

THE RELATIONSHIP OF TEACHER PRAISE TO TEACHER
ORIENTATION AND THEIR RELATIONSHIPS TO STUDENTS'
PERCEIVED COMPETENCE, INTRINSIC MOTIVATION, AND ACHIEVEMENT

By

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This dissertation is dedicated to
my husband, John, and my son, Bryan.

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This observational correlational study investigated the relationship between frequencies of various types of teacher praise and teacher orientation toward supporting autonomy in versus controlling children. Further, this study investigated the relationships between the frequencies of various types of teacher praise and children's feelings of competence, intrinsic motivation, and achievement. The relationships between teacher orientation and the three children's measures were also studied. The subjects were 154 third-grade children in middle-ability reading groups and their 22 teachers in Alachua County, Florida.

Prior to classroom observation, the teachers' orientation was assessed. The teachers' use of praise was recorded during middle-ability reading groups by four different observers on four separate occasions of 30 minutes each.

The children's feelings of competence and intrinsic motivation were assessed in small group test situations while the study was in progress. Achievement data were collected at the end of the academic year.

A series of correlations was computed to analyze the data. The findings indicated that teacher orientation and teacher praise had few relationships with the children in the study. No significant relationship was found between teachers' orientation and teachers' use of praise. No significant relationships were found between teachers' orientation and children's feelings of competence, intrinsic motivation, and achievement. No significant relationships were found between teachers' use of praise and children's feelings of competence and achievement. A negative correlation significant at the .05 level was found between the informational dimension of praise and children's intrinsic motivation. Because informative praise occurred infrequently the negative correlation between informative praise and children's intrinsic motivation must be interpreted cautiously. Trends in the data, although not significant, suggest there may be some differences between the use of praise by control- and autonomy-oriented teachers. Control-oriented teachers used more praise statements, more tangible reinforcers, and more conduct-specific praise. These trends as well as the small sample of subjects in the present study suggest the need for further investigation.

CHAPTER I INTRODUCTION

Praise as a teacher behavior has been receiving mixed reviews in the research literature. In a survey of 200 teachers, Zahorik (1977) found that praise was rated as the single most important teacher behavior for facilitating learning and elaborate praise was rated as the second most important. Sandefur and Adams (1976) conducted a five-year longitudinal study of the teaching effectiveness of teacher education graduates from Western Kentucky University. In their Evaluation of Teaching Report based on these data, Sandefur and Adams stated, "good teachers use significantly more praise and encouragement for the student" (p. 72). Dunkin and Biddle (1974) reviewed a series of studies each of which indicated that praise increased achievement. Support for praise also can be found in numerous teacher education texts, experimental studies, and expert opinion articles.

Other studies, however, question the effectiveness of teacher praise. Dershimer (1982) summarized previous praise research in her article on pupil perceptions of praise. She stated that several of the large correlational studies of teacher effectiveness have concluded that teacher

praise is not a strong predictor of effective teaching. Peng and Ashburn (1978) stated that there is little evidence to show the importance of teacher praise. In a meta-analysis of praise literature, Wilkinson (1980/1981) concluded that teacher praise has very little relationship to achievement. Soar and Soar (1978) stated that

positive affect [including praise] related more consistently negatively to gain than any other measure . . . it seems clear that the "happy classroom" is not only not necessary, but may be a liability for pupil gain in achievement. (p. 95)

Based on findings like Soar's, Brophy (1981a) maintained that teacher praise was not effective and should remain infrequent. In fact, he saw no necessity for praise at all: "Students don't need praise to master the curriculum, to behave or to develop healthy self-concepts" (p. 21).

To praise or not to praise is obviously an unsettled question. One problem with much of the research to date is the acceptance of praise as a uni-dimensional variable. Studies have grouped a multitude of events, attitudes, and phrases under a single heading--praise. Rather than continuing to view praise as a unitary phenomenon, it seems important to acknowledge the many factors that combine to vary the effects of praise on students. In fact, this seems to be exactly the direction taken by several researchers in their praise studies. For example, investigators have found that the effects of praise vary by

factors in the situation, such as expectancy and contingency, and by certain pupil characteristics, such as locus of control, age, and SES (Boggiano & Ruble, 1979; Danner & Lonky, 1981; Evertson, 1975; Swann & Pittman, 1977).

Another important dimension of praise receiving attention is the characteristic of the praiser, or rewarder. This particular approach to studying the effects of praise comes from the intrinsic motivation literature. Specifically, it follows from Deci's (1975) cognitive evaluation theory. Deci proposes that every external reward, such as praise, has both a controlling aspect and an informational aspect. The function of the controlling aspect is to bring about a particular behavioral outcome in the recipient. The function of the informational aspect is to convey information about one's competence at a target activity. The aspect of praise which is more salient to recipients will have an effect on their intrinsic motivation. If the controlling aspect is more salient, intrinsic motivation decreases; if less salient, intrinsic motivation is maintained or enhanced.

Characteristics of teachers may be among the factors that determine which types of praise administered by teachers will be more salient to students (Deci, 1975, Deci & Ryan, 1981). Teachers who are more control-oriented may be likely to praise in controlling ways that will undermine children's intrinsic motivation. Teachers who are more

oriented toward supporting autonomy may be likely to praise in informational ways that enhance children's feelings of competence and intrinsic motivation (Deci, Nezlek, & Sheinman, 1981a). Viewed in this light, praise could function either as a detrimental or as a valuable educational tool, depending on the orientation of teachers.

Statement of the Problem

The purpose of the present study was to investigate informational praise and controlling praise by observing teachers' use of praise in classrooms. Specifically, three questions were explored:

1. Are there significant relationships between frequency of various types of teacher praise and teacher orientation toward controlling versus supporting autonomy in children?
2. Are there significant relationships between frequency of various types of teacher praise and children's feelings of competence, intrinsic motivation, and achievement?
3. Are there significant relationships between teacher orientation toward controlling versus supporting autonomy in children and children's feelings of competence, intrinsic motivation, and achievement?

Definition of Terms

Teacher praise. Teacher praise is a positive evaluative reaction which goes beyond the level of simple affirmation by verbally complimenting the child ("Good," "Fine," "Wonderful," etc.) and/or by accompanying verbalization of positive feedback with expressions or gestures connoting excitement or warmth. As used in this study, praise is measured by behaviors on the Teacher Praise Behavior Checklist (Appendix B).

Control-oriented teacher. A control-oriented teacher is a teacher who exhibits the characteristic of being controlling with children as indicated by a low or negative score (below 6.98) on Deci's The Problems in Schools" Questionnaire: A Measure of "Adults' Orientations Toward Control Versus Autonomy with Children (Deci, Sheinman, Schwartz, & Ryan, 1981b).

Autonomy-oriented teacher. A teacher who exhibits the characteristic of supporting autonomy in children as indicated by a higher score (above 6.98) on Deci's instrument is an autonomy-oriented teacher.

Controlling praise. Teacher praise statements which initiate a change in the students' perceived locus of causality process are labelled as controlling praise. Dimensions of this category are listed in Chapter III.

Informational praise. Teacher praise statements which initiate a change in the students' perceived competence

process are labelled as informative praise. Dimensions of this category are listed in Chapter III.

Feelings of competence. The feelings of cognitive, social and physical competence and general self-worth of the child are measured by Harter's Perceived Competence Scale (Harter, 1979).

Intrinsic motivation. The motivational orientation of the child in the situational context of classroom learning is measured by Harter's Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (Harter, 1980).

Achievement. The achievement of the child is measured by the Metropolitan Achievement Test, Spring administration, 1983.

Need for the Study

Cognitive evaluation theory (Deci, 1975) seems to provide a feasible framework from which to approach the question of the effectiveness of teacher praise. It seems likely that previous studies of teacher effectiveness have included both control-oriented and autonomy-oriented teachers. If, as Deci et al. (1981a) suggest, teacher orientation varies the effect of praise on the learner, this may account for the inconsistent results of previous studies. The praise of control-oriented teachers may have undermined students' intrinsic motivation and achievement, whereas praise of autonomy-oriented teachers may have

enhanced intrinsic motivation and achievement. The combination of these opposite effects of teacher praise on students may account for the weak and mixed direction correlations between praise and achievement reported in the literature (Brophy, 1981a; Evertson, 1975; Wilkinson, 1980/1981).

Cognitive evaluation theory (Deci, 1975) suggests that when children are informationally praised, their feelings of competence are enhanced. Because they feel more competent, at a task for example, their intrinsic motivation to perform the task increases. Eventually, because they are motivated to perform the task more often, their achievement increases. When children receive controlling praise, however, their intrinsic motivation is undermined. They may be less motivated to engage in learning tasks and their achievement may decline.

Although the literature on cognitive evaluation theory suggests that informational praise will increase feelings of competence, intrinsic motivation, and, hence, achievement, no studies have been done to investigate this relationship directly. Many studies have been conducted to establish the relationship between praise and achievement, but because praise has been treated as a uni-directional variable, little meaning can be assigned to the results. Studies are needed which look at praise in terms of its many factors in order to determine the relationship between praise and achievement.

Several studies have been done that investigate aspects of the relationship between one factor of praise (informational praise) and intrinsic motivation, feelings of competence and achievement. In an experimental investigation Pittman, Davey, Alafat, Wetherill, and Kramer (1980) found that informational verbal rewards enhanced interest in a task (Soma puzzles), whereas controlling verbal rewards did not. The subjects were 84 college-age males and females. Deci et al. (1981a) conducted a field study in fourth-through sixth-grade classrooms. They considered the relationship between teacher characteristics (control vs. autonomy orientation to children) and the competence and intrinsic motivation of students. They found significant positive correlations between teachers' orientation scores and both children's measures. That is, teachers who were more autonomy-oriented had students who were more intrinsically motivated and felt more confident. Deci et al. (1981a) and Deci, Sheinman, Schwartz, and Ryan (1981b) did not, however, observe teachers' use of praise in the classroom. They merely stated the assumption that teachers' orientations influenced the type of praise the teachers used in the classroom.

Partial support for the distinction between informational and controlling praise can be found in an analysis of praise articles written by several authors. For example, although Evertson's (1975) results indicate that the effectiveness of praise varies by SES of the student, she

cautions against telling teachers not to praise their students. She says praise should be individual, genuine, specific, and delivered in private. From Deci's perspective, Evertson's recommendation can be seen as calling for informational praise rather than controlling praise. That is, praise which is specific and communicated privately to an individual gives that student information about his/her competence, and in addition cannot be interpreted by other students as trying to control their behavior (by implying they should imitate the praised student).

Brophy's (1981a) functional analysis of praise also adds support to Deci's formulation. Throughout his analysis, Brophy refers to controlling the student. He states that at its optimum, praise acts as reinforcement. That is, the function of praise ought to be as a reinforcer, which is used to control behavior. He uses as an argument against praise that it reduces the intrinsic motivation of students. From Deci's perspective, Brophy is addressing controlling praise.

Although Brophy (1981a) states that praise should function as reinforcement, he suggests that it often functions in numerous other ways in the classroom. The actual function of praise in the classroom is an area of great concern to teachers and teacher educators, but it is also an area with little empirical data. As Zahorik's (1977) survey indicates, teachers highly value praise and use it to facilitate learning. Teacher education courses are

reported most frequently as the source of teachers' praising behavior (Zahorik, 1977). In most courses and teacher education texts, however, praise is considered a uni-dimensional variable. The effect of praise is assumed to be beneficial.

Cognitive evaluation theory (Deci, 1975) proposes that informational praise is beneficial but controlling praise is not. This suggests that some instructional problems exist. Teachers who praise in controlling ways may assume their behavior is enhancing learning when, in fact, their praise is counterproductive. More research is needed on the function of praise so that teachers can develop more effective praising strategies. As an important source of teachers' praising behavior, teacher educators are also in need of these empirical data on the function of praise. More knowledge of praise function would help determine the most appropriate training and workshop content for teachers and student teachers who praise incorrectly or not at all. The distinction between informational and controlling praise provides one fruitful approach to studying the functions of praise.

Although partial support for Deci's distinction between informational and controlling praise exists, the observational approach of this investigation was needed. A field study, that has primary students as subjects, that catalogues the naturally occurring differences between teachers' use of informational and controlling praise, and that

measures the relationship between teachers' praise behaviors and children's intrinsic motivation, feelings of competence, and achievement combines aspects of several different studies that provide only partial support for the effectiveness of informational praise.

Limitations of the Study

This study was designed as a descriptive, exploratory study. The analyses were correlational and, therefore, no causality was inferred. The generalizability of this study is restricted due to the moderate sample size of 22 classrooms. Although small, this represents two-thirds of the third-grade classrooms in Alachua County, Florida. Controlling for age and maturation variables outweighs the small sample size deficit.

An observation instrument, the Teacher Praise Behaviors Checklist, developed by the researcher for the present investigation, was used to collect data on the praise styles of third-grade teachers. The use of an instrument restricted the richness of the data collected. Because there were four observers, a uniform and consistent method of data collection was needed. A further limitation was the use of four observers. Inter-rater agreement was established before data collection to minimize variability of observation data due to varying degrees of observer sensitivity.

Finally, although the individual was the unit of analysis for the teacher's orientation measure, the classroom was the unit of analysis for all children's measures. Pooling classroom data in this way ignores individual student differences. It was necessary, however, because student data in a classroom are not independent.

Summary

This study investigated whether a relationship exists between teacher orientation and frequency of teacher praise behaviors. In addition, this study investigated the relationship between frequency of praise behaviors and children's feelings of competence, intrinsic motivation, and achievement. The relationship between teacher orientation and the three children's measures was also studied. This study was designed to help clarify the inconsistent pattern of results obtained in praise studies due to the researchers' treatment of praise as a uni-dimensional variable. The findings from this study provide teachers with a better understanding of the relationship between their praise statements and children's intrinsic motivation, feelings of competence, and achievement.

CHAPTER II REVIEW OF THE RESEARCH

Introduction

Praise as a teacher behavior is highly regarded by practitioners (Zahorik, 1977), but its effect on learning gains is questioned by current researchers (Brophy, 1981a, 1981b; Evertson, 1975; Soar & Soar, 1982; Wilkinson, 1980/1981). The current review of the literature related to the effects of praise on children reveals studies with three major outcome measures: achievement, intrinsic interest, and competence. The results are often contradictory. Some studies find praise facilitates learning, while others find praise undermines learning.

Meta-analyses

In an attempt to clarify the findings from a number of studies which include praise variables, three meta-analyses have been conducted. A meta-analysis integrates the findings from single studies and thus produces more powerful and often more meaningful statistical results (Glass, 1978). Even the more powerful technique of

meta-analysis yields unclear findings, however. Gage (1978) and Lysakowski and Walberg (1981) conclude that praise has positive effects on attitude and achievement, while Wilkinson (1980/1981) concludes that teacher praise has very little relationship to student achievement.

Functional Aspects of Praise

Perhaps the confusion due to confounding of the effects of different types of praise on achievement, intrinsic interest, and competence can be alleviated by viewing praise as having multi-functions. The literature yields more consistent results when the studies are grouped according to the functional aspects of praise. Several researchers (Bardwell, 1981; Deci & Ryan, 1981a; Deci et al., 1981a; Meyer, Bachman, Bierman, Hemplemann, Ploger, and Spiller, 1979; Pittman et al., 1980) have investigated different functions of praise, particularly informative and controlling functions. Deci and Ryan (1980) suggest that the function of praise is determined by factors in the situation, rewarder, and rewardee.

The present review of the literature related to the effects of praise on children covers four areas. These include praise and achievement, praise and intrinsic motivation, praise and competence, and the functional aspects of praise.

Praise and Achievement

The current tradition of studying the effects of praise on the performance of primary school children was begun by Elizabeth Hurlock in the early 1920s. Hurlock (1925) asked the following research question:

In a classroom, do the children who constantly receive praise for their work show more improvement from day to day than do the children who are reproofed or who are completely ignored?
(p. 146)

Hurlock's approach involved dividing primary classrooms into groups of children who received either praise, reproof, or no comments following a test. When retested she found that the praise and reproof groups achieved more than the control groups with the greatest improvement shown by the praised groups.

Investigators continue to study the same question today, although the research paradigms are more varied. The vast number of studies involving praise and achievement can be classified as either experimental classroom studies, laboratory studies, or large correlational studies of teacher behavior.

Experimental Classroom Studies

Kennedy and Willcutt (1964) reviewed more than 50 years of experimental classroom studies of the effects of praise and blame on the performance of school children.

Of the 33 studies reviewed, most concluded that praise produced somewhat higher achievement than blame or control conditions. Problems with the research included nonrandom assignment of students to experimental conditions, no control for practice effects in test-retest situations, and the ambiguity of praise statements used.

Thompson and Hunnicutt (1955) reported a study of work achievement of fifth-grade pupils. They used five different classrooms, six alternative forms of a cancellation test, and specifically stated the praise and blame conditions used. When the data were analyzed across all subjects, either praise or blame was more effective than no incentive.

Laboratory Studies

In a review of laboratory studies, Barringer and Gholson (1979) compared verbal feedback with tangible reinforcers. They found that learning was differentially affected by various combinations and types of feedback. In general, the laboratory findings indicated that verbal feedback was more efficient for teaching children than was tangible feedback. Two types of verbal feedback produced performance differences. Praise for correct answers and silence for incorrect responses (right-blank combination) produced low efficient performance during acquisition and little resistance to extinction. In contrast,

wrong-blank combination led to a more rapid acquisition and greater resistance to extinction.

Current examples of studies in the laboratory tradition found that groups who received praise showed some performance increment over control groups. Parnes (1973) found, in a sample of 220 first graders randomly assigned to different incentive conditions, that the praised group performed significantly better than the controls on a design copying task. Garcia (1980) in a study of 60 third- and fourth-grade Chicano students found that task-oriented praise produced significantly more question-asking behavior than either person-oriented praise or control group conditions. Williams (1981), however, found that praised groups did not perform significantly better than control groups on a praised-associate memory task. Although Williams performed his experiment in classrooms, his study is classified with the laboratory studies because it shares several weaknesses with other laboratory studies.

In general the laboratory studies found that groups who received praise showed some performance increment over other conditions and control groups. The laboratory studies often lacked ecological validity, however, due to novel situations and tasks, experimenter effects, and short duration of treatment.

Classroom Observational Studies

Another approach to studying teacher praise and student achievement has been to observe actual behavior in large numbers of intact classrooms and correlate teacher behavior to student outcomes. These large correlational studies of teacher behavior are identified as process-product research. In contrast to the generally positive influence of praise on performance found in the experimental and laboratory studies, the large correlational studies of teacher behavior have yielded a generally negative view of the effect of praise on the achievement of primary age students. The findings from classroom observation studies must be heeded because of their greater ecological validity. That is, these studies used actual teachers and learners in real classroom settings with no outside manipulations. What they gain through ecological validity may be lost through threats to internal validity, however. In addition, Wilkinson (1980/1981) states other limitations that include data collection (frequency counts of praise ignore many context variables), mean gain scores (means ignore important individual differences), and teacher behavior (the focus is on the teacher and the learner is ignored).

An example of a large correlational study that included praise as a teacher variable was reported by Evertson (1975). Praise data were collected over two years. In the

first year praise data were collected for 10 hours each in 31 second- and third-grade classrooms. In the second year praise data were collected for 30 hours each in 28 second- and third-grade classrooms. The process measure used was an expanded version of the Brophy-Good Dyadic Interaction System. Praise variables included positive evaluative reactions following public response opportunities, during study-initiated contacts, during teacher- initiated contacts, for academic work, and for behavior. The product measure was the students' achievement assessed by the Metropolitan Achievement Test.

Evertson found that the effect of praise on achievement varied by SES of the student and context of the situation. In low SES classrooms, praise was regularly but weakly associated with achievement but was relatively unimportant in high SES classes. Further, praise was found to be somewhat effective when teacher-initiated and during private interactions for both low and high SES classrooms.

Wilkinson (1980/1981) included Evertson's (1975) study in her meta-analysis of the effect of praise on achievement. Wilkinson used as her source of studies Medley's (1979) review of process-product research. She chose Medley's review because of the stringent quality criteria Medley used to screen the studies he reviewed. Wilkinson lists the four criteria as

1. The study from which a relationship came had to be designed so that the relationship was generalized to some

- population of teachers larger than the sample studied.
2. The relationship had to be both reliable enough to be statistically significant and large enough to be practically significant.
 3. The measure of teacher-effectiveness had to be based on long-term pupil gains in achievement areas recognized as important goals of education.
 4. The process measure had to specify the behaviors exhibited in such a way that they could be reproduced as desired.
(p. 12)

Medley included 14 large correlational studies conducted between 1965 and 1976. Wilkinson used these studies and one subsequent study (which Dr. Medley, in a personal interview with Wilkinson, indicated met his criteria but was published after his review). In the meta-analysis, Wilkinson aggregated data from 1,051 classrooms from kindergarten through grade 12. Students from both high and low SES classrooms were included. Wilkinson reported an overall aggregated correlation for the data set of $\bar{r} = .076$. She concluded, therefore, that teacher praise had little, if any, relationship to student outcome. She did find, however, that SES membership of students, grade level of students, and subject area had effects on the praise-achievement correlations. These effects will be discussed in a later section of the current review.

In summary, it seems that praise has some connection with student achievement as indicated by the generally positive results of experimental and laboratory studies.

Because this connection has not been confirmed in studies of actual classroom process, however, the praise-achievement connection does not appear to be fully explored. Other factors must be investigated which influence the effect of teacher praise on student achievement.

Praise and Intrinsic Motivation

Interest in intrinsic motivation as an outcome measure of praise studies is a relatively recent development. The trend of measuring intrinsic interest after verbal rewards stems from the research on tangible extrinsic rewards. Although not tangible, praise can be considered a form of extrinsic reward. Findings that extrinsic rewards undermine intrinsic motivation for the rewarded activity seem quite robust (Deci & Ryan, 1980). A decrease in intrinsic motivation in the form of less liking for the activity or reduced time performing the activity has been demonstrated with prizes (Ross, 1975), awards (Lepper, Greene, and Nisbett, 1973), money (Deci, 1971, 1972), food (Karniol & Ross, 1977), and supervision (Pittman et al., 1980).

In terms of the preschool and primary age child, Condry and Koslowski (1979) reported that "a major disadvantage of extrinsic reward systems is that they motivate the child more to get the reward than to arrive at a complete understanding of the educational task at hand" (p. 227). A

child is described as intrinsically motivated if he/she performs an activity for its own sake and externally motivated if the activity is performed as a means to an end, to obtain a reward (Ross, 1975). Intrinsically motivated students eager to learn out of curiosity and desire seem the ideal model for education. Deci et al. (1981b) raised a serious question about how to design learning environments that can use rewards without undermining students' intrinsic motivation.

Some of the first studies of the effects of reward on motivation were done by Deci (1971, 1972). Deci used a word game "SOMA" composed of a number of blocks that could be arranged in a variety of patterns. A series of experiments were done using college-age students. The task was to solve the puzzle patterns presented. The dependent measure was the amount of time spent playing with the puzzle during an unsupervised session. Reward conditions included a praise condition ("that's very good"; "that's much better than average for this configuration"), money condition (\$1.00 for each configuration), and control condition (Deci, 1971), and in a later series of experiments praise in combination with the money condition for males and females separately (Deci, 1972). The results indicated that money decreased intrinsic interest, whereas praise increased intrinsic interest for the 1971 studies and increased intrinsic interest for males in the 1972 study.

These Deci (1971, 1972) studies provided the paradigm for studying the effect of praise on intrinsic motivation:

1. provide subjects with an intrinsically interesting task,
2. praise subjects for doing the activity,
3. assess the level of intrinsic motivation relative to a control group by observing in a free-choice situation,
4. or by having subjects rate the extent to which they enjoyed the activity.

Although Deci's (1971, 1972) studies seem to have powerful implications for education (praise increases intrinsic motivation), they were done in laboratory settings (Condry & Koslowski, 1979). The next prototypic study in the area of intrinsic rewards and subsequent intrinsic interest was done in a typical nursery school setting by Lepper et al. (1973). Although they did not use praise as a reward condition, they did include the important dimension of expectancy. They found it was not the "good player" award per se which decreased interest in a drawing task, but the expectation of receiving the award before the task was begun. Of the three conditions, expected reward, unexpected reward, and no reward, only the expected reward subjects played with the magic markers less than the other two groups.

Anderson, Manoogian, and Reznick (1976) replicated the Lepper et al. (1973) study with 72 four- and

five-year-olds in 8 kindergarten centers. In addition to the award condition, Anderson et al. added a praise condition and a money condition. They also included three comparison groups who received no reward as controls for time or history, the presence of the experimenter, and the personal attention given the child by the experimenter. The task, as in the Lepper study, was free drawing with magic markers. The dependent variable was intrinsic motivation, defined as the amount of time spent drawing. The rewards (praise, money, or award) were presented every two minutes. Praise statements included "you are pretty good at this," "you really did a good job," "that picture is real nice." Anderson et al. (1976) found that money and awards decreased intrinsic motivation, whereas praise sharply increased intrinsic motivation.

Swann and Pittman (1977) further explored the finding that praise tends to increase rather than decrease intrinsic motivation. Swann and Pittman set up their experiment to see if it was the unexpected aspect of praise that increased intrinsic motivation. They did so by adding an unexpected tangible award condition. The subjects were 65 male and female first, second, and third graders from middle and lower class families. The task was a drawing task, and there were three experimental conditions and two control conditions. Rewards included a "good player" award (as in the Lepper et al., 1973, study) alone and in combination with either praise or an unexpected star.

The praise statement, given after the award, was "Wow, that's a really good picture; you really are a fine artist." The dependent variable was intrinsic interest measured as amount of time spent drawing during a free choice period. A one-way ANOVA performed on the data showed a main effect for reward condition. The award plus verbal-praise group spent more time drawing and were more likely to choose drawing than the other groups.

Swann and Pittman (1977) conclude that these results support Deci (1972). Praise can neutralize the effects of contingent tangible rewards. Swann and Pittman point out that it was not the mere presence of rewards but rather what the rewards did to self-perceived motivation that led to changes in intrinsic motivation.

In a study of 39 preschool children in their natural classroom setting, Krantz and Scarth (1979) investigated teacher praise and intrinsic interest. They included four treatment conditions and one control condition. The dependent variable was measured by amount of time spent with a target activity. The treatment conditions included combinations of teacher proximity, praise, and prompting. The praise conditions resulted in more time persisting with a task.

Rather than looking at one age level, Sarafino and Stinger (1981) examined the effects of material and praise rewards on intrinsic interest developmentally. Their subjects were 28 kindergarten boys and girls and 28

fourth-grade boys and girls. Sarafino and Stinger chose kindergarten and fourth grade because these two age levels have been shown by Witryol (1971) to prefer different rewards. In a survey of scaled reward preferences, Witryol found a reversal occurs between kindergarten and third grade. Kindergartners show a distinct preference for material rewards (nickel, charm, bubble gum) over praise, while third to sixth graders prefer praise.

The task Sarafino and Stinger used was giving "funny endings" to riddles. Intrinsic interest was measured by the number of unfinished riddles children chose to take home. Each age level and sex was divided into two reward conditions; half received a nickel and half received praise. The fourth graders who received praise chose to take significantly more riddles home than those who received money, whereas the kindergartners who received money chose to take more riddles home than the praise group, although this difference was nonsignificant.

This study, although interesting because it attempted a developmental perspective, has several problems. There is a discrepancy in results between Sarafino and Stinger (1981) and Anderson et al. (1976). The Sarafino and Stinger study found a trend that suggested for kindergartners that money increased intrinsic interest and praise reduced it. Anderson et al. found that money decreased intrinsic interest and praise increased it. Four factors in Sarafino and Stinger's study make its findings questionable. First,

the Anderson et al. task, drawing, was more age appropriate than generating multiple riddle endings. Second, Anderson et al. praised every two minutes whereas Sarafino and Stinger praised only at the end of the six-minute task. Third, Sarafino and Stinger's instructions to the praise group had a strong evaluative tone.

When you finish, I will tell you if your endings are funnier than the ones you gave before and if they are funnier than those given by the children from the other schools whom I have asked. (p. 295)

According to Deci and Ryan (1980), evaluation of subjects lends an extrinsic character to praise and is often experienced as highly controlling and aversive. The fourth problem with the Sarafino and Stinger (1981) study is the absence of a control group. Because of these problems, more weight must be given to Anderson et al. (1976) and the enhancing effect of praise on intrinsic motivation.

Another study which investigated the effect of praise on intrinsic motivation in a developmental perspective was Danner and Lonky (1981). They reported a series of two experiments. In Experiment I, they empirically established what are intrinsically motivating tasks for three developmental levels of children. Danner and Lonky divided 90 four- to ten-year-old children into three cognitive ability groups based on their ability on a series of Piaget's classification tasks. All three groups spent most time with classification tasks that were just beyond their ability levels. When asked, they also rated these

activities as most interesting. In Experiment II the task was the same for all 90 children; thus the task was either at, above, or below their predicted levels of intrinsic interest. The task was a class inclusion classification task. Based on their interest in Experiment I, this task was highly motivating for Group 2 (just beyond their ability level) and less motivating for Groups 1 (too difficult) and 3 (too easy). Three reward conditions included a good work certificate, praise, or no reward. There were 3 ability groups X 3 conditions groups or 9 groups. Praise statements were given five times per session to each child and included "That's the best work you've done so far," "Very fine work," "Not many other children at your age have done so well." Praise had a generally positive effect on the children's motivation; however, it did not have a uniform effect on all children.

Danner and Lonky (1981) thus showed a facilitating effect of praise on intrinsic motivation for young children as did Anderson et al. (1976), Swann and Pittman (1977), and Krantz and Scarth (1979). Sarafino and Stinger's (1981) methodological problems made their study less compelling in its finding that money was more effective than praise for kindergartners. In his review of the effects of extrinsic reward on intrinsic motivation Bates (1979) also concluded that praise can be beneficial to intrinsic motivation provided that it is unambiguously related to task performance.

In summary, praise seems to have an enhancing effect on intrinsic motivation. This suggests that praise may be a solution to what Bates (1979) calls

the apparent inability of the American educational system to preserve and enhance the interest in exploration and learning that seems to be intrinsic in most children when first entering school. (p. 557)

The major problems with the evidence on praise and intrinsic motivation to date are the low numbers of studies and the lack of ecological validity due to novel situations and tasks, experimenter effects, and short duration of treatment. What is needed are investigations into the effect of praise on intrinsic motivation under normal classroom conditions with real academic tasks.

Praise and Competence

Feelings of competence have been postulated to be precursors of intrinsic motivation (Deci and Ryan, 1980; Karniol and Ross, 1977). The standards with which a person evaluates his or her competence are often extrinsically or socially defined. Karniol and Ross (1977) thus argue that extrinsic factors which increase one's feelings of competence should in turn generate intrinsic interest in the activity. Thus, when rewards provide the standard by which an individual evaluates the quality of his/her performance, intrinsic motivation increases. Deci (1975) suggested that perceptions of competence are minimized

through the use of tangible rewards and maximized by the use of praise.

Few studies manipulate both reward condition (praise vs. tangible) and competence feedback. This section covers three categories of experiments that each contain an aspect of the relationship of praise to feelings of competence. The first category covers experiments which manipulate competence feedback but contain no praise variables. The second category covers studies which manipulate the assumed competency information component of the praise statements. The third category covers experiments which investigate praise and one aspect of feelings of competence, self-esteem.

Extrinsic Reward and Competence

Five experiments address the question of the connection between extrinsic reward and competence. The first such experiment was performed by Karniol and Ross (1977). These investigators manipulated the competence information imparted to the 57 subjects, aged 4-9, by making the reward contingent or noncontingent on quality of performance and by giving the children bogus social comparison feedback. Their assumption was that contingent rewards impart more information about one's competence than do noncontingent rewards (the more rewards, the more competent). The rewards used were marshmallows; the dependent measure was intrinsic

interest measured by the amount of time spent on the target activity; and the task was a slide game. They found no significant main effect for age but a significant effect for treatment. Children, who received contingent rewards or no reward and were told they performed well compared to other children, showed increased interest in the task but showed decreased interest when told they had performed poorly. Karniol and Ross (1977) concluded that the competence information imparted by the rewards affected subsequent interest.

Enzle and Ross (1978) also studied the effect of contingency of reward on competence information imparted. They used 72 male college students in the puzzle-solving paradigm initiated by Deci (1971, 1972). They used two dependent measures of intrinsic interest, time spent on puzzles during free time, and expressed enjoyment of the task on a nine point rating scale. Enzle and Ross's results agree with those of Karniol and Ross. Subjects who received performance-contingent rewards (rewards dependent on quality of performance) increased time spent on a task and expressed more enjoyment than the time spent and enjoyment expressed by subjects who received no reward or simply task-contingent rewards (rewards dependent on simply engaging in the task). Karniol and Ross concluded that performance-contingent rewards signalled task competence and therefore increased intrinsic interest in the subjects.

Schunk (1983) compared the performance of 36 children, aged 8-11, on division problems. The children received didactic instruction in division operations and were randomly assigned to one of three groups: performance-contingent rewards (rewards dependent on quality of performance), task-contingent rewards (rewards dependent on engaging in the task), or unexpected rewards. The dependent measures were division skill attainment and self-efficacy judgments. Schunk's results are consistent with those of Karniol and Ross (1977) and Enzle and Ross (1978). Subjects who received performance-contingent rewards exhibited significantly higher division skill and made significantly more efficacious judgments about their division skill than either the task-contingent or unexpected reward groups. Schunk discusses these results in terms of Bandura's theory of self-efficacy as well as Deci's cognitive evaluation theory. The performance-contingent children viewed the rewards as conveying information about their competence, whereas the task-contingent children viewed the rewards as controlling.

Boggiano and Ruble (1979) referenced both Karniol and Ross (1977) and Enzle and Ross (1978) as research support for the idea that "rewards made contingent on successful performance provide cue value regarding competency at a task, thereby maintaining intrinsic interest" (p. 1463). Their experiment was designed to test the competency hypothesis by a) manipulating the availability of direct

information about competence and by b) means of a developmental analysis. Their subjects were 147 middle-class children, half from two private nursery schools (mean age 4.6) and half from two public elementary schools (grades 3 through 5, mean age 9.11). The task used was a hidden picture game, the reward was candy, and the dependent measure was the amount of time spent playing with the target activity during a free play period. There were two levels of two conditions in the design: reward condition (either task- or performance-contingent) and social comparison condition (either relative competency or incompetency). A control group received no reward or social comparison information.

Boggiano and Ruble found age effects, contingency effects, and an age by social comparison interaction. For the younger children, they found that comparative information had no effect, but the task-contingent reward decreased interest compared to the performance-contingent and control conditions. The older children showed a sharply different data pattern. For them, the contingency of reward had no effect, but the comparative competency information did. Task interest increased for those who received competency information and decreased for those who received incompetency information compared to the control groups. Boggiano and Ruble (1979) concluded that the preschool children interpreted competence information in terms of absolute but not relative standards. They also concluded

that the results provide "strong support for the competency hypothesis by showing that social comparison, providing highly direct and unambiguous information about one's level of competence, superseded reward contingency and its effects on intrinsic interest in older children" (p. 1467).

Another study suggested that it is not contingency per se, but whether rewards provide information about the subjects' competence that determined how subjects reacted to extrinsic rewards. Rosenfield, Folger, and Adelman (1980) used 118 female college students randomly assigned to eight conditions (two levels of contingency, two levels of competency information, two levels of reward, and two control). The task was a crossword game and the dependent measures were amount of time spent with the task in a free period, willingness to repeat task in the future, and expressed liking for the task. Their findings support those of Boggiano and Ruble (1979). The presence or absence of competency feedback was the crucial determinant of the subjects' intrinsic motivation whereas there was no significant difference between contingency conditions.

Both Rosenfield et al. (1980) and Boggiano and Ruble (1979) extrapolated their results in their discussion sections to the subject of praise. They hypothesized that praise increased intrinsic motivation because it imparted competency information to the subjects. Although no direct investigation of this hypothesis has been carried out, several studies seem to support this idea. If one makes

the assumption that more specific and descriptive praise imparts more competency information than general praise, the following studies add weight to the competency hypothesis.

Competency Information Component of Praise

Bernhardt and Forehand (1975) compared the relative effectiveness of two types of praise content, labeled and unlabeled, on the task performance of 40 five-year-old white lower- and middle-class children. The task was a marble in the hole game. Examples of the praise statements used were "good boy" (unlabeled) and "what a good boy you are for picking up the blocks" (labeled). Their results indicated that the children were significantly more responsive to labeled than to unlabeled praise. The labeled praise presumably conveyed more competency information than the unlabeled praise.

Takler (1975/1976) investigated the effect of descriptive praise versus general praise on the performance of a monotonous motor task (crossing out circles) on 60 fourth-grade students. He found no significant differences between the two praise conditions and a control group. This cannot be interpreted, however, as evidence against the informative value of descriptive praise. A task that is dull and uninteresting is certainly not intrinsically motivating initially. Adding extrinsic rewards, such as praise, to a

dull task would not increase intrinsic interest (Deci & Ryan, 1980).

Scheer (1976/1977) investigated the same question but used a more interesting classification task with 50 fifth- and sixth-grade students. He found the descriptive praise group performed significantly better than either the general praise or control groups.

Praise and Self-Esteem

Feelings of self-esteem are indicators of a person's general feelings of competence (Harter, 1982). Two studies indicate that praise increases subjects' feelings of self-esteem. Garcia (1980) found that task praise increased the 60 third and fourth graders' feelings of self-esteem as measured by self-report. Brown and Goodall (1981) found that systematic written feedback by a fifth-grade teacher significantly improved her students' feelings of worth and the classroom climate compared to a control classroom.

In summary, most of the studies reviewed in this section provide indirect support for the connection between praise and competence. Rewards influence intrinsic motivation because of the competency information they provide the learner (Enzle & Ross, 1978; Karniol & Ross, 1977). Praise is hypothesized to provide unambiguous competency information (Boggiano & Ruble, 1979; Rosenfield et al., 1980). Some support is found for the connection between

praise and competence in the superiority of descriptive versus general praise (Bernhardt & Forehand, 1975; Scheer, 1976/1977). Support is also found in the enhancement of a general measure of perceived competence following praise (Brown & Goodall, 1981; Garcia, 1980). Direct investigation of the relationship between praise and feeling of competence is needed rather than relying on measures of intrinsic motivation and extrinsic rewards, especially in real classroom situations.

Functional Aspects of Praise

The effects of praise on achievement, intrinsic motivation, and competence can be better understood when one considers how praise is functioning in the situation. Many current educational theorists and researchers have begun to unravel the dimensions inherent in the construct of praise (Bardwell, 1981; Bates, 1979; Brophy, 1981a, 1981b; Deci, 1975, Deci & Ryan, 1980; Meyer et al., 1979; Soar & Soar, 1982).

Four Theoretical Orientations

The function of praise is interpreted differently depending on the theoretical orientation assumed. Bates (1979) described three theories that could be used to explain the effects of praise. Behaviorist theory

incorporates praise into the S → R paradigm. That is praise acts as a reinforcer and should increase the incidence of behaviors it follows. Praise does not, however, always increase behaviors (Deci, 1972; Pittman et al., 1980; Sarafino & Stinger, 1981; Takler, 1975/1976; Wilkinson, 1980/1981).

Self-perception theory is another orientation discussed by Bates (1979). This theory explains praise as an extrinsic reward that leads to the attribution of an external cause of the behavior and therefore the absence of an internal one. Several studies have clearly shown that praise increases intrinsic motivation (Anderson et al., 1976; Danner & Lonky, 1981; Swann & Pittman, 1977). A third orientation pointed out by Bates (1979) is the overjustification hypothesis. This orientation is an off-shoot of the self-perception framework and was used by Lepper et al. (1973) to explain their results. In the overjustification hypothesis praise functions as an oversufficient reward when applied to an interesting task. That is, praise would shift the locus of control for performing a task from internal to external. This is refuted by the same evidence that refutes self-perception theory's explanation of praise.

A fourth theoretical orientation toward praise appears to be more consistent with empirical evidence than the previous three. Cognitive evaluation theory (Deci, 1972, 1975; Deci & Ryan, 1980) seems to provide a framework for interpreting the discrepant results of praise studies.

Deci (1975) formulated the cognitive evaluation theory to account for the effects of extrinsic rewards (including praise) on intrinsic motivation.

Cognitive Evaluation Theory and Praise

Deci (1975) asserts that there are two psychological processes through which praise can affect a person's intrinsic motivation. The first is a change in the perceived locus of causality process. The perceived locus of causality process is based on feelings and perceptions of self-determination (Deci & Ryan, 1980). When people are rewarded in a controlling way for an activity, they perceive an instrumental relationship between the activity and the reward. The behavior which had been in the domain of the intrinsic motivational subsystem moves to the domain of the extrinsic subsystem.

The second process through which one's intrinsic motivation can be affected is the change in perceived competence process (Deci, 1975). [Deci originally included feelings of self-determination in the second process but has since stated self-determination is part of the first process (Deci & Ryan, 1980).] When information increases one's perceptions of competence, it should enhance one's intrinsic motivation; when it decreases feelings of competence, it should decrease intrinsic motivation.

Deci (1975) called these two processes Propositions I and II of his cognitive evaluation theory. Proposition III relates directly to praise.

Proposition III of Cognitive Evaluation Theory:
Every reward [including praise] has two aspects, a controlling aspect and an informational aspect which provides the recipient with information about his competence. The relative salience of the two aspects determines which processes will be operative. If the controlling aspect is more salient, it will initiate the change in perceived locus of causality process. If the informational aspect is more salient, the change in feelings of competence . . . process will be initiated. (p. 142)

Hence, cognitive evaluation theory accounts for contradictory effects of praise depending on which of its aspects --informational or controlling--is most salient to the recipients. From Deci's perspective, then, praise has two functions, a controlling function and an informational function.

Two Functions of Praise

Support for these two functions can be found in the praise literature even when the researchers are from different theoretical orientations. For example, Brophy (1981a) explored several functions of praise. Throughout his analysis, Brophy referred to controlling the student. He stated that, at its optimum, praise functioned as a reinforcer. That is, praise should be used to control the student. Brophy argued that praise decreased intrinsic

motivation of students. In terms of cognitive evaluation theory, Brophy emphasized the controlling aspect of praise.

Bardwell (1981), like Brophy (1981a), questioned the reinforcing value of feedback. She demonstrated through an analysis of feedback delay that feedback was serving an informational function and did not follow the rules suggested by reinforcement theory. She used a school-related learning task with subjects in grades 4, 6, and 8. The subjects studied, were tested, and received feedback on the learning task. One-half of the subjects received immediate and one-half received delayed feedback. Reinforcement theory suggests that delayed feedback facilitates retention but hinders acquisition. Bardwell demonstrated that delayed feedback facilitated both acquisition and retention, which are the results suggested by information theory.

In a series of six experiments, Meyer et al. (1979) investigated the degree to which praise provides information about others' perceptions of an acting person's ability depending on the difficulty level of a particular task. Their results suggested that young children perceived the praised person's ability to be higher than a person given neutral feedback, regardless of the difficulty level of the task. These data are reversed for subjects sixth grade and older. This result, in addition to Boggiano and Ruble (1979), suggests that younger children use concrete

information (rather than comparative or relative) in perceiving competence.

Soar and Soar (1982) also stated the idea that praise functions in a more complex fashion than simply reinforcing behavior. Although they separated praise from positive affect rather than controlling praise from informational praise, Soar and Soar's analysis seems consistent with Deci's (1975) with a few semantic changes:

A possible interpretation is that praise [controlling praise] places authority and control in the adult, which hinders pupil development of independence, self-reliance in thought and complex thought processes. Positive affect [informational praise], on the other hand . . . encourages pupil independence, complex thought processes, and more positive attitudes. With such different results, it seems imperative to separate praise [controlling praise] from positive affect [informational praise] conceptually, as measures in research, and as desirable teaching behaviors. (p. 18)

Soar and Soar (1982) indicated the need to separate positive affect (praise with an informational function) from praise (praise with a controlling function). Deci and Ryan (1980) indicated the same need in the form of this question, "what determines which aspect of [praise] will be more salient? [The] answer is that there are factors in (1) the rewardee, (2) the situation, and (3) the rewarder that will determine which aspect of the reward is more salient" (p. 68).

The following sections of this review contain praise studies which fall into each of these three categories.

Factors in the Rewarder

Students differ in a number of ways. Many of these factors probably affect the way they interpret and thus respond to praise. The factors which have been investigated with respect to praise are SES, age, sex, and locus of control.

SES. Several studies have included SES as a mediator variable in studies of praise. Although the results of these studies on the impact of students' SES on their response to praise seem to differ, there is a methodological pattern. The small studies failed to find that SES had an impact whereas the larger studies reported consistent effects of SES on response to praise.

Bernhardt and Forehand (1975), Heller and White (1975), and Means, Means, Osborne, and Elsom (1973) all reported no significant differences between middle and lower SES groups of children in response to praise. The samples in each study were small (the largest number in any group was 45) which may have decreased power. The treatments were short and novel which may not have given the manipulated variables time to have effect.

The larger studies show a consistent praise by SES interaction. Brophy (1979) found that teachers of high SES, high ability classes were more challenging and demanding and less apt to praise. Teachers of low SES, low ability classes were more encouraging and praised more.

Evertson (1975) found that in low SES schools, praise was regularly but weakly associated with learning gains. Praise was unrelated to learning gains in high SES schools. Soar and Soar (1982) reported Rowe's finding that praise was contingently dispensed to high ability (high SES) students and was just as frequently but noncontingently dispensed to low ability (low SES) students.

Wilkinson (1980/1981) found a higher correlation between teacher praise and student achievement for students from low SES backgrounds ($\underline{r} = .107$) than for high SES students ($\underline{r} = .028$).

Thus, although the larger studies show that praise had a higher correlation to achievement for low SES students, the effect is small. The possibility cannot be overlooked that the smaller studies (experimental designs) present more accurate findings.

Age. Several studies have looked at the effects of praise from a developmental perspective. The subjects in single-age studies of the effects of praise and extrinsic reward on performance cover a wide age span, from preschool (Anderson et al., 1976; Boggiano & Ruble, 1979; Lepper et al., 1973; Krantz & Scarth, 1979) and elementary school levels (Boggiano & Ruble, 1979; Danner & Lonky, 1981; Karniol & Ross, 1977; Swann & Pittman, 1977) to college populations (Deci, 1971, 1972; Enzle & Ross, 1978).

In general these studies found that praise enhanced the intrinsic motivation of subjects across the developmental span. Sarafino and Stinger (1981), however, found that kindergartners who were praised expressed less interest than those rewarded with money. The present investigator considered this a problem in methodology. It could also be that because of the directions given in the praise condition, these children felt controlled and their intrinsic interest thus decreased.

Younger children do differ in their interpretation of competency information, however. They seem unable to interpret relative or comparative information about competency (Boggiano & Ruble, 1979; Meyer et al., 1979). This suggests that concrete and specific praise statements would be appropriate for younger children (third grade and younger).

Wilkinson (1980/1981) found a difference in the relationship of praise to student achievement for primary (K-3) and intermediate (4-8) students. For primary students the overall correlation was $r = .118$ whereas for intermediate students it was $r = .064$. The same trend was seen in the separate correlations for math and reading as well. This may suggest that teacher praise sustains an informational function through the third grade and is perceived as more controlling as children become older.

Sex. Like the variables discussed so far, sex of the subjects seems to mediate the effect of praise. This

effect seems to interact with age, however. Sex differences in the effects of praise have been demonstrated with adults but not often with children (Deci, 1972, 1975). Only one study was found which demonstrated differences in praise effects due to the sex of the children (Lintner & Ducette, 1974).

In the Deci (1972, 1975) studies praise increased the intrinsic motivation of males but decreased the intrinsic motivation of females. In the Lintner and Ducette (1974) study of 285 students from third, fifth, and seventh grades of lower middle class schools, praise significantly improved the performance of males on an ambiguous coding task but nonsignificantly improved the performance of females in the positive direction.

In terms of its two functions, praise tends to be more controlling for females and more informative for males. For females a change in the perceived locus of causality from internal to external was initiated whereas for males an increase in feelings of competence was initiated. One explanation for these differences may be found in the socialization processes of males and females in the traditional culture (Deci, 1975). Girls may have learned to be more dependent and interpersonally focused, and boys may have learned to be more independent and achievement focused (Deci & Ryan, 1980). This interpretation receives some support from the work of Dweck, Davidson, Nelson, and Enna (1978). They reported several differences

in the evaluative feedback given to elementary age boys and girls. Praise given to boys conveyed specific information about the adequacy of their performance, whereas praise given girls conveyed just the general attitude of the teacher.

Another explanation of the sex differences found in the Deci (1972) study could be the interaction of sex of the experimenter with sex of the subject. Bates (1979) suggested this could be the case (the experimenter in the Deci (1972) study was a friendly young male graduate student). Some support for this idea comes from a study by Rothbaum, Zigler, and Hyson (1981). In a study of 96 male and female third-grade children from a middle class school, Rothbaum et al. found that there was an interaction between the sex of the experimenter and sex of the subject. They found, however, that the children were significantly more responsive to cross-sex adults in the adult praise condition. Rothbaum et al. (1981), therefore, do not support Bates' idea. Actually, Deci (1975) ran another experiment to clarify his 1972 results. In the follow-up experiment he included male and female experimenters as well as subjects. He replicated the 1972 results: intrinsic interest increased for males and decreased for females. He found no interaction with sex of experimenter.

Condry and Koslowski (1979) offered another explanation for the sex difference found in the Deci (1972) study. Tasks can be considered by the participants to be

sex-appropriate, and this affects their responses to the task. It could be that SOMA puzzles were considered by the participants to be masculine. Deci and Ryan (1980) suggested the same explanation but indicated there may have been a change in women from the earlier to the later part of this decade. This is supported by a recent study that shows no differential effects of praise for males and females (Heller & Parson, 1981).

Locus of control. The clearest evidence for the mediation of the effect of praise by a factor in the rewarder is shown for the locus of control variable. Praise increases the intrinsic motivation of internal children and decreases it for external children. According to cognitive evaluation theory, the informational aspect of praise is salient for internal children. Praise increases their perceptions of competence and, hence, enhances their intrinsic motivation. The controlling aspect of praise is salient for external children. Praise causes a change in their perceived locus of causality and a decrease in intrinsic motivation.

Three of four studies which included a locus of control variable support this interpretation. Thompson and Hunnicutt (1955), Anderson (1977/1978), and Danner and Lonky (1981) all found that praise enhanced performance or intrinsic motivation for internal children and decreased them for external children. In addition, Anderson (1977/1978) in a study of 84 fifth- and sixth-grade children included

an encouragement condition. She found that internal children preferred praise over encouragement and could more clearly differentiate the two conditions than could external children.

Lintner and Ducette (1974), however, found that external children were more responsive to praise than internal children on an ambiguous coding task. This could be due to a problem in the study, however. It could be that the children perceived the sorting task as dull and external children only responded to the praise which functioned as a controlling external reward.

Factors in the Situation

The conditions under which praise occurs seem to have important influences on its effects. For example, Brophy (1981b) and Evertson (1975) indicated that praise given during teacher-initiated contacts was more effective than praise given during student-initiated contacts. Three factors which seem to be operating in the situation are contingency, salience, and expectancy. These factors are limiting conditions to the process in which a change in perceived locus of causality leads to decreased intrinsic motivation (Deci & Ryan, 1980).

Contingency. Several studies showed that contingent rewards increase intrinsic motivation or performance (Enzle & Ross, 1978; Karniol & Ross, 1977; Rosenfield et al.,

1980). Conversely, several studies showed that contingent rewards decreased intrinsic motivation or performance (Deci, 1972; Swann & Pittman, 1977). The apparent discrepancy in results was due in large part to a problem with the use of the word contingent (Condry & Koslowski, 1979). Some studies made the reward contingent on "doing the task" while others made the reward contingent on the quality of performance. Contingency in the behavioristic sense indicates that the behavior is under the control of the reward (Sharpley & Sharpley, 1981). Contingency in the framework of cognitive evaluation theory has to do with competence information. A contingent reward that conveys direct and unambiguous competency information enhances intrinsic motivation. A noncontingent reward that conveys no competency feedback makes the control aspect of the reward more salient and, hence, decreases intrinsic interest. Rosenfield et al. (1980) showed that it was not the contingency itself that was an important determinant of the effect of reward on intrinsic interest. It was the presence or absence of competency feedback. When greater rewards indicated greater competence, intrinsic motivation increased. When greater rewards did not indicate greater competence, there was a decrease in intrinsic motivation regardless of contingency.

Ryan, Mims, and Koestner (1983) also showed that informational aspects of rewards mediated the contingency effects. They made performance-contingent rewards either

informational or controlling by varying the feedback statements. The controlling performance-contingent-reward subjects received feedback statements that were the same as the informational performance-contingent-reward subjects except that a "should"-related phrase was added. An example was, "You did very well on that one, just as you should." In addition to the two groups with performance-contingent rewards that were informationally versus controllingly administered, there were four other groups: two comparable no reward groups who received the same feedback statements and one no reward/no feedback group and one no feedback, task-contingent reward group. The subjects were 96 college students and the tasks were hidden-figures puzzles. The dependent measure of intrinsic motivation was the amount of time spent working on puzzles during a 6-minute free choice period.

Ryan et al. (1983) showed that the informational feedback groups spent more time working on puzzles than the controlling feedback groups and the no-feedback groups. The informational feedback/no reward groups displayed more intrinsic motivation than the comparable feedback performance-contingent-reward group. These results are consistent with Rosenfield et al. (1980). It is not the contingency itself, but whether the rewards and feedback are perceived as informational or controlling that affects intrinsic motivation. Beyond this the Ryan et al. (1983) study showed that performance-contingent rewards, like

all rewards, tended to lower intrinsic motivation relative to no rewards if there is identical verbal feedback (competency information).

Salience. Ross (1975) performed an experiment with 60 preschool children in three nursery schools. The task used was playing a drum. The treatment conditions included a highly salient reward (a prize under a box in full view), a nonsalient reward (prize merely mentioned), and no reward (control). The dependent measure was intrinsic motivation as measured by a) amount of time spent playing the drum during free play and b) whether child responded that the drum was the "most fun thing." The salient reward condition significantly decreased intrinsic motivation compared to the nonsalient and no reward groups. Ross concluded that highly salient rewards led children to change their perceived locus of causality to external causes.

Deci and Ryan (1980) countered, however, that the salience of the reward was not the parameter that determined whether rewards would decrease intrinsic motivation. The important parameter was the salience of the informational and controlling aspects of the reward rather than the salience of the reward per se.

Pittman et al. (1980) reported an experiment in which they manipulated the functional aspects of praise. The subjects were 84 college males and females randomly assigned

to the experimental and control conditions. The tasks used were SOMA puzzles. The controlling praise given was

I haven't been able to use most of the data I've gotten so far, but you're doing really well, and if you keep it up I'll be able to use yours. (p. 230)

The informational praise was

Compared to most of my subjects, you're doing really well. (p. 230)

Pittman et al. found that compared to a no reward control, the informational praise enhanced task interest but the controlling praise did not.

Expectancy. Lepper et al. (1973) demonstrated that the expectancy of receiving a reward undermined intrinsic motivation rather than the good player award itself. To test whether the enhancing effect of praise on motivation was due only to its unexpected nature, Swann and Pittman (1977) paired unexpected praise with a contingent reward and compared its effect to an unexpected tangible reward (a star) paired with a contingent reward. They found that the praise group increased in interest whereas the star group decreased.

Deci and Ryan (1980) explained that the question of expectancy can be understood within the context of the relative salience of the two aspects of rewards. Again it is the salience of the controlling aspect or the informational aspect of the reward (praise) that determines whether it will increase or decrease intrinsic interest and feelings of competence. All other things equal, when

rewards are expected they will be experienced as controlling because one begins the activity in order to get the reward. When rewards are unexpected, they will more likely be experienced as an indication of good performance.

Factors in the Rewarder

The effects of praise do not appear to be uniform across situations or across children. Praise effects seem to vary by the situational factors of contingency, expectancy, and salience. Praise effects also seem to vary by the rewardee factors of SES, age, sex, and locus of control. More research is needed in each area to clarify the interaction between the function of praise (control or information) and the situational and personological variables.

In terms of educational practice, however, even if the differential effects of praise were explicated for a multitude of student characteristics, it would still be difficult for teachers to praise differentially in the classroom. There is usually one teacher for every thirty children. To praise differently for every student would be very difficult. Rather than concentrating on student characteristics, it would seem beneficial to investigate those factors in teachers which seem to influence whether they praise informationally or controllingly. In this way an attempt could be made to maximize the benefit of

teacher praise for most students by identifying the sources of informational praise. Deci et al. (1981a, 1981b) have begun investigating teacher characteristics in relation to praise function. In addition, several researchers have looked at related teacher attitudes and how students perceive these teacher attitudes.

Teacher attitudes and praise. Silberman (1969) examined several different teacher attitudes toward their students and the way in which these different attitudes affected their classroom behavior. He interviewed 10 third-grade teachers to determine toward which students they held attitudes of attachment, concern, indifference, and rejection. He then observed the teachers' classroom behavior. He designated four teacher behaviors as the dependent variables: teacher-initiated contact, praise, criticism, and acquiescence. Silberman found that teachers' attitudes are generally revealed in their actions. Different attitudes are translated into action in different ways. Teachers gave more praise to those students for whom they felt attachment and less praise to those for whom they felt indifference.

Benninga, Guskey, and Thornburg (1981) also investigated teacher attitudes and the way attitudes affected behavior. They felt it was particularly important to examine the connection between teacher attitudes and behavior:

If attitudes and perceptions affect their behavior and the roles they defined for themselves, it is important to understand

these underlying beliefs, particularly since they may have an impact on how teachers behave toward pupils. (p. 66)

They measured the attitudes of 42 first-, second-, and third-grade teachers. Teacher measures included authoritarianism, control, teaching self-concept, responsibility for student achievement, and affect toward teaching. One group, who liked teaching more, tended to be less authoritarian, felt less need to control students, and felt a greater responsibility for positive student learning outcomes. The other group, who had higher teaching self-concepts, tended to be more authoritarian, were more restrictive, and felt less responsibility for learning outcomes. Although Benniga et al. (1981) emphasized the need to examine connections between attitude and behavior, they included no observation component. This study is included in the current review as evidence that teachers have measurably different attitudes toward children and teaching.

Deci et al. (1981a, 1981b) reported results of a field study conducted in 36 fourth-, fifth-, and sixth-grade classrooms in four elementary schools. The study was designed to investigate the assumption that characteristics of the teacher were among the factors that determined whether the controlling or informational aspect of praise was more salient. They predicted that if teachers were more oriented toward controlling children, they would be likely to praise in controlling ways that would undermine

children's intrinsic motivation. If they were oriented toward supporting autonomy in children, they would be likely to praise informationally in a way that would increase children's perceived competence. The distinction between the two types of teachers, controlling vs. supportive of autonomy, has been indicated by Benninga et al. (1981) and Deci et al. (1981b).

Deci et al. (1981a) looked for the connection between teacher type and differences in children's expressed intrinsic motivation and competence. They measured 36 teachers' orientation (control vs. autonomy) toward children. They then gathered data on 610 children in these teachers' classrooms on several measures, two of which were perceived competence and intrinsic orientation.

Deci et al. (1981a) found significant positive correlations (from .29 to .56) between teacher orientation scores and children's scores on scales of perceived competence and intrinsic motivation. Deci et al. concluded that this study showed a clear relationship between characteristics of the teacher and intrinsic motivation and perceived competence in the learner. The results could indicate that praise will tend to undermine intrinsic motivation and perceived competence when given by a teacher with a controlling orientation but will tend to maintain or enhance intrinsic motivation and competence when given by a teacher who is autonomy oriented. Or the results could indicate that the praise teachers generate differs depending on

their orientation toward controlling or supporting autonomy in children.

Deci et al. (1981a, 1981b) assumed that when teachers have different attitudes toward children, they behave differently in the classroom. That is, they assumed that control-oriented teachers praised differently from autonomy-oriented teachers and that it was this difference in praise and reward behavior that led to the differences measured in their students. Deci et al. included no observational component; however, so they offered no data to support this assumption.

The Deci et al. (1981a, 1981b) studies measured the teachers' personality variable, orientation toward control versus supporting autonomy with children, that affected whether their classrooms were more informational or more controlling. Deci, Speigel, Ryan, Koestner, and Kauffman (1982) manipulated conditions that led teachers to be more controlling versus more autonomy-oriented with students. When teachers were told that they were responsible for their students' performing up to standards, the teachers were more controlling. The Deci et al. (1982) study was a laboratory study using 20 male and 20 female teachers. Each teacher directed one student on a puzzle-solving activity. One-half of the male and one-half of the female teachers were in the informational condition (no performance standards specified). The other halves of the teacher groups were in the controlling condition (performance

standards specified). The clearest differences between teachers were that the controlling teachers talked more and in more controlling ways.

It seems an important area of investigation to observe the differences in control- and autonomy-oriented teachers' behavior without any manipulation of their orientation as in the Deci et al. (1982) study. It also seems important to observe these differences in the classroom rather than the laboratory. In this way, empirical evidence can support the connection between teacher attitude and behavior that Deci et al. (1981a, 1981b) assume.

Students' perceptions of teacher attitudes and praise.

Each of the studies reviewed in the previous section contained a pupil perception component except the Deci et al. (1982) study. An important issue to resolve is if students perceive different teacher attitudes and behavior. The research evidence indicates that students are sensitive to and perceive teacher differences.

In the Silberman (1969) study, there was a significant positive correlation between student perceptions of teacher behavior and actual observations. Students were able to predict better than chance the relative amounts of contact, criticism, and acquiescence they received. They could not predict with any accuracy, however, how much praise they received.

Benninga et al. (1981) also included a pupil perception measure in their study. They found that students could

discriminate differences in teachers. Although they did not perceive fine distinctions between the two types of teachers, students perceived controlling teachers as having less rapport and interactional competence and less authoritarian teachers as having more rapport.

Deci et al. (1981a) measured children's perceptions of classroom climate. They used these scores to investigate whether children perceived a difference in classrooms of control- versus autonomy-oriented teachers. They found a significant positive correlation (.354) between teacher orientation score and children's perception of classroom climate.

The Silberman (1969), Benninga et al. (1981), and Deci et al. (1981a) studies indicated that children were sensitive to teachers' different attitudes. The following two studies indicate that children are also sensitive to teachers' use of praise. Meyer et al. (1979) investigated how other children perceive praise given to a particular child. They found that children's perceptions varied by age. Children fifth grade and younger perceived praise as absolute. That is, if a child was praised for performing either a low ability or high ability task, that child was perceived as having high ability. Older children and adults, however, perceived people as having low ability if they were praised for performing easy tasks.

Dershimer (1980, 1982) investigated pupil perceptions of the functions of teacher praise as a part of a larger

sociolinguistic study. She observed 164 children in their 6 second-, third-, and fourth-grade classrooms. She found several interesting patterns in pupils' perceptions of teacher praise. Students perceived only 12 percent of the praise that occurred. As the intensity of the praise increased, however, there was a concomitant increase in the proportion perceived. Those students who were high in class participation and thus received more praise, perceived praise as deserved. Those students who were low in class participation and thus were an audience for praise received by others, perceived praise as serving an instructional function.

Another interesting finding indicated that pupils perceived praise as functioning not so much to reinforce the individual student as to give information to the group. This finding may be explained by the model of an integrated view of classroom discourse taken from her larger study (Dershimer, 1982): 1) teacher questions serve to identify things one ought to know, 2) pupils respond to questions, 3) answers to questions inform pupils; one must attend to pupil responses in order to know what should be known, and 4) a pupil response which is praised is probably a better presentation of information than one that is not; so one must pay special attention to comments that draw teacher praise.

Summary

Praise studies have typically looked at praise as a unidimensional variable. This has led to confusion about the effects of praise. Some studies (Anderson et al., 1976; Garcia, 1980; Pittman et al., 1980; Swann & Pittman, 1977) reported positive effects of praise, some negative (Evertson, 1975; Peng & Ashburn, 1978; Takler, 1975/1976; Wilkinson, 1980/1981) and some mixed (Danner & Lonky, 1981; Deci, 1972; Lintner & Ducette, 1974; Sarafino & Stinger, 1981). Using cognitive evaluation theory (Deci, 1975) as a framework helps to explain the discrepant results of the praise studies.

The effects of praise are different depending on which aspect is more salient, the control or information dimension (Deci & Ryan, 1980). Controlling praise tends to decrease intrinsic motivation, whereas informational praise tends to increase feelings of competence. Deci et al. (1981a) suggest that there are factors in the rewardee, situation, and rewarder that influence which aspect is salient.

Factors in the situation which tend to influence the salient aspect include the contingency, expectancy, and salience of praise. Factors in the rewardee include SES, sex, age, and locus of control. Factors in the rewarder include the orientation toward children, either controlling or supporting of autonomy. In terms of the reality of

classroom practice, the most feasible factor to investigate is the rewarder, or teacher.

There is some evidence to suggest that teachers' orientations toward children influence the type of praise they use and how children feel about themselves (Deci et al., 1981a, 1981b). There have been no studies, however, which have investigated this relationship with children younger than fourth grade. There have also been no studies which have included an observational component in the classroom. The assumption that control-oriented teachers use praise differently has not been empirically demonstrated.

There exists a need for more research on the functioning of praise. Specifically it seems necessary to investigate further the connection between teacher orientation and children's intrinsic motivation and competence. A field study using primary children which includes an observational component would significantly increase the understanding of the effects of praise on children.

CHAPTER III METHODOLOGY

This study was designed to investigate the relationships between teacher orientation and frequencies of various types of teacher praise. Further, this study investigated the relationships between teacher orientation and children's feelings of competence, intrinsic motivation, and achievement. The relationships between frequencies of various types of teacher praise and the three children's measures were also studied. The following specific correlations were computed:

1. teacher orientation (a scale from autonomy to controlling) with frequencies of various types of teacher praise
2. teacher orientation with children's feelings of competence
3. teacher orientation with children's intrinsic motivation
4. teacher orientation with children's achievement
5. frequencies of various types of teacher praise with children's feeling of competence
6. frequencies of various types of teacher praise with children's intrinsic motivation

7. frequencies of various types of praise with children's achievement.

Design of the Study

The design of the study was ex post facto. The independent variables, teacher orientation and praise style, were not manipulated. The naturally occurring attribute of the teachers was measured and the naturally occurring praise events in the classroom were recorded. Teachers were measured using Deci's orientation measure, The "Problems in Schools" Questionnaire. Their ranking reflected a continuum from a control orientation to an autonomy orientation toward children. These orientation scores were then correlated with the teachers' frequency of various types of praise in the classroom as recorded on the Teacher Praise Behaviors Checklist, developed by the researcher. Thus, the extent of the relationship between teachers' orientations (attributes) and their use of praise in the classroom (behavior) was determined.

These two teacher measures were then correlated with the children's measures to determine the relationships between teacher orientation and teacher praise and children's scores on measures of feelings of competence, intrinsic motivation, and achievement. The children's measures were considered the dependent variables.

The correlational-observational method outlined above seemed the most appropriate design for investigating the strength of relationships which may exist between teacher orientation, teacher praise, and the selected student variables for several reasons. First, the intent of the present investigation was exploratory. More data need to be gathered on naturally occurring praise events in the classroom before manipulation of variables is warranted. As Vasta (1979) suggests, the findings from correlational studies are most useful for indicating potential relationships which then can be investigated using experimental methods. Gage and Giaconia (1981) also state that the best experimental studies of teaching are based on correlational findings rather than on theory. Prior to the present study, Deci's (1975) distinction between informational and controlling praise was primarily a theoretical distinction. The present study, as well as Deci et al.'s (1981a) study, help determine which relationships are most useful to investigate experimentally.

Another reason for selecting a correlational design was the need for greater ecological validity in praise studies. Although Pittman et al. (1980) used an experimental design to study the difference between informational and controlling praise, their results have little applicability to classrooms. They used a novel task, individual testing, only one treatment period, and a contrived praise statement. Before experimental designs can possess adequate

ecological validity, more about what occurs in actual classrooms must be investigated.

Subjects

The subjects consisted of 22 third-grade teachers in the Alachua County School District. Deci et al. (1981a) pooled data on the relationship between teacher orientation and student characteristics for fourth through sixth graders. A need existed for investigating this relationship with primary age children. To control for age effects, only one grade level was used. Third grade was the youngest grade level for whom Harter (1979, 1980) gathered reliability data on two of the children's measures, the perceived competence scale and the intrinsic motivation scale. For this reason third grade was the primary grade chosen for this study. Only nonteamed teachers were used in this study. It would be difficult to separate out the effects of team-teachers on each other and on the students. For example, if one teacher is control-oriented and the other is autonomy-oriented, the children may receive two types of praise in the classroom. A clearer estimate of the relationships between teacher orientation, praise, and student characteristics can be obtained in single teacher classrooms.

In recruiting subjects for this study, the term, teacher praise, was not used. The broader, more inclusive term of teacher interaction was used instead. This was done to

minimize the Hawthorne effect. That is, the teachers were unaware that their use of praise was being observed in order to prevent altering their natural praise style.

Because of the need for informed consent, participation of students and teachers was voluntary. An average sample of 7 children from each classroom was used for a total of 154 children. These children were selected on the basis of their membership in the middle-ability reading group. Teachers sent out student informed consent forms to parents and then implemented follow-up measures consisting of a follow-up letter and then a telephone call. Informed consent reduced the generalizability of this study to similar groups.

Instrumentation

The "Problem in Schools" Questionnaire

Each teacher's orientation toward supporting autonomy in versus controlling children was assessed using The "Problems in Schools" Questionnaire developed by Deci et al. (1981b) [see Appendix A]. The questionnaire is composed of eight vignettes, each of which is followed by four items. Each item represents a possible solution to the situation in the vignette. Each item also corresponds to one of the four subscales: highly controlling (HC), moderately controlling (MC), moderately autonomous (MA), and highly autonomous (HA). The teacher responded to each item by using a

seven-point scale which ranges from 1 (very inappropriate) to 7 (very appropriate). A total score was based on the sum of the weighted averages of each of the four subscales.

Deci et al. (1981b) reported summary statistics for the total scale score and the four subscales for 68 teachers (K-6) as shown in Table 1. They reported split half reliabilities using Cronbach's alpha for the standardized scores for the four subscales (HC, MC, MA, HA) as .73, .71, .63, and .80, respectively. Test-retest reliability data on 19 teachers using a two-month interval were collected. Reliability coefficients for the four subscales range from .77 to .82. The test-retest reliability for the total score is .70.

Two studies were conducted to ascertain the construct validity of The "Problems in Schools" Questionnaire. These are reported in Deci et al. (1981a). Study 1 investigated the relationship between teachers' and children's characteristics. To be considered valid, the teacher measure should correlate with the actual intrinsic motivation and perceived competence of the children. Thirty-five teachers and their 610 students (4th-6th grades) were the subjects. Teacher orientation correlated significantly with fall data on three intrinsic motivation subscales (from .36 to .56) and on general and cognitive perceived competence (.36 and .29, respectively). These results appear in Table 2.

The second analysis used the same data base and investigated whether children perceive a difference in the classrooms of control- versus autonomy-oriented teachers. Teacher

Table 1

Means, Standard Deviations, Minimum Scores, and Maximum Scores for the Scale Total and Each of the Four Subscale Scores (n=68).

Subscale	M	SD	Minimum Score	Maximum Score
1 HC	2.72	.86	1.13	6.50
2 MC	3.36	.90	1.13	5.63
3 MA	3.67	.85	1.25	6.25
4 HA	6.05	.70	1.88	7.00
Scale Total	6.98	3.11	-10.13	12.13

Table 2

Correlations Between Teachers' Orientation and Children's Intrinsic Motivation and Perceived Competence (n=35).*

Subscale	Intrinsic Orientation	Perceived Competence	Correlation (Fall data)
Motivational			
Prefers challenge			.41
Curiosity			.56
Mastery attempts			.35
General self-worth		Perceived Competence	.36
Cognitive			.29

*Note: The classroom is unit of analysis.

scores on The "Problems in Schools" Questionnaire were correlated with children's scores on deCharm's Classroom Climate Questionnaire (1976). Deci et al. (1981a) reported a correlation of .354, significant at the .05 level. Thus, it appears children do perceive autonomy-oriented teachers as supportive of autonomy.

Teacher Praise Behaviors Checklist

Each teacher's praise behavior during reading group was recorded on a checklist developed by the researcher [see Appendix B]. A compilation of the teacher praise behaviors and contexts studied by Dershimer (1980, 1982), Dweck et al. (1978), Evertson (1975), and Soar and Soar (1978) are included on the checklist. The researcher drew heavily on Soar and Soar's Climate and Control System for the form and organization of the checklist.

The Teacher Praise Behaviors Checklist is organized in two main sections called Behaviors and Context. The Behaviors section contains a list of behaviors that span three dimensions: a control dimension, an information dimension, and an affect dimension. The Context section contains a list of possible contexts in which praise occurs. An extra section for Additional Observer Comments was included to record any unlisted behavior or context that occurred during observation periods. The checklist also contains a section for recording the actual praise statement used by the

teacher. This provided the reseacher with the opportunity for additional praise analysis.

The observers checked as many behaviors and contexts as were appropriate for each praise statement. The behaviors and contexts were not mutually exclusive. The following are explanations of each of the 33 behaviors and contexts included in the checklist. The source for each explanation is cited after the behavior or context is defined.

Items 1-5 are part of the control dimension which varies from very controlling to slightly controlling praise statements. Two types of behaviors are included in this dimension, contingent praise and praise with "I" referents.

1. Paired with tangibles/other rewards

Although this is not always the result (Swann & Pittman, 1977), Deci and Ryan (1980) state that in most cases, tangible rewards are very controlling. Tangibles include happy faces, gold stars, candy, etc. Other rewards include more recess time, less homework, etc. Examples:

"Good work" as teacher draws happy face.

"You've done so well that you can go outside for five extra minutes of recess today."

2. Refers to teacher's needs, likes

By referring to an outside cause of behavior, the teacher may shift the locus of causality for the child from internal to external (Pittman et al., 1980). Examples:

"I like the way Terry is sitting."

"I need all my students to be good readers today, just like Amy."

3. Refers to teacher's genuine opinion

It seems necessary to differentiate between "I statements" that convey control from those that express genuine opinion. Example:

"I think your story is great!"

4. Contingent on response

Praise that is contingent on responding rather than on the quality or content of the response may be perceived as controlling (Enzle & Ross, 1978). Praise that follows a student response in a uniform way with no variation for quality of responding is checked here. Example:

"Good job" following each student answer.

5. Noncontingent

Praise statements that follow incorrect answers or mark teacher pauses or transitions (Brophy, 1981b).

Items 6-17 are part of the information dimension which varies from vague information to very specific, individual information about competence.

6. Contingent on quality of response

Praise that indicates level of competence varies with the quality of the child's answers. The intensity of praise increases as child performance increases. Praise statements can also refer to the behavior praised. Examples:

"Nice" . . . "Great" . . . "Excellent"

"Your pronunciation deserves applause, Tom!"

7. Repeats child's response

Praise that is simple repetition is quite mild but may convey information to the child that he/she is correct. Dershmer (1980, 1982) includes this category.

8. Accepts child's response

This category also originates from Dershmer's (1980, 1982) study. Example:

"Good" or "Okay" or a nod after each child's response.

9. Phrase, general

Praise statements that are general and brief may convey information about competence (Danner & Lonky, 1981). Soar and Soar (1980) include a general praise item.

Example:

"Fine work" "Good job"

10. Sentence, general

These statements differ from #9 in their length.

Examples:

"You are doing really well."

"You did a great job."

11. Specifies child's behavior/attribute

Praise that specifies what is good about a person or his/her work may give more information about competence (Bernhardt & Forehand, 1975; Scheer, 1976/1977). Soar and Soar (1978) include a specific praise item. Examples:

"Great! You read well today."

"Good girl. You're so patient."

12. Specifies child's behavior/attribute with detail

These statements differ from #11 in degree of specificity. Examples:

"Great! You read twelve new works today."

"Good answer. It shows you really thought about the meaning of the story."

13. Extended

Praise statements that go on for several sentences. Dersheimer (1980, 1982) includes this category; extended praise is rare. Example:

"What a good reading group today. You children are improving so much. Pretty soon we'll have to get new books because these are getting too easy."

14. Compares child to others

Social comparison can provide highly direct and unambiguous information about one's competence (Boggiano & Ruble, 1979; Pittman et al., 1980). Examples:

"You're the best reader in the group."

"Compared to my other classes, you're great!"

15. Compares child to self

The teacher may provide competency information by comparing the child's performance to his/her past performance. Brophy (1981b) includes this behavior as desirable praise behavior. Examples:

"Good girl! This is your best paper ever."

"You've improved your expression a lot, Tommy."

16. Attributes effort

The praise statement includes an effort attribution (Dweck, 1978). Example:

"Good reading. You're trying very hard."

17. Attributes ability

The praise statement includes an ability attribution (Dweck, 1978). Example:

"You are a great reader."

Items 18-23 are part of the affect dimension that varies from congruent with the praise statement to incongruent. Brophy (1981b) indicates that contradictory affect damages the credibility and genuineness of the praise statements. This implies that congruent affect may enhance the informative function of praise, whereas incongruent affect may enhance the controlling function.

18. Flat voice19. No facial expression

Items 18 and 19 express incongruent affect.

20. Enthusiastic voice21. Smiles, laughs, nods22. Eye contact23. Touch, pat, hug

Items 20-23 express congruent affect. Items 21 and 23 are taken from Soar and Soar (1978).

The Context section contains 10 items that indicate details about the situational context of the praise statements. The general context is uniform across all

observation periods. That is, teacher praise was observed during small group reading time. Within this general context, praise statements were addressed to an individual in private or in public or to a group of students in private or in public. The praise statements were given to a male or a female. The praise statement referred to the academic work, the conduct or a personal comment or quality of students. The praise statement also occurred during transition times. Praise was given when a child initiated contact or when the teacher initiated contact. The context categories are taken from Evertson's (1975) revision of the Brophy-Good Dyadic Interaction System.

After the praise statements were scored on the above 33 items, several subscales were formed by collapsing items. Subscale 1 (S1) is the total of all items scored. One difference between the praise styles of control- and autonomy-oriented teachers could be the total amount of praise generated. Subscale 1 would indicate this difference, whereas the individual items may not. Subscale 2 (S2) is the controlling dimension of teacher praise and includes items 1, 2, 4, 5, 18, and 19. These are the controlling praise behaviors as well as the incongruent affect items. Subscale 3 is the information dimension of teacher praise and includes items 3, 6, 9-16, 20-22. These are the praise statements which convey information, excluding items 7 and 8 which convey vague information, and the congruent affect items. These three subscales were included

because they may reveal patterns in the teachers' praise styles that individual items do not.

Scale of Intrinsic Versus Extrinsic Orientation in the Classroom

Each child completed a measure of intrinsic motivation. Harter (1980) developed the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom based on her own theoretical model of intrinsic motivation, which stems from White's (1959) model of effectance motivation. Harter uses classroom learning as the situational context for her scale. She reports the following question as the starting point of the scale: "To what degree is a child's motivation for classroom learning determined by his or her intrinsic interest in learning and mastery, curiosity, preference for challenge in contrast to a more extrinsic orientation in which the child is motivated to obtain teacher approval and/or grades, and is very dependent on the teacher for guidance?" (Harter, 1980, p. 5).

In answering this question, Harter developed a scale with five subscales, three of which reflect dimensions of intrinsic motivation (preference for challenge versus preference for easy work, curiosity/interest versus pleasing the teacher, and independent mastery versus dependence on teacher) and two of which reflect dimensions of internal evaluation (independent judgment versus reliance on

teacher's judgment and internal criteria versus external criteria). Only the three intrinsic motivation subscales were used in this study. In their preliminary study, Deci et al. (1981a) reported low or negative correlations between the two internal evaluation subscales. Therefore, these two subscales were not used.

The scale uses a structured alternative format which decreases the social desirability response tendencies of the true-false format. An example of the response format follows:

Some kids like hard
work because it's a
challenge

but

Other kids prefer easy
work that they are sure
they can do

Really
true
for me

Sort of
true
for me

Sort of
true
for me

Really
true
for me

Each item is scored on a scale from 1 to 4 with 1 being most extrinsically oriented and 4 most intrinsically oriented. Each subscale contains six items, three of which are worded to begin with the intrinsic orientation and three with extrinsic orientation. No two consecutive items are from the same subscale and no more than two consecutive items are keyed in the same direction.

The Kuder-Richardson Formula 20 reliability coefficient was used to assess internal consistency using data from

third- to ninth-grade students from New York, California, and Colorado. Reliabilities for subscales ranged from .78 to .84, .68 to .82, .54 to .78, .72 to .81, and .75 to .83 for the challenge, mastery, curiosity, judgment, and criteria subscales, respectively (Harter, 1981). Test-retest reliability data for 761 third through sixth graders in New York after a 9-month interval and for 793 third through ninth graders in California after a one-year interval ranged from .48 to .63 for the five subscales (Harter, 1981).

Validity studies included factor analyses, discriminant as well as criterion validity. The factor analyses were performed on data from the New York and California samples above. Both orthogonal and oblique solutions revealed the same five factors, reflecting the five subscales. The average loadings for items on their designated factors was between .46 and .53. No items cross-loaded on other factors (Harter, 1980).

Harter (1981) reports several studies of discriminant validity. In one study Harter (1981) compared the scores of 26 pupils (fourth to sixth grades) in a private "open" school from upper-middle class families which emphasized attributes of the intrinsic pole of the scale with scores from pupils matched for age and sex from a traditional school. The results indicated the expected differences; the open school students scored higher (more intrinsically) on each subscale of the measure (see Table 3).

Table 3

Mean Scores for Open School and Traditional School Pupils on Harter's Intrinsic Orientation Scale.

Subscale	Mean Scores		Level
	Open	Traditional	
challenge	2.98	1.81	(p .001)
curiosity	3.10	2.30	(p .001)
independent mastery	2.80	2.47	(p .05)

For a test of criterion validity, Harter (1981) compared the scores of a group of third through sixth graders in Colorado on the Intrinsic Orientation Scale with teacher ratings. Correlations between teacher and pupil ratings were as follows: .73 for challenge, .67 for curiosity, and .61 for mastery.

The Perceived Competence Scale for Children

Each child filled out Harter's Perceived Competence Scale for Children (1979). Harter constructed the scale to be sensitive to perceived competence as "an important correlate and mediator of the child's intrinsic motivation to be effective, to engage in independent mastery attempts in the anticipation of a competent outcome" (p. 1). The scale reflects the view that competence is not a unitary domain but has several components. There are four subscales to the Perceived Competence Scale. These are

cognitive competence--reflected primarily in academic performance

social competence--emphasis is on popularity with peers

physical competence--defined in terms of ability at sports and outdoor games

general self-esteem--general feelings of worth which are independent of any particular skill domain.

Only the cognitive competence and general self-esteem subscales were used in this study. In their preliminary study, Deci et al. (1981a) reported low or negative correlations between social and physical competency, respectively, and teacher orientation. Therefore, these two subscales were not used.

The response format is the structured alternative format (see Intrinsic Orientation section). Each of the 28 items is scored on a scale from 1 to 4, with a score of 1 indicating low perceived competence and 4 high perceived competence. Fourteen of the 28 items are worded with high perceived competence reflected in the first half of the statement.

Kuder-Richardson Formula 20 reliability coefficients for each subscale were assessed on large samples of third-through sixth-grade children in Colorado, Connecticut, California, and New York. The internal consistency values were .76 and .73 for the cognitive and general subscales, respectively (Harter, 1979). Test-retest reliability data

for 208 Colorado students after a three-month interval and 810 New York students after a nine-month interval were .78, and .70 for Colorado and .78, and .679 for the New York sample, for the two subscales (Harter, 1982).

Factor analyses of the items on the Perceived Competence Scale using both orthogonal and oblique solutions were obtained. Items have moderate to high loadings on their designated factor and do not cross-load on other factors. The same pattern was replicated on samples from all four states (Harter, 1982).

Criterion validity has been established for the cognitive subscale. Teacher ratings of cognitive competence were correlated with the children's scores. For the California sample, third through ninth grades, the following correlations were found for grades 3 through 6, .28, .32, .50, and .55, and for grades 7 through 9, .31, .66, .73, respectively. The same pattern and magnitude of correlations was obtained when children's scores were correlated with the Iowa Test of Basic Skills (Harter, 1982).

Metropolitan Achievement Test

Achievement was measured by Metropolitan Achievement Test (MAT) scores. The test has nine subtests including word knowledge, word discrimination, reading, spelling, language (usage, punctuation, and capitaliation, total), mathematics (computation, problem solving, and concepts).

The reading subtest and total scores were used. The Eighth Mental Measurement Yearbook (Buros, 1978) reports favorable reviews for the MAT. Gronlund reports that reliability estimates are based on measures of internal consistency. Correlations range from .84 to .97 for the subtests. Wingard and Bentler note that the selection of the standardization sample is a problem. A disproportionately large number of low-income and low-ability pupils were erroneously included. The national norms, therefore, cannot be relied upon. Comparisons among schools and districts can, however, be made with confidence. In his critique, Wolf concludes the MAT are high quality instruments despite minor technical flaws and their use is well justified.

Data Collection

This study involved 22 third-grade teachers in Alachua County, Florida, and 154 children, an average sample of 7 children from each classroom. Participation of teachers and children in the study was determined by their willingness to sign the informed consent forms. Follow-up attempts by the researcher to increase their participation level included personal contacts, letters, and phone contacts. The use of volunteer subjects decreased the generalizability of the present study to similar groups. It was important to use teachers from a variety of schools so that the discipline procedures and social climate of any one school

did not overly influence the data collected. Follow-up attempts to increase teacher participation focused on including different schools in the county. Eight schools were included.

Once the participating teachers were identified, the researcher contacted the teachers at each school and administered Deci's The "Problems in Schools" Questionnaire (1981) within one week. Group administration of Deci's instrument promoted faster and more independent teacher responses. Arrangements were made at this time for the children to be tested and for observers to collect praise data in each classroom. Copies of each teacher's daily and weekly schedules were obtained to facilitate observation times.

Four observers were trained to the criterion level of 75% interrater agreement on the Teacher Praise Behaviors Checklist, developed by the researcher. The mean interrater agreement over four observation periods was 76.7%. The agreement ranged from 71% to 81%. Two agreement checks were made before the study began, and two additional agreement checks were made during the study. The calculations were based on the number of agreements divided by the total number of praise statements for each observation period. Training consisted of approximately four hours of viewing and discussing videotapes while learning the instrument and an additional two hours in the field observing and recording teacher praise episodes. Videotape training

provided the opportunity for praise episodes to be evaluated and discussed repeatedly until observer consensus was reached. Field training provided the opportunity to practice accurate recording of praise episodes of teachers in real contexts. That is, observers recorded teacher praise while experiencing the distractions of a noisy classroom and while sitting only a few feet from the reading group. An attempt was made to find teachers who displayed frequent and readily discernible styles of praise for the practice sessions. Practice took place in second, rather than third, grade classrooms to avoid any overlap between practice and experimental classrooms.

It has been shown that more frequent, shorter episodes of observation are more reliable than longer but fewer periods (Rowley, 1978). For this reason, each teacher was observed four times for 30 minutes, or a total of 120 minutes.

To facilitate comparability of data among teachers, observation of teacher praise occurred during small group reading time. This area of the curriculum was chosen because of the similarity in format across classrooms, frequency of occurrence, high probability of teacher feedback to student behavior, verbal nature of the task, and the high priority accorded reading in the elementary school curriculum.

Reading groups were generally 30 minutes long. An observer began recording praise statements from the time

the teacher called the children together until she dismissed them. In the event a reading group lasted a shorter period of time than 30 minutes, the time the group began and ended was recorded. The observer then repeated the praise observation process with the next group, noting when the 30-minute period ended but recording praise statements until the group ended. In other words, praise-recording episodes were the length of reading groups. It was important to record the entire group session in the event praise style changed as the lesson progressed.

Each teacher was observed for a minimum of 120 minutes. For the majority of teachers this was for four reading groups of 30 minutes each. For a few teachers with shorter reading groups, this was more than four groups. In both cases, observers recorded praise statements in reading groups of middle-ability students. Only the middle-ability reading group in each classroom was observed because the middle-ability reading group was the largest group per classroom and provided enough student subjects for this study. The same ability level was observed in each classroom to facilitate comparability of the data collected.

Observation times, of course, coincided with reading group times. The time of observation, therefore, depended upon the teachers' schedules and was not made uniform by the researcher. It was common for reading groups to occur in the mornings every day of the week. No teacher was

observed more than once per day. Each teacher was observed four times for 30 minutes each. Each of the four observers recorded praise statements from each of the 22 teachers.

During the observation weeks, but at times when observation was not going on (afternoons, for example), the researcher and one other proctor administered the children's measures, Intrinsic Orientation Scale and Perceived Competence Scale. The administration time was uniform across children to control for fatigue. A comparable setting was chosen for testing. The measures were administered in groups of 16-24 children, all the subjects per school. When more than 24 children in any one school participated, the group was divided in half for testing. Total testing time was no longer than 40 minutes, including instructions.

Achievement data were obtained in the form of Metro-politan Achievement Test scores, Spring Administration, 1983.

Summary

The present study was designed to investigate the relationships between teacher orientation toward controlling versus supporting autonomy in children and frequencies of various types of praise. Further, the study investigated the relationships between these two teacher variables and children's feelings of competence, intrinsic motivation, and achievement. The design was correlational-observational

because the study was exploratory and because of the need for ecological validity.

The subjects consisted of 22 third-grade teachers and 154 children in their middle-ability reading groups. Observation of praise occurred during reading group sessions on four occasions of 30 minutes' duration. Reading groups were chosen because of the similarity in format across classrooms, frequency of occurrence, high probability of teacher feedback to the student behavior, verbal nature of the task, and the high priority accorded reading in the curriculum.

Teacher orientation was assessed in the weeks prior to classroom observation, and the children's feelings of competence and intrinsic motivation were assessed in the afternoons concurrent with classroom observation. Achievement data were collected after the school year was ended.

CHAPTER IV RESULTS

Introduction

The purpose of this study was to explore the relationships between teachers' use of praise and their orientation toward controlling versus supporting autonomy in children. The relationships between these two teacher measures and children's feeling of competence, intrinsic motivation, and achievement were also explored. One hundred fifty-four third-grade children and their teachers in 22 classrooms participated in this study. The children's scores were aggregated and averaged per classroom. The classroom was thus the unit of analysis for this investigation.

Specifically, the study sought to answer three questions:

1. Were there significant relationships between frequencies of various types of teacher praise and teacher orientation toward controlling versus supporting autonomy in children?
2. Were there significant relationships between frequencies of various types of teacher praise and children's feelings of competence, intrinsic motivation, and achievement?

3. Were there significant relationships between teacher orientation toward controlling versus supporting autonomy in children and children's feelings of competence, intrinsic motivation, and achievement?

To answer these questions, correlations were calculated between the two teachers' measures (frequency of teacher praise and teacher orientation toward controlling versus supporting autonomy in children) and between each teacher measure and the three children's measures (children's feelings of competence, intrinsic motivation, and achievement).

The following teacher measures were used: to measure frequency of teacher praise, the Teacher Praise Behavior Checklist (35 items plus 3 collapsed subscales), and to measure teacher orientation toward controlling versus supporting autonomy in children, The "Problems in Schools" Questionnaire (1 score).

The following children's measures were used: to measure children's feelings of competence, the Cognitive and General subscales of the Perceived Competence Scale for Children (2 subtest scores); to measure children's intrinsic motivation, the Preference for Challenge, Independent Mastery and Curiosity/Interest subtests of the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (3 subtest scores); and to measure children's achievement, the reading subtest and the total scores on the Metropolitan Achievement Test (2 scores).

Descriptive Statistics for Teachers' and Children's Measures

Descriptive statistics for the teacher orientation measure are reported in Table 4. Deci et al. (1981b) indicate that teachers who score below 6.98 on The "Problems in Schools" Questionnaire are control-oriented. Teachers who score above 6.98 are autonomy-oriented. In the present study 15 teachers scored as control-oriented and 7 teachers scored as autonomy-oriented.

Table 4

Descriptive Statistics for The "Problems in Schools" Questionnaire

N	Mean	Standard Deviation	Minimum Score	Maximum Score
22	5.00	2.87	-0.80	10.00

Descriptive statistics for the various types of praise are presented in Table 5. There were 1,712 praise statements generated by the 22 teachers for the 120 minutes of observation time each. The teachers' use of praise ranged from a minimum of 2 statements to a maximum of 46 statements per 30 minute lesson for an average of 19 statements per 30 minute lesson.

The observers checked as many items as were appropriate for each praise statement; that is, the items were not

mutually exclusive. This explains why adding together the Frequency column does not yield the total of 1,712 praise statements. The Frequency and Minimum and Maximum Scores columns of Table 5 do indicate which types of praise were frequent and which infrequent. The frequent praise behaviors were Contingent, Repeats, and Accepts. The infrequent praise behaviors were Tangible reinforcer, Genuine opinion, Specifies attribute/behavior, Specifies with detail, Extended, Compares to others, Compares to self, Attributes effort, and Attributes ability. All affect categories were frequent except Touch, pat, hug. In terms of context several categories were frequent and the rest were infrequent. The frequent context items included Public, To individual, Academic, and Teacher-initiated. Praise seemed almost equally distributed to females and to males.

Descriptive statistics for the three subscales are reported in Table 6. The subscales were formed by collapsing items in the Teacher Praise Behavior Checklist. Subscale 1 is a sum of all the items in Table 2. Subscale 2 is the controlling dimension and Subscale 3 is the information dimension of the praise checklist. The two praise variables Repeats and Accepts were added to the controlling dimension beyond those listed in Chapter III. It is apparent from Table 6 that more items were scored on the controlling dimension (3538) than on the information dimension (2707).

Table 5
 Descriptive Statistics for the Teacher Praise Behavior Checklist

Praise Items	Mean	Standard Deviation	Frequency	Minimum Score	Maximum Score
<u>Behaviors</u>					
Tangible reinforcer	0.04	0.12	4.00	0.00	2.00
Teacher needs	0.26	0.36	23.00	0.00	6.00
Genuine opinion	0.01	0.05	1.00	0.00	0.00
Contingent	16.22	5.20	1427.00	28.00	114.00
Noncontingent	2.42	1.21	213.00	2.00	17.00
Contingent on quality	0.91	1.48	80.00	0.00	24.00
Repeats	6.31	2.51	555.00	7.00	47.00
Accepts	10.22	3.59	900.00	16.00	67.00
Phrase	2.22	3.13	195.00	0.00	61.00
Sentence	1.04	1.14	92.00	0.00	14.00
Specifies attribute/ behavior	0.40	0.63	26.00	0.00	11.00
Specifies with detail	0.00	0.00	0.00	0.00	0.00

Table 5. Continued.

Praise Items	Mean	Standard Deviation	Frequency	Minimum Score	Maximum Score
Extended	0.06	0.19	3.00	0.00	3.00
Compares to others	0.02	0.07	2.00	0.00	1.00
Compares to self	0.07	0.16	6.00	0.00	2.00
Attributes effort	0.01	0.05	1.00	0.00	1.00
Attributes ability	0.04	0.12	4.00	0.00	2.00
<u>Affect</u>					
Flat voice	1.75	3.19	154.00	0.00	48.00
No facial expression	2.97	5.99	262.00	0.00	91.00
Enthusiastic voice	10.15	5.75	893.00	0.00	105.00
Smile, laugh, nod	7.78	5.28	685.00	0.00	96.00
Eye contact	8.17	5.39	719.00	8.00	109.00
Touch, pat hug	0.14	0.20	12.00	0.00	3.00
<u>Context</u>					
Private	0.24	0.37	21.00	0.00	4.00
Public	16.72	5.68	1471.00	39.00	145.00

Table 5. Continued.

Praise Items	Mean	Standard Deviation	Frequency	Minimum Score	Maximum Score
To individual	14.94	4.83	1315.00	32.00	111.00
To group	2.00	1.58	176.00	0.00	25.00
Academic	16.31	5.83	1435.00	33.00	138.00
Conduct-related	0.16	0.25	14.00	0.00	4.00
Personal	0.01	0.05	1.00	0.00	1.00
Transition ritual	2.48	1.36	219.00	2.00	21.00
Child-initiated	0.36	0.80	32.00	0.00	12.00
Teacher-initiated	16.52	5.32	1454.00	39.00	138.00
To females	7.95	3.05	699.00	12.00	57.00
To males	7.20	4.00	634.00	7.00	71.00
Total Praise Statements	19.00	----	1,712.00	2.00	46.00

Table 6

Descriptive Statistics for Three Subscales of The Teacher Praise Behavior Checklist

Subscales	Mean	Standard Deviation	Frequency	Minimum Score	Maximum Score
Subscale 1 (Total)	156.14	51.56	13,740	374.00	1,288.00
Subscale 2 (Controlling)	40.20	15.08	3,538	84.00	340.00
Subscale 3 (Informational)	30.87	19.74	2,707	44.00	418.00

Descriptive statistics for the three children's measures are calculated from classroom means and are presented in Table 7. The means for the perceived competence and intrinsic motivation measures are very similar to those reported by Harter (1979, 1980) for her third-grade samples. The standard deviations differ, however. Whereas the standard deviations range from 0.29 to 0.39 in the present study, Harter (1979, 1980) found standard deviations from 0.61 to 0.77.

Tables 4-7 indicate that a large number of variables were used in the present study. Because all children's measures were correlated with all teachers' measures, a large number of correlations were performed (359). In addition, the Frequency column of Table 5 reports that some of the praise variables occur infrequently. The large number of correlations and infrequent praise variables

caused difficulty in interpreting the findings when all 35 praise items and 3 subscales were used in the analyses.

Table 7

Descriptive Statistics for the Perceived Competence Scale for Children, The Scale of Intrinsic Versus Extrinsic Orientation in the Classroom, and The Metropolitan Achievement Test

Children's Measure	Mean	Standard Deviation
Perceived Competence		
Cognitive	2.97	0.29
General	2.96	0.29
Intrinsic Motivation		
Preference for challenge	3.09	0.29
Independent mastery	2.93	0.38
Curiosity/interest	2.96	0.39
Metropolitan Achievement Test		
Reading	676.16	39.36
Total	631.52	38.58

When variables with few data points are used, they probably cannot correlate with much of anything; and when a correlation does occur, it may reflect one or two data points rather than a general pattern in the data. For this reason only the 3 subscales, rather than all 35 praise items, from the Teacher Praise Behavior Checklist are reported in the following analyses. The Total, Controlling, and Informational subscales contain the most relevant data from the praise checklist. The correlations for the 35

praise items from the Praise Behavior Checklist with the teacher orientation scores and with the children's test scores are reported in Appendix C.

Each praise statement was scored in multiple categories. To check the possibility that vague praise statements would be given more weight than more specific praise statements in these analyses, each praise statement was also given a single score of informational or controlling. Correlations were calculated using the single scores of the praise statements.

The correlations for the singly scored praise statements with the teacher orientation scores and with the three children's tests scores are reported in Appendix D. Because the pattern of these correlations match the pattern of correlations using the three subscales formed from the Teacher Praise Behaviors Checklist, it does not appear that vague praise statements unduly affected the results.

Findings

The "Problems in Schools" Questionnaire and the Teacher Praise Behavior Checklist

Question 1 asked if there were significant relationships between teachers' frequency of using praise and teachers' orientation toward controlling versus supporting autonomy in children. To answer this question correlations

were calculated between the three subscales from the Teacher Praise Behavior Checklist and the scores on the "Problems in Schools" Questionnaire. Table 8 shows that there were no correlations significant at the .05 level. Apparently, these teachers' use of praise is not related to their orientation toward controlling versus supporting autonomy in children as measured by these instruments.

Teacher Praise Behavior Checklist and the Three Children's Measures

Question 2 asked if there were significant relationships between teacher frequency of using praise and children's feelings of competence, intrinsic motivation, and achievement. To answer this question correlations were calculated between the three subscales from the Teacher Praise Behavior Checklist and the three children's measures.

Table 9 reports the correlations for the Teacher Praise Behavior Checklist subscale scores and the Perceived Competence Scale for Children scores. There were no correlations significant at the .05 level. It appears that these teachers' use of praise is not related to their students' feelings of competence as measured by these instruments.

Table 8

Correlation Coefficients for The "Problems in Schools" Questionnaire and the Three Subscales from the Teacher Praise Behavior Checklist (significance level reported below correlations)

Subscale	
Subscale 1 (Total)	-0.32 (0.147)
Subscale 2 (Controlling)	-0.42 (0.052)
Subscale 3 (Informational)	-0.00 (0.990)

Table 9

Correlation Coefficients for the Three Subscales from the Teacher Praise Behavior Checklist and the Perceived Competence Scale for Children (significance level reported below correlations)

Praise Subscale	Perceived Competence Subscales	
	Cognitive	General
Subscale 1 (Total)	-0.05 (0.834)	0.10 (0.660)
Subscale 2 (Controlling)	0.33 (0.138)	0.31 (0.163)
Subscale 3 (Informational)	-0.37 (0.095)	-0.15 (0.516)

Table 10 presents the correlation coefficients for the Teacher Praise Behavior Checklist subscale scores with the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom scores. For the intrinsic motivation subscale, Preference for Challenge, Subscale 3 (Informational) is correlated significantly at the .05 level. There are no correlations significant at the .05 level for the Independent Mastery subscale. For the subscale, Curiosity/Interest, Subscale 3 (Informational) is correlated significantly at the .05 level. The informational dimension of praise is negatively related to children's intrinsic motivation as measured by these instruments.

The correlation coefficients for the Teacher Praise Behavior Checklist subscale scores and the Metropolitan Achievement Test scores are shown in Table 11. There were no correlations significant at the .05 level. There is not sufficient evidence for a relationship between teachers' use of praise and students' overall or reading achievement as measured by these instruments.

Therefore, these teachers' use of praise does not appear to be related to children's feelings of competence or reading achievement as measured by these instruments. There appears to be a negative relationship between the informational dimension of praise and children's intrinsic motivation as measured by these instruments.

Table 10
 Correlation Coefficients for the Teacher Praise Behavior Checklist and the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (significance level reported below correlations)

Praise Subscale	Intrinsic Motivation Subscales		
	Preference for Challenge	Independent Mastery	Curiosity/Interest
Subscale 1 (Total)	-0.18 (0.433)	0.00 (0.995)	-0.24 (0.273)
Subscale 2 (Controlling)	0.16 (0.465)	0.36 (0.103)	0.06 (0.779)
Subscale 3 (Informational)	-0.44* (0.041)	-0.32 (0.144)	-0.43* (0.044)

*Significant at the .05 level

Table 11

Correlation Coefficients for the Teacher Praise Behavior Checklist and the Metropolitan Achievement Test (significance level reported below correlations)

Praise Subscale	Metropolitan Subscales	
	Reading	Total
Subscale 1 (Total)	0.03 (0.901)	-0.08 (0.735)
Subscale 2 (Controlling)	0.28 (0.208)	0.18 (0.414)
Subscale 3 (Informational)	-0.26 (0.243)	-0.31 (0.159)

The "Problems in Schools" Questionnaire and the Three Children's Measures

Question 3 asked if there were significant relationships between a measure of teacher orientation toward controlling versus supporting autonomy in children and children's feelings of competence, intrinsic motivation, and achievement. To answer this question correlations were calculated between the teachers' scores on The "Problems in Schools" Questionnaire and the three children's measures.

Table 12 indicates there are no significant correlations between the scores on The "Problems in Schools" Questionnaire and the children's scores on the two subtests of the Perceived Competence Scale for Children at the .05 level. Table 13 presents the correlation coefficients for the scores on The "Problems in Schools" Questionnaire with the three subtests of the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom scores. There were no correlations significant at the .05 level. Table 14 shows there were no significant correlations between The "Problems in Schools" Questionnaire and the Metropolitan Achievement Test scores at the .05 level. Apparently these teachers' orientation toward controlling versus supporting autonomy in children is not related to children's feelings of competence, intrinsic motivation, or achievement as measured by these instruments.

Table 12

Correlation Coefficients for The "Problems in Schools" Questionnaire and The Perceived Competence Scale for Children (significance level reported below correlations)

Perceived Competence

Cognitive	-0.15 (0.054)
General	0.25 (0.253)

None were significant at .05 level

Table 13

Correlation Coefficients for The "Problems in Schools" Questionnaire and The Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (significance level reported below correlations)

Intrinsic Motivation

Preference for challenge	0.07 (0.743)
Independent mastery	0.03 (0.901)
Curiosity/interest	0.15 (0.493)

None were significant at .05 level

Table 14

Correlation Coefficients for The "Problems in Schools" Questionnaire and The Metropolitan Achievement Test
(significance level reported below correlations)

Metropolitan Achievement Test	
Reading	0.01 (0.951)
Total	-0.01 (0.963)

None were significant at .05 level

Summary

The descriptive statistics for the praise items and subscales from the Teacher Praise Behavior Checklist indicate that a large number of praise variables were used in the present study. Table 5 indicates that many praise items occurred infrequently. Because of the cautions involved with correlating large numbers of infrequent variables, only three subscales from the Teacher Praise Behavior Checklist were used in the reported analyses. Correlations using all 35 praise items are presented in Appendix C.

No significant relationship was found between teachers' use of praise and teachers' orientation toward controlling versus supporting autonomy in children.

No significant relationships were found between teachers' use of praise and children's feeling of competence or achievement. A negative relationship was found between the informational dimension of praise and children's intrinsic motivation.

No significant relationships were found between teachers' orientation toward controlling versus supporting autonomy in children and children's feelings of competence, intrinsic motivation, or achievement.

CHAPTER V
SUMMARY, DISCUSSION, AND CONCLUSIONS

The purpose of this study was three-fold: 1) to see if the teachers' orientations toward controlling or supporting autonomy in children were related to the teachers' use of praise in the classroom; 2) to see if teachers' use of praise was related to children's feelings of competence, intrinsic motivation, and achievement; and 3) to see if the teachers' orientations toward controlling or supporting autonomy in children were related to children's feelings of competence, intrinsic motivation, and achievement. This approach to studying praise is based on Deci's (1975) cognitive evaluation theory. Deci proposes that every external reward, such as praise, has both a controlling aspect and an informational aspect. The function of the controlling aspect is to bring about a behavioral outcome in the recipient. The function of the informational aspect is to convey information about one's competence at a target activity. The aspect of praise which is more salient to recipients will have an effect on their feelings of competence, intrinsic motivation, and achievement. If the controlling aspect is more salient, intrinsic motivation decreases; if less salient, intrinsic motivation is maintained or enhanced.

Teachers' orientations toward controlling or supporting autonomy in children may be among the factors that determine which aspect of praise will be more salient to students (Deci, 1975; Deci & Ryan, 1981). According to cognitive evaluation theory, teachers who are more control-oriented may be likely to praise in controlling ways that undermine children's intrinsic motivation, feelings of competence, and hence, achievement. Teachers who are more oriented toward supporting autonomy in children may be likely to praise in informational ways that enhance children's feelings of competence, intrinsic motivation, and hence, achievement (Deci et al., 1981a). The present study was designed to investigate this aspect of cognitive evaluation theory. It is hoped that the findings from this study will 1) stimulate interest in future investigation into the distinction between controlling and informational praise and praise's effects on children, and 2) help teachers and researchers determine the relative importance of praise in classroom life.

Summary of Findings

Twenty-two third-grade teachers and 154 children in their middle-ability reading groups comprised the sample. Prior to classroom observation, the teachers' orientation toward controlling versus supporting autonomy in children was assessed. The teachers' use of praise was recorded

during middle-ability reading groups by four different observers on four separate occasions of 30 minutes each. The children's feelings of competence and intrinsic motivation were assessed in small group test situations while the study was in progress. Achievement data were collected at the end of the academic year.

The findings from this study can be summarized as answers to the three questions posed in Chapter I.

1. Were there significant relationships between teachers' use of praise and a measure of teachers' orientation toward controlling or supporting autonomy in children?

There were no significant correlations at the .05 level between scores on a checklist of teacher praise and scores on a measure of teacher orientation toward controlling or supporting autonomy in children.

2. Were there significant relationships between teachers' use of praise and children's feelings of competence, intrinsic motivation, and achievement?

There were no correlations significant at the .05 level between the three subscales from the checklist of teacher praise and children's feelings of competence or achievement. There were negative correlations significant at the .05 level between the Informational Subscale of the Teacher Praise Behavior Checklist and two subscales of the children's intrinsic motivation measure,

Preference for Challenge ($\underline{r} = -0.44$) and Curiosity/Interest ($\underline{r} = -0.43$).

3. Were there significant relationships between teachers' orientation toward controlling or supporting autonomy in children and children's feelings of competence, intrinsic motivation, and achievement?

There were no significant correlations at the .05 level between scores on a measure of teacher orientation toward controlling or supporting autonomy in children and scores on the children's measures of feelings of competence, intrinsic motivation, or achievement.

Discussion

The findings from this study indicate that teachers' orientation toward controlling or supporting autonomy in children was not related to teachers' use of praise. In addition the findings indicate that neither teachers' orientation nor teachers' use of praise was related to children's feelings of competence or achievement. There is an indication that the informational dimension of praise was negatively related to children's intrinsic motivation. The following sections are organized to discuss the present findings in terms of literature precedents and methodological issues.

Teacher Orientation Toward Supporting Autonomy in Versus Controlling Children

Although there were no significant correlations between the measure of teacher orientation (The "Problems in Schools" Questionnaire) and any other measure in the study, teachers showed variation in their scores on the measure. The scores ranged from -0.80 to 10.00 with a standard deviation of 2.87 for the 22 third-grade teachers from one district in the present study. Deci et al. (1981b) reported a range from 2.13 and 12.13 (with one extreme case of -10.13) with a standard deviation of 3.11 in a sample of 68 teachers from grades K-6 from six schools in two districts. Although the range is similar, the two samples differ in orientation. The teacher scores in the present study are lower than those reported by Deci et al. (1981b). Fifteen teachers in the present investigation scored as control-oriented (below 6.98) and seven scored as autonomy-oriented (above 6.98). Five schools contained a mix of control- and autonomy-oriented teachers and three contained only control-oriented teachers. Two possible explanations for the higher proportion of control-oriented teachers in the present study compared to Deci et al.'s (1981b) study are the more southern geographical region and the lower grade level. A third explanation seems more likely, however. During the period of data collection for the present study, the district in which the 22 teachers were

employed changed to a new reading series. It was strongly communicated to the teachers that the children in their classrooms should cover a certain amount of material and should achieve a certain mastery level. According to Deci et al. (1982) placing such performance standards on teachers shifts them to a more controlling orientation toward children. In addition to the new reading series, the teachers in the present study had also adopted a new discipline method called Assertive Discipline. One technique suggested by Assertive Discipline is the use of "I like" statements. This may have influenced the teachers toward a control orientation also.

Teacher Praise

Two-thirds of the teachers in the present study scored as control-oriented on the measure of teacher orientation toward controlling versus supporting autonomy in children. One purpose of the present study was to see how this orientation was related to their use of praise. It was expected that control-oriented teachers would praise to control children and autonomy-oriented teachers would praise to inform them. In fact, no significant correlations were found between a measure of teacher orientation and a measure of teachers' frequency of praise (Teacher Praise Behavior Checklist).

Number of praise statements. Several observations about the teachers' use of praise seem important, however. The average number of praise statements ranged from 10 to 38 per 30 minute lesson per teacher. The average for all 22 teachers was 19 statements per 30 minute lesson as shown in Appendix E. The average for the seven autonomy-oriented teachers was 17 statements, whereas the average for the control-oriented was 21 statements. Although this difference was not statistically significant, other researchers have found statistically significant differences. Deci et al. (1982) found that controlling teachers praised significantly more than teachers in the informational group. Deci et al. did not use the same categories of praise as the present investigation. They used two categories, Praise of Person and Praise of Performance. In both categories controlling teachers praised significantly more than teachers in the informational group.

Although it is not apparent from the average number of praise statements, the most striking observation about praise in this study was the lack of it. Table 5 in Chapter IV indicates the distribution of types of praise statements. Of the 1,712 praise statements recorded, 1,455 statements, or 85%, were classified simply as Repeats and Accepts. The categories of Repeats and Accepts are questionable as praise but were included in this study for purposes of comparison with previous published results. Dershimer (1980) recorded praise statements in 36 language

arts lessons, 6 lessons each by 6 teachers. She reports that 72.9% of the praise statements were Repeats (53.7%) and Accepts (19.2%).

Praise other than repeats and accepts. Fifteen per cent of the statements recorded in the present investigation were distributed over the other categories: Tangible reinforcer, Teacher needs, Genuine opinion, Phrase, Sentence, Specifies attribute/behavior, Specifies attribute/behavior with detail, Extended, Compares to others, Compares to self, Attributes effort, and Attributes ability. Table 5 in Chapter IV records the number of praise statements in each of these categories. Because each category was not exclusive, that is, one statement could be recorded in several categories, the sum of statements per category does not seem to add up to 15% of 1,712 or 257 statements. When multiple scoring is taken into account, however, 15% of the praise statements are in these categories. Appendix F contains a list of all praise statements other than Repeats, Accepts, and simple phrases, such as "Good," "Very good," and "Correct."

Several aspects of teacher praise are apparent from this list. Three teachers (all control-oriented) are not represented in Appendix F because they used only Repeats, Accepts, and simple phrases such as "Good" in the 120 minutes of observation each. The remaining 19 teachers generated the 94 praise statements in Appendix E. Most of the statements are general expressions, such as "Oh

boy, D-, that was great," and "everyone did well on this page."

Specific academic praise. There are 13 instances of specific praise statements for academic work, such as "Great. Lots of expression and very fluent" and "Very good. Did you see D-? When he reads, he puts his endings on. Good." The praise statements which specify academic work account for 0.76% of the praise statements generated by the 22 teachers. Because of this low rate, it appears that praise which contained specific academic information did not occur frequently enough to influence the data in the present investigation.

The praise statements generated by the teachers in this study were infrequent and predominantly general. This agrees with Brophy's (1981a) functional analysis of praise. However, Brophy reports that specific academic praise accounts for 5% of all praise statements, whereas this study found a lower rate of 0.76%. Specific praise is shown in the literature to have more positive effects on children than general praise. Bernhardt and Forehand's (1975) study of the relative effectiveness of labeled praise ("what a good boy you are for picking up the blocks") and unlabeled praise ("good boy") showed that children were more responsive to labeled praise. Scheer (1976/1977) also demonstrated that children given descriptive praise performed significantly better than either the general praise or control groups. Deci (1975) suggests that

specific praise provides the children with information that increases their perceptions of competence, thereby enhancing intrinsic motivation.

Specific conduct praise. The teachers in the present investigation used much more general praise than praise which contained specific academic information. But in addition to specific academic praise, the teachers in this study occasionally generated another type of specific praise statement. Appendix F indicates there are also 13 instances of praise statements that specify conduct behaviors. Most of these begin with the phrase "I like." Examples include, "I like the way A- put her head down when she got through" and "I like the way S-, M-, and J- are sitting quiet." Teacher 4 combines an "I like" statement with specific academic information, "I like the way L- reads with expression."

The purpose of the praise statements that specify conduct seems to be to control the behavior of the praised student as well as the onlooker students. Brophy (1981) refers to this as vicarious reinforcement. The teachers' use of the "I" referent seems to make explicit the instrumental relationship between the conduct and the praise. Pittman et al. (1980) assert that by referring to an outside cause of behavior, the teacher may shift the locus of causality from internal to external, thereby decreasing intrinsic motivation.

Comparison of control- and autonomy-oriented teacher praise. A major assumption in the present study was that autonomy-oriented teachers would praise informatively, thereby increasing the intrinsic motivation, feelings of competence and achievement of the children in their classrooms. It was also assumed that control-oriented teachers would praise in controlling ways that would shift the locus of causality from the intrinsic domain of the child to the extrinsic domain of the teacher.

The data from this study show, however, that in terms of the praise statements in Appendix F both control- and autonomy-oriented teachers generate general praise as well as more specific praise which provides information about academic competence and praise which controls behavior in the classroom. Four autonomy-oriented and four control-oriented teachers used the 13 praise statements which specified academic work. Two autonomy-oriented and four control-oriented teachers used the 13 praise statements that specify conduct. There were no instances of overlap. That is, no teachers used both types of praise: praise that specified an academic trait as well as praise that specified conduct.

Comparative praise. Appendix F contains eight examples of comparative statements. Boggiano and Ruble (1979) point out that social comparison provides highly direct and unambiguous information about one's level of competence for older children. Brophy (1981b) includes comparative

statements in his guidelines for effective praise. Although comparative statements seem to convey competency information to the students, five control-oriented and only one autonomy-oriented teacher generated the statements. As Ryan et al. (1983) suggest, it could be that the children interpreted these praise statements as competitive, which would be seen as controlling.

The significance of the distribution of praise statements is unclear. It could be a function of chance or it could be an indication of praise style that a teacher develops over time. Further investigation into the praise style is needed.

Tangible rewards. In terms of the praise categories in Table 5, Chapter IV, a few further points seem worthy of note. Only control-oriented teachers used tangible reinforcers such as marbles or smiley faces. One autonomy-oriented teacher read a poem as a reward for good work and so was scored in the Paired with tangible reinforcer/ other reward category. Deci and Ryan (1980) consider tangible rewards to be controlling by producing a change in perceived locus of causality from internal to external.

Contingency. Control- and autonomy-oriented teachers did not differ on the contingency dimension of their praise. Enzle and Ross (1978) consider praise that is contingent on the response rather than the quality of that response to be controlling. Teachers in the present study who responded with "Good" to almost every child's answer,

without regard to the content or quality of the child's answer, responded contingently. Praise that is contingent on the quality of the response conveys information about competence. Teachers who varied the intensity of their praise to match the content of the child's answer used contingent on quality praise. For example, Teacher 2 generated the following praise statements, "that was all right," "D- read that pretty good," and "Wow. Great. L- did really well," depending on the quality of the child's response. Noncontingent praise is used as a transition ritual or after incorrect responses and may just serve to detract from credibility of the teacher's genuine praise episodes.

Even though contingent praise may be controlling and praise that is contingent on quality of the response may be informative, both control- and autonomy-oriented teachers generated both kinds of praise as well as noncontingent praise. The 22 teachers used Contingent praise 83% of the time, Noncontingent praise 12% of the time, and Contingent on Quality praise 5% of the time.

Affect and context. Control- and autonomy-oriented teachers did not differ in affect or context dimensions. Praise was most often teacher-initiated and administered in an enthusiastic voice to an individual about academic matters.

Summary. In summary, then, it is apparent that a general profile of teacher praise style emerged but that a clear distinction between autonomy- and control-oriented

teacher praise was not demonstrated. In small reading group sessions, the 22 teachers from this study tended to generate 19 praise statements per 30-minute session which were mostly instances of repeats and accepts. The remaining statements were often general; only occasionally would a teacher specify the academic work or conduct being praised. The praise statements were commonly contingent on the response, teacher-initiated and administered in an enthusiastic voice to an individual about academic matters. There was a slight tendency for control-oriented teachers to use more tangible reinforcers and praise statements that specify conduct. Beyond this, no differences in praise style were apparent between control- and autonomy-oriented teachers.

Praise in Reading-Groups

Table 5, Chapter IV, shows that few instances of specific praise, comparative praise, or attribution of effort and ability occurred in the 1,712 praise episodes recorded in this study. These categories of praise provide the child with the most information about his/her competency. Therefore, it was assumed that autonomy-oriented teachers would generate more instances of praise in these categories than control-oriented teachers. This was not the case. Autonomy- and control-oriented teachers employed informative praise, but they used it very rarely. Several explanations

must be weighed. Either there are no differences in the amount of information control- and autonomy-oriented teachers include in their praise statements, or the two types of teachers do praise differently in terms of information but not during reading groups. The first explanation gains some support from the trend that indicates control-oriented teachers tend to use more tangible reinforcers and specific conduct praise. Maybe control- or autonomy-oriented teachers differ on the control dimension and not the information dimension. The second explanation cannot be overlooked, however. Reading groups are often characterized by recitations, short question and answer sessions, and work page corrections. How much information should be in praise statements during these occasions? It seems likely that the amount of information in praise statements is dependent on the level of academic content involved as well as the orientation of the teacher.

Soar and Soar (1983) discuss the kinds of tasks facilitated by controlling praise (that is, praise that conveys little information about one's competence). These tasks tend to be rote learning, algorithmic (the solution depends on applying solutions already known), and simple clerical tasks. It could be that autonomy-oriented teachers do include more information about competence in their praise in more academically complex situations such as concept attainment and creative production. More research is needed

on praise in situations of differing levels of academic achievement.

Children's Feelings of Competence, Intrinsic Motivation, and Achievement

There were no significant correlations between teacher orientation toward supporting autonomy in or controlling children and the frequency of praise statements generated by these teachers. In general, both control- and autonomy-oriented teachers praised in similar ways. In addition, other than repeats and accepts, praise was an infrequent occurrence.

In light of the common style and infrequent use of praise, therefore, it is not surprising that no relationship was found between frequency of praise and two of the children's measures. There was a negative correlation between Subscale 3 of the praise checklist and two of the subscales on the children's intrinsic motivation measure. Subscale 3 is the informational dimension of the Teacher Praise Behavior Checklist. This is a surprising result. According to Deci (1975) when the information dimension of praise is more salient, intrinsic motivation should be enhanced. The information dimension of the praise list included items 3, 6, 9-16, 20-22 [see Appendix B]. Most of the items occurred infrequently except for items 20-22 which are the congruent affect items, Enthusiastic voice, Smiles,

laughs, nods, and Touch, pat, hug. Informative praise probably did not occur frequently enough to influence the data in this study. Congruent affect, however, occurred often as shown in Table 5, Chapter IV. Control- and autonomy-oriented teachers did not differ in their use of congruent affect. It may be that, because of the predominance of control-oriented teachers in this study, the negative correlation between the information dimension of praise and children's intrinsic motivation is due to the congruent affect displayed by the controlling teachers.

It is surprising, also, that a relationship between teacher orientation, presumably a stable trait, and the three children's measures was not found. Deci et al. (1981b) assumed teacher orientation was a stable trait because they obtained a test-retest correlation coefficient of .70 after several months' time span. In addition, two months into the school year the pattern of significant relationships between teacher orientation and the children's measures in their study were established and remained constant over the school year.

Deci et al. (1981a) explain why a relationship is expected between teacher orientation and children's feelings of competence and intrinsic motivation.

The prediction of a relationship between teachers' attitudes and the intrinsic motivation and self-esteem of children is based on the assumption that when teachers have different attitudes, they

will behave differently and their different behaviors will lead to different effects on children. (p. 3)

In fact, Deci et al. (1981a, 1981b) did find significant relationships between teachers' scores on the measure of teacher orientation and the children's scores on several measures, two of which were perceived competence and intrinsic motivation. Two major differences exist between the Deci et al. study and the present investigation. The Deci et al. study involved children from 36 fourth-, fifth-, and sixth-grade classrooms. In addition Deci et al. tested children from all ability levels in these classrooms. The present investigation involved only children from the middle-ability reading groups in 22 third-grade classrooms. It could be that control- and autonomy-oriented teachers do have different effects on children, but that younger children, third grade and below, do not perceive these differences. Or it could be that the high-ability students or the low-ability students are more perceptive of teacher difference than the middle-ability students. Some support for these alternate explanations exists in the literature. Dershimer (1980, 1982) found that high- and low-ability students perceive praise differently. Meyer et al. (1979) and Boggiano and Ruble (1979) found that children's perception of praise differed by age.

Further investigation is needed to determine the age, ability level, and other characteristics of the children who perceive differences in teachers' praise styles and

attitudes. Beyond the perception of differences, more studies are needed to determine the different effects that control- and autonomy-oriented teachers have on children.

Methodological Issues

Several methodological issues may have influenced the findings in the present investigation. Two-thirds of the teachers who participated in the study were control-oriented. All of the children in the study were from the middle-ability reading groups. Thus the sample of children observed and tested was homogeneous in terms of ability. The sample of teachers was not homogeneous, but the majority were similar in orientation toward children. This may have given rise to the problem of the restricted range. The extent of the range a sample of scores can have affects the magnitude of correlations. When the range the scores can have is restricted, the magnitude of the correlations is reduced. The range of children's scores was low, the range of teachers' scores was low, and the praise generated was predominantly similar. The magnitude of the correlations possible with these samples of scores was thus low.

In addition, the sample size was moderate. The power of the correlations drops dramatically when the sample size is below 30. With a sample size of 22, the power of the analyses was lessened. The moderate sample size

as well as the low variability in scores may have obscured any true relationships that may exist among teacher praise, teacher orientation, and children's feelings of competence, intrinsic motivation, and achievement.

Suggestions for Further Research

A need exists for further research into the area of praise and its effects on children. The present study was based on Deci's (1975) cognitive evaluation theory. Further investigations into the ways control- and autonomy-oriented teachers praise children are needed. Several points arising from the present study should be pursued.

There were slight trends in the data that, although not significant, should be studied. Control- and autonomy-oriented teachers differed somewhat on the control dimension but not on the information dimension of praise. In addition, control-oriented teachers tended to use more praise statements than autonomy-oriented teachers. Teachers tended to use either academic-specific praise or conduct-specific praise but not both. More control-oriented than autonomy-oriented teachers used comparative statements. These trends should be studied using several experimental methods. Further observational-correlation studies are needed which employ settings other than reading groups; for example, large group discussions during concept attainment lessons. Ethnographic studies are needed which would focus on the

classroom as a cultural scene. The complex social meanings involved in classroom praise interactions could be unraveled using the ethnographic process without the restrictions imposed by standardized tests and observation systems.

Experimental studies are needed to investigate more clearly the effects of praise on children's feelings of competence, intrinsic motivation, and achievement. After data have been collected from further observational studies and ethnographic studies, the derived praise styles of control- and autonomy-oriented teachers can be taught to a sample of teachers. These teachers would then either praise to inform or praise to control and their students would be tested to assess any differences in effect. Of particular interest would be the relationship between informational praise and children's intrinsic motivation. Also of interest would be children's perceptions of praise such as repeats and accepts. Are these events perceived as controlling or informative or neutral?

Further studies should also address the methodological issues previously discussed. Field studies are needed that correct the issue of the restricted range. The present study was designed using only one grade level as a control for age effects and varying curricula. The sample of teachers who agreed to participate was small and so all who volunteered were used as subjects. This produced a sample of teachers, the majority of whom were control-oriented. This study needs to be expanded to include a balance of

teachers, that is, an equal number of control-and autonomy-oriented teachers, as well as random samples of children from all ability levels from a range of grade levels.

Implications for Teaching

The implications for teaching derived from this study are based on trends in the data and literature precedents. Most of the results of the correlations calculated were not significant. The implications are thus tentative and cautionary in nature.

The basis for the present study was that praise has multidimensions; that is, there are at least two kinds of praise, praise that controls and praise that informs. Soar and Soar (1983) state "that when praise is used to control, to limit, or to eliminate choice by pupils, it will likely decrease intrinsic motivation; but if it is used to convey positive feedback about student competence in the context of choice, it is likely to increase intrinsic motivation" (p. 69). Thus, teachers should think before they speak. It seems advisable to include specific competence information in praise statements.

The data from the present study indicate that the 22 teachers generated 1,712 praise statements in 2,640 minutes of observation. This yields an average of 1.5 praise statements per minute. Teachers, thus, seem to believe that praise is important. However, because so

much of the praise generated was devoid of any competency information, teachers do not seem to understand how to utilize praise to benefit the student. It seems important for teacher educators to train teachers to use praise to enhance the intrinsic motivation of their students and not to use praise as a controlling instrument.

Only control-oriented teachers used tangible reinforcers. The literature suggests that tangible reinforcers are seen as more controlling than praise (Anderson et al., 1976; Boggiano & Ruble, 1979; Lepper et al., 1973; Pittman et al., 1980; Swann & Pittman, 1977). It seems advisable, therefore, to use verbal reinforcement rather than tangible reinforcers to maintain rather than decrease children's intrinsic motivation.

The data from the current study show that 12% of the praise statements generated were used noncontingently. Praise should not be used as a transition ritual or after incorrect answers. Praise used in this manner can only lessen the credibility of praise given in legitimate circumstances.

The majority of praise statements recorded in the present investigation were repeats and accepts, especially "uh-huh," or "okay." It is not clear whether children perceive these events as controlling or informative, but it was apparent to the observers that reading group sessions punctuated primarily by "okay" were boring. Teachers should

be sensitive to the effects their statements have on the children in their classrooms.

Conclusion

The present study found few significant relationships among teacher orientation toward supporting autonomy in or controlling children, teacher praise, and children's feelings of competence, intrinsic motivation, and achievement. The literature, however, suggests that there are significant correlations between teacher orientation and children's feelings of competence and intrinsic motivation (Deci et al., 1981a, 1981b). The present study indicates there may be differences in the way control- and autonomy-oriented teachers praise children. Control-oriented teachers tended to use more praise statements and more tangible reinforcers. Control-oriented teachers also tended to use more conduct-specific praise. Beyond this, both control- and autonomy-oriented teachers tended to produce a common profile of teacher praise style.

The choice of small group reading sessions as the context for the present investigation may have reduced the variability found in the information dimension of praise. Reading groups tended to be instances of rote learning, algorithms, and clerical tasks, all of which seem to be facilitated by controlling praise (Soar and Soar, 1983).

The choice of one grade level and one ability level in the children sample and a majority of control-oriented teachers in the teacher sample may have led to the problem of restricted range which lowers the correlations possible. Small sample sizes may have reduced the power of the analyses.

Further investigations are needed that use larger, more heterogeneous samples of children and teachers in the observational-correlational paradigm of the present study. In addition, ethnographic studies of praise in the classroom and experimental studies utilizing these results are needed.

APPENDIX A
THE "PROBLEMS IN SCHOOLS" QUESTIONNAIRE

NAME: _____ SCHOOL: _____

DATE: _____ GRADE: _____

The "Problems in Schools" Questionnaire

On the following pages you will find a series of vignettes. Each one describes an incident and then lists four ways of responding to the situation. Please read each vignette and then consider each response in turn. Think about each response option in terms of how appropriate you consider it to be as a means of dealing with the problem described in the vignette. You may find the option to be the "perfect," in other words, "extremely appropriate" in which case you would circle the number 7. You may consider the response highly inappropriate in which case you might circle the 1. If you find the option reasonable you would circle some number between 1 and 7. So think about each option and rate it on the accompanying scale. Please rate each of the four options for each vignette. There are eight vignettes with four options for each.

There are no right or wrong ratings on these items. People's styles differ, and we are simply interested in what you consider appropriate given your own style.

Some of the stories ask what you would do as a teacher. Others ask you to respond as if you were giving advice to another teacher or to a parent. Some ask you to respond as if you were the parent. If you are not a parent, simply imagine what it would be like for you in that situation.

2. At a parent conference last night, Mr. and Mrs. Greene were told that their daughter, Sarah, has made more progress than expected since the time of the last conference. All agree that they hope she continues to improve so that she does not have to repeat the grade (which the Greene's have been kind of expecting since the last report card). As a result of the conference, the Greene's decide to:

- a. Increase her allowance and promise her a ten-speed if she continues to improve.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- b. Tell her that she's now doing as well as many of the other children in her class.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- c. Tell her about the report, letting her know that they're aware of her increased independence in school and at home.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- d. Continue to emphasize that she has to work hard to get better grades.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

3. Donny loses his temper a lot and has a way of agitating other children. He doesn't respond well to what you tell him to do and you're concerned that he won't learn the social skills he needs. The best thing for you to do with him is:

- a. Emphasize how important it is for him "to control himself" in order to succeed in school and in other situations.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- b. Put him in a special class which has the structure and reward contingencies which he needs.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- c. Help him see how other children behave in these various situations and praise him for doing the same.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- d. Realize that Donny is probably not getting the attention he needs and start being more responsive to him.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

4. Your son is one of the better players on his junior soccer team which has been winning most of its games. However, you are concerned because he just told you he failed his unit spelling test and will have to retake it the day after tomorrow. You decide that the best thing to do is:

- a. Ask him to talk about how he plans to handle the situation.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	appropriate

- b. Tell him he probably ought to decide to forego tomorrow's game so he can catch up in spelling.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- c. See if others are in the same predicament and suggest he do as much preparation as the others.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- d. Make him miss tomorrow's game to study; soccer has been interfering too much with his school work.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

5. The Rangers spelling group has been having trouble all year. How could Miss Wilson best help the Rangers?

a. Have regular spelling bees so the Rangers will be motivated to do as well as the other groups.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

b. Make them drill more and give them special privileges for improvements.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

c. Have each child keep a spelling chart and emphasize how important it is to have a good chart.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

d. Help the group devise ways of learning the words together (skits, games, and so on).

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

6. In your class is a girl named Margy who has been the butt of jokes for years. She is quiet and usually alone. In spite of the efforts of previous teachers, Margy has not been accepted by the other children. Your wisdom would guide you to:

a. Prod her into interactions and provide her with much praise for any social initiative.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

b. Talk to her and emphasize that she should make friends so she'll be happier.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

c. Invite her to talk about her relations with the other kids, and encourage her to take small steps when she's ready.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

d. Encourage her to observe how other children relate and to join in with them.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

7. For the past few weeks things have been disappearing from the teacher's desk and lunch money has been taken from some of the children's desks. Today, Marvin was seen by the teacher taking a silver dollar paper-weight from her desk. The teacher phoned Marvin's mother and spoke to her about this incident. Although the teacher suspects that Marvin has been responsible for the other thefts, she mentioned only the one and assured the mother that she'll keep a close eye on Marvin. The best thing for the mother to do is:

- a. Talk to him about the consequences of stealing and what it would mean in relation to the other kids.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate		appropriate
		very
		appropriate

- b. Talk to him about it, expressing her confidence in him and attempting to understand why he did it.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate		appropriate
		very
		appropriate

- c. Give him a good scolding; stealing is something which cannot be tolerated and he has to learn that.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate		appropriate
		very
		appropriate

- d. Emphasize that it was wrong and have him apologize to the teacher and promise not to do it again.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate		appropriate
		very
		appropriate

8. Your child has been getting average grades, and you'd like to see her improve. A useful approach might be to:

- a. Encourage her to talk about her report card and what it means for her.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- b. Go over the report card with her; point out where she stands in the class.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- c. Stress that she should do better, she'll never get into college with grades like these.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

- d. Offer her a dollar for every A and 50 cents for every B on future report cards.

	1....2....3....4....5....6....7	
	very	moderately
inappropriate	appropriate	very appropriate

APPENDIX B
TEACHER PRAISE BEHAVIORS CHECKLIST

TEACHER PRAISE BEHAVIORS CHECKLIST

School _____ Date _____ Start _____ Page _____

Teacher _____ Observer _____ Stop _____ of _____

Reading Group _____ Type of Activity _____

Praise Statement: _____

Behaviors	Context
-----------	---------

- | | |
|--|-------------------------------|
| 1. ___ paired with tangible reward | 24. ___ in private |
| 2. ___ refers to teacher's needs, likes | 25. ___ in public |
| 3. ___ refers to teacher's genuine opinion | 26. ___ to individual m f |
| 4. ___ contingent on response | 27. ___ to group |
| 5. ___ noncontingent | 28. ___ academic work-related |
| 6. ___ contingent on quality of response | 29. ___ conduct-related |
| 7. ___ repeats child's response | 30. ___ personal-related |
| 8. ___ accepts child's response | 31. ___ transition ritual |
| 9. ___ phrase, general | 32. ___ child-initiated |
| 10. ___ sentence, general | contact m f |
| 11. ___ specifies child's behavior/attribute | 33. ___ teacher-initiated |
| 12. ___ specifies child's behavior/attribute with detail | |
| 13. ___ extended | |
| 14. ___ compares child to others | |
| 15. ___ compares child to self | |
| 16. ___ attributes effort | |
| 17. ___ attributes ability | |
| 18. ___ flat voice | |
| 19. ___ no facial expression | |
| 20. ___ enthusiastic voice | |
| 21. ___ smiles, laughs, nods | |
| 22. ___ eye contact | |
| 23. ___ touch, pat, hug | |

Observer Comments

APPENDIX C
TABLES OF CORRELATIONS BETWEEN THE 35 PRAISE ITEMS
ON THE TEACHER PRAISE BEHAVIOR CHECKLIST
AND ALL OTHER MEASURES

Table 1. Correlation Coefficients for The "Problems in Schools" Questionnaire and The Teacher Praise Behavior Checklist (significance level reported below correlations)

Praise Item	
<u>Behavior</u>	
Tangible reinforcer	-0.10 (0.648)
Teacher needs	-0.07 (0.742)
Genuine opinion	-0.22 (0.317)
Contingent	-0.29 (0.186)
Noncontingent	-0.38 (0.084)
Contingent on quality	-0.14 (0.544)
Repeats	-0.26 (0.242)
Accepts	-0.16 (0.465)
Phrase	-0.20 (0.374)
Sentence	-0.08 (0.725)
Specifics attribute/behavior	-0.01 (0.955)
Specifics attribute with detail	-0.06 (0.798)
Extended	-0.09 (0.704)
Compares to others	0.06 (0.794)
Compares to self	-0.32 (0.144)
Attributes effort	0.37 (0.087)
Attributes ability	0.00 (0.995)

Table 1. Continued.

Praise Item	
<u>Affect</u>	
Flat voice	-0.31 (0.155)
No facial expression	-0.34 (0.118)
Enthusiastic voice	-0.04 (0.845)
Smile, laugh, nod	0.08 (0.727)
Eye contact	0.14 (0.539)
Touch, pat, hug	-0.22 (0.329)
<u>Context</u>	
Private	-0.34 (0.125)
Public	-0.34 (0.116)
To individual	-0.34 (0.125)
To group	-0.03 (0.887)
Academic	-0.33 (0.129)
Conduct-related	0.23 (0.304)
Personal	0.01 (0.973)
Transition ritual	-0.36 (0.097)
Child-initiated	-0.12 (0.579)
Teacher-initiated	-0.38 (0.082)
To females	-0.18 (0.429)
To males	-0.32 (0.151)

None were significant at .05 level

Table 2. Correlation Coefficients for Teacher Praise Behavior Checklist and Perceived Competence Scale for Children (significance level reported below correlations)

Praise Item	Perceived Competence	
	Cognitive Subscale	General Subscale
<u>Behavior</u>		
Tangible reinforcer	-0.28 (0.202)	0.37 (0.091)
Teacher needs	-0.23 (0.308)	-0.28 (0.204)
Genuine opinion	-0.10 (0.659)	0.19 (0.401)
Contingent	0.05 (0.817)	0.15 (0.490)
Noncontingent	-0.16 (0.481)	0.07 (0.766)
Contingent on quality	-0.26 (0.240)	-0.06 (0.794)
Repeats	0.44* (0.038)	0.08 (0.737)
Accepts	0.07 (0.742)	0.41 (0.056)
Phrase	-0.08 (0.728)	-0.08 (0.707)
Sentence	-0.32 (0.148)	-0.31 (0.157)
Specifics attribute/behavior	-0.25 (0.255)	-0.30 (0.173)
Specifics with detail	-0.07 (0.757)	-0.20 (0.362)
Extended	-0.25 (0.247)	-0.20 (0.351)
Compares to others	-0.12 (0.581)	-0.05 (0.840)
Compares to self	-0.17 (0.457)	-0.23 (0.308)
Attributes effort	-0.26 (0.241)	0.17 (0.435)
Attributes ability	-0.20 (0.358)	0.07 (0.758)

Table 2. Continued.

Praise Item	Perceived Competence	
	Cognitive Subscale	General Subscale
<u>Affect</u>		
Flat voice	0.41 (0.059)	0.22 (0.313)
No facial expression	0.38 (0.080)	0.24 (0.288)
Enthusiastic voice	-0.26 (0.241)	-0.00 (0.990)
Smile, laugh, nod	-0.41 (0.056)	-0.18 (0.423)
Eye contact	-0.42 (0.051)	-0.17 (0.448)
Touch, pat, hug	-0.07 (0.746)	-0.10 (0.670)
<u>Context</u>		
Private	0.03 (0.906)	0.13 (0.549)
Public	0.07 (0.754)	0.12 (0.598)
To individual	0.03 (0.883)	0.13 (0.559)
To group	-0.27 (0.231)	-0.25 (0.261)
Academic	-0.02 (0.938)	0.14 (0.540)
Conduct-related	0.03 (0.901)	-0.09 (0.691)
Personal	-0.05 (0.811)	0.27 (0.224)
Transition ritual	-0.14 (0.527)	0.04 (0.840)
Child-initiated	0.41 (0.060)	0.43* (0.047)
Teacher-initiated	-0.11 (0.630)	0.05 (0.836)
To females	0.07 (0.757)	0.20 (0.380)
To males	0.01 (0.947)	0.09 (0.697)

*Significant at the .05 level

Table 3. Correlation Coefficients for The Teacher Praise Behavior Checklist and the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (significance level reported below correlations)

Praise Item	Intrinsic Motivation		
	Preference for Challenge	Independent Mastery	Curiosity/Interest
<u>Behavior</u>			
Tangible reinforcer	-0.14 (0.541)	-0.18 (0.427)	-0.51* (0.015)
Teacher needs	-0.21 (0.345)	-0.21 (0.351)	-0.12 (0.608)
Genuine opinion	-0.05 (0.814)	0.08 (0.730)	-0.22 (0.334)
Contingent	-0.03 (0.879)	0.14 (0.539)	-0.08 (0.733)
Noncontingent	0.06 (0.783)	0.06 (0.778)	-0.10 (0.640)
Contingent on quality	-0.53* (0.011)	-0.39 (0.077)	-0.45* (0.037)
Repeats	-0.00 (0.987)	0.14 (0.528)	0.03 (0.884)
Accepts	0.06 (0.798)	0.24 (0.278)	-0.02 (0.941)
Phrase	-0.25 (0.268)	-0.11 (0.619)	-0.27 (0.225)
Sentence	-0.22 (0.324)	-0.28 (0.205)	-0.44* (0.038)
Specifics attributes/ behavior	-0.47* (0.025)	-0.41 (0.056)	-0.50* (0.016)
Specifics with detail	-0.18 (0.426)	-0.17 (0.454)	-0.28 (0.210)
Extended	-0.25 (0.255)	-0.26 (0.238)	-0.36 (0.101)
Compares to others	0.27 (0.224)	0.08 (0.712)	0.19 (0.383)
Compares to self	-0.49* (0.019)	-0.40 (0.063)	-0.33 (0.134)
Attributes effort	-0.20 (0.380)	-0.35 (0.110)	-0.14 (0.531)
Attributes ability	-0.04 (0.846)	-0.13 (0.564)	0.12 (0.583)

Table 3. Continued.

Praise Item	Intrinsic Motivation		
	Preference for Challenge	Independent Mastery	Curiosity/ Interest
<u>Affect</u>			
Flat voice	0.25 (0.261)	0.31 (0.157)	0.09 (0.684)
No facial expression	0.28 (0.208)	0.41 (0.058)	0.21 (0.342)
Enthusiastic voice	-0.30 (0.176)	-0.14 (0.541)	-0.38 (0.076)
Smile, laugh, nod	-0.44* (0.042)	-0.43* (0.047)	-0.40 (0.066)
Eye contact	-0.44* (0.038)	-0.31 (0.161)	-0.32 (0.143)
Touch, pat, hug	-0.53* (0.010)	-0.51* (0.016)	-0.07 (0.747)
<u>Context</u>			
Private	-0.24 (0.290)	-0.28 (0.200)	-0.38 (0.078)
Public	-0.15 (0.507)	0.02 (0.930)	-0.19 (0.394)
To individual	-0.07 (0.769)	-0.02 (0.910)	-0.17 (0.451)
To group	-0.25 (0.257)	0.04 (0.858)	-0.18 (0.428)
Academic	0.01 (0.949)	0.15 (0.506)	-0.13 (0.565)
Conduct-related	-0.26 (0.249)	-0.12 (0.588)	-0.07 (0.742)
Personal	-0.14 (0.528)	-0.11 (0.618)	0.05 (0.823)
Transition ritual	-0.00 (0.983)	0.04 (0.874)	-0.12 (0.602)
Child-initiated	-0.18 (0.412)	0.13 (0.572)	-0.07 (0.764)
Teacher-initiated	-0.08 (0.714)	0.03 (0.876)	-0.16 (0.469)
To females	-0.47* (0.025)	-0.22 (0.321)	-0.58* (0.005)
To males	0.22 (0.309)	0.18 (0.422)	0.23 (0.303)

*Significant at the .05 level

Table 4. Correlation Coefficients for The Teacher Praise Behavior Checklist and The Metropolitan Achievement Test (significance level reported below correlations)

Praise Items	Metropolitan	
	Reading Subtest	Total Score
<u>Behaviors</u>		
Tangible reinforcer	0.23 (0.303)	0.01 (0.980)
Teacher needs	-0.03 (0.909)	-0.08 (0.706)
Genuine opinion	-0.12 (0.594)	-0.10 (0.669)
Contingent	0.18 (0.421)	-0.03 (0.876)
Noncontingent	-0.00 (0.981)	-0.12 (0.589)
Contingent on quality	-0.27 (0.225)	-0.11 (0.631)
Repeats	0.21 (0.356)	-0.08 (0.723)
Accepts	0.13 (0.553)	0.01 (0.960)
Phrase	-0.14 (0.542)	0.04 (0.866)
Sentence	-0.40 (0.068)	-0.21 (0.356)
Specifics attribute/behavior	-0.59* (0.003)	-0.30 (0.186)
Specifics with detail	-0.49* (0.021)	-0.12 (0.580)
Extended	-0.32 (0.144)	-0.02 (0.921)
Compares to others	0.25 (0.262)	0.09 (0.678)
Compares to self	-0.32 (0.144)	-0.15 (0.508)
Attributes effort	0.11 (0.626)	0.12 (0.608)
Attributes ability	0.20 (0.375)	-0.24 (0.273)

Table 4. Continued.

Praise Items	Metropolitan	
	Reading Subtest	Total Score
<u>Affect</u>		
Flat voice	0.32 (0.146)	0.42* (0.048)
No facial expression	0.21 (0.356)	0.32 (0.143)
Enthusiastic voice	-0.17 (0.441)	-0.42* (0.048)
Smile, laugh, nod	-0.12 (0.578)	-0.31 (0.156)
Eye contact	-0.31 (0.160)	-0.29 (0.195)
Touch, pat, hug	-0.15 (0.493)	-0.28 (0.202)
<u>Context</u>		
Private	0.20 (0.380)	-0.02 (0.935)
Public	0.04 (0.863)	-0.03 (0.909)
To individual	0.12 (0.601)	-0.06 (0.796)
To group	-0.18 (0.411)	-0.06 (0.782)
Academic	0.14 (0.535)	0.09 (0.693)
Conduct-related	-0.17 (0.445)	-0.48* (0.025)
Personal	0.34 (0.123)	-0.15 (0.509)
Transition ritual	-0.08 (0.734)	-0.18 (0.430)
Child-initiated	0.13 (0.562)	0.16 (0.485)
Teacher-initiated	0.08 (0.729)	0.01 (0.972)
To females	-0.06 (0.778)	-0.23 (0.310)
To males	0.20 (0.378)	0.11 (0.635)

*Significant at the .05 level

APPENDIX D
TABLES OF CORRELATIONS BETWEEN THE SINGLY
SCORED PRAISE STATEMENTS AND ALL
OTHER MEASURES

Table 1

Correlation Coefficients for The "Problems in Schools" Questionnaire and the singly scored praise statements

Praise Statements	
Informational	-0.14
Controlling	-0.13

Table 2

Correlation Coefficients for the Perceived Competence Scale for Children and the singly scored praise statements

Praise Statements	Perceived Competence	
	Cognitive Subscale	General Subscale
Informational	-0.29	-0.10
Controlling	0.03	0.10

Table 3

Correlation Coefficients for the Scale of Intrinsic Versus Extrinsic Orientation in the Classroom and the single scored praise statements

Praise Statements	Intrinsic Motivation		
	Preference for Challenge	Independent Mastery	Curiosity/Interest
Informational	-0.50	-0.36	-0.55
Controlling	-0.11	0.07	-0.15

Table 4

Correlation Coefficients for The Metropolitan Achievement Test and the single scored praise statements

Praise Statements	Metropolitan	
	Reading Subtest	Total Score
Informational	-0.28	-0.17
Controlling	0.07	-0.10

APPENDIX E
AVERAGE NUMBER OF PRAISE STATEMENTS

Teacher	Observation Period				Average	Total	Orientation
	I	II	III	IV			
1.	21	28	28	24	25	101	A
2.	18	22	14	12	16	66	C
3.	16	28	4	8	14	56	C
4.	15	26	18	13	18	72	A
5.	13	31	5	18	17	67	C
6.	10	30	10	18	17	68	A
7.	8	17	14	23	15	62	C
8.	9	14	10	9	10	42	A
9.	14	23	13	5	14	55	A
10.	15	16	17	16	16	64	C
11.	15	25	14		18	54	A
12.	3	18	30	25	19	76	C
13.	2	46	23	23	23	94	C
14.	33	43	36	40	38	152	C
15.	38	34	14	25	28	111	C
16.	22	34	17	4	19	77	C
17.	19	45	25	21	27	110	C
18.	16	8	26	10	15	60	C
19.	20	7	18	19	16	64	C
20.	17	40	20	17	23	94	C
21.	26	19	8	13	16	66	A
22.	12	36	26	27	<u>25</u>	<u>101</u>	C
					19	1712	

A average praise statements--17 (7 teachers)

C average praise statements--21 (15 teachers)

APPENDIX F
PRAISE STATEMENTS

<u>Teacher</u>	<u>Praise Statement Other than Accepts, Repeats, Phrase</u>
1. (A)	<ol style="list-style-type: none">1. T- is sitting nice and quite. (specific conduct)2. M- has been sitting nice and quiet today (specific conduct)3. I like the way S-, M-, and J- are sitting quiet. (specific conduct)4. I like the way A- is sitting quiet. (specific conduct)5. I like the way Ch- is sitting. (specific conduct)
2. (C)	<ol style="list-style-type: none">1. I- read the first sentence really well, didn't she class? (specific academic)2. Thank you, C-, that was all right. Better than last week. (compares to self)3. Oh, boy. These are smart guys here.4. Oh, dear, dear. You guys are smart.5. D- read that pretty good, didn't he?6. E- is being nice.7. Oh boy D-, that was great.8. Wow. Great. L- you did really well.9. That was great.10. You guys are doing really nice.
3. (C)	<ol style="list-style-type: none">1. Excellent, you are all doing so much better now. (compares to self)2. That's better. (compares to self)

4. (A)
1. Good. Most of you were up like a flash.
 2. Everyone got that one right.
 3. Everyone is right on that one.
 4. I think you are getting better at this, recognizing the main idea. (specific academic)
 5. Oh, good for you.
 6. That is a good answer.
 7. I really like the way L- reads with expression. (specific academic)
5. (C)
1. I am very proud of L- now.
 2. I want to thank you very much for ---.
 3. That's a very good observation. (specific academic)
6. (A)
1. Best readers I have heard yet! (compares to others)
 2. Great. Lots of expression and very fluent. (specific academic)
7. (C)
1. That's a good guess.
 2. I like the way A- took out his book. (specific conduct)
 3. We all agree. Being a perfect group, we must be right.
 4. You have some good ideas.
 5. OK. You're on the right track.
 6. That was a good job.
 7. That's a good guess.
 8. I told you you could. You proved me right. That's good.
8. (A)
1. S- put it real well.

2. You people did well on your unit test.
(specific academic)
 3. OK. You're kind of getting on to it.
 4. You've been working real hard so I'm going to read you a poem about dinosaurs.
9. (A)
1. Very good. You really read this didn't you. (specific academic)
 2. Everyone did a nice job on that.
 3. All right! You two are correct.
 4. Everyone did well on this paper.
 5. There you go. Good.
11. (A)
1. I knew you could do that.
13. (C)
1. I like the way A- put her head down when she got through. (specific conduct)
 2. I like the way F- has read every one of his answers. (specific conduct)
14. (C)
1. Very good. Did you see D-. When he reads, he puts his endings on. Good. (specific academic)
 2. Very good. Say it again. Very good.
 3. You have done a fantastic job. I have told everyone how well my 3rd graders are writing. You are doing great. (specific academic)
 4. I'm really proud of you.
 5. I'll tell you. You are doing just fantastic-- very good. Excellent.
 6. I was very proud of you when you took your last criterion test. (specific academic)
 7. Now you did a very good job of explaining that. I couldn't have done better myself. (specific academic)
 8. That's exactly true.

9. Very good reading, darling. (specific academic)
 10. You all did really well yesterday.
 11. You all did really well yesterday. I am really proud of you.
 12. I'm very pleased with you, D-.
 13. You all have done a beautiful job.
 14. You all have come a long way. (compares to self)
 15. You all have been a wonderful group.
 16. I'm very proud of you.
 17. You are doing a lot better today. (compares to self)
 18. Very good Ch-. This is excellent.
15. (C)
1. I like the way M- has found this page. (specific conduct)
 2. You all did such a nice job on that other page.
 3. Oh, you're so smart today.
 4. All of you are always smart, you just seem smarter today.
 5. I like the way most of you came in quietly and sat down. (specific conduct)
 6. She did a pretty good job.
16. (C)
1. That was much better. (compares to self)
18. (C)
1. That sounds pretty good.
 2. That is correct.
 3. I think you've the right idea.
 4. I like the way you're ready.

5. You all did a good job on this.
6. You've got it.
19. (C) 1. I believe you're right, H-.
20. (C) 1. Most of you did very good.
 2. That's the one.
 3. You're doing a good job, A-.
 4. Very good, that's mean. (specific academic)
21. (A) 1. Boy, you are really paying a lot of attention today. (specific conduct)
22. (C) 1. I like the way you looked over all the answers. (specific conduct)
 2. You did a real good job.
 3. That would be nice.
 4. Good--most of you are ready like C and C.
 5. I'm glad that Mickey is so attentive. (specific conduct)
 6. M- is really doing a good job.
 7. OK. That's exactly what he said.
 8. G- did much better. (compares to self)

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BIOGRAPHICAL SKETCH

Patricia L. Denny was born on March 11, 1954, in San Diego, California. She moved to San Antonio, Texas, where she received her primary and secondary education. She went to Colorado College and graduated summa cum laude, Phi Beta Kappa, with a Bachelor of Arts in psychology in 1976.

Patricia was a preschool teacher for two and a half years before entering the graduate program in early childhood education at the University of Florida in 1979. She graduated with a Master of Education in 1980. While in the doctoral program, she worked as a research assistant and as a seminar leader.

Patricia is married to John B. Denny. They have one son, Bryan, and are expecting a second child in January 1985. Patricia is currently a full-time mother in New York City.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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