.68	132	.001	.99	127
Teacher Collaboration						
Final Score	.23	.008**	136	.25	.004**	131
Gain Score	.11	.19	132	.02	.81	127
Total School Culture Survey						
Final Score	.19	.03*	135	.25	.004**	131
Gain Score	.12	.17	128	-.02	.80	123

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 13

Correlations of the *School Culture Survey* Subscales with Change and Satisfaction as a Result of Cognitive Coaching and Nonverbal Classroom Management

	As a Result of Cognitive Coaching			As a Result of Nonverbal Classroom Management		
	r	p	n	r	p	n
Teacher Professionalism and Goal Setting						
Final Score	.17	.06	134	.19	.03*	134
Gain Score	.08	.38	127	.20	.03*	127
Administrator Professional Treatment of Teachers						
Final Score	.08	.36	135	.24	.005**	135
Gain Score	.06	.51	131	.23	.008**	131
Teacher Collaboration						
Final Score	.25	.003**	135	.24	.006**	135
Gain Score	.08	.33	131	.20	.02*	131
Total School Culture Survey						
Final Score	.20	.02*	134	.25	.003**	134
Gain Score	.09	.32	127	.26	.003**	127

*p < .05. **p < .01. ***p < .001.

Table 14

Differences Between Treatment Group Green Chair Coaches and Non-Green Chair Coaches

Variable	Green Chair Coaches			Non-Green Chair Coaches				
	$\overline{X}$	SD	n	$\overline{X}$	SD	n	t	p
Effectiveness with At-Risk Students[a]	4.35	.65	23	3.97	.69	115	2.43	.017
Level of Skill As a Classroom Manager[a]	4.52	.59	23	4.12	.67	115	2.68	.008
Number of Times Coaching Someone in Formal Conference	15.78	12.05	23	8.12	6.04	114	2.97	.001
Number of Times Been Coached Formally	13.39	8.56	23	7.57	5.61	115	3.13	.004
Frequency of Building Rapport[b]	6.65	.71	23	5.96	1.50	114	3.41	.001
Frequency of Paraphrasing[b]	6.57	.66	23	5.96	1.26	114	3.35	.001
Frequency of Coaching Students[b]	6.22	.85	23	5.60	1.81	115	2.50	.015

table continues

Table 14 (Continued)

Differences Between Treatment Group Green Chair Coaches and Non-Green Chair Coaches

Variable	Green Chair Coaches			Non-Green Chair Coaches				
	$\overline{X}$	SD	n	$\overline{X}$	SD	n	t	p
Satisfaction with Nonverbal Classroom Management[c]	4.96	.21	22	4.79	.43	114	2.79	.007
Influence of PVP on Teaching[d]	4.50	.80	22	4.06	.90	114	2.06	.041
Change in Approach to Teaching From CC[e]	3.05	.84	22	2.67	.67	114	2.29	.023
Changes in Teaching Approach From NVCM[e]	3.59	.59	22	3.10	.64	114	3.37	.001
Change in Teaching Abilities from NVCM[f]	2.73	.46	22	2.39	.49	113	3.14	.004
Growth in Adapting to Individual Differences[g]	.24	.50	20	-.02	.39	105	2.63	.010

Table 14 (Continued)

Differences Between Treatment Group Green Chair Coaches and Non-Green Chair Coaches

Variable	Green Chair Coaches			Non-Green Chair Coaches				
	$\overline{X}$	SD	n	$\overline{X}$	SD	n	t	p
Relatedness[h]	4.42	.38	23	4.20	.46	115	2.09	.039
Joy of Life[h]	4.61	.34	24	4.35	.54	115	2.23	.028
Total Empowerment[h]	4.38	.28	24	4.19	.37	115	2.34	.021
Teacher Collaboration Subscale[i]	4.04	.69	24	3.57	.94	115	2.35	.020
Creates Positive Relationships[j]	3.89	.12	23	3.68	.36	114	5.07	.001
Positive Beliefs About Adolescence[k]	3.65	.24	23	3.42	.39	114	3.82	.001

Note. [a]Scale was 1-5, where 1 = Low and 5 = High.
[b]Scale was 1-7, where 1 = Never and 7 = Daily.
[c]Scale was 1-5, where 1 = Very Dissatisfied and 5 = Very Satisfied.
[d]Scale was 1-5, where 1 = Not At All and 5 = A Great Deal.
[e]Scale was 1-4, where 1 = No Change in Approach and 4 = A Major Shift in Approach.
[f]Scale was 1-3, where 1 = No Changes in Abilities and 3 = Major Changes in Abilities.
[g]This was computed by subtracting 1994 scores from 1997 scores.
[h]Scale was 1-5, where 1 = Almost Always Untrue and 5 = Almost Always True.
[i]Scale was 1-5, where 1 = Almost Never and 5 = Almost Always.
[j]Scale was 1-4, where 1 = Almost Never and 4 = Almost Always.
[k]Scale was 1-4, where 1 = Strongly Disagree and 4 = Strongly Agree.

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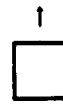| The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
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