DOCUMENT RESUME

ED 285 871 SP 029 366

AUTHOR Stevens, Dannelle D.; Anderson, Linda M.
TITLE Classroom Socialization and Student Perceptions of Control.
PUB DATE 87
NOTE 41p.; Paper presented at the Annual Meeting of the American Educational Research Association (Washington, DC, April 20-24, 1987).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Classroom Environment; Individual Instruction; Individual Needs; Intermediate Grades; Self Concept; *Student Attitudes; Student Needs; *Teacher Behavior; *Teacher Student Relationship

ABSTRACT

A study addressed how teachers' practices influenced students' perceptions of control in social and academic domains and what teacher practices were related to student perceptions of control. To relate teacher practices to student perceptions of control this paper: (1) defines the concept of control and describes theoretical and empirical concepts that relate to it; (2) provides background on the relationship of control to other significant classroom outcomes; (3) describes the role of environments in control development; and (4) links the concept of control to the classroom environment. Data collected from 19 third- and fourth-grade teachers and their students included qualitative narrative records of each classroom and students' scores on various self-perception measures. Practices that appeared to result in more favorable classroom environments included: respect for and sensitivity to individual need and growth; predictability and teachers' structuring of information about the environment; and opportunities for students to practice self-regulation. (CB)

Classroom Socialization and Student Perceptions of Control

Dannelle D. Stevens
Michigan State University

Linda M. Anderson
Michigan State University

Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., 1987.

Classroom Socialization and Student Perceptions of Control

Socialization in schools is the process by which children learn the norms, goals and expectations necessary to fulfill a student role. This student role consists of two simultaneous demands: meeting individual academic demands and being a member of the social group. Accumulated experience in schools leads to generalized role knowledge about how to meet these demands, but each September brings to students the challenge of adapting their general knowledge and "learning the ropes" in particular classrooms. Teachers play a critical role in establishing and maintaining the academic and social standards of a particular classroom and communicating these to the students. As a result, children's beliefs about themselves, their peers and their work are shaped by being in a particular classroom environment.

One of the beliefs that children seem to develop in schools is their perception of control over their successes and failures. When self-perception of control is considered, it is not about how children learn to be "in control" of their behavior. Self-perception of control refers to children's own perceptions about their role in important events in their lives, in their successes and failures. In classrooms this translates into the question: Do I have control over what happens to me in this classroom- my learning, my grades, my friends? Control has been shown to be an important aspect of the self to study because of its relationship to other variables which are significant in classrooms, including achievement and self-concept. This paper is about what teacher practices may relate to the development of student perceptions of control.

In order to relate teacher practices to student perceptions of control, it is necessary to 1) define the concept of control and describe some of the theoretical and empirical concepts that relate to it; 2) give some background on the relationship of control to other significant classroom outcomes; 3) describe the role of environments in development of control; and 4) link the concept of control to classroom environments.

Definitions of control & related theoretical and empirical concepts

Historically, self-perception of control has been considered a bi-polar attribute with internal versus external control as the end points, called "locus of control" (Rotter, 1966). This paper draws on more recent thinking which emphasizes the multidimensional aspects of control. That is, people have varying perceptions of control over outcomes in different settings and with different tasks.

The theoretical underpinnings of the concept of control lie in cognitive psychology which implies that students mediate instruction in the classroom. Students do not simply record the knowledge given like a blueprint into their minds. Their own background knowledge and certain self-perceptions have been shown to filter, promote and, sometimes, interfere with learning. Beginning with Rotter's "locus of control" concept (1966), the role of student perception of control over significant events in their lives has been investigated in various ways as a variable that intervenes between instruction (or environment) and student performance. Research has shown that children's perceptions of control seem to play a central role in mediating the world of the classroom and its demands. How much control children perceive that they have over their world seems to be linked to their performance. In cognitive psychology, perceptions of control play a central role in accounting for behavior (Connell, 1985).

Several researchers have differentiated control beyond the internal-external dimension of Rotter (1966). For example, Weisz & Stipek (1982) postulated that there are two dimensions to control: "perceived contingency" and "perceived competence". Connell (1985) and Harter and Connell (1984) argue that an important dimension of control is belief that one knows why outcomes occur, whether for internal or external reasons. This "knowledge of control" construct is similar to Weisz and Stipek's (1982) description of "perceived contingency." More recently, Skinner and Connell (1986) have defined student self-perception of control as "control understanding" which means "an individuals' generalized perceptions about the causes of desired and undesired outcomes in their lives (p.35)". In all of these analyses, perceptions that one knows what causes outcomes is a critical factor, as critical or more critical than perceptions of internal or external sources of control.

Relationship of control to other significant outcomes

Research in experimental and classroom settings has established a relationship between perceptions of control and other significant outcomes. Several investigators in experimental settings have found that children's perceptions that they can control outcomes through their behavior seem to be related their motivation and task persistence (Diener & Dweck, 1980). In school settings, Weinstein (1983) views locus of control as a critical aspect of the developing sense of self in the classroom. A series of studies on locus of control reviewed by Wang (1982) reports a close relationship between locus of control and learning processes and outcomes. Norwicki & Stickland (1973) report that school achievement is more highly correlated with measures of locus of control than with intelligence. "A consistent finding in control perception literature is that individuals who believe that they can exert control over important outcomes show relatively better cognitive performance than

individuals who believe they can exert less control" (p.57, Skinner & Connell, 1986). Thus, children's perceptions of control seem to be strongly associated with motivation, task persistence, and, then, student learning.

In a path analysis of perceptions of control, achievement, and perceptions of cognitive competence, Harter and Connell (1984) found that control perceptions, particularly perceived knowledge of control, seem to be the beginning link in a chain of events which affect student performance, then, motivation and perceptions of competence.

Role of environments in the development of control

Given that control understanding seems to be significantly associated with outcomes, what promotes the development of this understanding? Based on the work of Lamb & Easterbrooks on parent socialization practices (1981), Skinner & Connell (1986) argue that control understanding is constructed and modified in large part based on experience in interpersonal contexts. They argue that it is the sensitivity of these interpersonal contexts which are important antecedents to the development of causal models. A causal model is the set of conceptions a person has about why events happen in their lives.

Sensitive environments, according to Skinner and Connell (1986) respond not only contingently to a person's behavior but are responsive (sensitive) to an individual's intentions and goals so that the person can get desired outcomes. Contingent environments are not necessarily sensitive environments but they provide a consistent and relatively immediate response to an individual's behavior. Sensitive environments have two aspects: 1) the degree to which the individual receives clear information regarding the consequences of his or her actions (contingency), and 2) the degree to which the person experiences the environment as taking into account his or her intentions and feelings (sensitivity) (Skinner & Connell, 1986). From the actor's perspective, a

sensitive interaction takes the following form: "I want Z, I do X, I consistently get Z". On the other hand, a merely contingent environment would produce the following: "I want Z, I do X, I consistently get Y" (p.61). Both of the these responses are contingent on behavior, so the actor consistently gets the same thing following a behavior. However, a sensitive environment aids the person in getting a desired outcome. The person begins to understand that in this environment there is a probability of success, of achievement of his or her goals. Thus, control beliefs develop: "I can produce Z, which I desire". By considering the sensitivity of interpersonal contexts we may be able to better predict the development of individual differences in control understanding.

Studies of parental socialization suggest other environmental dimensions that promote a sense of control. Baumrind and Black (1967) and Maccoby and Martin (1983) describe how parents with authoritarian/autocratic styles often have children with more external locus of control. An authoritarian pattern is characterized by too few opportunities for choice and independent judgment. In contrast, an authoritative pattern, characterized by information about the reasonableness of demands along with opportunities for independent judgment, is associated with more desirable control perceptions. Such findings suggest that the dimension of opportunity for independence and choice may be an important influence on perceptions of control.

Development of control in classrooms

Control understanding seems to develop over time in different contexts (environments). What role do teachers and particular classroom experiences play in the development of control understanding?

This paper focuses on what teacher behaviors might influence student perceptions of control of classroom events in both task (work-related) and social (peer-related) domains within schools. Schooling and the student

role involve both individual task performance and social behavior. Preliminary results of the Socialization Outcomes Project, from which this data is drawn, indicate that teachers can affect student's overall self-perceptions in the task domain (Anderson, Stevens, Prawat, & Nickerson, in press). However, as Lortie (1975) recognized, there is a dual aspect of classroom life: classroom events have both an individual element where task performance involves individual effort (e.g., getting grades, doing schoolwork) and a social element where tasks are carried out in a social context created by the participants. Doyle (1983) and Erickson (1986) have indicated that the program of action in a classroom includes both the social participation dimension as well as the academic work (task) dimension. The combination of these two dimensions make up the "vector of action" (Doyle, 1986) in the classroom. Thus, the task and the social domains are the key elements in the complex social world of the classroom.

Therefore, earlier analyses within the Socialization Outcomes Project of perceptions of control and competency in the task domain need to be extended to include analyses of similar self-perceptions in the social domain of schooling. This paper addresses the following two questions: first, do teachers' practices influence students' perceptions of control in both the social and academic domain? Second, what teacher practices are related to student perceptions of control?

METHODS

The total sample studied in the larger Socialization Outcomes Project included 19 third and fourth grade teachers and their students. The teachers were recruited based on their answers to a 30-item, forced-choice questionnaire about socialization priorities (Prawat, Anderson, Anderson, Jenkins, & Anderson, 1983). The questionnaire was designed to be used to select a range of teachers who had different priorities in the task domain and in the interpersonal domain. This wide range of priorities increased the chances that there would be a variety of teacher socialization practices.

All classrooms were located in a single, urban district in the Midwest. The schools drew students from working-class and middle-class homes and were either integrated by means of busing or drew students from integrated neighborhoods. The present paper examines data from 13 of these classrooms.

Two types of data were used in the present analysis. First, there were qualitative narrative records of each classroom: four from the first three weeks of school, two from the middle of the year and four from the spring. Observers were trained to focus on socializing messages and the establishment and maintenance of a classroom social environment.

The second type of data used was quantitative: students' scores on various self-perception measures. Students were given self-perception questionnaires at the beginning and end of the school year, including a measure of the source of control over task and social outcomes (Connell, 1980).

Measures of student perceptions of control

Connell's control scales are designed to tap students' perceptions of their knowledge of what controls outcomes as well as their own role in the

success and failure experiences they have in school. In particular, these scales ask children to distinguish whether the outcome they get (either success or failure) is due to something within themselves or due to "powerful others". The control measure yielded two scores for each domain (cognitive and social): known control and relative internality.

Known control scores reflected the students' belief that s/he had knowledge of what controls outcomes. Typical items on this scale are:

Cognitive When I don't do well in school, I usually can't figure out why.

Social A lot of times I don't know why kids like me.

The cognitive and social known control scales each tap the degree to which children know why they succeed or fail in school and among friends. When children respond to this scale by answering "not at all true for me", they are saying that they know why things happen to them, that they can figure out why they succeed or fail. In other words, they perceive something about themselves or about powerful others which causes success or failure. They know why they get the outcomes they do. The scale does not ask for specific reasons for their experience; it only asks if they perceive a cause for these events.

Relative Internality reflects the relative number ot times students attributed outcomes to internal causes vs. powerful others. To compute the Relative Internality score, the score on the Powerful Others scale was subtracted from the score on the Internal Control scale within each dimension. This same procedure was used by Harter and Connell (1984).

Typical items on the Powerful Others scale were:

Cognitive When I do well in school, it's because the teacher likes me.

Social If I want my classmates to think I am an important person, I have to be friends with the really popular kids.

The cognitive and social powerful others scales each tap the degree to

which children feel that other people (teachers or popular classmates), have control over what happens to them academically or socially. A high score on this scale indicates that the child feels that these other people really have control over successes and failures in the cognitive or social domains.

Typical items on the Internal Control scale were:

Cognitive If I get bad grades, it's my own fault.

Social If someone likes me, it is because of the way I treat them.

The cognitive and social internal control scales each tap the degree to which the child feels that she or he is in control of the successes or failures s/he experiences. A high score on this scale indicates that the child takes responsibility for both successes and failures in the domain in question.

A high score on **Relative Internality** indicates that students gave more internal than external (powerful others) attributions.

Identification of classrooms with favorable and less favorable patterns

In order to answer the research questions, it was necessary to identify classrooms where students generally revealed more desirable and less desirable patterns of control perceptions in both the task and social domains. We assumed that it was more desirable for students to have greater knowledge of control over events and higher relative internality. Thus, the selection of classrooms with more and less favorable patterns on these scales involved the comparison of control scores across classrooms in both domains.

Originally, analyses were to be based on pretest-posttest comparisons. Unfortunately, due to district-wide testing, the project was not allowed in the classrooms to test children until early October. It is presumed that socialization practices in some classrooms may have already affected children's scores. Indeed, Deci, Schwartz, Sheinan, and Ryan (1981) found that children's perceptions of control had changed from the first day of school to merely six weeks later. In the project, the fall measure was not a true pretest. Therefore, it is necessary to be cautious when making pretest-posttest comparisons in these classrooms.

Given Deci et al's (1981) results and this unique situation (of a late "pretest"), a traditional analysis of covariance was unacceptable. It was necessary to find an analytical method that would look at relative change, while at the same time keeping in mind that an absolute amount of change might present a misleading picture. For example, students might have low fall control scores because teacher socialization practices have already had a detrimental effect. There might be very little change by spring, with scores remaining low. In contrast, a class might demonstrate high positive patterns in fall because of an early, strong socializing experience, and

there might be little change by spring. Thus, if only a change score was considered, the "low" and "high" classrooms would look the same. Therefore, the method that was developed compared the fall-to-spring change scores relative to other classes in the same grade, but only after classrooms that maintained extremely high or low patterns across the year were identified.

In this procedure, the student self-perception questionnaire data from the 19 classrooms were first used to compute class means and, then, within each grade level, z-scores were computed for both the task and social subscales. Each classroom had eight z-scores: two scores (fall and spring) for each of two scales (Known Control and Cognitive Relative Internality) in each of the two domains (Cognitive and Social).

The change from fall to spring was calculated for each scale within each domain by subtracting spring from fall, and the nature of the change was classified. Two classrooms were identified as "low maintainers". Their fall z-scores were average to low (0 to 0.73) and they generally maintained these scores into the spring on both scales in both domains. The Known Control and Relative Internality change scores for each of the remaining 17 teachers were then added together within each domain for a total change score in each domain. (Thus, each class had a Cognitive and Social change score.) The classrooms were then ranked by this amount of change in each domain. The cognitive and social rankings were compared to see if any classrooms shared the same or similar rankings on both lists.

Correlational analyses indicated that there are moderate, yet significant, correlations between the cognitive and social scores in both known control and relative internality (Table 2). These correlations and previous research seem to indicate that, indeed, there may be a "vector of action" (Doyle, 1983) in the classroom which is related to student self-perceptions of control in both the social and task classroom

environments.

Based on the relative rankings of the change scores, classrooms were identified which had shown change in both domains, the cognitive and social. Three classrooms at each grade level (total=6) shared the top three positions on both scales. These were labelled the "more favorable" classrooms, hypothesizing that their environment may have favored the development of both social and cognitive control. Two classrooms in the third grade and one classroom in the fourth grade fell to the bottom of the ranks on both scales (total=3); these were labelled, "less favorable", hypothesizing that their environments may not have fostered the development of control in either domain. The two "low maintainers" classrooms were included in the "less favorable" group as well. Therefore, there were five classrooms in the less favorable group and six in the more favorable, leaving eight classrooms not fitting into the criteria.

After selecting the more favorable and less favorable classrooms by the procedures above, two teachers (one at each grade level) of the remaining eight seemed to have changes which were anomalous in relation to the other classrooms, changes not evident in the majority of classrooms. These teachers had decreasing cognitive control scores over the year, while maintaining social control scores. These anomalous classrooms were selected for special study.

The remaining classrooms (total=6) shared the middle rankings. These mid-level classrooms were not included in the present analysis because it is hypothesized that analysis of the extreme-groups would provide a clearer picture of teacher practices which could relate to student perceptions of control.

Therefore, our final sample was composed of 6 "more favorable" classrooms (three at each grade level), 5 "less favorable" classrooms (one

fourth grade, two third grades, plus one "low maintainer" at each grade level), and 2 anomalous classrooms (one at each grade level).

Narrative Analysis

Earlier in the Socialization Outcomes Project (prior to the selection of teachers for this paper), narratives of all teachers had been read and each classroom was summarized along several dimensions that were predicted to be related to the measured student self-perceptions. These overall dimensions were derived from several sources.

First, there was only one analysis conducted within the Socialization Outcomes Project that used a social outcome measure (changes in racial bias score). From the narrative analyses, the dimension of respect for and sensitivity to individual needs and growth (Nickerson, Anderson & Stevens, 1986) was hypothesized to distinguish between classrooms that had positive changes in racial bias scores from those that did not over the course of the school year. This dimension has not been examined in relation to support for changes in other self-perceptions like control.

Second, the researchers hypothesized that the classroom dimension of the predictability and teacher's structuring of information about the environment supported gains in the cognitive self-perception scores, as reported in Anderson et al. (in press). This dimension in each classroom has not been examined, however, for its relationship to combined task and social outcomes nor has it been examined for control perceptions apart from other measures.

Third, researchers hypothesized that the number of opportunities that a teacher provides for students to practice self-regulation would influence the cognitive self-perception outcomes in the classroom, also reported in Anderson et al. (in press). Again, this dimension has not been related to the combined task and social outcomes.

In this paper, these three dimensions were hypothesized to distinguish between environments that differentially fostered a sense of control in both task and social domains. Control and socialization literature (reviewed earlier in the paper) supports this hypothesis, as do earlier analyses within the project. Overall, this literature suggests that experiences in the environment can lead to development of control.

First, the respect for and sensitivity to individual needs and growth, the first dimension, seems to particularly support the hypothesis that control understanding develops in sensitive environments as described by Skinner and Connell (1986). To develop control understanding the environment needs to be not only contingent but sensitive to individual needs and desires. A classroom where the teacher models respect for children's needs and values the individual's contribution to the classroom would seem to support this development.

Second, predictability and structuring, the ~~first~~ second dimension, may create a contingent environment for children, an environment where they can predict what is likely to happen and, therefore, recognize the contingencies between their behavior and outcomes. Skinner and Connell (1986) believe that part of control understanding is awareness of the contingency of one's behavior.

Third, opportunities for self-regulation, the third dimension, is related to the parent socialization literature which investigated parental practices and the development of control. Parents who offer children choices and encourage independent judgment (the authoritative style) support the development of control (Baumrind & Black, 1967; Maccoby & Martin, 1983). Classrooms which give students the opportunity to monitor and regulate their own behavior may foster the development of the self-perception that they have control over the outcomes that they

experience.

In order to test the hypotheses, two readers reviewed earlier analyses and summaries of classroom narratives along these dimensions that had been written. Results reported below describe how each of the three dimensions relate to the classification of classrooms as more favorable, less favorable or anomalous. Appendix A provides summary descriptions of these 3 dimensions for two teachers.

RESULTS

Dimension 1: Respect for and sensitivity to individual needs and growth.

The focus of this dimension is the respect that the individual student is accorded in the classroom. Respect means that the individual interests, needs and concerns are valued. The individual receives repeated, consistent messages about his/her importance as a contributor to the classroom as well as finds a safe place in which his/her needs can be expressed and considered. Time is allotted to attend to those needs, interests and concerns. Systems and procedures are in place which remind students of the needs of others. These systems apply to all students equitably.

Support for this dimension is provided by Skinner and Connell (1986), who have hypothesized that control understanding develops in an environment which is "sensitive" to an individual's goals and intentions, as further described in the literature review. In the present study, it is hypothesized that the student who perceives respect and sensitivity will have a solid foundation from which to develop control understanding.

Within the sample studied, teachers in more favorable classrooms appeared to treat students very respectfully. In contrast, less favorable classrooms were generally places where students' rights, needs, and concerns were not obviously considered. Evidence of respect for the individual in more favorable classrooms was shown in two areas:

1.) teacher modeling of respect for student interests, needs and concerns,

2.) the provision of social and academic systems and procedures which reinforced equitable treatment and respect for individual growth and rights.

First, the classes in the more favorable group were characterized by the teacher being a model of respect and concern for individual student needs and interests. Teachers maintained a calm, respectful manner throughout the year. For example, teachers would consistently say "thank you", and "please". Teachers in the more favorable group would remind students of the effect of their behavior on others: "Your talking interrupted me and I'm sure it interrupted others, too." "If you don't respect yourself, then, others won't respect you." In the cognitive domain, several teachers shared personal stories that related to content and encouraged students to do the same, thus, probably indicating to students that their lives outside of the classroom were important and valued. For example, at the end of a health lesson, one teacher said, "I hope you have learned something that will help you. There's nothing more important than your body and what you need to take care of it." In another case, a teacher once attended to the medicine a student would need for a cut, and , in another incident, told students specifically what to do about removing paint on their clothes when they get home. Finally, the more favorable group of teachers would not tolerate students putting down other students when they didn't know the answer. (e.g., "We all make mistakes, even I make mistakes."; "No one is dumb.")

In the less favorable classrooms, the teachers were not consistent models of respect for others. They sometimes resorted to nagging and name calling (e.g., "Now, Teresa, don't get into one of your snits."), and there is less evidence of their valuing of student concerns and interests compared to the more favorable rooms. For example, when a new student kept asking questions about an assignment, one teacher said, "You can't get your work done and you can't stop bugging me." Sometimes these teachers

would make target errors (accusing the wrong student of misbehavior) but did not apologize or admit that they made an error. There was some evidence of students being allowed to tattle on one another. At times, students were criticized publicly for misbehavior or being off task. These incidents by themselves might occur in any classroom; however, in our less favorable classrooms, there were a number of times in each classroom where the teacher did not model respect and equitable treatment.

The second aspect of the respect dimension showed up in the overall systems and procedures used to reinforce the concept of "respect". In more favorable classrooms, systems and procedures were in place which supported and reinforced the worth of the individual in the classroom. Both the content of the systems and procedures and the process of enforcement seemed to reflect the need to respect and be sensitive to others. The rules in these classrooms were often about being respectful of others, not focused solely on how to do tasks. They reminded children to be respectful of others and be sensitive to others' needs. For example, "Be kind, fair and polite." "Respect yourself, peers and others." Rules often were referred to all year long as consistent, specific reminders of how we treat one another. One teacher had "Courtesy Cards" which recorded student daily behavior and treatment of others. All rooms had job systems in which the students contributed to the classroom. One teacher had jobs which required two students to cooperate and do the job together. Another teacher had several posters around the room which reinforced concern for others, such as, "No act of kindness no matter how small is ever wasted." Most of these teachers had visual, explicit and redundant systems which reminded students of the importance of respect for and sensitivity to

individual interests, needs and concerns.

In the less favorable classrooms, there was more variability in the systems and procedures which could support the development of respect and sensitivity. We hypothesized that two elements were important in creating an environment favorable to the development of control: 1) the content of the systems and procedures reflected the need to be respectful and sensitive to self and others, and 2) these systems and procedures were enforced consistently. In the less favorable classrooms, either one or both of these elements were missing. For example, in one classroom, the rules presented the first day concerned being quiet when the teacher talked, bathroom rules, line rules, no gum, and how to pass paper. Although one could presume that these rules ultimately were provided to help children be respectful of each other, we hypothesize that the lack of an explicit message may have affected children's development of control. In another room, the teacher started the year with rules like "Don't bother others while they are working" and "You have a right to your own space, your own desk". This same teacher also talked about not laughing at others mistakes. However, these rules were not consistently enforced. For example, this same teacher would get upset at a reading group for being noisy and, then, at the end of the group say, "You've done a really nice job on part one. I've enjoyed listening." It is hypothesized that children in these classrooms could not internalize any expressed standards of respect because of inconsistency.

Dimension 2: Predictability and teachers' structuring of information about the environment.

The second dimension that distinguished classrooms in the higher and lower groups was called "Predictability and teachers' structuring of information about the classroom environment". Predictability refers to the extent that regular patterns are apparent in the classroom, so that certain aspects of daily life could be predicted after an introduction to the classroom, such as, the schedule of events, expectations for performance and behavior, consequences for behavior, and the teacher's interactive style. It is hypothesized that students are more likely to feel a sense of control over outcomes when they can prdedict what is likely to happen and the contingencies between events and their outcomes. In this sample, the classes in the higher group were characterized by a stronger sense of predictability than were most of the classes in the lower group.

Predictability was demonstrated in a variety of ways: A regular schedule that was posted for the students and followed; consistency on the teacher's part in enforcing standards and following through on consequences; routines and procedures that were used consistently; and a work accountability system that insured that the teacher knew about everyone's progress and held all students to reasonable standards. Predictability did not necessarily mean that the classrooms were inflexibly bound to a schedule and a set of routines; in the highly predictable classrooms, there were occasional changes in routines and special events. However, in these cases, the teachers prepared children for the changes and provided at least short-term predictability about what would happen and how.

In addition to creating a predictable classroom, some teachers in the higher group also provided structure through information about the principles behind the classroom's predictability. Such information

provides a basis for the cognitive structure or scheme about the classroom in which standards and events fit together in a coherent and complex way, rather than an arbitrary listing of "do's and don't's". We hypothesized that students might develop a greater sense of control when they understood more and could reason about the contingencies between events and their consequences.

Examples of structuring included talk about rationales for standards (e.g., "We pass in papers this way because it goes faster, and that gives us time for more important things."); talk about specific connections between events and consequences (e.g., "If you do not turn in your work to the right basket, then I will not be able to read it and give you feedback."); and definititions of specific contexts within which different standards applied (e.g., "You can talk quietly before the bell rings, but when it rings you need to move quietly to your seats.")

Teachers who frequently made statements of this sort appear to be using an inductive style of socialization identified in the parenting literature (Baumrind & Black, 1967; Maccoby & Martin, 1983) as part of an authoritative pattern that appears to promote greater competence and self-confidence in children. The socialization messages of these teachers went far beyond what children were supposed to do and explained to the students why, how, and when to behave according to certain standards. Many of the teachers in the higher group appeared to provide a great deal of structure of this sort to their students, although some teachers did not. Within the lower group, there was much less evidence of structuring by the teachers about why, how and when to apply standards.

Dimension 3: Opportunities for students to practice self-regulation

In this analyses, the dimension of opportunities for self-regulation emerged as a discriminator of the more favorable from the less favorable classrooms. Before the discussion of the evidence of this dimension in the selected classrooms, a definition of "self-regulation" is necessary. Then, a description follows of how teachers can provide opportunities for self-regulation in classrooms.

"Self-regulation" refers to any student thought or action that results primarily from the student's own initiative and furthers accomplishment of an academic task or classroom procedure. Such self-regulation involves some self-directed cognition, such as monitoring one's progress or the environment, pacing one's actions to accomplish a goal, and evaluating oneself against a standard. Then, on the basis of the information gained through such self-directed cognition, the student decides on and initiates a course of action. Thus, self-regulated behavior is motivated at least in part by student decisions, not completely by teacher direction. Recently, cognitive psychologists have identified self-regulation as an important developmental variable (Flavell, 1985; Brown, 1983). A child's ability to self-regulate has been shown to relate to performance, task persistence and motivation.

This dimension focuses on the opportunities that a teacher provides for students to experience making their own decisions regarding certain events in the classroom, such as task choice, timing, and completion. We hypothesize that the provision of opportunities for self-regulation serves several functions in classrooms. First, students are allowed to practice directing their own behavior and thus, experience their successes and failures, the consequences, of making their own decisions. Children will never really perceive the contingencies between their behavior and the

behavior of others without practicing and experiencing them. Recognition that there is a contingency is a foundation for understanding that you may have some control over these events. Second, giving students the opportunity to "share" in the decision making promotes more ownership, more control, over events in the classroom.

There are two kinds of evidence for such opportunities. One source of evidence is teacher action. Teachers can cue children that it is a time to set in motion a self-regulating process. For example, in one of the favorable classrooms, the teacher would often refer to how much time is left, "We have about three minutes left in the morning math period." Teacher-created opportunities for self-regulation may also be created through concrete procedures, such as checklists that must be completed at the end of a unit of math work. The teacher may give students choices about which assignment to do and/or what to do after completion of teacher-assigned tasks. In these situations, the apparent teacher purpose is to engage students in self-directed cognition about their work so that they can make a decision about what to do next, when and sometime how to do it.

A second source of evidence are actual examples of self-regulation on the part of the students. We must note that student self-regulation is more than simply being on-task under the direction of the teacher. There must be evidence that the students are engaged in some sort of self-questioning, self-monitoring, and self-evaluation which results in action. Through these experiences, we hypothesize that students can perceive the contingency between their behaviors and the outcomes they receive.

The favorable classrooms in this sample were characterized by opportunities for students to self-regulate. We hypothesize that even such simple examples of allowing students to get their own drinks, sharpen

their own pencils and use the bathroom when necessary contributed to the development student self-regulation. Students in one classroom would receive feedback about their decisions. For example, a student asked to leave the math game to finish up his morning math, the teacher agreed and said, "That's a good idea. It's a good time to do that." During a map assignment in this classroom, students were given choices about what symbols each would use for various items in the room. In another classroom, when students had gotten too noisy, instead of telling the students to be quiet, the teacher referred to the poster that should cue them to be quiet, implying that should have been regulating themselves.

In the less favorable classrooms, students generally did not have consistent opportunities to self-regulate. In one classroom in the spring , the students were playing the game Quizmo while the teacher was back at her desk. The teacher had to constantly monitor the game due to bickering and quarreling among the students. In this less favorable classroom, in particular, the teacher would create opportunities for students to self-regulate but often the students were unsuccessful and the teacher response was to "shhhh" them and constantly remind them to be quiet. This teacher did not seem to use it as an opportunity for children to practice or learn how to self-regulate. In another classroom, the teacher directed, corrected and monitored all activities. There was no evidence of systems in place which promoted self-checking, self-evaluation nor self-monitoring. In another classroom, the teacher seemingly gave the students many opportunities to self-regulate for this teacher had lots of down time when students did not have any assignments to do. However, they were few opportunities to test their self-directed cognitions and regulate their behavior in achievement of a goal because the goals generally did not exist. There was frequent bickering and quarreling

among the students.

Anomalous Classrooms

In the two anomalous classrooms there was not a parallel development or consistency of change in both the cognitive and social domains of control understanding. These classrooms are anomalous because the majority of the classrooms had parallel development or consistency in their change scores. In both classrooms, students maintained their original social control understanding but decreased their sense of cognitive control from fall to spring. Decreasing sense of cognitive control would imply that by the end of the year students had less knowledge about and felt less responsible for their own successes and failures in the academic domain. Maintaining social control would imply that students would generally feel the same way they did at the beginning of the year about their control over their social successes and failures.

These two classrooms present anomalous, even puzzling, cases. When compared, although they shared similar outcomes, there were striking differences in these classrooms in terms of our three dimensions. The third grade classroom had some of the features found in our more favorable classrooms, while the fourth grade had more of the features found in our less favorable classrooms. Further, since there are only two cases, it would be difficult to generalize from these to other classrooms. However, the distinctive character of each of these classrooms led to making some tenative hypotheses about why these classrooms might have had the outcomes they did and, thus, fell into an anomalous category. To do this, for each classroom, the dimensions of respect, predictability/structure and opportunities for self-regulation will be considered.

In the third grade classroom the teacher modeled respect for the

students and was generally pleasant, calm and polite with students. Her rules were not explicit reminders of respecting the rights of others but were more concerned with procedural issues. The class seemed to be largely teacher-directed; there seemed to be no system in place all year which gave students the opportunity to self-regulate. The teacher provided a predictable environment and structured situations for the children. The salient feature of this classroom, however, not found in any of the other classrooms in our sample, was the predominance of rewards for subgroups and individuals all year long. Children seemed to get a reward of some sort every time their row or gender or skill group did something well. We hypothesize that, with such an extrinsically-based system, the children had little or no opportunity to internalize or practice the socialization values of respect presented by the teacher. The use of rewards for almost every behavior and task may have conveyed a teacher belief to children that they are not and cannot be internally motivated, or self-directed.

On the other hand, in the fourth grade anomalous classroom, there was some evidence of our respect dimension, but, in general, students were allowed to put each other and the teacher down. The fourth grade classroom had no system in place to remind students of the rules. If children showed disrespect, the teacher would often ask, "what's the problem?" and then not monitor the response. The teacher did require the students to be quiet when she spoke but would not wait for them to be quiet. She was an ineffectual manager, thus commanding no respect for herself; she was negative with children, with interactions ranging from low-level nagging about noise to accusatory statements which question a child's character. Students had many opportunities to interact with one another because the teacher was such a poor manager and did not command respect. Sometimes these student interactions would burst into

name-calling and fighting; yet, at these times, she appeared helpless to solve their problems. When the teacher left the room, the students would immediately be off-task. In terms of the maintenance of social control which characterizes these anomalous classrooms, we can only hypothesize that the fall scores represented a strong student social system, unaffected by the teacher, that prevailed throughout the year.

Further, in this fourth grade anomalous classroom, the tasks seemed to be all teacher-directed. The teacher corrected all of the work. Tasks were done usually so that students could "go to recess on time". The teacher graded all work. She had a system where students could "buy time" on Friday when they had finished their work during the week. Students who bought time had free time on Friday. However, during the Friday morning when certain students had bought time, the rest of the students also appeared to use the time as free time since there was a great deal of off-task behavior. There was not a consistent enforcement of accountability systems. We hypothesize that the decrease in cognitive control resulted from lack of predictability, structuring as well as few opportunities to practice being in control and experience the consequences of their successes and failures in the academic domain.

DISCUSSION

The research presented here fits within a larger body of research on teacher effects. Over the past 15 years, much of teacher effects research has been limited to the identification of categories of teacher behaviors that are correlated with student achievement. Even though the teacher effects research in the past has contributed to our knowledge about classrooms, there has been criticism of its' limited definitions of effectiveness as well as its' focus on achievement as the sole outcome (Shulman, 1986; Shavelson, Webb & Burstein, 1986).

This paper seeks to enrich and entend our conceptions of teacher effects. This work is different from the process-product research paradigm in two ways: first, it is an effort to examine student perceptions as outcomes, and second it uses qualitative data, not categorical checklists, to examine differences in teacher practices.

The first research question was: Do teacher practices relate to student perceptions of control in the task and social domains? After computing the *z*-scores for the classrooms, ranking the classrooms' change scores and comparing across task and social domains, it was concluded that there were classrooms which seemed to have consistent patterns in both domains, maintaining their position relative to other classrooms across the year. Narrative analysis revealed that certain characteristics in more favorable classrooms were less evident in the less favorable classrooms, and mixed in the anomalous classrooms. Therefore, there seemed to be some confirmation of the hypothesis that certain teacher practices relate to student perceptions of control.

There was a remarkable consistency in the classrooms, meaning that change in the cognitive domain seemed to be mirrored in the social domain. Out of 19 third and fourth grade classrooms, only two classrooms seem to

have any shown any striking differences between the cognitive and social outcomes as measured by the Connell (1985) scales. These overall results are supported by Doyle's (1983, 1986) conception of classrooms where the task and social domains combine to produce a "vector of action." Although the social part of the Connell questionnaire asked children about sense of control in their friendships, the social and cognitive scales seemed to move together or not at all in each classroom, leading to the consideration of the both domains together.

The second research question was: What teacher practices relate to student self-perceptions of control? Through qualitative analysis of classroom narratives we derived three dimensions which seemed to distinguish the more favorable from the less favorable classrooms in our sample.

Dimension 1: There was a focus on respect for and sensitivity to individual needs and growth in the more favorable classrooms, but this was not found consistently in the less favorable classrooms.

Dimension 2: In the more favorable classrooms, teachers seemed to create a predictable and structured environment, whereas in the less favorable classrooms, events were less predictable and understandable.

Dimension 3: Teachers in the more favorable classrooms gave children opportunities to self-regulate. Children had the opportunity to practice self-direction, and experience the consequences of their actions.

These three dimensions are not really separate entities. A single aspect of classroom life can reflect all three dimensions. For example, the teacher presents and tells the importance of a rule about respecting others' property: the content conveys respect; the explanation provides

structuring and consistent enforcement conveys predictability; giving students' freedom to move about the room gives students the opportunity to practice following the rule.

There is, also, a limitation of these results based on the potential effect of entering student characteristics or background (Jsuch as, socioeconomic status, or SES) on student perceptions of control. There isn't enough information at this point about the interaction of SES or other background variables with student self-perceptions in a given classroom to make broad claims about the generalizability of these findings. There is a lack of research on how many of the teachers' practices are a response to the unique characteristics of the students in his/her classroom. Student responses may be more dependent on variables like SES than the practices that the teacher initiates. Future research is needed to examine the effects of student entering characteristics on development of student self-perceptions in the classroom.

The purpose of this study was to examine teacher practices as they relate to student perceptions of control in both the task and social domains of schooling. Some classrooms seem to promote the development of student knowledge about the outcomes they experience. Other classrooms seemed to have less favorable outcomes. This is another step toward understanding the effects of teacher practices on student variables other than achievement.

TABLE 1: Cognitive and Social Control z-Scores by Grade Level by Teacher

Grade/ Teacher	Known Control				Relative Internality			
	Cognitive		Social		Cognitive		Social	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
3A	-.05	-.26	+.12	+.14	-.37	-.04	-.37	-.47
3B	-.10	-.42	-.21	-.23	+.17	+.03	+.31	-.05
3C-	-.56	-.50	-.09	-.22	-.70	-.29	+.22	-.21
3D*	+.17	-.01	+.10	+.38	+.39	-.53	+.30	+.10
3E+	-.25	+.22	-.24	+.14	-.02	-.14	-.29	-.06
3F-	-.05	-.17	-.49	-.66	-.07	-.31	-.07	-.40
3G+	+.15	+.55	-.09	+.11	+.43	+.44	+.08	+.23
3H	-.23	-.08	+.36	+.10	-.21	.03	-.00	-.08
3I	+.43	+.18	+.69	-.11	+.33	+.28	+.03	+.44
3J+	+.50	+.75	-.41	^.20	-.10	+.64	-.14	+.78
4A	+.19	+.22	+.03	+.17	+.13	.39	-.45	-.64
4B*	+.03	+.28	-.12	+.13	+.12	-.62	-.04	-.22
4C-	-.32	-.62	-.04	-.46	+.17	-.00	-.20	-.11
4D-	+.20	+.34	+.10	+.19	-.73	-.58	+.40	-.02
4E+	+.21	+.27	+.13	+.09	+.26	+.29	+.41	+.54
4F+	+.08	-.17	+.04	-.03	+.15	+.37	+.03	+.32
4G	-.04	-.22	+.02	-.20	-.58	-.47	-.43	-.52
4H+	+.04	+.13	+.13	+.32	+.08	+.27	+.04	+.21
4I	-.14	-.12	-.30	-.19	+.02	-.05	+.18	+.06

The symbol after the teacher identification number stands for:
"+" more favorable classrooms;
"-" less favorable classrooms;
"*" anomalous classrooms.

Table 2: Correlations between cognitive and social scales of known control and relative internality

	Known control		Relative internality	
	Cognitive	Social	Cognitive	Social
Known Control				
Cognitive		.38*	.28*	.25*
Social	.38*		.08	.12*
Relative Internality				
Cognitive	.28*	.08		.51*
Social	.25*	.12*	.51*	

*significant at the p>.01 level.

Summary Description of Teacher 3J

(Example of More Favorable Classroom)

1. Sensitivity and respect

During the second day of school, the narrative reveals a teacher who models respect and interest in all students. Her classroom rules reflected concern for others: "Be kind, fair, and polite. Be responsible for your actions and environment. Do your best at all times. Respect yourself, peers, and adults." During this observation, there was a lot of individual praise, which was apparently genuine (i.e., not done in order to correct another child indirectly) and also informative. In several incidents, she offered rationales for corrections that focused on consequences of one's actions for other students (e.g.,when students called out, then everyone did not get a fair chance to talk.)

This impression of a respectful, sensitive teacher is further supported by the rest of the fall narratives. For example, she modeled polite treatment by saying to the student teacher, "Excuse me, may I interrupt?" when she broke into his lesson with a procedural announcement, and when finished she apologized for interrupting. When she had to correct one child (David) several times, she finally took him out into the hall for a private conference, rather than publicly demonstrating irritation. Some corrections are couched in terms of the need to be polite to others and not to be rude, thus appealing to interpersonal rationales.

During the spring narratives, the teacher still appears to be a model of calm, patient, respectful treatment. She also reveals a sense of humor, and the classroom is often characterized by laughter and gentle teasing that is accepted by the students in a playful manner. She responds even to children who might create special problems. For example, when David, a student who has continued to need many reminders about behavior, told her a rather long story about a lost pencil during transition, the teacher asked the class if they had seen the pencil. That is, she responded to David's expressed need, instead of sending him on his way with irritation because he was a "troublemaker". In another incident, Tasha, a child who appeared to have some special needs, wandered away from the reading group. When the teacher told her to come back, Tasha replied angrily, "Why should I? You never call on me." Rather than responding to Tasha's sullen tone, the teacher said quietly, "If you come back to the rug, I will call on you." Then, she did call on Tasha right away. Such responses, if used indiscriminately, might lead to management problems, although this was not a problem in this classroom, and these incidents appeared to be cases of the teacher responding to the child's special need at that time. There are several other examples of the teacher treating students with great respect and kindness, while still maintaining her leadership status in the classroom.

2. Predictability and structuring

During the first three weeks of school, there were many statements that aided predictability and provided some structure to understanding classroom standards. For example, she said on the second morning of school, "Every morning when you come in, there will be math on the board for you to do", and then she followed through with this pattern throughout the year. Also on the second morning, she explained that the morning schedule would typically include movement between classes for reading, but

that for two weeks they would be doing something different. By the end of the third week, students appeared to know what was expected of them and they behaved accordingly.

As the year progressed, the classroom ran fairly smoothly, with students adept at moving from one event to another quickly. The work accountability system was clearly in evidence. For example, in one observation, students had a designated place to turn in certain assignments, and an aide immediately checked another assignment when completed. Before dismissal for lunch, the teacher collected all work and then called out the names of students who were finished and could leave for lunch. Throughout the year, the teacher provided a great deal of information about time to the students, such as pointing out how many minutes were left in the period to finish up work, or saying to a student who appeared to be off-task that his reading group would begin in five minutes. (These time references seemed to be an alternative to straightforward corrections of behavior, while focusing students' attention on the salient feature of passing time, thus providing information that went beyond the teacher's dissatisfaction with their behavior.

3. Opportunities for self-regulation

The fall observations did not reveal a lot of opportunities for student independent decision-making, although procedures for water, bathroom, and pencil sharpening were in place and running smoothly with students going without asking the teacher. The teacher did provide some choices in the assignments (e.g., names for the graph, symbols for class map), and commented on student self-regulation when it occurred (e.g., "Jennie, I like the way you use your time", to a girl who had chosen to keep working on an assignment when others took a bathroom break. On another occasion, when a girl finished a reading assignment and resumed work on an earlier math paper, the teacher noticed and said, "Good...you're getting that morning math done. That's a good idea too.") Sometimes, the teacher would cue student behavior without explicitly telling them what to do, which might have been a way of easing students into more thinking for themselves (e.g., She held up a science book, saying, "If you see what I am holding up, you will know what to get ready for next.")

By mid-year and the spring observations, there was more evidence that students were making decisions and functioning independently. For example, students spontaneously began their assigned classroom jobs. When doing morning math, students chose where they wanted to sit and work, and at other times, students make choices about where to work, even receiving permission to go into the hall. Apparently, no management problems resulted from this. Students also had the option of joining a more advanced math group for instruction when they finished their regular assignments. One day, a fight broke out between two boys, one of whom had just been sent to this teacher's room because of problems in another class and who was eventually referred to special education. While the teacher broke up the fight and talked to the boys, she called out to the rest to go to lunch, and the observer reported that they did an excellent job of lining up and walking down the hall without supervision.

Many of the teacher's messages to students, especially corrections, relayed the message that they had choices and could control themselves. For example, she said to a boy who had been inattentive in reading group, "Go to your seat and put your head down. When you really want to listen, you can come back."

Summary of Teacher 3C
(Example of less favorable classroom)

Dimension 1: Sensitivity to and respect for students' needs, intentions, and feelings

The first observation of the year, on the afternoon of the first day, revealed some mixed messages about the teacher's respect of students needs, intentions, and feelings. Most of the afternoon was spent with seatwork, with the teacher emphasizing the need to be quiet and finish, although there was one large group discussion about families and feelings that did elicit a lot of student involvement. Although the teacher occasionally showed warmth toward individuals, the prevailing impression is not one of emotional warmth. In fact, there was noticeable gruffness and irritation in her dealings with some students, and no explicit messages about how students should treat one another. (For example, classroom rules did not explicitly state that respect was an important standard.)

Several specific incidents support the impression of some insensitivity to students. For example, sometimes the teacher asked questions in a rhetorical manner, seemingly not expecting a reply, and ignoring or contradicting any student responses that did occur. One lesson may have been intended to communicate interest in individuals (students were to write about themselves in a book, including measures of height taken by the teacher), but the teacher interrupted her own explanation by slamming down a boy's pencil because he started writing before she was ready. Then, the measurement took so long that many students did not get a turn, and the activity ended abruptly at the end of the day. Two other telling incidents suggest something about the teacher's modeling a lack of respect for others. Twice during this first afternoon, she accepted students' tattles on other students. The first time, she asked the group who had done something, and several students pointed the transgressor out to the teacher.

On the second observation (fourth day of school), the teacher chastised students and made some statements interpreted by the reader as conveying low expectations. Such statements as the following, made to a low-achieving student, suggest that the teacher did not model respect for all students: "I know you work much slower than everyone in the class but if you are going to be in this class, you're going to have to concentrate. We can't wait for you." This was offered with no instructional assistance.

During the spring observations, the teacher was frequently irritable with student behavior, although this did not result in tirades or personal harsh criticism. Thus, the spring narratives present a less harsh picture of the classroom than the fall narratives, although there was not any positive evidence that the teacher conveyed respect for and sensitivity to student's needs.

Dimension 2: Predictability and structuring

By the end of the first day of school, the teacher had demonstrated inconsistency in following through on corrections. She commented several times on lines that were not straight and students who were talking, but

did little that prevented further occurrences of the same behavior. This pattern continued throughout the first few weeks of school. There were occasions when her own predictions about how time would be spent were inaccurate, either due to poor planning or poor management or both. For example, on the first afternoon, the class was ten minutes late leaving the building because the teacher ran overtime with announcements and clean-up, and then stopped the group four times as they walked to the door because their line was not straight. During the first few weeks, there were few work-related procedures in operation with resulting delays in beginning lessons. The teacher made very few statements about why, how, and when to apply standards, and instead most of her communications were corrections, often in a nagging tone, about student behavior.

During the rest of the year, there continued to be teacher focusing on student misbehavior (often in a nagging tone), rather than structuring statements to help students understand rationales for and ways of meeting standards. However, by the spring narratives, there was a basic predictability to the room; it was not chaotic. A schedule was on the board and it was followed, and students seemed to be familiar with the usual course of events, which appeared to center around movement through commercial materials. There was no clear system for assigning classroom jobs, and the accountability system for work completion was not clear. For example, one afternoon, at 1:20, the teacher told students that if they weren't finished, they would have to finish at recess or take the work home. However, at the end of the day, she announced that two students would have to stay after school because they had not finished their work.

Dimension 3: Opportunities for self-regulation

During the fall observations, the activities were primarily teacher-directed, with few opportunities for the students to make decisions and take responsibility for task performance or classroom maintenance. The teacher was the primary task monitor, and she delivered frequent corrections to students for their behavior without providing the procedural systems that would have facilitated student independence. Instead, the lack of procedures sometimes necessitated teacher-regulation, such as telling students to return to their seats to get pencils for the reading group.

During the spring observations, this pattern of teacher-direction was still apparent. No systems were apparent for students to find their assignments, make choices, check their own work, etc.

BIBLIOGRAPHY

Anderson, L.M., Stevens, D.D., Prawat, R. & Nickerson, J. (in press). Classroom task environments and students' task-related beliefs. Elementary School Journal.

Baumrind, D. & Black, A. (1967). Socialization practices associated with dimensions of competence in preschool boys and girls. Child Development, 38, 265-285.

Brown, A.L. (1983). Knowing when, where & how to remember: a problem of metacognition. in P. Mussen (Ed.). Handbook of child psychology: Vol. 3. Cognitive Development. New York: Wiley.

Connell, J.P. (1985). A new multidimensitonal measure of children's perceptions of control. Child Development, 56, 1018-1041.

Connell, J.P. (1980). A multidimensional measure of children's perception of control. Unpublished Master's thesis, University of Denver, Denver, CO.

Deci, E., Schwartz, A., Sheinan, L. & Ryan, R. (1981). An instrument to asess adult's orientations toward control versus autonomy with children: Reflecitons on intrinsic motivation and perceived competence. Journal of Educational Psychology, 73, 642-650.

Deiner, C.I. & Dweck, C.S. (1980). An analysis of learned helplessness (II): The processing of success. Journal of Personality and Social Psychology, 39, 940-952.

Doyle, W. (1983). Academic work. Review of Educational Research, 53, 159-199.

Doyle, W. (1986). Classroom organization & management. In M.C. Wittrock (Ed.). Handbook of research on teaching (3rd Ed.). New York:Macmillan.

Erickson, F. (1986). Qualitative methods in research on teaching. In M.C. Wittrock (Ed.), Handbook of research on teaching (3rd Ed.). New York: Macmillan.

Flavell, J.H. (1985). Cognitive development (2nd Ed.). Englewood Cliffs, NJ: Prentice-Hall.

Harter,S. & Connell, J.P. (1984). A model of children's achievement and related self-perceptions of competence, control and motivation

orientation. In J. Nicholls & M.L. Maenr (Eds.). Advances in motivation and achievement (Vol. 3, pp. 219-250). Greenwich, Conn: JAI Press.

Lamb, M.E. & Easterbrooks, M.A. (1981). Individual diffferences in parental sensitivity: Some thoughts about origins, components & consequences. In M.E. Lanm & L.R. Sherrod (Eds.). Infant social cognition: Empirical & theoretical considerations (pp. 127-153). Hillsdale, NJ: Erlbaum.

Lortie, D.C. (1978). Schoolteacher. Chicago: Univ. of Chicago Press.

Maccoby, E. & Martin, J. (1983). Socialization in the contexts of the family: Parent-child interaction. In E.M. Hetherington (Ed.). Handbook of child psychology (pp.37-56). New York: Wiley.

Nickerson, J., Anderson, L., & Stevens, D.D. (1986, April). Teacher practices & pupil cross-race peer selection in hetereogeneous classrooms. Paper presented at the annual meeting of the American Educational Researach Association, San Francisco.

Nowicki, S. & Strickland, B. (1973). A locus of contol scale for children. Journal of Consulting & Clinical Psychology, 40, 148-154.

Prawat, R., Anderson, D., Anderson, A. Jenkins, F., & Anderson, L.M. (1983, April). The development of an instrumnet to measure teacher goal orientations. Paper presented at the annual meeting of the American Educational Research Association, Montreal.

Rotter, J.B. (1966). Generalized expectancies for internal vs. external control of reinforcement. Psychological Monographs, 80 (Whole No. 609).

Skinner, E. & Connell, J.P. (1986). Control understanding: suggestions for a developmental framework. In M.M. Baltes & P.B. Baltes (Eds.). The psychology of control & aging. Hillsdale, NJ: Erlbaum.

Wang, M.C. (1982). Development & consequences of studetns' sense of person control. In J. Levine & M.C. Wang (Eds.). Teacher & student perceptions: implications for learning. Hillsdale, NJ: Erlbaum.

Weinstein, R.H. (1983). Student perceptions of schooling. Elementary School Journal, 83(4), 287-312.

Weisz, J.R. & Stipek, D. (1982). Competence, contingency & development of perceived control. Human Development, 25, 250-281.

Note

This work is sponsored in part by the Institute for Research on Teaching, College of Education, Michigan State University. The Institute for Research on Teaching is funded primarily by the Office of Educational Research and Improvement, United States Department of Education. The opinions expressed in this publication do not necessarily reflect the position, policy or endorsement of the Office or the Department. (Contract No. 400-81-0014).