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ABSTRACT

This study compared 96 high efficacy and 93 low efficacy elementary teachers regarding a variety of cognitive, affective, and behavioral factors associated with classroom management and discipline of at-risk students. Quantitative and qualitative data were collected in relation to: teachers causal attributions for student misbehavior, expectancy for student behavior improvement, emotional reactions to student misbehavior, student control ideology, and recalled frequency of using restrictive and positive intervention strategies. A series of analysis of variance procedures indicated that high efficacy teachers were less likely to judge their difficult students as having chronic behavior problems; more likely to expect student behavior improvement; less likely to feel angry, embarrassed, or guilty about student misbehavior; more likely to like problem students; and more likely to feel confident about being able to manage misbehavior. Path analysis supported the development of a model in which low teacher efficacy, mediated by anger and stress, predicts usage of severe punishments. The study showed support for the construct of teacher efficacy as an important marker of general teacher effectiveness in the domain of classroom management. The questionnaire is appended. (Contains 99 references.) (SM)

High Teacher Efficacy as a Marker of Teacher Effectiveness in the Domain of Classroom Management

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"If our purpose and intent are to change the practices of those who teach, it is necessary to come to grips with the subjectively reasonable beliefs of teachers."

(Fenstermacher, 1978)

"Teachers' greatest impact may be in how they respond to individual differences."

(Good & Tom, 1985)

ABSTRACT

This study compared 96 high efficacy and 93 low efficacy teachers to explore a variety of cognitive, affective, and behavioral factors associated with classroom management and discipline of at-risk students. Quantitative and qualitative data were collected in relation to the following variables: (a) teachers' causal attributions for student misbehavior, (b) expectancy for student behavior improvement, (c) teachers' emotional reactions to student misbehavior, (d) pupil control ideology, and (e) teachers' recalled frequency of usage of restrictive and positive intervention strategies. A series of analysis of variance procedures indicated that high efficacy teachers were less likely to judge their difficult students as having chronic behavior problems, more likely to expect student behavior improvement, less likely to feel angry, embarrassed or guilty about student misbehavior, more likely to like problem students, and more likely to feel confident about being able to manage misbehavior. Path analysis supported the development of a model in which low teacher efficacy, mediated by anger and stress, predicts usage of severe punishments. Support for the construct of teacher efficacy as an important marker of general teacher effectiveness in the domain of classroom management was found. Implications for teacher selection, preservice education, and inservice training are discussed.

INTRODUCTION

This study explored the relationships between teacher efficacy and teachers' attributions, expectations, emotions, control beliefs, and intervention strategies used in problem behavior situations. Although teachers should be able to plan appropriate lessons, present new content clearly, and assign suitable practice activities (Hunter, 1982), they must also be able to create non-disruptive classroom environments in order to provide for optimal student learning (Doyle, 1986). Since many teachers demonstrate difficulties in handling problem behaviors and establishing discipline (Brown & Payne, 1988; Kyriacou & Sutcliffe, 1978), and since the processes by which successful teachers negotiate order in the classroom are poorly understood (Shulman, 1986), it is of interest to examine certain cognitive, emotional, and behavioral factors associated with effective classroom management and effective teaching.

The motivational construct of self-efficacy inspired the present investigation. Teacher efficacy refers to teachers' confidence in their ability to bring about student learning and positive change (Ashton & Webb, 1986). Teachers high in teacher efficacy believe that teaching makes a difference and that they personally can effect student learning, while teachers low in teacher efficacy believe that the action of teaching has little influence and that they cannot regulate student learning. Since research in the area of teacher efficacy has found intriguing relationships between high teacher efficacy and improved student achievement in math and reading (Armor et al., 1976; Ashton & Webb, 1986; Berman, McLaughlin, Bass, Pauly, & Zellman, 1977), teacher efficacy is sometimes considered to be a general indicator or predictor of teaching effectiveness. Recently investigators have been calling for additional research into *situation-specific* teaching efficacy (Gibson & Dembo, 1984; Korevaar, 1990; Meijer &

Foster, 1988; Schunk, 1984). This study explored whether high efficacy and low efficacy teachers develop qualitatively different thoughts, emotional responses, expectancies, control ideologies, and behavior management strategies in discipline problem situations.

While all teachers encounter countless professional decisions and tasks in the course of a single school day (Clark & Peterson, 1986; Jackson, 1968; Shavelson & Stern, 1981), some teachers seem to handle more efficiently and elegantly the on-going challenge of creating functional, well-managed, classroom environments (Brophy & Evertson, 1976; Kounin, 1970). Certainly, some children distinguish themselves from their classmates by demonstrating conduct disorders, hyperactivity, aggression, and defiant behaviors (Edelbrock & Achenbach, 1984; Epstein, Kauffmann, & Cullinan, 1985; Offord, 1986), and teachers agree that students who show these externalizing behaviors can be especially difficult to motivate, control, and discipline (Feshbach, 1969; Fuller, 1969; Gesten, Cowen, DeStefano, & Gallagher, 1978; Safran & Safran, 1984; Safran, Safran, & Barcikowski, 1985; Walker, Bettes, & Ceci, 1984; Wheldall & Merrett, 1988). However certain teachers, instead of rejecting these students, seem to greet the challenge; they persist in their efforts and whether through positive reinforcement, more consistent discipline, or force of personality, succeed with hard-to-handle students where others have failed. Why are some teachers so successful with hyperactive and aggressive students? Is there a characteristic "frame of mind" or dispositional attitude that these teachers bring to the classroom milieu? Can this mind set be identified and analyzed to explain differences in situational teacher effectiveness and implementation of disciplinary tactics?

The psychological construct of teacher efficacy has already provided investigators with a useful tool to begin understanding teacher motivation and perseverance relating to student learning. However, researchers do not know

enough about teacher efficacy and classroom management. Why are some teachers motivated to put forth extra energy and effort to help students with behavior problems, while other teachers quickly despair and reject such students? My objective in this study was to clarify the nature of the efficacy construct within the domain of classroom management and attempt to contrast the attributional thoughts, emotions, beliefs, and strategies of effective/efficacious teachers and ineffective/inefficacious teachers.

It is reasonable to suppose that when instructors with high teacher efficacy encounter various discipline problem situations such as aggressive/defiant behavior or hyperactive behavior, they will tend to feel more efficacious, and personally confident about being able to manage such student behavior, but this has not been studied previously. The purpose of my research is to ascertain whether high teacher efficacy is systematically related to any specific teacher attributions, emotions, beliefs, or particular intervention strategies associated with the successful management of externalizing student behavior. This project draws on the recommendations of Gibson and Dembo (1984), Korevaar (1990), Meijer and Foster (1988), and Schunk (1984), who have called for investigations to elaborate our understandings of teacher efficacy and teacher thought processes which relate to well-defined functions.

This study seeks to answer several related questions. First, and most generally, do high efficacy teachers and low efficacy teachers think and feel differently about problem behavior? For example, are efficacious teachers more likely to view student misbehavior as caused by factors internal to the student, temporary, uncontrollable, and unintentional? Do high efficacy teachers have greater expectancy for problem behavior improvement than low efficacy teachers? Do high efficacy teachers experience less anger, more pity, less embarrassment, more guilt, more confidence, and report liking discipline problem students more?

Additionally, I am investigating whether high and low efficacy teachers differ in terms of pupil control ideology. Pupil control ideology is an established construct that defines teachers' beliefs towards students along a continuum from *humanistic* at one end, to *custodial* at the other. Do high efficacy teachers tend to report humanistic beliefs regarding student management, while low efficacy teachers tend to report custodial beliefs? Finally, are high efficacy teachers and low efficacy teachers distinct in recalled usage of restrictive and positive disciplinary strategies?

RATIONALE AND RELEVANT RESEARCH

Self-Efficacy Research

Recent research paradigms in cognitive psychology have emphasized the importance of teachers' thought processes (Clark & Peterson, 1986; Fenstermacher, 1978; House, Lapan, & Mathison, 1989; Munby, 1982; Shavelson & Stern, 1981; Shulman, 1986), values (Ames, 1983; Ames & Ames, 1984), and beliefs (Cooper, Hinkel, & Good, 1980; Good, 1981) as mediating variables affecting teacher behavior and student behavior. Bandura's theory of self-efficacy (1977, 1982) is of particular interest in this investigation, especially since recent studies have found significant relationships between teacher sense of efficacy and improved reading and math achievement in students (Armor et al., 1976; Ashton & Webb, 1986; Berman et al., 1977). Teachers who report a strong belief in the importance of teaching and a strong belief in their ability to personally affect learning have students who show significantly higher academic achievement.

Bandura (1977, 1982) proposed that self-efficacy beliefs influence thought patterns, emotions, and actions. In Bandura's multidimensional model, behavior is motivated by two variables (a) a general outcome expectancy (belief that certain actions will lead to desirable outcomes) and (b) a sense of self-efficacy (belief that

one is capable of performing certain actions). In Bandura's model (1982), expectations of personal efficacy are derived from four principal sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. He argued that judgments of self-efficacy are inferred as individuals weigh and integrate these personal and situational factors. In addition, he described self-efficacy as determining initiation of coping behavior, effort expenditure, and task persistence in the face of adverse experiences. Research relating to Bandura's postulated formulations on self-efficacy has largely substantiated his framework. Efficacy beliefs seem to mediate heart attack rehabilitation, career choice, heroin addiction relapse, anxiety relating to snake phobias and agoraphobia, and smoking cessation behavior (Bandura, 1982). Although other theorists have developed motivational frameworks to explain the explanatory power of human agency as a psychological force (deCharms, 1976; Heider, 1958; Rotter, 1966), the construct of self-efficacy is particularly compelling and has inspired the present investigation.

The conception of teacher efficacy, as developed by Armor et al. (1976), Ashton and Webb (1986), Berman et al. (1977), Dembo and Gibson (1985), and Denham and Michael (1981) corresponds to Bandura's general self-efficacy framework. These teacher efficacy theorists distinguish between two dimensions of teacher efficacy: (a) *teaching efficacy*, a teacher's belief that teaching can influence student learning despite family background, socioeconomic status, and school factors, and (b) *personal teaching efficacy*, a teacher's conviction that he or she can personally be effective as a change agent. The first factor, teaching efficacy, relates to Bandura's dimension of general outcome expectancy (a person's estimate that a given behavior will lead to certain outcomes), while the second factor, personal teaching efficacy conforms to the dimension of self-efficacy (a person's self-appraisal of capability).

Ashton adapts Bronfenbrenner's (1976) ecological approach and describes the development of teacher efficacy within a nested arrangement of four interrelated systems: the microsystem, the mesosystem, the exosystem, and the macrosystem (see Ashton, 1984). Ashton and Webb propose that teachers' efficacy beliefs are negotiated daily, on an on-going basis, dependent upon classroom situations, interpersonal transactions, school environment, and educational culture. Ashton (1984) warns, "teachers' sense of efficacy is in continual jeopardy, in danger of attack by resistant or hostile students, angry parents, demanding administrators, and dissatisfied colleagues." She expresses urgency for more research to expand understanding of teacher efficacy.

In Bandura's original treatise on self-efficacy, he presented an "Efficacy Expectation" chart that listed attributions and emotional arousal as principal sources of efficacy information (Bandura, 1977, p. 195). The present study examined associations between teacher efficacy, specific attributions, and emotional responses, to extend, empirically analyze, and perhaps validate, Bandura's claim. In order to understand more about teacher efficacy in specific situations of hyperactive or aggressive classroom management challenge, this investigation must involve an in-depth consideration of teachers' concomitant causal ascriptions about and emotional responses to student misbehavior.

Attribution Theory, Emotions, and Teachers

The early work of Heider (1958), deCharms (1968), and Rotter (1966), influenced the development of Weiner's (1979) attributional theory of motivation. For Weiner, humans are motivated to search for understanding when unexpected events, especially failure experiences, are encountered. Primarily studied in achievement and helping situations, attribution theory allows for the dimensional analysis of causal ascriptions.

Weiner defines three primary dimensions: locus of causality, stability, and controllability. Locus refers to the location of a cause, either internal or external to the subject; stability describes whether the cause is permanent (stable) or temporary (unstable); and controllability reflects whether cause can be regulated by the individual. Some typical causes are ability, effort, task difficulty, and luck. In Weiner's attributional scheme, ability is described as internal, stable, and uncontrollable, effort is internal, unstable, and controllable, task difficulty is external, stable, and uncontrollable, and luck is external unstable and controllable.

Each dimension of causality relates to certain psychological consequences. The locus dimension relates to self-esteem and pride. When subjects make internal attributions after failure experiences, they tend to experience decreased self-esteem, but when they make internal attributions after success experiences they feel greater pride and self-esteem. Since pride and self-esteem have been shown to foster achievement strivings, internal causal ascriptions are desirable and generally motivational following success experiences.

The dimension of stability influences expectancy. When individuals experience success and attribute the cause of their success to stable factors such as ability, they are likely to expect future success, but when they encounter failure and make similar stable attributions, they perceive that future success is unlikely or impossible. Making unstable causal attributions in the face of failure (for example, "this happened because of bad luck or poor effort") has been shown to increase subject persistence. The dimension of controllability relates to emotions such as anger, guilt, pity, and shame. We find that individuals experience anger when success is thwarted due to factors controllable by others, and guilt when failure seems due to internal controllable causes such as lack of effort or neglectfulness. Pity is felt when the failure experiences of others are perceived as caused by uncontrollable factors (such as lack of ability or handicap), and shame or

embarrassment is felt when failure seems due to internal uncontrollable causes such as low ability. When guilt is experienced, goal-directed activity is increased, but shame tends to lead to task withdrawal.

Research on teacher attribution has documented many of these associations. Several studies have substantiated the locus-esteem relationship. Investigators have found that teachers tend to take the credit when their students perform well by making ego-enhancing attributions, but assign blame to students when they perform poorly by making ego-defensive attributions (Beckman, 1970; Brandt, Hayden & Brophy, 1975; Darom & Bar-tal, 1981). Medway (1979) found that teachers attributed home problems as major causes of students' behavior difficulties. By blaming student failure on external causes, teachers "save face" and protect their self-images.

Additional teacher attribution research offers some interesting findings. Cooper and Burger (1980) found that in academic failure conditions, teachers intend to work more with students when the failure is ascribed to internal unstable causes, such as lack of student interest in the subject. This is an example of the stability-expectancy relationship. When teachers see student failure as potentially avoidable through personal intervention, expectancy for future student improvement is enhanced, and teacher persistence is increased.

The attributional dimension of controllability has been shown to be associated with certain teacher emotions and behavior intentions. Covington and Omelich (1979) found that teachers are most likely to reward students when success is seen as due to effort, a controllable cause, while Medway (1979) found that teachers tend to exhibit more anger, rejection, and punishment when failure is seen as due to effort. Brophy and Rohrkemper (1981) demonstrated that teachers are less committed to helping students when they perceive problem causality to be controllable by the student.

Basic concepts from attribution theory contributed to this investigation of teacher efficacy. In order to understand the dynamic relationship between efficacy beliefs and teacher thought and affect in problem situations, researchers first need to collect information about specific types of attributions and emotions in salient contexts (Schunk, 1984). In the present study, actual student behavior problems (i.e., hyperactive behavior, aggressive behavior, and hyperactive/aggressive combination behavior) served as contexts for attributional and emotional response analyses. A growing body of research provides evidence of the influence of thoughts and emotions on social behavior, but thus far no attempts had been made to compare differences in teacher efficacy beliefs with causal and affective experience in situations involving classroom management challenge.

Pupil Control Ideology

In order to contrast the specific classroom control beliefs of high efficacy and low efficacy teachers, the variable of pupil control ideology was included in the study design. Conceptualized by Willower, Eidell, and Hoy in 1967, pupil control ideology is a psychological construct that defines teachers' beliefs towards students and classroom discipline along a continuum from *humanistic* at one extreme to *custodial* at the other. A teacher with a humanistic orientation towards control is more likely to possess beliefs that emphasize an accepting, trustful view of students and an optimistic perspective towards student self-responsibility and cooperation. Students are seen as reasonable people needing sympathetic understanding and permissive regulation. A teacher with a custodial orientation toward control, however, is more likely to express beliefs that emphasize the maintenance of order, distrust of students, and a moralistic stance towards deviant behavior. Students are seen to be irresponsible untrustworthy, lacking in respect and obedience, and in need of firmness, strictness, and punishment.

Two research studies have suggested that perceptions of efficacy may be related to pupil control ideology. Barfield and Burlingame (1974), using a 5-item, politically-oriented efficacy instrument (efficacy was defined as a positive attitude toward accomplishing things through politics), found that teachers with low senses of efficacy possessed more custodial beliefs toward students and control than teachers with average or high perceptions of efficacy. In a more recent study, Woolfolk and Hoy (1990) conducted a component analysis of teacher efficacy and found that prospective teachers with high teaching and personal efficacy tend to be more humanistic in their pupil control ideology.

In the present investigation, I utilized a more psychometrically adequate and established teacher efficacy measure than was used in the Barfield and Burlingame study and I assessed experienced teachers, not preservice teachers as Woolfolk and Hoy did. I sought to investigate whether belief structures specific to custodial or humanistic orientations may act as intervening variables that contribute to teacher usage of various positive or restrictive intervention strategies.

Intervention Strategies

Intervention strategies are the actions teachers use to solve the problem of order in their classrooms. In the present study, I was initially concerned with two broad classes of intervention strategies: (a) positive intervention strategies and (b) restrictive intervention strategies. Positive strategies were defined as teacher behaviors that involve aspects of reward, positive reinforcement, and encouragement. Restrictive strategies were defined as teacher behaviors that include aspects of punishment, negative reinforcement, and chastisement. I sought to discover whether specific intervention strategies tend to be differentially utilized by teachers depending on the individual difference variables of teacher efficacy

and control ideology, as well as on teacher attributions for problem causality and emotional responses to misbehavior.

Research Questions

The specific questions to be addressed were:

1) Do teachers' attributions (locus, stability, controllability, and intentionality) for problem student behavior differ? Do high efficacy teachers tend to perceive student problem behaviors as more internal, unstable, uncontrollable, and unintentional than low efficacy teachers?

2) Do high efficacy and low efficacy teachers tend to differ in expectancy? Do high efficacy teachers have greater expectancy for student behavior improvement?

3) Do high efficacy and low efficacy teachers report different patterns of emotional response to student misbehavior? Do teachers differ in experienced anger, pity, embarrassment, guilt? Do high efficacy teachers like problem behavior students more and experience greater situational personal efficacy?

4) Are teacher efficacy beliefs related to pupil control ideology? Do high efficacy teachers tend to possess *humanistic* orientations towards student discipline? Do low efficacy teachers tend to possess *custodial* orientations towards student discipline?

5) Do teacher efficacy beliefs relate to usage of *restrictive* and *positive* intervention strategies? Do high efficacy teachers recall using more

positive strategies with difficult students, than low efficacy teachers? Do high efficacy teachers utilize a greater repertoire of intervention strategies (both positive and restrictive) overall?

6) If there is a relationship between teacher efficacy and intervention strategy usage, is the relationship direct or indirect? What intervening variables predict teacher usage of intervention strategies?

Methods

The primary subject pool consisted of 289 elementary school teachers, grades kindergarten through sixth, employed in 21 urban area public schools in a large western city. Subjects' ranked efficacy scores were used to identify the high efficacy and low efficacy teachers compared in most analyses: those falling into the top third of the efficacy distribution were labeled as "high efficacy," while those falling into the bottom third of the efficacy distribution were labeled as "low efficacy."

All 289 teachers in the primary sample were full-time, credential-bearing instructors. Teachers in the sample were assigned to regular (non-special education classroom) programs. Exemplifying the familiar elementary school female/male sex distribution disparity, 83.4% of the subjects were female, and 15.2% were male, while 1.4% of subjects did not indicate their sex. Teachers represented the following ethnic groups: 8.7% African American, 7.3% Asian/Pacific Islander, 11.8% Latino, 1% Native American, 62.3% White, and 6.2% "Other;" 2.8% chose not to indicate their ethnicity. The subjects tended to be relatively mature, experienced, and well-educated. (See Table 1.)

Subject participation was voluntary. Recruitment and participation of

Table 1

Age, Years Employed, and Educational Level of Subjects: Percentage of Sample Represented

Age	
20 to 30	15.6%
31 to 40	27.7%
41 to 50	31.5%
51 or above	23.9%
(missing)	1.4%

Years Employed	
0 to 1 years	5.5%
1 to 5 years	17.0%
6 to 10 years	20.1%
11 to 15 years	13.8%
16 to 20 years	12.1%
20 to 25 years	13.1%
25+ years	17.3%
(missing)	1.0%

Highest Level of Education	
Bachelor's degree	56.4%
Master's degree	42.2%
Ph.D.	.7%
(missing)	.7%

teachers was approved by the principal at each campus. Teachers were contacted by delivery of study materials to school mailboxes. Each subject received a small good will fee in the form of a fresh one-dollar bill paper-clipped to the cover letter of their questionnaire booklet. Subject participation remained anonymous unless subjects voluntarily chose to identify themselves as interested in participating in a paid audiotaped interview. Eight teachers were subsequently interviewed and paid a $40.00 interview fee. (One teacher adamantly refused to accept the fee, preferring to participate as a professional courtesy.) Notes returned with some questionnaires indicated that many subjects enjoyed responding to the survey, finding the experience to be interesting and professionally gratifying. The participation of subjects in the study was in accordance with the ethical standards of the University of California Human Subjects Protection Committee.

Procedure

The data collection occurred in two complementary phases:

Phase 1: Administration of the paper/pencil research questionnaire for quantitative data analysis, and

Phase 2: Classroom observations and audiotaped teacher interviews for collection of qualitative data.

Phase 1: Administration of the Questionnaire

The research questionnaire was designed to maximize clarity, ease-of-use, attractiveness, and compliance with human subject regulations. (See Appendix A for a sample of the questionnaire booklet.) Study forms were stapled together into a single 14-page booklet. All subjects received the same research instruments:

1. Cover Letter/Statement of Anonymity and Confidentiality
2. Teacher Efficacy Scale
3. Select a Student Form
4. Student Behavior Scale (IOWA Conners Teacher Rating Scale)
5. Teacher Attribution and Affect Scale
6. Intervention Strategies Scale
7. Pupil Control Ideology Scale
8. Demographic Survey

Subjects were advised that they would need about 15 to 20 minutes to complete all instruments. Pre-stamped return envelopes were provided. The cover letter requested that the questionnaire be completed and mailed within two to three days. A strong questionnaire return rate of 60% was achieved: 503 survey packages were distributed at 21 school sites, and 304 were completed and returned.

Instruments

The following items composed the complete study questionnaire:

1) Cover Letter/Statement of Anonymity and Confidentiality

On this form, subjects were thanked for participating and directed to complete the forms anonymously and candidly. A general explanation about the focus of the study and the contents of the questionnaire was offered. Assurances were made that reports would be statistically analyzed and that no identifying information would be released.

2) Teacher Efficacy Scale

Teacher sense of efficacy was assessed using the Teacher Efficacy Scale, developed and validated by Gibson and Dembo (1984). The instrument consists of 16 items presented in a Likert scale format in which teachers select a number:

from 1 = "strongly agree" to 6 = "strongly disagree," to indicate their level of agreement with each individual statement. Gibson and Dembo factor analyzed and reduced the number of prompts in the existing instrument from a pool of 30 sample items. Example items are:

> When I really try, I can get through to most difficult students.
> *(Personal Teaching Efficacy)*
>
> The amount that a student can learn is primarily related to family background.
> *(Teaching Efficacy)*

Gibson and Dembo worded some items positively and some negatively to provide a balanced presentation. In this way, subjects who mark "strongly agree" on positively phrased items and "strongly disagree" on negatively phrased items, receive high efficacy scores, while those who mark "strongly agree" on a negatively phrased items and "strongly disagree" on positively phrased items, receive low efficacy scores. In the above examples, agreeing with the first item is a high efficacy choice ("I can..."), but agreeing with the second item is a low efficacy choice, since blaming parents for poor student learning is not reflective of a strong belief that teaching can be effective. In the actual scoring of the Teacher Efficacy Scale, some items are necessarily scored in reverse, or weighted, to account for this difference in positively and negatively worded items.

Although the test can be scored separately for dimensions of personal teaching efficacy and teaching efficacy, study subjects were given a global efficacy score. Potential global scores on the Teacher Efficacy Scale range from 16 to 96. (Gibson and Dembo describe calculation of difference scores, personal teaching efficacy minus teaching efficacy, and report reliability scores for personal teaching

efficacy, teaching efficacy, and total scale as .78, .75, and .79, respectively, finding support for use of composite scores.) Test developers demonstrated a multitrait-multimethod analysis that supported both convergent and discriminant validity by analyzing data from teachers on three traits (teacher efficacy, verbal ability, and flexibility) across two methods. Analysis of internal consistency yielded .79 for the total 16 items.

The present investigation focused primarily on analysis of differences between high efficacy teachers and low efficacy teachers. Since research involving teacher efficacy is in the beginning stages, no norm-referenced criteria or established cut-off scores for identifying high and low efficacy teachers exist. In the present investigation, high efficacy teachers were defined as those subjects whose efficacy scores fell into the top third of the sample's efficacy distribution, while low efficacy teachers were defined as those subjects whose efficacy scores fell into the bottom third of the sample's efficacy distribution. This scale was untitled and presented first in the questionnaire booklet so that teacher efficacy could be assessed without subject exposure to potential emotional cues.

3) Select a Student Form

In order to collect data on actual students, this study employed a method similar to that utilized by Medway, (1979) and Christenson, Ysseldyke, Wang, and Algozzine (1983). These researchers surveyed teacher attributions using natural samples of students referred by their teachers for psycho-educational evaluation. In a similar fashion, Tollefson, Melvin, and Thippavajjala (1990) used a structured questionnaire to ask teachers to describe a student with a pattern of low achievement. Both studies involved assessment of teachers' feelings and behaviors toward students.

In this study, each teacher was directed to identify a student who had been in his or her class for at least four weeks and who was exhibiting the most severe behavior problem in the class. Teachers were informed that they would be asked to rate this student's behavior and describe perceived causes of and reactions to this behavior. On the "Select a Student" form, children were identified by first name only to insure their anonymity. The form purposefully allows teachers to elect students based on their own perceptions and assessments regarding "severe problem behavior;" specific externalizing behavior labels such as "hyperactive" and "aggressive" do not appear. After selecting the student, teachers were directed to indicate the student's grade in school, sex, whether the student had ever repeated a grade in school, current academic performance, and student ethnicity.

4) Student Behavior Scale (IOWA Conners Teacher's Rating Scale)

Although other behavior checklists were considered, such as the Achenbach Teacher's Child Behavior Profile (Edelbrock and Achenbach, 1984), the original Conners Rating Scale (Goyette, Conners, & Ulrich, 1978), the ACTeRS Scale (Ullmann, Sleator, & Sprague, 1984a), and the Walker and Severson 11-item Maladaptive Student Behavior Index (1990), the IOWA Conners Teacher's Rating Scale was selected for brevity and ability to identify students separately as being exclusively hyperactive, exclusively aggressive, or both aggressive and hyperactive. The 10-item IOWA test was empirically derived by Loney and Milich (1982), by factor analyzing individual items from the longer Conners Teacher's Rating Scale and correlating selected items with certain subscale factors. The resultant scale was named "IOWA Conners Teacher Rating Scale." The letters in IOWA are an acronym for Inattention-Overactivity With Aggression.

Sample items from the IOWA are: *fidgeting, hums and makes other odd noises, excitable/impulsive, quarrelsome, acts "smart"*, and *temper outbursts.*

Items 1 to 5 compose the hyperactive "IO" (inattention/overactivity) subscale, while items 6 to 10 compose the aggressive "A" subscale. Items are to be checked by teachers on a scale including "not at all," "just a little," pretty much," and "very much." Score values for each item are "not at all" = 0, "just a little" = 1, "pretty much" = 2, and "very much" = 3. Teacher ratings were scored by summing numbers for all items.

In order to provide a standardized definition for maladaptive behavior in this study, I adopted Loney and Milich's clinical screening recommendations for diagnosis. The clinical screening score cutoff point is 7 for the hyperactivity subscale, and 4 for the aggression subscale. In this study, students were categorized as follows:

IO subscale score > 7 = "Hyperactive"

A subscale score > 4 = "Aggressive"

IO > 7 *and* A >4 = "Aggressive Hyperactive"

The literature demonstrates that teachers identify aggressive, and hyperactive/aggressive combination students as the most severe types of behavior problems (Fuller, 1969; Gesten, Cowen, DeStefano, & Gallagher, 1978: Safran & Safran, 1984; Safran, Safran, & Barcikowski, 1985; Walker, Bettes, & Ceci, 1984; Wheldall & Merrett, 1988). In this study, the 189 problem students selected by high and low efficacy teachers were categorized as follows: 21 students = hyperactive only, 33 students = aggressive only, and 135 students = hyperactive/aggressive. Since the directions specifically prompted teachers to "*Choose a student who seems to exhibit the most severe behavior problem in your class*," it is not surprising that subjects tended overwhelmingly to select students with hyperactive/aggressive problems.

5) Teacher Attribution and Affect Scale

This page was not labeled in the questionnaire booklet since the terms "attribution" and "affect" might be unknown or confusing to teachers. Teachers were directed to think about the student they selected and respond to six emotion, four attribution, and one expectancy item. Participants indicated the degree to which they agreed and disagreed with the emotion statements by circling a number on a 5-point Likert scale. Anchors for these six prompts are "strongly disagree" and "strongly agree." The six emotion items are:

1) I feel angry when this student misbehaves.
2) I feel sorry for this student.
3) If a visitor came into my class when this student was misbehaving, I would feel embarrassed.
4) I feel confident about being able to manage this student's behavior.
5) I feel guilty about this student's misbehavior.
6) I like this student.

In addition, the form has four attribution items (for locus, stability, controllability, and intentionality), and one expectancy item, all of which are scored on a 5-point Likert scale. These items and anchors are indicated below:

7) This student's behavior is:

caused by something internal to the student	1	2	3	4	5	caused by something external to the student

8) This student's behavior is:

chronic	1	2	3	4	5	temporary

9) This student's behavior is:

controllable by the student	1	2	3	4	5	not controllable by the student

10) This student misbehaves:

on purpose	1	2	3	4	5	not on purpose

11) While in may class, I expect this student's behavior to:

improve a lot	1	2	3	4	5	not improve at all

The Attribution and Affect Scale was developed for this study, but the wording of the items was patterned after those used in many other studies (Darom & Bar-tal, 1981; Dusek & Joseph, 1983; review by Stipek & Weisz, 1981).

6) Intervention Strategies Scale

This scale was developed in order to assess the recalled usage of typical positive and restrictive discipline strategies employed by teachers. Although a general 12-item scale had been developed by Cunningham and Sugawara (1989), the items seemed inadequate to assess the possible scope of behaviors that teachers commonly utilize. The pilot/developmental work for this instrument involved asking six elementary teachers to generate lists of possible teacher intervention strategies. The prompt was, "What are the motivation

strategies and punishments teachers use when they have to control hard-to-handle children?" Responses included items such as, "Write names on the board," "Let students earn rewards and privileges," "Send to the principal's office," etc. Subsequently, the list was refined and the strategies were rated (forced-choice) as "positive" or "restrictive" by six educational psychology graduate students and four classroom teachers. Personal warmth, encouragement, rewards and various positive motivational techniques were rated as "positive strategies," while specific punishments and negative consequences were rated as "restrictive strategies."

Thirteen positive and 13 restrictive intervention strategies were selected for the final 26-item instrument and ordered using a random numbers method. Positive strategies are items 3, 4, 5, 8, 9, 11, 14, 15, 19, 20, 21, 24, 25, and restrictive strategies are items 1, 2, 6, 7, 10, 12, 13, 16, 17, 18, 22, 23, 26.

Examples of positive items include:

* I have related lesson content to this student's special interests.
* I have allowed this student to choose his or her own rewards for good conduct.
* I have given this student a special job or responsibility in the classroom.

Examples of restrictive items include:

* I have benched this student during recess or lunch.
* I have required this student to do extra class work or homework for behavior infractions.
* I have had this student suspended from school.

Teachers were directed to recall frequency of usage of intervention strategies on a 5-point Likert scale. Anchors were "never," "sometimes," and "often." Although the problematic possibility of obtaining socially desirable responses could not be completely avoided, this measure was uniquely designed to target not recalled general classroom management behavior, but situation specific intervention behavior. Each item was written to include the term, "this student." For example,

1. I have let *this student* earn special rewards or privileges.
2. I have benched *this student* during recess or lunch.

It was predicted that the specificity of the prompt would provoke teachers' specific memories and that these specific memories might allow for greater reporting accuracy. Directions at the top of the form were purposefully worded to give teachers encouragement and permission to report the full range of rewards and punishments.

After the teacher response data was collected, the Intervention Strategies Scale was factor analyzed resulting in the emergence of a three-factor solution. (See "Factor Analysis" in Results section, p. 38.) The original positive intervention strategies factor emerged as predicted and was labeled "Rewards," but the original single restrictive intervention strategies factor seemed to be better conceptualized as two separate factors: "Negative Consequences" and "Severe Consequences." Thus, high efficacy and low efficacy teachers were compared on usage of

(a) Rewards, (b) Negative Consequences, and (c) Severe Punishments.

7) Pupil Control Ideology Scale

Pupil control ideology was measured by a 20-item instrument called the Pupil Control Ideology Scale (Willower, Eidell, & Hoy, 1967). It is an established and accepted scale, used in over 200 studies. The measure asked teachers to indicate their response to a variety of statements, for example:

* It is desirable to have students sit in assigned seats during assemblies.
* A few pupils are just young hoodlums and should be treated accordingly.
* Being friendly with pupils often leads them to become too familiar.
* Beginning teachers are not likely to maintain strict enough control over their pupils.

Teachers indicated their agreement or disagreement with the statements using a 5-point Likert scale: from 5 = "strongly agree," to 1 = "strongly disagree." The theoretical range of subject scores on the Pupil Control Ideology Scale is from 20 to 100. A higher score indicates hat a teacher's orientation toward student control is more *custodial*, while a lower score indicates that a teacher's orientation is more *humanistic*. Studies report split-half reliability coefficients ranging from .70 to .93 (Hoy, 1976; Woolfolk & Hoy, 1990). Validity checks have been conducted by comparing mean scores of teachers who worked at schools with reputations known to be humanistic (typically democratic, trusting atmospheres, two-way student-teacher communication and student individuality allowed) and schools with reputations known to be custodial (typically rigid, highly controlled settings, with unilateral flow of power and communication downwards, and atmospheres of pessimism and mistrust). Teacher difference scores have been reported to be significant at the .01 level, using a t-test of the difference of the

means (Barfield & Burlingame, 1974). The measure is considered to be relatively valid.

8) Demographic Survey

Standard demographic information about teacher age, sex, years employed, level of education, experience in supervisory capacities, number of students in class, number of behavior problems in class, and academic level of students was solicited. In addition, a few questions regarding school climate, stress, and job satisfaction were asked. The final item explained that the researcher would need to conduct confidential interviews with a few respondents in order to gather more information about teacher attitudes and opinions relating to problem student behavior. The interview was optional for teachers and a $40.00 inducement fee was proffered. Interested teachers were asked to print their names, phone numbers, and school names, in order that they might be contacted.

Phase 2: Teacher Observations and Interviews

In order to supplement empirical data analyses and have access to more in-depth narrative descriptions of differences between high efficacy and low efficacy teachers in problem behavior situations, four high efficacy teachers and four low efficacy teachers were selected for Phase 2 observation and interviewing. The purpose of this qualitative or ethnographic exploration was to collect information about how individual efficacious and inefficacious teachers differently assess causality of hyperactive and aggressive student behavior, respond emotionally to misbehavior, analyze and cope with challenging situations, and make decisions about usage of rewards and restrictive strategies. Since teaching is a personal activity, and the unique actions teachers take in their classrooms are dependent upon how they perceive events, behaviors, persons, and themselves, the Phase 2

observations and interviews were undertaken to examine individual conduct in light of beliefs, values, and perspectives. While some observations were coded for comparison, the ultimate goal of this modified case-study approach was to present a portrayal of the subjective reality of teaching from the standpoints of, and as far as possible, in the words of the teachers themselves.

The eight subjects were randomly chosen from those whose efficacy scores fell at the extreme tails (top 10% and bottom 10%) of the teacher efficacy distribution as measured by the Teacher Efficacy Scale. Phase 2 subjects had previously and voluntarily indicated their interest in being interviewed by completing the optional form on the last page of the questionnaire. The teachers were observed by the researcher for one half day (an afternoon) and one full day. Subjects were interviewed in their classrooms after the full day observation. All school site principals granted permission for the researcher to visit and observe classroom interaction and all eight teachers signed informed consent forms. During observations and interviews, the researcher was blind as to the whether subjects' scores on the Teacher Efficacy Scale were high or low. While conducting classroom observations, the researcher took notes to document incidents of student/teacher communication and interaction during challenge moments, teachers' use of language to motivate, instruct, and convey emotion, the sequence of classroom events in relation to the passage of time, and use of overt motivational schemes or disciplinary procedures to manage classroom events. In addition, a detailed map of each classroom was drawn.

A 20-item Teacher Evaluation Checklist (see Appendix B) was completed for each of these subjects two times, the first after the half day observation and the second after the full day observation. Scores on the checklist, adapted from the Occidental College "Student Teacher Evaluation Form" (Olson, 1994), are made in reference to numerical point values (0 to 9) and grade equivalents ("F" to "A+"),

indicative of "inadequate" to "outstanding" performance for a variety of personal/professional qualities and teaching competencies. The 20 checklist items are:

Personal and Professional Qualities

1. Impresses others with appearance, manner, and bearing.
2. Possesses health and vitality.
3. Shows emotional poise and self-control.
4. Displays mental alertness and sound judgment.
5. Maintains a positive outlook and shows enthusiasm.
6. Assumes responsibility, takes initiative, and works hard.
7. Sets important goals and achieves them.
8. Makes effective use of oral and written language.
9. Accepts and uses constructive criticism.
10. Works cooperatively and harmoniously with others.

Teaching Competencies

11. Knows and applies subject matter content and skills.
12. Maintains attractive classroom learning environment.
13. Develops pupil discipline and morale.
14. Manages classroom procedures and school routines.
15. Plans effective lessons and units of instruction.
16. Uses appropriate teaching methods and questioning techniques.
17. Motivates and inspires students.
18. Provides for individual student differences.
19. Exhibits creativity and imagination.
20. Contributes to the total school program.

Each teacher's raw item scores were reported in tabular form. In addition, item means, teacher means (for the total checklist), and group means (comparing ratings of the high and low efficacy teachers) were calculated.

The researcher privately interviewed teachers in their classrooms after school, although in one case an adjacent conference room was utilized. A battery-operated audiotape recorder was used to tape the interviews, and all interviews were subsequently transcribed. Interview discussions focused on recall and analysis of student/teacher interaction during specific challenge moments, teachers' attributions for student misbehavior, teacher affect, expectancies, classroom management philosophy, and strategy usage. In addition, teachers' feelings of efficacy, perceptions of job-related stress, and job satisfaction were explored. A semi-structured teacher interview outline was developed and utilized to guide the line of inquiry. (See Appendix C.)

In Phase 2, four very high efficacy teachers (from the top 10% of the distribution) and four very low efficacy teachers (from the bottom 10% of the distribution) were randomly selected to be observed and interviewed, (from those who initially volunteered to be in the pool of potential interviewees). The goal of this Phase 2 modified case study approach was to present a portrayal of the subjective reality of teaching from the standpoints of, and as far as possible, in the words of the teachers themselves.

Data Source

The data was collected as part of a dissertation research project. This was an independent study, not affiliated with any larger project.

RESULTS

Ninety five percent of all responding teachers (N = 289) had at least one student with an externalizing behavior disorder that could be categorized as hyperactive, aggressive, or hyperactive/aggressive according to the IOWA Conners clinical screening criteria (Loney & Milich, 1982). Since high efficacy and low efficacy teachers were defined as those whose scores fell into the top third and bottom third of the sample's teacher efficacy distribution, most statistical analyses utilized 189 cases: (n = 96) for high efficacy teachers and (n = 93) for low efficacy teachers.

Teacher Efficacy and Attributions

Research question number one asked: Do teachers' attributions (locus, stability, controllability, and intentionality) for problem student behavior differ? Do high efficacy teachers tend to perceive student problem behaviors as more internal, unstable, uncontrollable, and unintentional than low efficacy teachers?

Locus. The analysis of variance (ANOVA) indicated that the responses of high efficacy teachers and low efficacy teachers did not differ significantly along the dimension of perceived locus of student behavior causality, ($F < 1$). In assessing whether their students' misbehavior was caused by relatively internal versus external forces, high efficacy and low efficacy teachers assigned nearly identical midrange scores, ($M = 2.95$ and $M = 2.93$, respectively, on a Likert scale ranging from 1 to 5). Student misbehavior was seen as neither caused by factors purely internal to the child nor external to the child.

(Table 2 summarizes the teacher efficacy and attribution data, and also presents results for the additional primary research questions set forth in this

section. The denominators reported in text for degrees of freedom vary for some analyses due to missing data.)

Stability. The ANOVA indicated that high efficacy and low efficacy teachers differed significantly along the dimension of perceived student behavior stability, $F(1, 185) = 4.37$, $p<.05$. Low efficacy teachers assessed student misbehavior as more severely chronic ($M = 1.85$) than did high efficacy teachers ($M = 2.23$).

Controllability. The ANOVA indicated that high efficacy and low efficacy teachers did not differ significantly along of the dimension of perceived student behavior controllability, ($F < 1$). High efficacy and low efficacy teachers assigned similar mid-range controllability ratings,
($M = 3.03$ and $M = 3.20$, respectively), assessing student problem behavior as being neither completely controllable by the student nor uncontrollable by the student.

Intentionality. High efficacy and low efficacy teachers did not differ along the dimension of perceived intentionality of student behavior.
The ANOVA was non-significant, ($F < 1$), indicating that high efficacy and low efficacy teachers assessed student misbehavior similarly, as only slightly intentional, ($M = 2.80$ and $M = 2.70$, respectively).

Do teachers' attributions for problem student behavior differ? Results for this sample demonstrated that high efficacy teachers and low efficacy teachers' attributions for problem student behavior differed only along the dimension of stability, highlighting the tendency of low efficacy teachers to believe that their students' problems were more chronic. Teacher attributions along the dimensions of perceived student behavior locus, controllability, and intentionality did not differ.

Table 2
Teacher Efficacy and Attributions, Expectancy, Emotions, Pupil Control Ideology, and Strategy Usage: Means, Standard Deviations, and F Values (ANOVA)

	Low Efficacy Teachers		High Efficacy Teachers		
Attributions	M	SD	M	SD	F
Locus	2.93	1.25	2.95	1.40	0.00
Stability	1.85	1.22	2.24	1.35	4.37*
Controllability	3.20	1.35	3.03	1.33	0.71
Intentionality	2.70	1.29	2.80	1.24	0.18
Expectancy	2.60	1.09	2.15	1.10	8.04***
Emotions					
Anger	3.49	1.13	2.92	1.23	11.24****
Pity	3.42	1.30	3.40	1.29	0.12
Embarrassment	2.76	1.39	2.28	1.21	6.35**
Guilt	1.53	0.96	1.26	0.67	4.91*
Liking of Student	3.62	1.03	3.91	1.04	3.77*
Confidence	3.22	1.21	4.09	1.01	29.42*****
Pupil Control Ideology	2.74	0.49	2.56	0.44	7.26**
Intervention Strategies					
Rewards	33.60	9.11	35.07	8.26	1.35
Negative Consequences	20.32	5.70	18.52	6.70	3.96*
Severe Punishments	4.49	0.49	3.40	3.09	5.34*

*p < .05
**p < .01
***p < .005
****p < .001
*****p < .0001

Teacher Efficacy and Expectancy

Research question number two asked: Do high efficacy and low efficacy teachers differ in expectancy? Do high efficacy teachers have greater expectancy for student behavior improvement?

The ANOVA indicated that high efficacy teachers were significantly more likely to expect that students with behavior problems would improve while in their classes ($M = 2.15$), while low efficacy teachers tended to expect less student behavior improvement ($M = 2.60$); $F(1, 186) = 8.04$, $p<.005$. (Lower scores indicated greater expectancy for improvement.)

Teacher Efficacy and Emotion

Research question number three asked: Do high efficacy and low efficacy teachers report different patterns of emotional response to student misbehavior? Do teachers differ in experienced anger, pity, embarrassment, and guilt? Do high efficacy teachers like problem students more and experience greater situational personal efficacy?

1. Anger. The ANOVA indicated that low efficacy teachers were much more likely to report feeling angry when their difficult students misbehaved ($M = 3.49$), while high efficacy teachers reported experiencing less anger ($M = 2.92$). This difference was statistically significant, $F(1, 187) = 11.24$, $p<.001$.

2. Pity. High efficacy and low efficacy teachers both reported feeling moderately sorry for their difficult students, ($M = 3.40$ and $M = 3.42$ respectively). The ANOVA did not reveal a statistically significant difference between the two groups, ($F < 1$).

3. Embarrassment. The ANOVA indicated that low efficacy teachers were significantly more likely to report that they would feel embarrassed if a visitor came into their class while their student was misbehaving ($M = 2.76$), while high efficacy

teachers were less likely to report that they would feel embarrassed (M = 2.28), F(1, 186) = 6.35, p<.01.

4. Guilt. The ANOVA indicated that low efficacy teachers were significantly more likely to report feeling compunctious about their students' misbehavior (M = 1.53), while high efficacy teachers tended to experience less guilt (M = 1.26), F(1, 187) = 4.91, p<.05.

5. Liking the Student. The ANOVA demonstrated that high efficacy teachers were significantly more likely to report liking their behavior problem students (M = 3.91), while low efficacy teachers tended to report feeling less affection for their difficult students (M = 3.62), F(1, 187) = 3.77, p<.05.

6. Confidence. High efficacy teachers were much more likely to report feeling highly confident about being able to manage their difficult student's misbehavior (M = 4.09), while low efficacy teachers tended to report less confidence in being able to manage misbehavior (M = 3.22). The ANOVA was statistically significant: F(1, 187) = 29.42, p< 0001.

Do high efficacy and low efficacy teachers report different patterns of emotional response to student misbehavior? The analyses on the data from this sample indicated that high efficacy and low efficacy teachers differed in experienced anger, embarrassment, guilt, liking, and confidence. No significant differences in experienced pity were demonstrated. High efficacy teachers were less likely to feel angry at their misbehaving students, and less likely to feel embarrassed or guilty about student misbehavior. High efficacy teachers tended to like problem students more, and tended to feel more confident about being able to manage problem student behavior. Low efficacy teachers were more likely to feel angry at their problem students, and more likely to feel embarrassed and guilty about student misbehavior. Low efficacy teachers tended to like their problem students less, and tended to feel much less confident about being able to manage problem student behavior.

Teacher Efficacy and Pupil Control Ideology

Research question number four asked: Are teacher efficacy beliefs related to pupil control ideology? Do high efficacy teachers tend to possess humanistic orientations towards student discipline? Do low efficacy teachers tend to possess custodial orientations towards student discipline?

The ANOVA revealed that along the humanistic-custodial continuum high efficacy teachers tended to possess more humanistic pupil control philosophies (M = 2.56), than low efficacy teachers (M = 2.74), $F(1, 187) = 7.26$, $p<.01$.

High efficacy teachers were more likely to possess stronger beliefs emphasizing accepting, trustful views of students and optimistic perspectives towards student self-responsibility and cooperation. Low efficacy teachers were more likely to express beliefs emphasizing the maintenance of order, distrust of students, and moralistic attitudes towards deviant behavior.

Teacher Efficacy and Use of Intervention Strategies

Research question number five asked: Do teacher efficacy beliefs relate to usage of restrictive and positive intervention strategies? Do high efficacy teachers recall using more positive strategies with difficult students, than low efficacy teachers? Do high efficacy teachers utilize a greater repertoire of intervention strategies (both positive and restrictive) overall?

Factor Analysis of Intervention Strategies Instrument. In order to assess the Intervention Strategies instrument and determine whether it indeed represented two factors and distinguished between what seemed intuitively to be "positive" and "restrictive strategies," a preliminary analysis of the sample of responses was conducted using a Principal Components Factor Analysis procedure. Departures from chance patterns in the scree plot of unrotated factors was used to determine the number of factors for rotation. Factor analysis was performed with an orthogonal

varimax rotation (see SPSS Base Users Guide, by Norusis, 1990). Using the entire sample of 289 teachers, the analysis extracted three factors, not two, with eigenvalues greater than 1. (See Table 3.)

Table 3
Factor Analysis of Intervention Strategies Instrument: Eigenvalues For Three Factor Solution (Principal Components)

Factor	Eigenvalue
1	5.00742
2	3.74501
3	1.52077

Table 4 displays the intervention strategy factor loadings from the rotated factor matrix. Factor 1, labeled "Rewards," clearly represents rewards, positive reinforcement, and helping strategies. An array of techniques including praise, demonstrations of interpersonal warmth, individualized counseling, and special instruction/consideration, loaded on this factor. Factor 2, labeled "Negative Consequences," is characterized by punishments, negative reinforcement, and a variety of disciplinary techniques such as removal of privileges, time out, and chastisement. Factor 3, labeled "Severe Punishments," is represented by harsher, more extreme disciplinary efforts such as banishment from the classroom, school suspension, and being sent to the principal's office.

It can be seen that the factor originally labeled as "positive strategies" was confirmed by the factor analysis and was renamed "Rewards," while the original "restrictive strategies" factor emerged as two factors, one factor seeming more moderate in degree, "Negative Consequences," and the other more extreme, "Severe Punishments."

Table 4
Intervention Strategies and Factor Loadings (Orthogonal Varimax Rotation)

Item no.	Factor loading	Intervention Strategy
		Factor 1: Rewards
15	.70	I have praised this student's improved behavior.
21	.70	I have given this student special smiles for encouragement.
9	.68	I have told this student that I like him or her.
20	.66	I have spent time to give this student individual counseling.
25	.66	I have given this student pats on the back or congratulatory hugs.
5	.60	I have written "Good News" notes to the student's parents for behavior improvement.
3	.57	I have let this student earn special rewards or privileges.
11	.55	I have allowed this student to earn his own rewards for good conduct.
19	.54	I have taught this student special self-monitoring strategies such as "Stop, Look, Listen."
8	.54	I have related lesson content to this student's special interests.
14	.53	I have offered this student a variety of rewards.
24	.51	I have given this student a special job or responsibility in the classroom.
4	.43	I have given this student work that provides a high degree of success.
		Factor 2: Negative Consequences
12	.67	I have threatened to call this student's parents.
2	.62	I have sent this student to a certain area of the classroom for punishment or time out.
22	.61	I have taken away this student's materials or privileges.
1	.59	I have benched this student during recess and lunch.
6	.58	I have written notes to this student's parents when the student misbehaves.
10	.58	I have given this student unsatisfactory marks for conduct or citizenship.
23	.49	I have used a sharp voice and reprimanded this student in public.
17	.45	I have written this student's name on the board for infractions.
		Factor 3: Severe Punishments
26	.68	I have sent this student to the principal's office.
18	.63	I have sent this student out of the room.
13	.52	I have had this student suspended from school.
7	.52	I have threatened to punish the whole class for continued individual misconduct.

In order to test for a relationship between teacher efficacy and usage of intervention strategies, an ANOVA was conducted for each intervention strategy factor: (a) Rewards, (b) Negative Consequences, and (c) Severe Punishments.

Rewards. High efficacy teachers and low efficacy teachers both reported utilizing a high frequency of rewards, helping techniques, and positive reinforcement strategies with their misbehaving students. Although high efficacy teachers reported using rewards more frequently than low efficacy teachers, the ANOVA did not reach statistical significance, $F(1, 187) = 1.37$, $p>.05$.

Negative Consequences. The ANOVA indicated that low efficacy teachers were significantly more likely than high efficacy teachers to report utilizing negative consequences such as taking away a student's materials or privileges, benching students during recess or lunch, giving unsatisfactory marks for conduct or citizenship, and writing students' names on the board for infractions, $F(1, 187) = 3.96$, $p<.05$.

Severe Punishments. ANOVA results demonstrated that low efficacy teachers were also more likely than high efficacy teachers to report resorting to severe punishments such as sending students to the principal's office, sending students out of the room, suspending students from school, and punishing the whole class for continued individual misconduct, $F(1, 187) = 5.34$. $p<.05$.

Additional Findings

ANOVA and chi-square analyses revealed that teacher efficacy was related to a variety of additional variables: (a) number of behavior problem students in the classroom, (b) years employed, (c) experience as a mentor or supervising teacher, (d) academic level of students, (e) decision-making freedom, (f) relationship with the principal, (g) stress level, (h) curriculum philosophy, and (i) job satisfaction.

Teacher Efficacy and Number of Problem Students

The ANOVA results indicated that low efficacy teachers were significantly more likely to report a high number of behavior problem students in their classes, $F(1, 187) = 7.99$, $p<.005$. Low efficacy teachers reported an average of 6.0 problem students in their classes ($SD = 3.98$), while high efficacy teachers reported an average of 4.6 problem students in their classes ($SD = 2.57$).

Teacher Efficacy and Years Employed

Table 5 shows a contingency table of chi-square results indicating that level of teacher efficacy was significantly related to years on the job. Low efficacy teachers were likely to have taught for fewer years, while high efficacy teachers tended to have had longer career histories, $\chi 2\ (6, N = 87) = 12.93$, $p<.05$.

Table 5
Teacher Efficacy and Years Employed, "How Many Years Have You Been An Employed Teacher?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
0 to 1 year (first year)	9.8% n = 9	1.1% n = 1
1 to 5 years	14.1% n = 13	18.9% n = 18
6 to 10 years	23.9% n = 22	16.8% n = 16
11 to 15 years	16.3% n = 15	11.6% n = 11
16 to 20 years	7.6% n = 7	13.7% n = 13
20 to 25 years	10.9% n = 10	18.9% n = 18
25+ years	17.4% n = 16	18.9% n = 18

Teacher Efficacy and Experience as a Mentor or Supervising Teacher

Although a surprisingly high percentage of all teachers reported having been a supervising teacher for a student teacher or an official mentor teacher for a beginning teacher, high efficacy teachers were more likely than low efficacy teachers to have had these experiences. Table 6 displays the frequency counts generated by the chi-square test of significance, $\chi 2$ (1, N = 188) = 6.24, $p<.01$.

Table 6
Teacher Efficacy and Mentor/Supervisory Experience, "Have You Ever Been A Supervising Teacher for a Student Teacher Or An Official Mentor For A Beginning Teacher?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
Yes	50.5% n = 47	68.4% n = 65
No	49.5% n = 46	31.6% n = 30

Teacher Efficacy and Academic Level of Students

High efficacy teachers were more likely to report that the general academic level of students in their classes was above average, while low efficacy teachers were more likely to report that their students were functioning at a below average level. Table 7 displays the chi-square contingency data, $\chi 2$ (2, N = 187) = 10.16, $p<.006$.

Table 7
Teacher Efficacy and Academic Level of Students, "How Would You Describe the General Academic Level of the Students in Your Class?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
Above average	8.7% n = 8	26.3% n = 25
Average	54.3% n = 50	46.3% n = 44
Below average	37.0% n = 34	27.4% n = 26

Teacher Efficacy and Decision Making Freedom

Although most teachers reported feeling free to make their own decisions about curriculum and teaching methods, low efficacy teachers were significantly more likely to report feeling pressured to teach a certain curriculum a certain way. Table 8 presents the chi-square frequency data, $\chi 2$ (1, N = 86) = 10.92, $p<.001$.

Table 8
Teacher Efficacy and Decision-Making Freedom, "Which Statement Most Closely Fits Your Perception?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
I feel free to make my own decisions about curriculum and teaching methods.	76.7% n = 69	93.8% n = 90
I feel pressured to teach a certain curriculum in a certain way.	23.3% n = 21	6.3% n = 6

Teacher Efficacy and Attitude of the Principal

In general, most teachers tended to think that their principals considered them to be strong, effective teachers, but low efficacy teachers were less likely to believe this. Table 9 displays the chi-square results,
$\chi 2$ (1, N = 184) = 9.64, p<.005.

Table 9
Teacher Efficacy and Attitude of the Principal, "Do You Think The Principal Thinks You're a Strong, Effective Teacher?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
Yes	87.6% n = 78	98.9% n = 94
No	12.4% n = 11	1.1% n = 1

Teacher Efficacy and Stress

Table 10 shows that low efficacy teachers were more likely to experience teaching to be "very stressful" or "extremely stressful," while high efficacy teachers were more likely to report that teaching was "not at all stressful," "mildly stressful," or "moderately stressful," $\chi 2$ (4, N = 187) = 42.31, p<.00001.

Table 10
Teacher Efficacy and Stress, "In General, How Stressful Do You Find Being A Teacher?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
Not at all stressful	2.2% n = 2	7.4% n = 7
Mildly stressful	8.7% n = 8	37.9% n = 36
Moderately stressful	27.2% n = 25	34.7% n = 33
Very stressful	33.7% n = 31	14.7% n = 14
Extremely stressful	28.3% n =26	5.3% n = 5

Teacher Efficacy and Curriculum Philosophy

Chi-square analysis demonstrated that high efficacy teachers tended to feel that fostering student self-esteem and adjustment was more important than presenting subject matter to students. Low efficacy teachers tended to be evenly divided in assigning importance to self-esteem and subject matter, $\chi 2$ (1, N = 171) = 8.60, $p<.005$. See Table 11.

Table 11
Teacher Efficacy and Curriculum Philosophy, "Which Is More Important To You?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
Presenting subject matter to students.	48.8% n = 42	27.1% n = 23
Fostering student self-esteem and adjustment.	51.2% n = 44	72.9% n = 62

Teacher Efficacy and Job Satisfaction

Low efficacy teachers were more likely to state that if they had to do it all over again, they would not choose to become teachers. High efficacy teachers were more likely to report that they would choose teaching as a career again. The teacher efficacy and job satisfaction relationship was found to be highly statistically significant, $\chi 2$ (1, N = 181) = 15.85, $p<.0001$. Table 12 shows the chi-square contingency and frequency results.

Table 12
Teacher Efficacy and Job Satisfaction, "If You Had To Do It All Over Again, Would You Choose To Become A Teacher?" (Chi-square)

	Low Efficacy Teachers	High Efficacy Teachers
Yes	58.6% n = 51	85.1% n = 80
No	41.4% n = 36	14.9% n = 14

Teacher Efficacy: What is it not related to?

A variety of interesting variables did not seem to affect or be related to teacher efficacy.

1. Sex. High efficacy and low efficacy teachers were equally as likely to be women as men.

2. Type of School. High efficacy and low efficacy teachers were as likely to be found in regular schools as in "LEARN" or magnet schools.

3. Ethnicity. High efficacy and low efficacy teachers were not differentially represented in various ethnic groups.

4. Educational Level. High efficacy teachers were no more likely to hold advanced degrees than were low efficacy teachers.

5. Grade Level Taught. High efficacy and low efficacy teachers tended to be equally distributed in the elementary grade levels (kindergarten through sixth grade).

6. Number of Students in Classroom. High efficacy and low efficacy teachers were equally as likely to have medium or large size classes.

7. School Atmosphere. High efficacy and low efficacy teachers were equally as likely to be found in schools judged to be friendly or unfriendly, as well as in schools where teachers and other professional personnel are seen as freely sharing ideas and materials or not sharing ideas and materials.

8. Salary. Teacher efficacy did not seem to be related to salary situation. Although 53.6% of the total sample reported a salary cut for the current year, 36.2% had "no change," and 9.2% reported a pay raise, high efficacy teachers were no more or less likely to have received a raise or a pay cut.

Correlational Analyses

Correlation coefficients between the main variables in this study were generated utilizing complete data from all 289 teachers in the primary sample.

Confirming most previous categorical comparisons, teacher efficacy was significantly related to many of the cognitive, affective, and behavioral variables included in this investigation, (see Table 13). Higher teacher efficacy scores were associated with higher instability ratings (student behavior was judged as less chronic), higher expectancy ratings (student behavior was rated as more likely to improve), lower anger ratings, higher liking ratings, higher confidence ratings (greater situational teacher efficacy), lower stress ratings, stronger humanistic pupil control ideology orientations, and less frequent usage of negative consequence strategies. Although the previously reported ANOVA between high and low teacher efficacy and usage of reward strategies did not achieve significance, the correlational analysis indicates that higher efficacy scores were associated with more frequent usage of reward strategies.

The correlation coefficient matrix also highlights some other significant relationships between variables. Lower pupil control ideology scores, indicating more humanistic control orientations, were associated with higher efficacy scores, higher intentionality scores (misbehavior was seen as less intentional), lower expectancy scores (student behavior was judged more likely to improve), lower anger scores, higher liking scores, lower stress scores, more frequent usage of rewards, and less frequent usage of negative consequences and severe punishments.

Higher teacher stress levels were associated with lower efficacy scores, higher stability scores (student misbehavior was seen as more chronic), higher anger scores, lower confidence scores (lower situational efficacy), more custodial pupil control ideology, and more frequent usage of negative consequences and severe punishments.

Some attribution/attribution and attribution/affective relationships were evidenced. Teachers who judged student behavior as caused by forces external to the students tended to also judge their behavior as more temporary or unstable.

Teachers who judged student misbehavior as controllable by the student also tended to judge the misbehavior as intentional. Teachers who judged student misbehavior as intentional tended to feel more angry at their students, less sorry for their students, and tended to like their students less. These findings are all in accord with general predictions from attribution theory.

Developing a Model to Predict Usage of Restrictive Intervention Strategies

Research question number six asked: If there is a relationship between teacher efficacy and intervention strategy usage, is the relationship direct or indirect? What intervening variables predict usage of intervention strategies?

In this section, a model predicting usage of restrictive intervention strategies will be presented and tested. Based on Bandura's proposition that self-efficacy beliefs influence emotions and actions, and based upon the strength of correlations between certain variables in this study, I selected seven variables for analysis and was able to validate an emotion-mediated model using path analytic procedures.

Since the primary goal of this research was to typify the cognitions, affects, and strategies associated with effective (and efficacious) teachers, a variety of variables were included in the study design, usage of intervention strategies among them. Because the ANOVA results indicated that teacher efficacy was significantly related to usage of negative consequences and severe punishments, the identification of predictor variables became of interest. Since multiple regression permits identification of these predictor variables, two separate regressions were conducted, the first using negative consequences as the dependent variable, and the second using severe punishments as the dependent variable. The following predictor or independent variables were selected for the regression analyses: stress, anger, and liking (as affective variables), stability (an attributional variable), expectancy, pupil control ideology, and teacher efficacy.

Table 14 shows that the affective variables of stress, anger, and liking generated significant beta weights in the analysis for negative consequences (R^2 = .21), F (7, 276) = 10.35, $p < .0001$ while stress and anger generated significant beta weights in the analysis for severe punishments (R^2 = .13), (F (7, 276) = 5.73, $p <$ .0001.

Figure 1 and Figure 2 depict the emotion-mediated causal models to be tested. Figure 1 displays the variables, respective path coefficients, and levels of significance for the model predicting the negative consequences analysis, while Figure 2 displays the variables, respective path coefficients, and levels of significance for the model predicting the severe punishments analysis. For each model, separate regression analyses were performed to determine path coefficients. It can be seen in these hypothesized models that teacher efficacy, mediated by emotional factors, predicts restrictive strategy usage.

In order to test the significance of the hypothesized models, separate chi-square tests were conducted. This was accomplished by generating path coefficients for two additional "fully-realized models" models representing all possible relationships between tested variables, and then comparing the fit. In both cases, based on the tests of significance, $\chi 2(2, N = 283) = .07586$, $p > .10$ for the negative consequences model and $\chi 2(1, N = 283) = .0147$, $p > .10$ for the severe punishments model, it was concluded that the data were consistent with the models and that the efficacy-emotion-action paths may be judiciously advanced.

Phase 2: Teacher Observation and Interview Results

Four high efficacy teachers and four low efficacy teachers were selected for observation and after school audiotaped interviewing. These eight teachers were selected from the respondent pool by a research assistant in order that the interviewer would be blind to whether the teachers had scored high or low on the

Table 14

Multiple Regression Beta Weights, t Values, and Levels of Significance

Variable	ß	t	p
	Negative Consequences		
Anger	.2938	5.025	.0000
Stress	.2192	3.688	.0003
Liking	-.1318	-2.314	.0214
Expectancy	.0756	1.348	.1788
Teacher Efficacy	.0703	1.153	.2501
Pupil Control Ideology	.0442	.764	.4454
Stability	.0185	.332	.7399
	Severe Punishments		
Anger	.1900	3.094	.0022
Stress	.1982	3.176	.0017
Liking	-.0844	-1.412	.1590
Expectancy	.0908	1.542	.1242
Teacher Efficacy	.0775	1.210	.2272
Pupil Control Ideology	.0698	1.151	.2509
Stability	-.0226	-.386	.6997

Figure 1

Path Diagram and Path Coefficients Showing Effects of Teacher Efficacy, Stress, Anger, and Liking on Usage of Negative Consequences

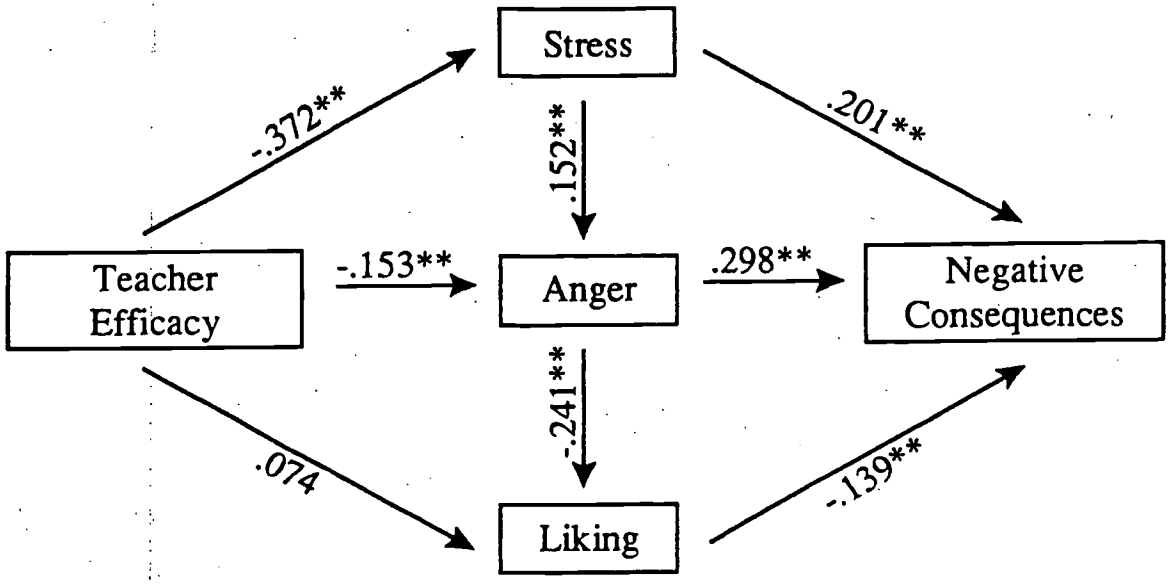
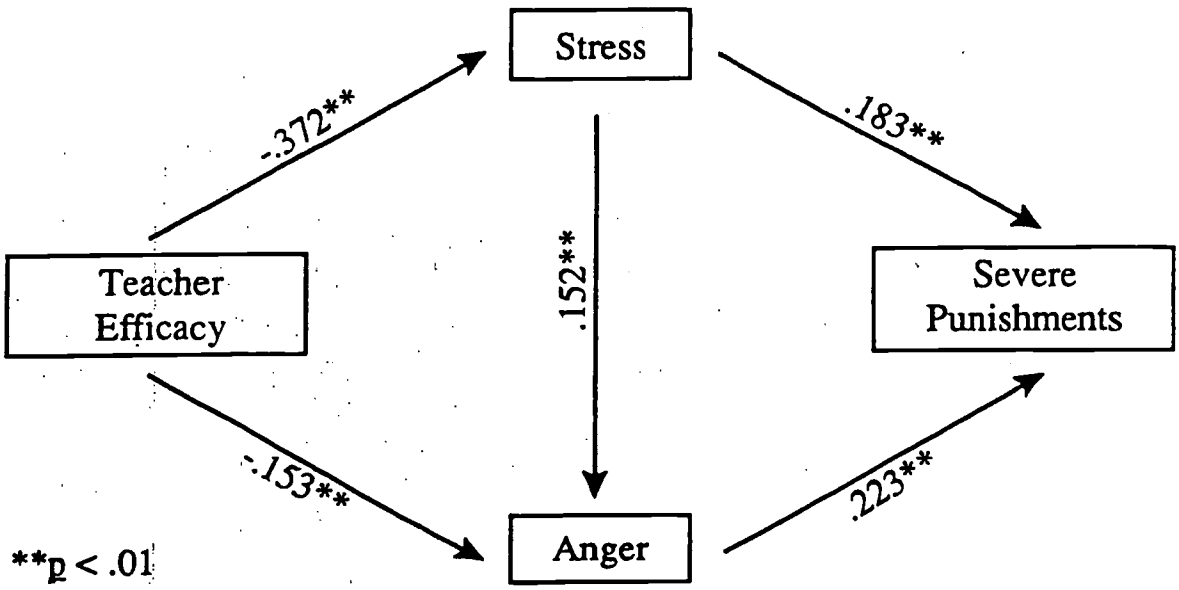


Figure 2

Path Diagram and Path Coefficients Showing Effects of Teacher Efficacy, Stress, and Anger on Usage of Severe Punishments



Teacher Efficacy Scale. Thirty eight percent of all primary sample teachers (110 out of 289) identified themselves on the last page of their questionnaires as being interested in the paid interview, thus the size of the interview pool was quite large. Chi-square analysis confirmed that high efficacy and low efficacy teachers self-selected themselves into the interview pool in equal proportions. The four high efficacy teachers, Teachers A, B, C, and D, received the following efficacy mean scores: 5.00, 5.06, 5.43, and 5.25, indicating strong beliefs in their ability to influence students, teach, and effect learning, while the four low efficacy teachers, Teachers W, X, Y, and Z, received the following efficacy mean scores: 2.69, 2.63, 2.75, and 2.87, indicating a lack of confidence in their ability to instruct and influence student learning. (Recall that a score on the Teacher Efficacy Scale reflects summed and averaged ratings for 16 items; a mean score of 6 is the highest possible efficacy score, while a mean score of 1 is the lowest possible efficacy score).

The eight subjects were observed by the researcher for one half day (afternoon) and one full day. A range of professional qualities and teaching competencies were assessed using the 20-item Teacher Evaluation Checklist (see Appendix B). Teacher performance on these items was rated in reference to numerical point values (0 to 9) and grade equivalents ("F" to "A+") indicative of "inadequate," "below average," "satisfactory," "strong," or "outstanding" performance. Day 1 and Day 2 raw checklist scores for high efficacy teachers "A," "B," "C," and "D," and low efficacy teachers "W," "X," "Y," and "Z" are displayed in Table 15 along with item means, teacher means, and group means. It can be seen that for each item, high efficacy teachers, on average, were rated higher than low efficacy teachers. Indeed, for the entire checklist (when items are summed and averaged), high efficacy teachers' average ratings ($\underline{M}$ = 7.5, equivalent to grade "A," or "strong" performance) were higher than low efficacy teachers' ratings ($\underline{M}$ = 5.8,

Table 15

Phase 2 Teacher Evaluation Checklist: Day 1 and Day 2 Observation Scores for Four Low Efficacy and Four High Efficacy Teachers, Item Means, Teacher Means, and Group Means

	Low Efficacy Teachers					High Efficacy Teachers				
	"W"	"X"	"Y"	"Z"	M	"A"	"B"	"C"	"D"	M
1. Impresses others with appearance manner, and bearing.	6,7	6,6	6,6	7,8	(6.5)	6,7	9,9	6,6	9,8	(7.5)
2. Possesses health and vitality.	7,7	6,7	6,6	7,8	(6.75)	7,7	8,8	6,7	8,8	(7.375)
3. Shows emotional poise and self-control.	3,3	7,7	6,6	7,8	(5.875)	7,7	9,9	6,5	8,9	(7.5)
4. Displays mental alertness and sound judgment.	4,4	7,6	7,6	5,8	(5.875)	7,8	8,9	5,7	8,9	(7.625)
5. Maintains a positive outlook and shows enthusiasm.	4,4	6,7	5,6	8,9	(6.125)	6,7	8,8	8,8	7,9	(7.625)
6. Assumes responsibility, takes initiative, and works hard.	4,3	6,3	4,6	6,8	(5)	6,8	8,8	8,8	9,9	(8)
7. Sets important goals and achieves them.	3,3	7,3	6,5	7,8	(5.25)	7,9	8,8	6,8	n,8	(7.714)
8. Makes effective use of oral and written language.	6,7	7,8	5,7	7,7	(6.75)	7,7	9,8	7,6	7,7	(7.25)
9. Accepts and uses constructive criticism.	n,n	n,n	n,5	n,n	(5)	n,n	n,n	n,9	n,8	(8.5)
10. Works cooperatively and harmoniously with others.	7,6	7,7	6,6	8,8	(6.875)	6,9	8,9	n,8	n,9	(8.166)
11. Knows and applies subject matter content and skills.	3,4	4,3	5,4	8,7	(4.75)	5,8	8,8	7,9	7,7	(7.375)
12. Maintains attractive classroom learning environment.	3,3	5,6	4,5	9,8	(5.375)	4,6	7,8	7,6	9,8	(6.875)
13. Develops pupil discipline and morale.	3,2	6,6	6,6	9,9	(5.875)	6,6	8,9	6,7	9,9	(7.5)
14. Manages classroom procedures and school routines.	3,3	6,5	6,6	8,9	(5.75)	6,6	8,9	6,6	9,9	(7.375)
15. Plans effective lessons and units of instruction.	4,3	4,2	5,5	7,7	(4.625)	5,7	7,8	7,9	8,7	(7.25)
16. Uses appropriate teaching methods and questioning techniques.	3,4	5,4	6,5	7,7	(5.125)	6,7	7,9	7,6	7,6	(6.875)
17. Motivates and inspires students.	4,4	6,5	6,5	9,9	(6)	7,8	8,9	6,7	8,8	(7.625)
18. Provides for individual student differences	3,3	n,7	4,6	8,6	(5.286)	n,7	n,n	n,8	n,8	(7.666)
19. Exhibits creativity and imagination.	3,4	5,6	3,4	8,9	(5.25)	4,9	7,8	6,7	6,7	(6.75)
20. Contributes to the total school program	n,n	n,7	n,n	9,8	(8)	n,9	8,9	n,8	7,8	(8.166)
Teacher Means and Group Means:	(4.1)	(5.7)	(5.4)	(7.8)	**5.8**	(6.8)	(8.2)	(6.9)	(8.0)	**7.5**

equivalent to grade "B-" or satisfactory" performance), suggesting superior professionalism and instructional competence.

Observation of classrooms and students allowed the researcher to develop interview questions meant to stimulate recall of cognitions, emotions, and decisions. Interview discussions focused on analysis of student/teacher interaction during challenge moments, consideration of intervention strategies utilized by teachers, and understanding teachers' feelings of efficacy, attributions for student misbehavior, expectancy, and specific affect.

The eight teacher interviews were completely transcribed generating almost 300 pages of raw narrative data. In order to deal with this information, various categories were developed to allow "chunking" of data, aiming to accommodate the full range and salience of pertinent teacher commentary. Specific teacher statements were subsequently coded into seventeen final categories: (a) efficacy and confidence, (b) stability of student behavior problem, (c) descriptions of student misbehavior (d) expectancy for improvement, (e) anger, (f) embarrassment, (g) guilt, (h) liking, (i) pupil control ideology, (j) intervention strategies, (k) using punishments, (l) using rewards, (m) academic performance and behavior, (n) stress, (o) rewards of the job, (p) why they became teachers, and (q) miscellaneous/job satisfaction. High efficacy and low efficacy teacher quotations were separated and sequentially juxtaposed by category. Contextual cues were added parenthetically before certain passages to clarify meaning for the reader. A complete edited transcript of categorized and relevant teacher discourse is found in Appendix D of Melby's UCLA doctoral dissertation (Melby, 1995). It is entitled, "In Their Own Words: High Efficacy and Low Efficacy Teachers Share Their Thoughts." Teacher, student, and school names were changed to maintain anonymity.

Inspection of the teacher comments reveals the texture of everyday reality in the classroom as filtered through the consciousness of eight different individuals.

Sometimes inspiring, sometimes depressing, sometimes comical, the remarks show how different teachers view their pedagogical role and how they variously process information and cope with the challenges, stresses, and disappointments of their jobs.

A careful reading of "In Their Own Words" suggests a confirmation of many of the empirical group results reported previously. The high efficacy teachers (Teacher A, Teacher B, Teacher C, and Teacher D) made statements reflecting greater confidence in themselves as instructors and agents of change, tended to view student problems as less stable and chronic, tended to express more optimism and greater expectancy for student improvement, reported less emotional arousal for anger or frustration, expressed more liking for problem students, made statements about students and schooling that may be seen as representative of humanistic pupil control ideology, reported more confidence in being able personally to motivate students to be effortful, and expressed less inclination to punish or implement harsh, restrictive disciplinary measures.

The low efficacy teachers (Teacher W, Teacher X, Teacher Y, and Teacher Z) made statements that reflected less confidence in their abilities to effect student change, tended to see student problems as more chronic, tended to express less optimism or expectancy for student improvement, reported more intense anger and frustration, were more likely to state candidly that they disliked problem students, made statements that can be viewed as representative of custodial pupil control ideology, and reported being more inclined to resort to punitive disciplinary strategies.

High efficacy teachers represented strong personal beliefs of professional capability: "I think I'm a very good teacher. I'm able to teach. I'm able to do my job. I mean, children learn. They come out of this room and they have learned what

they needed to know," stated Teacher C. Another efficacious teacher, Teacher D, explained why her discipline system was effective:

> "Somehow I've gained a lot of strategies for managing the classroom, and managing and disciplining children. I think maybe one reason is because I know that all children are different. You have to discipline and you have to key into their sensitivities in a different way. Some are more loving and giving and easy to discipline, and some are not. I think my discipline is great. I think my classroom management is great because I've learned all these strategies either from raising my own children, years of experience with teaching, or sharing and learning from other people, because I didn't always know all this. I'd steal everyone else's strategies, and I try to adjust them and try to make them work."

But low efficacy teachers seemed to feel mired in their classroom troubles; the difficulties they encountered appeared to erode their feelings of confidence, levels of motivation, and persistence. Teacher W confided:

> "There are many times when I'm tired and I just don't want to do this today, and I do half of a job. I won't necessarily do other things, but I'll take out my newspaper and read for fifteen minutes, and have them do some sort of little project at their desks. There are times when I just reach that point in the day where I just can't do it anymore. We go out for P.E."

Teacher X expressed her feelings of helplessness, "I've gotten to the point where, you know, I've done a lot of things. I've tried. What else can I do? I mean, what can I do? I'm at a loss as to what else to do." Teacher Y also conceded nagging feelings of self-doubt and shared her private pain of teacher inefficacy: "You know, it's like, sometimes I wonder, 'I wonder if I'm going a good job? Am I doing this right, or am I not doing this right?'"

All teachers, both high efficacy and low efficacy, were able to generate similar lists of typical job-related stresses, (not enough time, too many students, etc.), but while high efficacy teachers' general narrative commentary tended to reflect proactive, solution-oriented attitudes, low efficacy teachers' statements seemed to reveal more intense feelings of personal difficulty, emotional arousal, and burnout. In particular, low efficacy teachers often seemed overwhelmed with their feelings of anger and frustration. Teacher X admitted, "I'm a really emotional person, and sometimes I fly off the handle and I just wish I could control my emotions a little more." Contrariwise, high efficacy teachers tended to report feeling and expressing less negative affect, "Getting mad doesn't help much with anybody," explained Teacher A.

High efficacy teachers reported less extreme problems with discipline and stronger orientations toward usage of positive motivation strategies. Teacher B stated, "I'd rather stay with the positive as opposed to reacting toward the negative. I believe in prevention, if you can," and Teacher D discussed one of her most effective intervention strategies, "My favorite one is to talk to him in a very soft, calm, loving manner, to try to get him to understand that his behavior is going in a negative direction. Usually I get a good response with that." Teacher C discussed her use of rewards, "Praise. And I do little treats. When we've had a really good week, we'll have a treat on Friday." Teacher A said, "My goal is to help them be successful and catch 'em being good."

Low efficacy teachers, in contrast, were more apt to utilize negative intervention strategies. Teacher X professed, "I find what works best is depriving them of things they want to do." She also declared, "You teach them by criticizing poor behavior. I don't think that everything you say to a child has to make them feel good." Teacher Y reported, "If they're just talking excessively, I'll put their names on the board, and they're not going to play," and, "If I can't take it anymore, then I'll

send them to the office." Teacher W explained, "I don't give stickers and I don't give certificates at the end of the week. I expect good behavior, so I don't do any rewarding."

Most heart-warming, and pointing up the fact that low efficacy teachers don't experience unremitting failure in the classroom, all teachers related stories about experiencing inspiring moments of student/teacher interaction that made teaching rewarding. Teacher X, a low efficacy teacher, highlighted the satisfaction of sometimes being able to help a child learn and feel efficacious about one's contribution:

> "When there's some kid who's really having difficulty with something and you struggle through with the kid and the kid masters it, there is just nothing better than when you just know the fog has lifted, when you know that whatever this is they felt bad about, or whatever it is they were trying to get over, or whatever it is they were trying to achieve, they do it. And you know that you had a part. When you know that the biggest single factor at that particular point is you and what you've done, there's nothing better. I can't think of anything other than like writing a symphony or something."

Teacher C made a similar statement: That's my greatest joy. Seeing a child who says, 'Oh, now I get it.'" Teacher D warmed to the topic, "One of the rewards of my job is to see the growth of my children. It could be from one day to the next, because growth is a process and you can't always see it coming. To see the children are learning... Joys and rewards."

High efficacy and low efficacy teachers reported clearly disparate attitudes towards job satisfaction. While Teacher A enthused, "This is the place to make a change with kids, with people. I love teaching. I love taking a problem and figuring

out a way to do it. It's fun," and Teacher D proclaimed, "I love being a teacher. It's like having an ice-cream sundae," Teacher Y confided, "There are some times where I think, 'Gosh, I've got to get out of here. I can't do this for the rest of my life,'" and Teacher Z admitted, "If I were to go do it again, I would not go into it *(teaching)*, If I had a daughter that considered going into it, I would try to dissuade the daughter, or the son."

DISCUSSION

This study compared high efficacy and low efficacy teachers in order to analyze differences in teachers' cognitive, affective, and behavioral reactions to hyperactive and aggressive student behavior. The results contribute to the scholarly literature on teacher efficacy, and allow extension of teacher efficacy theory from the domain of achievement to the domain of classroom management. The quantitative and qualitative findings suggest a variety of important practical implications for teacher selection, preservice teacher education, and inservice teacher training.

In this chapter, the following topics are discussed: (a) teacher efficacy as a marker of teacher effectiveness, (b) stability and expectancy, (c) the causal models predicting usage of negative consequences and severe punishments, (d) the Intervention Strategies Scale, (e) teacher efficacy and persistence, (f) environmental effects on teacher efficacy, (g) implications for teacher selection, (h) implications for preservice teacher education and inservice teacher training, and (i) future research.

Teacher Efficacy as a Marker of Teacher Effectiveness

The results of this investigation show that the construct of teacher efficacy is a convincing marker of general teacher effectiveness in the domain of classroom management. High efficacy teachers are less likely to perceive their difficult students as having chronic behavior problems, are more likely to expect behavior improvement, are less likely to feel angry, embarrassed, or guilty about student misbehavior, are more likely to like problem students, and are more likely to feel confident about being able to manage student misbehavior. In addition, high efficacy teachers tend to possess stronger humanistic pupil control ideologies and tend to utilize fewer negative consequences and severe punishments. High efficacy

teachers also have fewer problem students in their classes, are more likely to have been mentor or supervising teachers, are less stressed, have better relationships with their principals, experience greater job satisfaction, and are more likely to report that the students in their classes are above average academically.

In stark contrast, low efficacy teachers are more likely to perceive their difficult students as having chronic behavior problems, are less likely to expect student behavior improvement, are more likely to feel angry, embarrassed, and guilty about student misbehavior, are less likely to like problem students, and are less likely to feel confident about being able to manage student misbehavior. Furthermore, low efficacy teachers tend to possess less humanistic (more custodial) pupil control ideologies and tend to utilize more negative consequences and severe punishments. Low efficacy teachers also have more problem students in their classes, are less likely to have been mentor or supervising teachers, are more stressed, have worse relationships with their principals, experience less job satisfaction, and are more likely to report that the students in their classes are below average academically.

Taken as a whole, the data depict high efficacy teachers as more effective, generous, optimistic, confident, emotionally calm, non-stressed, affectionate, benevolent, and professionally successful, and portray low efficacy teachers as less effective, more negatively judgmental, pessimistic, insecure, temperamental, stressed, hostile, punitive, and professionally unsuccessful. While previous research has demonstrated that high teacher efficacy is correlated with improved student achievement in math and reading (Armor et al., 1976; Ashton & Webb, 1986; Berman et al., 1977), this study shows that high teacher efficacy is related to managerial excellence.

It should be noted that teachers establish excellent classroom discipline jointly with, and as a natural consequence of, presenting outstanding instruction. Thus,

high efficacy teachers are simultaneously, and necessarily, both good instructors and good classroom managers. Although Kounin (1970) set out to study classroom discipline and analyze teachers' "desist" control strategies, he found that there is no relationship between the qualities of teachers' desists and their degree of success in handling deviant behavior. Instead, he found that successful disciplinarians are, more precisely, successful "classroom managers," capable of creating effective learning environments, and consistent users of such defined preventive techniques as: "withitness" and overlapping, smoothness and momentum, group alerting and accountability, valence and challenge arousal, and seatwork variety and challenge. A successful classroom manager (or a high efficacy teacher) does such a fine job of creating an effective classroom ecology and learning milieu that dealing with misconduct through punitiveness or restriction is less necessary.

How are students affected by teacher efficacy? Although student perceptions were not directly assessed in this study, it is likely that teachers' concurrent levels of emotional reactivity, attributions for misbehavior, expectancies for improvement, control beliefs, and preferred disciplinary and management techniques are salient to children, while inextricably affecting classroom climate and the quality of teacher/student interpersonal relationships. Unless low efficacy teachers successfully conceal their thoughts and feelings, hyperactive and aggressive students who find themselves in these teachers' classrooms endure more negative teacher expectancy, anger, dislike, custodial ideologies, and are targets of more restrictive intervention strategies (both negative consequences and severe punishments), while similar students in high efficacy teachers' classrooms experience more positive teacher expectancy, less anger, more liking, humanistic ideologies, and are subjected to fewer restrictive intervention strategies.

Since low efficacy teachers report using more punishments and severe consequences with their hyperactive and aggressive students (they are more likely to

take away students' materials and privileges, use sharp voices and reprimand students in public, send students to the principal's office, suspend students from school, etc.) they can be viewed as being more *reactive,* and less *proactive,* in the classroom. High efficacy teachers, on the other hand, seem to assume the role of classroom managers, not classroom disciplinarians, and are able to proactively prevent many student behavior problems from occurring in the first place. High efficacy teachers spend more of their time structuring the learning environment and orchestrating classroom events; they are actors in the classroom, not reactors. Like the "effective" teachers identified and described in a study by Brophy and Evertson (1976), high efficacy teachers are proactively focused on instructing, preparing materials, organizing, planning housekeeping routines, diagnosing, individualizing, and preparing for contingencies.

Confirmation of the Theoretical Stability/Expectancy Link

In outlining his attributional framework of motivation, Weiner (1984) argues that the linkage between perceived causal stability and expectancy ought to be considered a fundamental law of psychology. The data from this study confirm this theoretical link, indicating that teachers who perceive student misbehavior as more chronic (more stable) expect less behavior improvement, while teachers who perceive student misbehavior as less chronic (more temporary and unstable) expect more behavior improvement. These findings are consonant with those reported by many other researchers (See summary by Weiner, 1984, pp. 25-26).

The publication of Rosenthal and Jacobson's Pygmalion in the Classroom, (1968) stimulated great interest in teacher expectations and self-fulfilling prophecies, and although the subsequent expectancy literature has been clouded by controversy (Dusek & Joseph 1983; Good, 1981; Good & Brophy, 1984; Snow, 1969; Taylor, 1970), many correlational studies make it possible to argue (but not

prove) that high expectations stimulate teaching effort and student academic performance (Brophy & Evertson, 1976; Martin, 1973; McDonald & Elias, 1976; Rutter et al., 1979). A valuable contribution of the present study is to highlight the importance of the relationship between perceived stability of student misbehavior and teacher expectancy for behavior improvement, and the probable role this relationship plays in affecting actual student behavior improvement.

It is reasonable to hypothesize that teacher effort, encouragement, and persistence with hyperactive and aggressive students is greater when teachers perceive student misbehavior as more temporary (unstable) and when they express positive expectancies for student behavior improvement. In this study, high efficacy teachers are shown to possess these benevolent beliefs, while also reporting less anger, less stress, liking problem students more, possessing more humanistic control ideologies, having fewer problem students overall, and utilizing fewer restrictive disciplinary strategies. Clearly, these efficacious teachers possess cognitions, emotions, and behavior patterns that are conducive to producing more positive student/teacher relations (hence, improved student motivation), friendly and supportive classroom "feeling tone," and superior, more individualized teaching.

The Causal Models Predicting Usage of Negative Consequences and Severe Punishments

In this study, multiple regression and path analytic procedures were used to test causal models predicting (a) usage of negative consequences and (b) usage of severe punishments. The data analyses produced statistically significant paths indicating that teacher efficacy, mediated by emotions, reliably predicts differences in restrictive strategy usage. In the first causal model, teacher efficacy mediated by stress, anger, and liking predicts usage of negative consequences, while, in the second causal model, teacher efficacy mediated by stress and anger predicts usage of

severe consequences. These findings substantiate Bandura's claim that self-efficacy beliefs influence emotions and actions (Bandura, 1977, 1982). They also emphasize the importance of the connection between teachers' levels of emotional arousal and their responses to hyperactive and aggressive student behavior in the classroom. Since this study shows that levels of teacher efficacy and patterns of emotional reaction to externalizing behavior crucially determine the character of the educational experience afforded to certain students, direct implications for teacher selection, preservice teacher education, and inservice training exist. These implications for practice will be discussed in a subsequent section.

The Intervention Strategies Scale

Since, for most researchers utilizing large subject samples, the on-site assessment and quantification of teachers' disciplinary and classroom management behaviors is prohibitively expensive in terms of time, money, and human resources, the development of a self-report, paper-pencil instrument is extremely useful. The Intervention Strategies Scale is offered here as an efficient assessment tool that may be useful for inclusion in future efficacy studies, validation experiments, or item refinement projects. Although it was thought that teachers might not be willing to report utilizing punitive intervention strategies, the data in study indicate that teacher responses to items representing negative consequences and severe punishments adequately discriminate and are significantly related to teacher efficacy ratings.

Although the Intervention Strategies Scale generates teachers' specific recollections of strategies used with particular children (strengthening face validity), and allows strategies to be grouped into dimensions (a technique to increase validity, recommended by Hook and Rosenshine, 1979), the reliability and validity of this instrument needs to be formally established. This investigation contributes to the

knowledge base in classroom management by showing that teachers' tendencies to make socially desirable statements about their teaching behavior do not prevent them from reporting different frequencies of restrictive strategy usage on this type of paper-pencil, self-report instrument.

Although some researchers have suggested that better teachers are more likely to use rewards and incentive systems to shape behavior (Emmer, Evertson, & Anderson, 1980), or display warmth and encouragement in certain contexts (Brophy and Evertson, 1974), no differences in positive intervention strategy usage were found in this study. The findings are surprising since use of token economies and reinforcement has been shown to be very effective with problem students (Barkley, 1981; Bornstein & Quevillon, 1976), as has the teaching of metacognitive self-control strategies (Meichenbaum, 1978).

The data in this study show that high and low efficacy teachers both utilize a high frequency of rewards and positive reinforcement strategies. This observed statistical similarity could be due to a variety of causes: (a) the similarity could be real, (b) low efficacy teachers could be prone to inaccurate assessment of their usage of reward strategies, or (c) the reward items in the Intervention Strategies Scale might not be appropriately or proportionally representative of positive techniques actually employed by teachers and may poorly discriminate between important types or purposes of reward subdimensions. It is strongly recommended that development and refinement of additional reward items be considered in future studies.

Teacher Efficacy and Persistence

Although the sarcastic maxim: "Those who can, do, and those who can't, teach," is sometimes bandied by those seeking to disparage and lampoon educators, the results of this study indicate quite the opposite, that: those who can, teach, and those who can't, either quit or learn how eventually. Interestingly, teacher efficacy

is significantly related to years on the job. Low efficacy teachers are likely to teach for fewer years, while high efficacy tend to have longer careers.

In Bandura's model (1977), self-efficacy is described as determining task persistence in the face of adverse experiences. Since low efficacy teachers seem to be less effective instructors and managers and are more likely to quit their jobs, it can be seen that they clearly are less persistent overall. This study generated evidence to support the self-efficacy/persistence relationship proposed by Bandura.

But why do low efficacy teachers have a tendency to abandon their efforts and resign from teaching in greater proportions? One useful way to view the problems low efficacy teachers encounter may be through the lens of Seligman's "learned helplessness" paradigm (Abramson, Seligman, & Teasdale, 1978; Seligman, 1975). In this model, learned helplessness is understood to be a condition of depression and inaction which results from the perception of "noncontingency" between a subject's behavior and outcome. With regard to learned helplessness and classroom management, if low efficacy teachers experience repeated episodes of student disruption, they may interpret the difficulty as being due to personal failure. As low efficacy teachers, they will perceive themselves to be incapable of bringing about change, and will consequently experience motivational deficits to persist at the task at hand. They may exert less day-to-day effort as instructional leaders for their students and may be more likely to quit or be fired from their positions.

Another explanation for this teacher efficacy/years employed relationship is that low efficacy teachers' early-career self-assessments are amenable to improvement. It seems likely that low efficacy teachers who stay in teaching will, either through study or trial-and-error, acquire some more obviously effectual teaching and management skills. Skill attainment would influence student behavior and these variables would function to modify teachers' efficacy beliefs. Thus, senior

teachers who have high efficacy beliefs, may, in their earlier careers, have had low efficacy beliefs.

Since research shows that up to 50% of all new teachers quit within seven years (Corey, 1970), it seems that "those who can," those whose self-efficacy assessments indicate a high level of confidence in their personal ability to be an effective change agent and a strong belief that teaching can influence student learning despite family background, socioeconomic status, and school factors, may be the ones who become career teachers, while those who can't, those who give themselves low teacher efficacy ratings, may become teacher dropouts.

Teacher Efficacy and Environmental Effects

This study revealed few environmental effects on teacher efficacy. Although Ashton and Webb (1986) perceive teacher efficacy to be inextricably embedded and reciprocally affected by what Bronfenbrenner (1976) termed the "microsystem," the "mesosystem," the "exosystem," and the "macrosystem," this investigation finds evidence of no such pervasive embedded dynamic. Instead, this study demonstrates a robust teacher effect, independent of many primary environmental variables. Teacher efficacy is not significantly related to grade level taught or number of children in the classroom, whether teachers in the school freely share ideas, whether teachers are friendly to one another, how supplies are distributed, or whether teachers engage in team teaching. Neither is teacher efficacy significantly related to pay cuts or raises, whether teachers are given access to discretionary funds, level of parent involvement, type of school, or whether teachers pursue advanced degrees. (Of course, additional studies on potential ecological influences on teacher efficacy are called for, and it is possible that different questionnaire prompts or data collection techniques might yield different results.)

The statistical findings of the present investigation show that the only two environmental variables that are significantly related to teacher efficacy are (a) perceived attitude of the principal, and (b) decision-making freedom. The results show that high efficacy teachers are more likely to state that they believe that their principals think they are strong, effective teachers, but that low efficacy teachers are less likely to state this belief. In addition, high efficacy teachers are much more likely to feel free about making their own decisions about curriculum and teaching methods. (In this study, decision-making freedom was defined as feeling free to make decisions about curriculum and teaching methods versus feeling pressured to teach a certain curriculum a certain way.) Teachers' senses of efficacy, therefore, seem somewhat, but not entirely, independent of the ecological structure within which they function. Experimental interventions aimed at increasing teachers' levels of efficacy by stimulating positive teacher/administrator relations and increasing perceptions of decision-making freedom should be piloted and evaluated in future research.

Implications for Teacher Selection

Individuals who believe that students' destinies are fixed, that teaching doesn't matter, and that they personally are unable to effect change with students have no business being teachers. Thus, teacher education admissions officers, principals, and school district recruiters, have a collective obligation (perhaps a moral obligation) to act as gate-keepers at their points of entry to the profession. Children deserve to be protected from those very inefficacious and ineffective instructors who may find their ways into classrooms.

Research on the important relationships between teacher efficacy and student achievement and teacher efficacy and classroom management suggest that the act of teaching must be motivated by something akin to faith. High personal and teaching

efficacy implies that an individual possesses a type of non-religious zeal or belief that the joint endeavor of teaching and learning is personally worthwhile and will be productive for children. Teachers must be confident that their students can develop, learn, and benefit from the process of instruction, and they must believe that they are capable of organizing the environment, planning, motivating, structuring activities, delivering instruction, assessing progress, providing for remediation, etc.

Teachers do "make a difference." Despite teacher shortages, society must have the courage to insist upon excellence in the classroom. This study, along with others, shows that teachers' efficacy beliefs may be considered a valuable source of pedagogical competency. Screening out very low efficacy teachers, or teachers whose low efficacy beliefs seem immutable, is a reasonable step to take when students' futures are at stake.

Implications for Preservice Teacher Education and Inservice Teacher Training

The results of this study suggest a strong need for teacher training institutions and school districts to provide preservice teachers and practicing teachers with more solid foundations in instructional principles and practical methods for effective classroom management. The emotion-mediated path models demonstrated that low efficacy teachers respond to hyperactive and aggressive student behavior with higher levels of anger and stress and subsequently utilize more negative consequences and severe punishments. It was also found that low efficacy teachers report having more problem students in their classes and that they experience less confidence in being able to handle student misbehavior. Most significantly, chi-square analysis showed that low efficacy teachers are more likely to be new and inexperienced. Thus, beginning teachers need to be inoculated against inefficacy and equipped with an array of effective strategies to skillfully manage the classroom challenges they are likely to encounter, and practicing low efficacy teachers need to be provided low-

threat opportunities to learn stress-reduction techniques and master practical methods for improved instructional and managerial leadership.

Programs of preservice teacher education and inservice teacher training must provide adequate components of study on students with special needs, especially on students who have attention deficit hyperactivity disorder (ADHD) and aggressive conduct disorders. Preservice teachers and practicing teachers should be prepared for circumstances which involve consideration of effective versus efficient teaching and be trained to analyze difficult cost/benefit situations extremely needy students present. Teachers need to be exposed to, and explicitly taught how to apply a variety of approaches that have been shown to be effective with problem students (Canter & Canter, 1976; Goodlad, 1984; Glasser, 1986; Kounin, 1970; Meichenbaum, 1978; Rogers, 1961), learn about medication effects (Barkley, 1981), and become aware of district-level resources that are available for special-needs students. Teachers should be taught how to develop coping strategies and belief structures that enable them to conserve their feelings of efficacy and avoid guilt, embarrassment, frustration, and feelings of personal failure (learned helplessness) when interacting with students with externalizing behavior problems.

Since problem student behavior is, in many cases, within the range of normal (some "difficult" children would not qualify as behaviorally disordered according to norm criteria), classroom management and teacher efficacy intervention programs need to teach teachers to use terms that assign temporary meaning to misbehavior: "naughty behavior," not "naughty child." Teachers need to learn that students with behavioral problems require help, not punishment, and that difficult behavior is amenable to change through socialization, improvements in the quality of instruction, counseling, use of positive reinforcement schemes, and instruction in metacognitive strategies. In this way, teachers will be more motivated to engage, persist, and mold student behavior.

This study found that a large percentage of practicing teachers experience overwhelming problems with student misbehavior. (Low efficacy teachers report having an alarming average of six students with behavior problems in their classes.) Since many teachers seem to have particular difficulty regaining control of classes that have already become undisciplined, mid-year teacher education inservice courses might be less than maximally effective. Instead, districts and university extension programs need to offer summertime, or off-track "Start-the-Year-Right" courses to teach teachers effective strategies to implement with their new classes. Research suggests that structured inservice teacher education programs in management can be effective (Cheser, McDaniel, & Cheser, 1982; Docking, 1985; Stallion & Zimpher, 1991), but there continues to be a pervasive lack in the area of classroom management skill development (Harthern & Rolle, 1991).

Future Research

Additional research in the area of teacher efficacy and classroom management will help clarify the nature of many of the relationships between variables discussed in this study. Future research ought to expand the teacher efficacy knowledge base into the following areas: (a) teacher efficacy and the attributions, expectancies, affects, and strategies of special education versus regular education teachers, (b) teacher efficacy and teachers' concomitant beliefs, emotions, and strategies for dealing with internalizing (anxious and withdrawn) problem behavior, (c) teacher efficacy and the effects of differences in administrative style and decision-making freedom, and (d) teacher efficacy and differences in teachers' beginning-of-the-year (first day, first week) behaviors.

Concluding Statements

This study's descriptive research design was modeled after one promoted in a paper by Scriven (1986), who argued that researchers should move away from an experimental educational design standard to a more commonsensical, practical paradigm, in which excellent teachers' "winning ways" would be investigated. Scriven stated:

> You must begin by identifying a number of practitioners who are outstandingly successful at the task in question; you must then use all the tricks in the book to identify the distinctive features of their approach (possibly but not necessarily by discrepancy comparisons with unsuccessful practitioners; you then teach new or unsuccessful practitioners to use the winning ways and retest until you get an exportable formula. It goes contrary to the traditional model to think that the practitioner knows more than the researcher about teaching or discipline... You don't disregard successful prospectors because you can't understand how diamonds could possibly be found in the Pilbara, you rush out and start finding out where exactly to find them. (p. 59)

This study provides a comprehensive profile of high efficacy teachers' "winning ways." While the results indicate that many teachers experience serious problems with discipline, it also shows how and why some teachers are effective and successful classroom managers. This investigation delineates the specific attributions, expectancies, emotions, control beliefs, and preferred intervention strategies of effective, efficacious teachers. This study also reveals that while most

environmental and school variables are not significantly related to teacher efficacy, certain important cognitive, affective, and behavioral individual difference variables are significantly related. The classroom teacher, then, is the crucial and appropriate variable of interest in the context of instructional excellence research and classroom management process analysis. The nurturance of effective, efficacious teachers may be our best hope for reform and school improvement.

APPENDIX A

The Research Questionnaire:

1. Cover Letter/Statement of Anonymity and Confidentiality
2. Teacher Efficacy Scale
3. Select a Student Form
4. Student Behavior Scale (IOWA Conners Teacher Rating Scale)
5. Teacher Attribution and Affect Scale
6. Intervention Strategies Scale
7. Pupil Control Ideology Scale
8. Demographic Survey

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GRADUATE SCHOOL OF EDUCATION
405 HILGARD AVENUE
LOS ANGELES, CALIFORNIA 90024-1525

Dear Teacher,

Thank you for participating in this study. I am a graduate student at UCLA conducting research for my dissertation. Without your help, this work is impossible.

On the following pages, I ask a number of questions regarding your feelings and beliefs about teaching. I also ask about your teaching experiences with problem behavior and student discipline. I've included other questions about your school setting and students to better understand the context of your teaching situation.

STATEMENT OF ANONYMITY AND CONFIDENTIALITY:
Do not worry about being identified personally in this study. Your name need not appear anywhere on these pages. All results will be reported statistically. No identifying information will be published or released. Your principal will never know how you responded to these questions.

Please be candid and honest as you respond to the questionnaire items on the following pages. The questionnaire will only take you fifteen or twenty minutes to finish.

Thank you for returning this survey promptly. If possible, mail the completed questionnaire within the next three or four days. I've provided a postage-paid envelope here so that you can mail the questionnaire back to me without expense. Please try to answer all items. Keep the dollar as a token of my appreciation for your participation in my study. If you have any questions, my phone number is 818-789-4611.

Sincerely,

Lynn Melby

Lynn Melby
UCLA Graduate Student

DIRECTIONS: Please indicate the degree to which you agree or disagree with each statement below by **circling** the appropriate numeral to the right of each statement.

	Strongly Disagree	Moderately Disagree	Disagree slightly more than Agree	Agree slightly more than Disagree	Moderately Agree	Strongly Agree
1. When a student does better than usual, many times it is because I exerted a little extra effort.	1	2	3	4	5	6
2. The hours in my class have little influence on students compared to the influence of their home environment.	1	2	3	4	5	6
3. The amount that a student can learn is primarily related to family background.	1	2	3	4	5	6
4. If students are not disciplined at home, they aren't likely to accept any discipline.	1	2	3	4	5	6
5. When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level.	1	2	3	4	5	6
6. When a student gets a better grade than he usually gets, it is usually because I found better ways of teaching that student.	1	2	3	4	5	6
7. When I really try, I can get through to most difficult students.	1	2	3	4	5	6
8. 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.	1	2	3	4	5	6

(continued on next page)

	Strongly Disagree	Moderately Disagree	Disagree slightly more than Agree	Agree slightly more than Disagree	Moderately Agree	Strongly Agree
9. When the grades of my students improve it is usually because I found more effective teaching approaches.	1	2	3	4	5	6
10. If a student masters a new math concept quickly, this might be because I knew the necessary steps in teaching that concept.	1	2	3	4	5	6
11. If parents would do more with their children, I could do more.	1	2	3	4	5	6
12. If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.	1	2	3	4	5	6
13. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him quickly.	1	2	3	4	5	6
14. The influences of a student's home experiences can be overcome by good teaching.	1	2	3	4	5	6
15. If one of my students could not do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.	1	2	3	4	5	6
16. Even a teacher with good teaching abilities may not reach many students.	1	2	3	4	5	6

Select a Student

DIRECTIONS: Select a student in your class who, in your opinion, has a **behavior** problem. You will be asked to rate the student's behavior and describe perceived causes of and reactions to this behavior. (For our purposes, the problem student you select needs to have been in your class for at least four weeks). Choose the student who seems to exhibit the most severe behavior problem in your class.

Student's Name (first only) _____

Grade in School (circle) K 1 2 3 4 5 6

Is this child a boy or a girl? (check one)

☐ boy ☐ girl

Has this student ever repeated a grade? (check one)

☐ No ☐ Yes ☐ Don't know

Current academic school performance: (check one)

☐ Far below grade level

☐ Somewhat below grade level

☐ At grade level

☐ Somewhat above grade level

☐ Far above grade level

Is this student currently taking any medication to control the behavior problem?

☐ No ☐ Yes ☐ Don't know

Student ethnicity: (check one)

☐ African American ☐ Native American

☐ Asian/Pacific Islander ☐ White

☐ Latino ☐ Other _____

(please specify)

Student Behavior Scale

DIRECTIONS: Think about the student you selected on the previous page. For each item, check (✓) the column which best describes this child.

	Not at All	Just a Little	Pretty Much	Very Much
1. Fidgeting				
2. Hums and makes other odd noises				
3. Excitable, impulsive				
4. Inattentive, easily distracted				
5. Fails to finish things he starts (short attention span)				
6. Quarrelsome				
7. Acts "smart"				
8. Temper outbursts (explosive and unpredictable behavior)				
9. Defiant				
10. Uncooperative				

DIRECTIONS: Think about the student you selected. Read the following statements and **circle** the number that shows how much you agree or disagree. Please indicate how you honestly feel.

	Strongly Disagree				Strongly Agree
1) I feel angry when this student misbehaves.	1	2	3	4	5
2) I feel sorry for this student.	1	2	3	4	5
3) If a visitor came into my class when this student was misbehaving, I would feel embarrassed.	1	2	3	4	5
4) I feel confident about being able to manage this student's behavior.	1	2	3	4	5
5) I feel guilty about this student's misbehavior.	1	2	3	4	5
6) I like this student.	1	2	3	4	5

DIRECTIONS: Read each statement and **circle** a number on the continuum that best represents your opinion.

7) This student's behavior is:

Caused by something internal to the student	1	2	3	4	5	Caused by something external to the student

8) This student's behavior is:

Chronic	1	2	3	4	5	Temporary

9) This student's behavior is:

Controllable by the student	1	2	3	4	5	Not controllable by the student

10) This student misbehaves:

On purpose	1	2	3	4	5	Not on purpose

11) While in my class, I expect this student's behavior to:

Improve a lot	1	2	3	4	5	Not improve at all

Intervention Strategies

Teaching involves selecting and applying disciplinary techniques. One challenge is to determine which intervention strategies will work with individual problem students. Some children may respond to rewards, but others seem to need consistent consequences and sometimes punishments for misbehavior.

DIRECTIONS: Think about the student you rated previously. For each of the following interventions, **circle** the number that indicates how often you have used it with this student. **Please be as accurate and honest as possible.**

	Never		Sometimes		Often
1. I have benched this student during recess or lunch.	0	1	2	3	4
2. I have sent this student to a certain area of the classroom for punishment or time out.	0	1	2	3	4
3. I have let this student earn special rewards or privileges.	0	1	2	3	4
4. I have given this student work that provides a high degree of success.	0	1	2	3	4
5. I have written "Good News" notes to the student's parents for behavior improvement.	0	1	2	3	4
6. I have written notes to this student's parents when the student misbehaves.	0	1	2	3	4
7. I have threatened to punish the whole class for continued individual misconduct.	0	1	2	3	4
8. I have related lesson content to this student's special interests.	0	1	2	3	4
9. I have told this student that I like him or her.	0	1	2	3	4
10. I have given this student unsatisfactory marks for conduct or citizenship.	0	1	2	3	4
11. I have allowed this student to choose his or her own rewards for good conduct.	0	1	2	3	4

(continued on next page)

	Never		Sometimes		Often
12. I have threatened to call this student's parents.	0	1	2	3	4
13. I have had this student suspended from school.	0	1	2	3	4
14. I have offered this student a variety of rewards.	0	1	2	3	4
15. I have praised this student's improved behavior.	0	1	2	3	4
16. I have required this student to do extra class work or homework for behavior infractions.	0	1	2	3	4
17. I have written this student's name on the board for infractions.	0	1	2	3	4
18. I have sent this student out of the room.	0	1	2	3	4
19. I have taught this student special self-monitoring strategies such as "Stop, Look, Listen."	0	1	2	3	4
20. I have spent time to give this student individual counseling.	0	1	2	3	4
21. I have given this student special smiles for encouragement.	0	1	2	3	4
22. I have taken away this student's materials or privileges.	0	1	2	3	4
23. I have used a sharp voice and reprimanded this student in public.	0	1	2	3	4
24. I have given this student a special job or responsibility in the classroom.	0	1	2	3	4
25. I have given this student pats on the back or congratulatory hugs.	0	1	2	3	4
26. I have sent this student to the principal's office.	0	1	2	3	4

DIRECTIONS: Following are twenty statements about schools, teachers, and pupils. Please indicate your personal opinion about each statement by **circling** the appropriate response at the right of each statement.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. It is desirable to require pupils to sit in assigned seats during assemblies.	SD	D	U	A	SA
2. Pupils are usually not capable of solving their problems through logical reasoning.	SD	D	U	A	SA
3. Directing sarcastic remarks toward a defiant pupil is a good disciplinary technique.	SD	D	U	A	SA
4. Beginning teachers are not likely to maintain strict enough control over their pupils.	SD	D	U	A	SA
5. Teachers should consider revision of their teaching methods if these are criticized by their pupils.	SD	D	U	A	SA
6. The best principals give unquestioning support to teachers in disciplining pupils.	SD	D	U	A	SA
7. Pupils should not be permitted to contradict the statements of a teacher in class.	SD	D	U	A	SA
8. It is justifiable to have pupils learn many facts about a subject even if they have no immediate application.	SD	D	U	A	SA
9. Too much pupil time is spent on guidance and activities and too little on academic preparation.	SD	D	U	A	SA

(continued on next page)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
10. Being friendly with pupils often leads them to become too familiar.	SD	D	U	A	SA
11. It is more important for pupils to learn to obey rules than that they make their own decisions.	SD	D	U	A	SA
12. Student governments are a good "safety valve" but should not have much influence on school policy.	SD	D	U	A	SA
13. Pupils can be trusted to work together without supervision.	SD	D	U	A	SA
14. If a pupil uses obscene or profane language in school, it must be considered a moral offense.	SD	D	U	A	SA
15. If pupils are allowed to use the lavatory without getting permission, this privilege will be abused.	SD	D	U	A	SA
16. A few pupils are just young hoodlums and should be treated accordingly.	SD	D	U	A	SA
17. It is often necessary to remind pupils that their status in school differs from that of teachers.	SD	D	U	A	SA
18. A pupil who destroys school material or property should be severely punished.	SD	D	U	A	SA
19. Pupils cannot perceive the difference between democracy and anarchy in the classroom.	SD	D	U	A	SA
20. Pupils often misbehave in order to make the teacher look bad.	SD	D	U	A	SA

Demographic Information

What is your age?
- ❒ 20 to 30
- ❒ 31 to 40
- ❒ 41 to 50
- ❒ 51 or above

What is your sex? ❒ Male ❒ Female

How many years have you been an employed teacher?
- ❒ 0 to 1 years (this is my first year)
- ❒ 1-5 years
- ❒ 6-10 years
- ❒ 11-15 years
- ❒ 16-20 years
- ❒ 20-25 years
- ❒ 25+ years

What is your highest level of education?
- ❒ Bachelor's degree
- ❒ Master's degree
- ❒ Ph.D.

Have you ever been a supervising teacher for a student teacher or an official mentor teacher for a beginning teacher?
- ❒ Yes
- ❒ No

Do you currently teach upper or lower grades?
- ❒ Lower grades (K, 1, 2, or 3)
- ❒ Upper grades (4, 5, 6)

How many students are in your class?
- ❒ 1-10
- ❒ 11-17
- ❒ 18-24
- ❒ 25-31
- ❒ 32-40+

(continued on next page)

Please estimate the ethnic background of students in your class by percentages. *(Total should equal 100%)*:

_____ % African American

_____ % Asian/Pacific Islander

_____ % Latino

_____ % Native American

_____ % White

_____ % Other

Total = 100%

In your class, how many students have problems communicating with you because they speak a language that you do not speak? *(Write an actual number, not a percent)*

_____ speak a language I do not speak

In your opinion, how many of your students are behavior problems? *(Write in actual numbers, not percentages)*

_____ number of behavior problem boys

_____ number of behavior problem girls

_____ total behavior problem students

Where are you most likely to seat behavior problem students?

- ☐ Very close to you
- ☐ Somewhat close to you
- ☐ Neither close to nor far from you
- ☐ Somewhat far from you
- ☐ Very far from you

Is your class an entirely Special Education class?

- ☐ Yes
- ☐ No

(continued on next page)

How would you describe the general academic level of the students in your class?

- ❒ Above average
- ❒ Average
- ❒ Below average

Do the teachers and other professional personnel in this school freely share ideas and materials?

- ❒ Yes
- ❒ No

How would you describe the general atmosphere at this school?

- ❒ Friendly
- ❒ Unfriendly

Do you have at least one good friend on the faculty here?

- ❒ Yes
- ❒ No

In your interactions with the principal, do you perceive that the principal is critical or disrespectful towards you?

- ❒ Yes
- ❒ No

Do you think that the principal thinks you're a strong, effective teacher?

- ❒ Yes
- ❒ No

Does your school provide you with a small discretionary fund for special materials and extra classroom expenses?

- ❒ Yes
- ❒ No

(continued on next page)

How are materials and supplies distributed at your school?

- ❒ Teachers have free access to most supplies
- ❒ Most supplies must be requisitioned

How would you describe the parent involvement at your school? *(Consider parent attendance at school events and conferences.)*

- ❒ Very active parent involvement
- ❒ Active parent involvement
- ❒ Some parent involvement
- ❒ Little parent involvement
- ❒ No parent involvement

Which statement most closely fits your perception? *(Choose one)*

- ❒ I feel free to make my own decisions about curriculum and teaching methods.
- ❒ I feel pressured to teach a certain curriculum in a certain way.

Are you involved in team teaching?

- ❒ Yes
- ❒ No

In what type of school do you teach?

- ❒ Regular public school
- ❒ LEARN school
- ❒ Charter school
- ❒ Magnet school

In general, how stressful do you find being a teacher?

- ❒ Not at all stressful
- ❒ Mildly stressful
- ❒ Moderately stressful
- ❒ Very stressful
- ❒ Extremely stressful

(continued on next page)

Which is more important to you? (*Choose one*)

- ❒ Presenting subject matter to students
- ❒ Fostering student self-esteem & adjustment

If you had it to do all over again, would you choose to become a teacher?

- ❒ Yes
- ❒ No

What is your salary situation this year?

- ❒ Received a pay cut
- ❒ No change in salary
- ❒ Received a pay raise

What is your ethnicity? (check one)

- ❒ African American
- ❒ Asian/Pacific Islander
- ❒ Latino
- ❒ Native American
- ❒ White
- ❒ Other _____
  (please specify)

$40.00 Paid Interview (Optional) I need to conduct casual class observations followed by confidential interviews with a few random respondents in order to gather more information about teacher attitudes, opinions about problem student behavior, and job satisfaction. Interviews will be arranged to take place after school, in teachers' classrooms. I will pay interviewees $40.00 cash for their time. Interviews will last about 1 hour. If you are interested, print the following information here so that I will be able to contact you. Only a few random teachers will be contacted, but please do identify yourself here if you're interested in the paid interview and would like to be included in this lottery.
(Leave blank if not interested)

Full name _____

Home phone number_____

Other phone number_____

Name of School_____

Thank you very much for your help. My research is impossible without the assistance of teachers like you. I sincerely appreciate your time and effort.

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