

How Teachers Establish Psychological Environments During the First Days of School: Associations With Avoidance in Mathematics

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Observations of the first days of school in eight sixth-grade classrooms identified three different classroom environments. In supportive environments teachers expressed enthusiasm for learning, were respectful, used humor, and voiced expectations that all students would learn. In ambiguous environments teachers were inconsistent in their support and focus on learning and exercised contradictory forms of management. In nonsupportive environments teachers emphasized extrinsic reasons for learning, forewarned that learning would be difficult and that students might cheat or misbehave, and exercised authoritarian control. Teachers' patterns of motivational and organizational discourse during math classes near the end of the year were consistent with the messages they expressed at the beginning of the year. When student reports of avoidance behaviors in math from fall and spring were compared with the qualitative analyses of these environments, students in supportive classrooms reported engaging in significantly less avoidance behavior than students in ambiguous or nonsupportive environments.

Sadly, not all students approach school with a desire to engage in and persist at academic tasks; some actively avoid academic engagement. This avoidance is principally to save face and avoid appearing unable, yet it comes at the detriment of learning. Although individual factors are associated with avoidance, students' use of avoidance strategies differs significantly among classes (Ryan, Gheen, & Midgley, 1998; Turner et al., 2002; Urdan, Midgley, & Anderman, 1998). This implies that classroom environments are powerful influences on students' avoidance of academic work and that students in some classes may be experiencing more negative motivational environments than others.

Environments begin to take shape on the first day of school and, once established, tend to remain fairly stable (Deci, Schwartz, Sheinman, & Ryan, 1981; Patrick, Anderman, Ryan, Edelin, & Midgley, 2001). The beginning of school, therefore, is a critical period, and teacher practices at this time may inadvertently set the context for patterns of avoidance that may persist for the course of the year, or longer. That is, teacher practices may contribute to classroom environments that do not promote adaptive patterns of engagement, such as approaching academic tasks, expending effort, and using appropriate learning strategies. Instead, teacher practices may contribute to more negative environments in which students feel psychologically uncomfortable and more likely to avoid engaging in schoolwork. Consequently, it is of considerable importance to understand both what teacher practices contribute to creating different classroom environments and how early environments are related to students' avoidance strategies. There has been little research linking specific teacher practices to initial classroom environments and none linking early practices and environments with students' avoidance. The purpose of the current study, therefore, was to examine how the practices of a group of upper elementary teachers contributed to different classroom environments beginning on the first days of school. Specifically, we sought to identify similarities and differences among teachers' practices and these emerging classroom motivational and social environments. Although we were informed by research in goal theory and about classroom perceptions, we were interested in expanding our understanding to identify associations among teacher practices and classroom environments that may not have been identified previously within these frameworks. Therefore, we began with a bottom-up, inductive method appropriate for theory building. The initial focus was on observations of classroom practices at the beginning of the year. We also compared our findings about early classroom environments with a variety of measures taken later in the year in math class, including teacher discourse, students' survey reports of their perceptions of different aspects of their classroom environment, and their use of a range of avoidance

behaviors (self-handicapping, avoiding seeking help, disruptive behavior, & cheating).

CLASSROOM ENVIRONMENTS AND AVOIDANCE STRATEGIES

Students may actively avoid engaging in academic tasks through a range of strategies. For example, they may do this by self-handicapping (i.e., purposefully withdrawing effort), by not asking for help even though they recognize they need assistance, by acting out and being disruptive in the classroom, or by cheating. Using any of these avoidance strategies is maladaptive because they limit opportunities for students to engage with the material, and thereby impede learning and understanding. Students use avoidance strategies, it is argued, in an effort to protect themselves from anticipated failure and appearing unable; they therefore protect their self-esteem and save face by not trying or engaging in the task's demands (Covington, 1992). Although individual factors such as gender and personal motivational beliefs are associated with avoidance, when those factors are controlled for students nevertheless avoid engagement to a significantly greater extent in some classrooms than in others (for reviews, see Ryan, Pintrich, & Midgley, 2001; Urdan, Ryan, Anderman, & Gheen, 2002).

Almost all of the research investigating classroom differences in students' use of avoidance strategies has been conducted within a goal theory framework. This theory posits that the purposes that students have for engaging in academic tasks, and their beliefs about the nature of competence, are associated with different patterns of cognitive and behavioral engagement, and consequently differences in learning and achievement (Ames, 1992b). Goal theory also assumes that students' motivation is influenced not only by their individual personal dispositions and beliefs, but also by the environment (Ames, 1992b). Thus, classroom environments are considered with respect to the purposes and meanings that are communicated to, and perceived by, students for engaging in academic tasks (i.e., the classroom goal structures). A classroom focus on mastery goals conveys a perception that students' learning and understanding, in contrast to mere memorization, are valued and that success is accompanied by effort and indicated by personal improvement. A classroom focus on performance goals conveys to students that learning is predominantly a means of achieving extrinsic rewards, and that success is indicated by outperforming others or surpassing normative standards (Ames, 1992b). Classrooms that are perceived as being mastery focused are most adaptive and have the lowest rates of students' academic avoidance (Kaplan, Gheen, & Midgley, 2002; Karabenick, 2002; Murdock, Hale, & Weber, 2001; Ryan et al., 1998; Turner et al., 2002). Furthermore,

classrooms that are perceived as being performance-focused are likely to have the highest rates of students' academic avoidance (Anderman, Griesinger, & Westerfield, 1998; Kaplan et al., 2002; Karabenick, 2002; Ryan et al., 1998; Urdan et al., 1998).

Although goal theory has been valuable in understanding students' avoidance in academics, much of the research has involved student surveys and thus cannot explain which practices influence psychological environments. Recent research that has incorporated observations and discourse has indicated that aspects of classroom environments other than goal structure are also important. For example, classroom differences in students' academic avoidance are related to the teacher's instruction (Karabenick, 2002), aspects of the socioemotional environment (Turner et al., 2002), and classroom management (Karabenick, 2002). It is important therefore that research on academic avoidance include attention to these aspects within classrooms.

As noted, there has been very little research investigating teacher practices related to students' use of avoidance strategies. Hypotheses may be made, however, from studies that link teacher practices and classroom environments with students' adaptive engagement and motivation; perhaps teachers who do not use those practices or use incompatible ones are more likely to have students who avoid engaging in schoolwork. We next briefly review research linking students' avoidance and engagement behaviors with teacher messages about tasks and expectations about learning, socioemotional relationships with the teacher and among students, and management practices.

MESSAGES ABOUT TASKS, LEARNING, AND EXPECTATIONS FOR STUDENTS

Teachers' instructional practices contribute to the psychological environment of classrooms because they send messages to students about the nature and importance of learning and schoolwork. These environments are believed to explicitly or implicitly encourage or dissuade students' effort, persistence, and strategic engagement in classroom tasks, via students' motivational beliefs and thereby influence the quality and type of engagement in academics.

There is a paucity of research linking instructional practices with students' use of avoidance strategies. Observers' rating of the quality of instruction during college lectures has been related to students' reports of avoiding asking for help (Karabenick, 2002). Specifically, a rating of teachers' apparent content knowledge and the quality of their instruction was related negatively with students avoiding seeking help. Furthermore, elementary school teachers whose students tend to have more negative motivational patterns had highly controlled patterns of instruction and were found to emphasize procedures and external motivational strategies, and not encourage responsibility (Marshall, 1987; Turner et al., 1998).

A small number of studies have connected classroom environments, via teacher practices, with upper elementary students' motivation to learn. In classrooms where students' positive motivational patterns were the norm, teachers communicated the value, interest, and intrinsic reasons inherent in schoolwork. They also supported student choice, autonomy, responsibility, and peer collaboration, adapted instruction to students' developmental levels, and used students' mistakes within instruction to increase understanding (Guthrie, Wigfield, & VonSecker, 2000; Marshall, 1987; Meece, 1991; Stipek et al., 1998; Turner et al., 1998).

Teachers' practices also convey their expectations for student learning, and those expectations can influence students' motivation and achievement (Brattesani, Weinstein, & Marshall, 1984). Teachers may send messages that they expect some students to have greater success than others (i.e., high differential treatment), whereas others convey similar expectations for all students' learning. Differential treatment may involve expressing expectations explicitly or be communicated through differential attention or inattention, grouping and task decisions, and by the manner in which instructional practices are carried out (Brophy, 1985; Marshall & Weinstein, 1986).

CLASSROOM SOCIOEMOTIONAL ENVIRONMENT: RELATIONSHIPS WITH THE TEACHER AND AMONG STUDENTS

A small amount of research has shown that social relationships are related to students' avoidance. Students in early adolescence who avoid seeking help when they need it tend to perceive their competence interacting with classmates as low (Ryan & Pintrich, 1997), be concerned about their reputation and status (Ryan, Hicks, & Midgley, 1997), and are more likely to be in classes where the teacher does not view providing social and emotional support as part of his or her role (Ryan et al., 1998). Perceptions of teacher support and mutual respect in the classroom influence students' disruptive behavior. When students perceive their teacher as supportive and promoting respect among classmates they engage in less disruptive behavior compared to the previous year (Ryan & Patrick, 2001).

Adaptive student engagement and motivation are related to social relationships within the classroom and perceptions of the socioemotional environment (Juvonen & Wentzel, 1996; Patrick, Anderman, & Ryan, 2002; Skinner & Belmont, 1993). For example, when students perceive their teacher as supportive they express adaptive motivational beliefs, including interest, value, effort, and enjoyment in schoolwork (Midgley, Feldlaufer, & Eccles, 1989), positive academic self-concept (Felner, Aber, Primavera, & Cauce, 1985), and expectancies for success (Goodenow, 1993). Similarly, when students believe their teacher promotes respect among classmates they report greater efficacy for schoolwork compared to the previous year

(Ryan & Patrick, 2001). Furthermore, students' perceptions of their teacher as supportive are related to help seeking (Newman & Schwager, 1993) and to engaging in increased self-regulated learning (Ryan & Patrick, 2001).

The importance of social and affective features for positive classroom motivational environments has been highlighted in recent classroom research that has focused on observed teacher practices. Patrick and her colleagues (Patrick et al., 2001) found that strong teacher social and affective support for, and concern about, students' learning and progress was one aspect that distinguished between classrooms viewed by students as having greater or lesser emphasis on learning and understanding (i.e., mastery goal structure). Similarly, a study by Turner and her colleagues (Turner et al., 2002) found that patterns of instructional discourse with a high incidence of teacher support were characteristic of high, but not low, mastery-focused classrooms. Stipek and her colleagues (Stipek et al., 1998) found that students' help seeking is related positively to the affective environment of their classroom. They also discovered that the most powerful predictor of students' motivation later in the year was the extent to which teachers expressed positive emotions and created a positive social and affective environment.

MANAGEMENT PRACTICES

Karabenick's (2002) recent research in college lecture classes found that a rating of instructors' management and discipline (inferred from apparent teacher control and student attention) accounted for differences among classes in students' avoidance of help seeking. From the extensive research by Emmer, Evertson, and their colleagues (e.g., Emmer, Evertson, & Anderson, 1980; Evertson & Emmer, 1982), the management practices that school teachers use in their classrooms have been related to different levels of student on- and off-task behavior. Although their focus on observers' counts of student on-task and off-task behavior is different from unobservable avoidance strategies, such as self-handicapping and not asking for help when needed, it is similar to disruptive behavior and perhaps low-skilled cheating. Their research program identified that the beginning of the year is a crucial time for establishing these management-related routines and behavioral norms. Elementary and junior high school teachers who were seen as most effective with respect to organization and management during the initial weeks of school gave priority to socializing students into a clearly organized classroom system (Emmer et al., 1980; Evertson & Emmer, 1982). Among other things, they explained important rules and procedures clearly without overloading the students, had a strong affective focus, and generally appeared sensitive to their students' needs. They also monitored students carefully at the outset, stopped disruptiveness promptly, and held students accountable for their work. These

teachers had students with significantly more on-task, and less off-task behavior than teachers with poorer organization and management. Furthermore, these differences in student engagement were maintained through the year (Emmer et al., 1980; Evertson & Emmer, 1982).

IMPORTANCE OF THE BEGINNING OF THE SCHOOL YEAR

Although the teacher management research has indicated that the beginning of the year is a crucial time with respect to establishing norms of student behavior, it is likely that this is also an important time for influencing the nature of the classroom psychological environment in general. The beginning of the school year is the time when teachers communicate explicitly the reasons for their practices and their expectations for students. They preview the year, establish the purposes for what students will be doing and the meaning of academic tasks and achievement, give explanations, build communities, set the affective tone, institute classroom routines and procedures, and set limits. Once established, those practices, and the associated differences in motivational environments, tend to remain consistent until the end of the year (Patrick et al., 2001). We expect, therefore, that teacher messages at the beginning of the year about tasks and learning, teacher–student and student–student relationships, and management will contribute to establishing different classroom environments, and will be related to students’ academic avoidance. Accordingly, the beginning of the year is an especially fruitful time to examine how classroom environments are created.

PURPOSE

Our first objective was to investigate teacher practices that contribute to different kinds of classroom psychological environments on the first days of school and to provide rich descriptions of the teacher practices associated with each kind of environment. We then sought to compare the different kinds of initial classroom environments, identified qualitatively, with students’ quantitative reports of perceived teacher support and mutual respect in their math classroom later in the fall and spring. We also compared students’ reports of their classroom mastery and performance goal structure by environment, because the majority of research on classroom environments and students’ use of avoidance strategies has been conducted within a goal theory framework. We sought to relate these different initial teacher practices and classroom environments from early in the year to students’ reports of strategically avoiding engaging in math classes through self-handicapping, avoiding seeking help, being disruptive, and cheating. Finally, we investigated continuity of teachers’ practices by comparing their messages at the beginning of the year with their discourse in mathematics during the spring semester.

METHOD

PARTICIPANTS

This study was part of a larger study examining avoidance in mathematics in the transition from elementary to middle school (e.g., Turner et al., 2002). The data for this study come from eight¹ sixth-grade teachers and their students from seven K–6 elementary schools in one ethnically diverse school district in the Midwest. Surveys were completed by 176 students (between 18 & 27 students in each class).

Teachers in 20 classrooms agreed to participate in the survey component of the study. In addition, the teachers were asked if they would be willing to have researchers in their classroom and allow tape-recording of instruction during math class. One teacher declined. Because of the time-consuming nature of qualitative data collection and analysis, a smaller number of classrooms were then chosen randomly for tape-recording from the two or three participating classrooms in each school. The eight teachers in this study ranged in experience from 4 to 30 years with a mean of 18. Two of the teachers were male and six had master's degrees. Three teachers were African American; the rest were Euro-American.

The school district began implementation of a new mathematics curriculum, Connected Mathematics (Lappan, Fey, Fitzgerald, Friel, & Phillips, 1998), in the fall of the year the study began. All classrooms followed the curriculum and all survey data were collected during the same units of instruction (e.g., geometry in the spring semester). Activity structures in the classrooms consisted primarily of heterogeneous whole class instruction with some use of either pairs or small groups, as recommended in the teacher manuals. No teacher used ability grouping and no schools used team teaching or looping.

Students remained with their teachers in self-contained classrooms for most of the day and for most subjects, including mathematics. Students typically had one other teacher, often for social studies or science, but they remained in the same heterogeneous group throughout the day.

MEASURES AND PROCEDURE

Qualitative Data

Researchers attended each classroom on the first and second days of the school year, for between 3 and 4 hours each morning. In this district elementary schools began on a Thursday and the regular academic schedule began on the Monday of the following week. Thus, teachers used the first 2 days to orient students to the different subjects they would

encounter throughout the year, for introductions, to outline routines and expectations, and to prepare students for the upcoming state testing. Some of the teachers' comments referred to specific subjects and others were more general and applied to what the students should expect in the classroom across all the subjects. Because the students were with their teacher for most of the school day, including math classes, we believed that teachers' initial general practices would contribute to the psychological environment of math class, in addition to the specific comments they made about math.

Teachers were told that we were interested in observing classrooms to better understand regular, daily classroom life during sixth grade and were assured that all information would remain confidential. All classroom talk was tape-recorded. In addition, a researcher sat at the back of the room and wrote additional notes about what was occurring to supplement or explain the discourse. Our primary focus was on the teacher and his or her affect and behavior; however students' behavior was also recorded. The audiotapes were transcribed, and the notes were integrated into the transcripts.

We also tape recorded and observed math lessons during the same two units of instruction in each of the classrooms. We sampled five lessons in the fall during a unit on factoring (e.g., least common multiple, greatest common factor, factor trees) and five lessons in the spring during a unit on geometry (e.g., identifying and measuring angles).

Prior to beginning data collection, researchers undertook training in writing field notes. Training involved four sessions, and was conducted by both visiting actual sixth-grade classes and using videotapes of sixth grade math classes. Training addressed how and what to record in field notes, using the recording equipment, and writing up the field notes uniformly. Field notes were to focus on visual aspects of instruction (e.g., whether the teacher smiled, placed his or her hand on a child's shoulder, walked around to check student work). Because analysis would focus primarily on the verbatim classroom discourse, field notes were intended to complement it and to illuminate any comments that might be difficult to interpret later when coding transcripts. Trainees' notes were compared with those of the trainer and discussions addressed the important features to include in the records and any necessary modifications. These features were reached by consensus. Thus, consistency among observations and records was ensured.

Qualitative Data

Students were administered a battery of survey measures in their regular classes at the end of both the fall and spring semesters. Students were told

to think about math class when answering, and all items were specific to math. Pairs of trained research assistants read instructions and survey items aloud to students. Students were told that the survey asked about how they felt about school and schoolwork, that this was not a test, that there were no right or wrong answers, and that the information would be kept confidential.

For this study we used scales measuring students' perceptions of four aspects of the classroom environment and four types of avoidance strategies. The format for all items was a 5-point scale, ranging from 1 = *not at all true* through 5 = *very true*, except where noted.

Students' Perceptions of Their Classroom Environment

Students reported their perceptions of the extent to which the teacher was supportive, promoted mutual respect among classmates, and promoted mastery and performance goals in math class. The measure of teacher support referred to support for academics (four items, α 's = .77 & .81, in fall and spring, respectively) and was taken from the Teacher Academic Support subscale of the Classroom Life Measure (Johnson, Johnson, & Anderson, 1983). A sample is "Can you count on your teacher for help when you need it?" For these items 1 = *almost never* to 5 = *often*. The measure of promoting mutual respect (four items, $\alpha = .72^2$) involved the extent to which the teacher was perceived as encouraging mutual respect among classmates (Ryan & Patrick, 2001). A sample item is "My teacher does not allow students to make fun of other students' ideas in class." The measures of classroom mastery goal structure (six items, α 's = .72 & .75) and classroom performance goal structure (five items, α 's = .72 & .77) were taken from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 1996). A sample item from the mastery goal structure is "My teacher thinks mistakes are okay in math as long as we are learning." A sample item from the performance goal structure is "My teacher lets us know which students get the highest scores on a math test." These four measures have been found in previous studies to have strong construct validity (for scales of teacher support and mutual respect, see Ryan & Patrick, 2001; for scales of mastery and performance goal structure, see Turner et al., 2002).

Student Avoidance Strategies

Students answered questions about their use of avoidance strategies in math class, including their self-handicapping, avoiding seeking help, disruptive behavior, and cheating. These measures have been found in previous

studies to have strong construct validity (see Urdan et al., 2002). The measure of self-handicapping (six items, α 's = .78 & .82, in fall and spring, respectively) was taken from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 1996). A sample item is "Some students put off doing their math work until the last minute. Then if they don't do well, they can say that is the reason. How true is this of you?" The measure of avoiding seeking help (five items, α 's = .75 & .81) was developed by Ryan (e.g., Ryan & Pintrich, 1997). A sample item is "I don't ask questions during math, even if I don't understand the lesson." The measure of disruptive behavior (five items, α 's = .86 & .73) was constructed by Kaplan (e.g., Kaplan & Maehr, 1999). A sample item is "I disturb the lesson in math class." The measure of cheating (three items, α 's = .84 & .87) was developed by Anderman (Anderman et al., 1998). A sample item scale is "I sometimes copy answers from other students during math tests."

OVERVIEW OF QUALITATIVE ANALYSIS

Beginning of the Year Data

Analysis of the qualitative data involved examining the transcripts (transcribed teacher and student discourse with field notes integrated) of the eight classrooms. The analysis involved data organization and reduction, as outlined by Miles and Huberman (1994). Our objective was to identify commonalities and differences in teacher practices with respect to the classroom environments established during the first days of school.

We began by coding the transcripts (discourse data and field notes) and creating charts, using an analysis scheme developed for investigating qualitative data about teacher practices (OPAL; Patrick et al., 1997). OPAL is grounded in goal theory, and includes the six categories of teacher practices (Task, Authority, Recognition, Grouping, Evaluation, Time) emphasized by researchers using this theory (Ames, 1992a). It also includes the categories Social Interactions, Help-Seeking, and general teacher Messages. Two researchers separately coded 1 day's transcripts for each of the teachers. After coding each transcript we met, calculated agreement, discussed the codes and transcripts extensively, resolved inconsistencies through discussion, and clarified the coding scheme. Inter-rater agreement was 81% for identifying codable episodes and 87% for labeling those episodes. After maintaining high interrater agreement for eight transcripts, the coding of the remaining eight was shared by the two researchers.

The coding and first series of charts assisted us in focusing systematically on different aspects of the classrooms. We then engaged in extensive discussions with the objective of identifying salient aspects from the transcripts that were not incorporated into the analysis, and themes and

patterns within and across all classrooms. During this phase we determined that messages about interpersonal relationships in the classroom (coded Social), including affective aspects of teacher talk and practices, were particularly salient and that we needed to distinguish between teacher and student relationships. There were other codes that were less salient at the beginning of the year (e.g., Grouping, Time). Furthermore, different codes tended to cluster together in different patterns for different classrooms. Both the relative salience of codes and their patterns suggested that four general categories of teacher practices during the first days of school best represented the data. The categories included what teachers said about (1) school and the upcoming year, the curriculum, and learning in general; (2) him or herself, professionally and personally, and anticipated relationships with students; (3) students and anticipated relationships among themselves; and, (4) anticipated classroom procedures and management structure. We then together identified and created a chart for each classroom, with columns for each of the four categories of practices (see Miles & Huberman, 1994, pp. 90–122); any differences were resolved through consensus.

After we had systematically organized the data, analysis moved to making comparisons across the different classrooms. That is, we engaged in iterative cycles of examining the charts, comparing teacher practices, generating hypotheses about similarities and differences among the classes, and searching for confirming and disconfirming evidence. This enabled us to summarize the psychological environments of each classroom, and identify and describe in rich detail what it was about those classes that differed, and what was similar, in terms of actual patterns of teacher practices and student behavior.

Analysis of Mathematics Discourse

We inspected patterns of teacher discourse from the math lessons observed in the spring to investigate the consistency of teachers' talk and messages from the beginning to near the end of the year. We coded the teacher discourse within all spring transcripts using three broad a priori categories: instructional, motivational, and organizational discourse.³ For the triangulation purposes of this study we used only the motivational and organizational categories. Within each of these categories we developed two subcategories, supportive and nonsupportive. The two motivational discourse categories included support (e.g., focus on importance and encouragement of learning, positive emotions, peer support for collaboration) and nonsupport, (e.g., focus on errorless learning, impersonal or negative affect, individual success & failure). The two organizational

discourse categories included support for on-task behavior (e.g., teachers gave directions that helped maintain pacing & momentum, organized groups, made smooth transitions between activities) and nonsupport (e.g., teacher interrupted learning because of off-task behavior).

RESULTS

We first compared and contrasted the eight teachers' practices and behaviors from the first 2 days of school, referring to the charts and transcripts. Although the teachers used different practices, there were considerable similarities among some in the types of messages their practices conveyed and in the kinds of classroom environments that were established initially. Accordingly, we identified three different classroom environments from the beginning of the year. After we had identified these different initial environments and the associated teacher practices, we sought to compare our grouping based on the classroom observations with students' survey reports of different aspects of their classroom environment, collected in the fall and the spring. We also examined whether students' reported use of avoidance strategies in math differed significantly among the three different classroom environments. Finally, we compared teachers' patterns of discourse during math classes in the spring with their messages at the beginning of the year, to investigate continuity throughout the year.

In the following section we present a brief overview of the three initial classroom environments. Referring to these environments we then present the results of the quantitative analyses, describe the teacher practices in each of the environments, and show patterns of classroom mathematics discourse in the spring, with examples, to illustrate teacher consistency through the year. We chose to order the results in this manner, even though the quantitative analyses were conducted after the qualitative analyses, to enable readers to more easily link practices with students' perceptions and use of avoidance strategies.

OVERVIEW OF CLASSROOM ENVIRONMENTS

Supportive classroom environments were intellectually and emotionally supportive. The teachers were respectful, used humor, and were enthusiastic about learning. They also voiced expectations that all students would learn, and their procedures and management practices were based on respect. There were three teachers (Davis, Guthrie, and Robinson⁴) who appeared to create such environments at the beginning of the year.

Ambiguous environments were sometimes learning oriented and academically and socioemotionally supportive, but teachers often undercut their own efforts by weak or ambiguous statements or passivity when students violated classroom rules or desired social norms. They also appeared to under- or overestimate students' development and to fail to connect with their students in the personal way that teachers in supportive environments did. Classroom procedures and management were inconsistent. There were three teachers (Anderson, Marks, and Weber) who appeared to create such environments.

Nonsupportive classroom environments did not appear supportive of students intellectually or socioemotionally, and teacher power and control were salient. Teachers gave extrinsic reasons for doing schoolwork and expressed views that students would find it difficult and might cheat. They also assumed that students would get into trouble and had authoritarian management systems. There were two teachers (Clark⁵ and Parsons) who appeared to create such environments.

DIFFERENCES AMONG STUDENTS' CLASSROOM PERCEPTIONS BY CLASSROOM ENVIRONMENT

We conducted analyses of variance to investigate mean level differences in students' perceptions of their math classroom among the three classroom environments identified at the beginning of the year. There were significant differences among the initial classroom environments for students' perceptions of teacher support, mutual respect in the classroom, and mastery and performance goal structures in both the fall and spring (the mutual respect scale was not included in the spring survey). The means, standard deviations, and *F*-statistics are presented in Table 1.

We then conducted Tukey post hoc significant difference tests to identify which groups differed significantly from each other on each of the dependent variables. The analyses indicated that students in supportive classrooms at the beginning of the year perceived their teachers as promoting more mutual respect in the classroom than did students in nonsupportive classrooms. Students' perceptions of ambiguous classrooms did not differ from those of students in supportive or nonsupportive classrooms. Students in supportive classrooms at the beginning of the year perceived their classrooms later that fall and in the spring as having more support from their teacher and a greater focus on mastery goals than did students in ambiguous or nonsupportive classrooms, who did not differ from each other. Finally, students in nonsupportive classrooms perceived their classroom at both times as having a greater focus on performance goals than did students in supportive classrooms.

Table 1. Means, standard deviations, and *F*-tests of students' classroom perceptions

| | Supportive (<i>n</i> = 69) | | Ambiguous (<i>n</i> = 71) | | Nonsupportive (<i>n</i> = 36) | | <i>F</i> |
|----------------------------|--------------------------------|-----------|-------------------------------|-----------|-----------------------------------|-----------|----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| Teacher support | | | | | | | |
| Fall | 4.32 _a | .72 | 3.22 _b | .87 | 3.51 _b | .99 | 30.75*** |
| Spring | 4.24 _a | .81 | 2.90 _b | 1.05 | 3.27 _b | 1.09 | 30.74*** |
| Mutual respect | | | | | | | |
| Fall | 4.67 _a | .51 | 4.37 _{a,b} | .72 | 4.14 _b | .81 | 8.02*** |
| Mastery goal structure | | | | | | | |
| Fall | 4.43 _a | .48 | 3.97 _b | .54 | 3.93 _b | .78 | 14.20*** |
| Spring | 4.35 _a | .66 | 3.46 _b | .89 | 3.51 _b | .96 | 21.20*** |
| Performance goal structure | | | | | | | |
| Fall | 2.80 _a | .96 | 2.98 _a | 1.04 | 3.74 _b | .81 | 11.63*** |
| Spring | 2.85 _a | 1.17 | 3.84 _b | 1.02 | 3.73 _b | 1.01 | 14.47*** |

Note: Means with different subscripts within rows differ significantly at $p < .05$.

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

DIFFERENCES IN STUDENTS' USE OF AVOIDANCE STRATEGIES BY CLASSROOM ENVIRONMENT

The next set of analyses involved investigating whether there were significant mean differences among the three types of initial classroom environments in students' reports of their avoidance in mathematics (self-handicapping, avoiding seeking help, disruptive behavior, & cheating) later that fall and in the spring. Analyses of variance indicated that there were significant differences among the early classroom environments for each of the four avoidance strategies in the fall and for all but cheating in the spring. These means, standard deviations, and *F*-statistics are presented in Table 2.

We conducted Tukey post hoc significant difference tests to identify the classroom environments that differed significantly from each other on each of these measures. The analyses indicated that students in supportive classrooms at the beginning of the year reported, both later that fall and in the spring, engaging in significantly less self-handicapping and disruptive behavior than did students in ambiguous or nonsupportive classrooms, who did not differ from each other. Furthermore, students in supportive classrooms reported at both times avoiding seeking help less than students in nonsupportive classrooms did. Interestingly, students in ambiguous classrooms reported significantly more cheating in the fall than those in

Table 2. Means, standard deviations, and *F*-tests of students' avoidance behaviors

| | Supportive (<i>n</i> = 69) | | Ambiguous (<i>n</i> = 71) | | Nonsupportive (<i>n</i> = 36) | | <i>F</i> |
|-----------------------|--------------------------------|-----------|-------------------------------|-----------|-----------------------------------|-----------|----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| Self-handicapping | | | | | | | |
| Fall | 1.61 _a | .72 | 2.23 _b | .90 | 2.28 _b | .97 | 11.73*** |
| Spring | 1.61 _a | .71 | 2.11 _b | .98 | 2.39 _b | .85 | 10.18*** |
| Avoiding help seeking | | | | | | | |
| Fall | 1.93 _a | .93 | 2.33 _{a,b} | .95 | 2.55 _b | .99 | 5.88** |
| Spring | 2.01 _a | .98 | 2.19 _{a,b} | .76 | 2.53 _b | .99 | 3.39* |
| Disruptive behavior | | | | | | | |
| Fall | 1.54 _a | .68 | 2.15 _b | 1.03 | 2.28 _b | .91 | 11.71*** |
| Spring | 1.87 _a | .92 | 2.73 _b | 1.36 | 2.54 _b | 1.16 | 9.10*** |
| Cheating | | | | | | | |
| Fall | 1.27 _a | .54 | 1.65 _b | .94 | 1.31 _{a,b} | .54 | 5.48** |
| Spring | 1.44 _a | .74 | 1.66 _{a,b} | .92 | 1.90 _b | 1.18 | 2.78 |

Note: Means with different subscripts within rows differ significantly at $p < .05$.

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

supportive classrooms, whereas students in nonsupportive classrooms did not differ from those in supportive or ambiguous classrooms. However, in the spring students in nonsupportive classrooms reported significantly more cheating than students in supportive classrooms; students in ambiguous classrooms did not differ from those in initially supportive or nonsupportive classrooms.

DESCRIPTIONS OF TEACHER PRACTICES ASSOCIATED WITH CLASSROOM ENVIRONMENTS

We next present descriptions of teacher practices associated with each of the three classroom environments identified at the beginning of the year. The descriptions are organized by the four categories by which the qualitative data were structured: (1) messages about tasks, learning, and expectations for students; (2) relationships with the teacher; (3) relationships among students; and (4) rules and management structures. Within each category, we give examples of teacher practices within each of the three types of environments (supportive, ambiguous, nonsupportive).

Messages About Tasks, Learning, and Expectations for Students

Supportive environments. In supportive environments all three teachers (Ms. Davis, Mr. Guthrie, & Ms. Robinson) spoke consistently about aspects

of the curriculum that they were personally excited about, tapped into students' interests, and portrayed learning (including about math) as enjoyable, valuable, and worthwhile. For example, when Ms. Davis introduced the new math curriculum she communicated that math can be fun, and that learning is empowering: "You have a great opportunity this year with the new math program. ... a lot of what we're going to be doing will be figuring out how to do things. ... I can see lights come on in your eyes ... And once you figure it out, you'll know how to do it. Someone can't take that away from you ... it becomes yours. Knowledge is a very, very powerful tool."

As they previewed the sixth-grade curriculum, teachers in the supportive environments expressed high expectations for their students' success, and confidence that they could teach them. They encouraged, built confidence, actively minimized anxiety or discomfort students may have been experiencing, and conveyed that they would help students, and that students would be successful if they put in effort. Ms. Robinson told students they would improve academically with persistence, but she also said that students who struggled would come to enjoy academics. For example, she said, "When you leave sixth grade, ... if you don't know how to do anything, you're going to know how to do MATH,⁶ you're going to know how to READ, you're going to be organized, and you're going to write." Mr. Guthrie made similar comments, such as, "When you leave here you're going to know all of the fractions and that'll be cool."

Ambiguous environments. During the first days of school all three teachers in the ambiguous environments spoke about academic content with enthusiasm. However these comments were very brief, and no teacher gave intrinsic reasons for learning; reasons, if given, were vague or extrinsic. For example, on the first day Ms. Anderson told students, "You're going to have a great educational experience and, um, we will study math, but we will also study other skills which hopefully will be lifelong learning skills which will help you throughout your life, even into adulthood and beyond." From those comments it is not especially clear what value she was attributing to math.

In general it appeared that these teachers wanted their students to learn, but they did not communicate unwavering confidence that they believed, or would ensure, that the students would learn, as the teachers in the supportive classrooms did. For example, Ms. Anderson said, "I can teach you, I can encourage you, I can give you good grades or not give you good grades, but you choose not to do your work" and, "You can lead a horse to the water, but you can't make him drink."

Another example of ambiguity involved Ms. Weber's apparent emphasis of learning over correctness when she said, "Don't be afraid to say it, even if

you're wrong. ... Nothing's going to happen if you give a wrong answer." However, when she asked students to volunteer answers to the math problems during the first days of school, she emphasized the importance of being certain of one's answers with questions such as, "Who else feels they have it exactly and would like to read their explanation?" Therefore she seemed to be valuing having the correct answer and not willingness to give attempts at answering.

Nonsupportive environments. Ms. Clark and Mr. Parsons also previewed the different subjects that the students would study in the forthcoming year. In general, they did not appear to convey value for learning academic content. Neither addressed the content of what students would be learning, and they seldom gave intrinsic reasons for doing schoolwork, or expressed enthusiasm or excitement about the content or learning. For example, Mr. Parsons said that reading was important because students would get a grade, that they would read books in order to write reports, and that he would read their reports to make sure they "haven't cheated" by not actually reading the book. Both teachers also implied often that students would not enjoy the activities. For example, after talking about the new math curriculum, with its "SIX math books" and lessons lasting "an ENTIRE HOUR," Ms. Clark reassured students, "We're not gonna start it 'til October, so you kinda get a little breather."

In contrast to the positive expectations in the supportive and ambiguous environments, the messages in the nonsupportive classrooms were often framed in ways that would be expected to arouse students' fear and anxiety. Mr. Parsons seemed to assume that many students would do poorly. He asked, "Why do most of you get Fs? Because you don't do your work." Ms. Clark warned students about math at middle school: "There's one teacher at [middle school], YOU DON'T GO TO LUNCH (shaking her finger for emphasis) until you know all your math facts." She then asked, "How many are shaky on math facts?" In the first 2 days of school Ms. Clark may also have evoked student apprehension when she spoke about students needing to "survive sixth grade": "Our first theme in reading is about survival because your main goal this year is to survive sixth grade, so that when you go to [middle school] next year, you will also survive that." Indeed, she used the word *survive* 12 times in a 10-minute period when talking about the upcoming year.

Summary. Although teachers in all three environments presented messages about what would be learned and how successful students would be, the content and the consistency of these messages varied among the three.

Whereas the introductions to sixth grade in supportive environments reflected enthusiasm for academics and incremental views of learning, coupled with unwavering teacher support of student successes, the nonsupportive approaches communicated things to be fearful about, emphasized capacity views of learning, and appeared to lack explicit teacher commitment to student success. In contrast to these opposing environments were the unclear and ambivalent messages about learning and teacher expectations in the ambiguous environments.

Relationships With the Teacher

Supportive environments. During the first 2 days of school, the three teachers in the supportive environments shared quite personal information about themselves. They made intellectually and emotionally supportive comments, sprinkled their remarks with humor, and conveyed a strong concern with wanting to help students learn. Their comments also conveyed their sensitivity of students' needs and showed a genuine respect for students.

Each of the three teachers introduced themselves to the students in personal, caring ways, and they connected this caring to their students' needs. For example, Ms. Davis indicated her understanding that students' feelings and behaviors are affected by many factors by saying, "My older son is physically handicapped and so I'm very, very aware of lots of things that go on with attention problems, that go with having a disability. And so if you're having a bad day or you just need a little bit of room or you just need to stand up, you need to let me know." Mr. Guthrie told students that being a teacher is more than a job—that teaching affects him personally and he goes home upset if there is a problem with a student. Ms. Robinson told very moving and very personal stories that showed empathy for some of her students' situations. She accompanied her disclosures with the exhortation, "I personally feel that if there's some way that I can help you, if there's something that you need, if I can help you, ... my former students will tell you—(forcefully) I will be there for you! I WILL BE THERE FOR YOU!!!!"

These teachers all directed warm, positive, and personal comments to the students. For example, when Ms. Robinson called roll on the first day she said something personal or complimentary to them, even if she had not known them before. She said, "Bethany Clark. Bethany can DANCE! I don't know anything, but I just remember the talent show last year," and, "Ramon Mead ... Ms. Weber says so many nice things about you. I'm glad I got you."

A feature of the relationships that these teachers began to construct with their students was a sense of developmental appropriateness; they seemed

to successfully walk the fine line between expecting adolescent responsibility and recognizing the child in them. They demonstrated skill in selecting and presenting activities that appealed to early adolescents. The teachers' liberal use of humor was also developmentally appropriate. For example, when Mr. Guthrie previewed that students would learn about the English and metric systems of measurement later in math, he had students laughing with comments such as, "What's an English measurement? Is that one that says, (in an English accent) 'I say, old chap'?"

These teachers made comments that indicated they were trying to create a comfortable learning environment for students. For example, Ms. Davis said she would play soothing music because, "It does help set the tone and it makes you relax." She and Mr. Guthrie explained that students would stop for midmorning snacks because they help their concentration.

Ambiguous environments. Like those in the supportive environments, the teachers in the ambiguous environments shared personal information about themselves and used introductory activities to get acquainted with their students. This information was less revealing of themselves as people, however, compared to teachers in the supportive environments. Ms. Anderson told students that she cared for her granddaughter and also described her recent trip to Mexico; Ms. Marks described her teenage son and her favorite activities; and Ms. Weber gave students a "quiz" about her, such as her age and her father's occupation. Interestingly, two of the teachers emphasized their teaching credentials on the very first day, as if to preempt any skepticism about their professionalism.

These teachers generally communicated friendliness and professional concern to their students, such as when they checked the pronunciation of students' names or asked if students were comfortable in their desks. However they did not make the kinds of personal comments to students that the teachers in supportive environments did; their introductory comments focused predominantly on themselves. Their messages may have seemed pro forma to the students, as teachers sometimes contradicted what they had just said. For example, on the first day Ms. Marks said, "You're one of my greatest classes that I've had in my whole years of teaching," but in almost the same breath said, "Now I'm going to tell you right now, I don't like what I see. And I haven't liked what I've seen thus far."

Through a variety of ways it appeared that these teachers were not always developmentally appropriate with their students; at times students appeared embarrassed by tasks or teacher comments. For example, Ms. Marks had students decorate nametags as an introductory activity and then demonstrated how to count the number of letters in their name. In contrast, Ms. Weber seemed to overestimate students' abilities and then

became frustrated. For example, during the first 2 days, when she spent considerable time on math review, she did not seem to recognize that students were having trouble because they did not understand how to do the math. It was common for her to make frustrated comments such as, “Don’t just sit there looking at it, boys and girls. Do the math!”

Nonsupportive environments. During the first 2 days of school both teachers in nonsupportive environments made themselves the focus of the classroom through actions that seemed to build audience, rather than community. For example, on the first day Ms. Clark had students read letters written by every child in her previous class, telling them about herself. She then asked students what they had heard about her from older siblings. Similarly, these teachers did not make comments that sounded intellectually or emotionally supportive of students. During an activity when students introduced themselves to the class Mr. Parsons told students, “Some people I remember, some people I don’t. I’ll try to remember who you are.” Both teachers communicated that students could not be trusted; they mentioned cheating as if they expected students would cheat, but also warned students not to because they would be caught.

A salient feature of messages sent about teacher-student relationships involved the teachers’ power over students and their ability to affect students’ school experiences. At times this authority sounded as if it would be enacted somewhat arbitrarily. For example, Mr. Parsons told the students, “Here are your consequences—I decide what happens.” Ms. Clark told students on the first day that she would be nice if they were: “If you want me to be ugly, I can be ugly. ... I am 51% princess and 49% witch. ... Go ahead, push my buttons—I’ll be happy to oblige.” Both teachers made threats, including indicating that they could have students removed from school. Mr. Parsons said, “With too many days absent I could say that this person needs to repeat the sixth grade.” Later he told students, “[Last year] I gave Richard quite a few detentions and pretty soon I just said, ‘Dr. Adams [principal], I’m tired of it. ... and I don’t want him any more. Suspend him the next time I send him down.’ ... I just didn’t want to deal with it.”

Summary. Teachers in the supportive environments seemed to focus on building teacher-student relationships. They introduced themselves in ways that indicated sensitivity to students’ personal and developmental needs, used humor, and expressed caring about students and their learning. Teachers in the ambiguous environments appeared to focus on relationship building but appeared to lack the important components of building trust

and understanding. They wavered in their personal statements, appeared ambivalent about whether they were ‘friend or foe,’ and their tasks seemed developmentally askew. In contrast, teachers in the nonsupportive environments seemed to focus on establishing the power differential between themselves and students; they introduced themselves as authoritarian and expressed an assumption that students would cheat.

Relationships Among Students

Supportive environments. During the first 2 days the teachers’ messages in the supportive environments appeared to create an atmosphere of community, in which respect among students was paramount. For example, Ms. Davis said, “Treating someone disrespectfully, making fun of someone because of a disability, because of their clothes, because of their parents, or their sister or brothers, it’s just not acceptable to me. ... Don’t you think we all have enough problems that we don’t need to create them for other people?” The teachers encouraged students to be thoughtful of others, consider their feelings, and to be inclusive, rather than exclusive. Ms. Davis told students they were not allowed to exclude others from sitting at a particular table in the cafeteria. Rather, they should “look around the cafeteria sometimes. If you see someone sitting alone—kids don’t often like to sit alone, so maybe you could be very nice that day and say, ‘Would you like to sit over here with us?’ Doesn’t mean you have to be the best friend of that person forever. It means that sometimes it’s nice to be thoughtful of others.” Ms. Robinson also emphasized her students’ interdependence and the need for helping each other. She told students emphatically, “I don’t want anybody to think just because you were straight As last year that you have the right to look down on somebody who might have struggled in social studies, math, or reading! ... We are here to HELP each other, not pull each other down.” She talked about how they would be able to support each other, through their friendships, next year in middle school when they were in a new environment and did not know many people.

Ambiguous environments. To varying degrees, these teachers addressed that students should behave positively and talked about the importance of getting along with others in the class. However, they did not insist on it or hold students accountable if they were disrespectful to each other. These inconsistent messages differed from those in supportive classrooms, in which teachers actively encouraged inclusion and did ensure that students behaved accordingly. For example, Ms. Marks told the class: “Every person has something important to say. And we always should allow someone else

to speak so that they can show that they are just as intelligent as you are.” However during the first 2 days students were heard bickering and telling each other to “shut up,” and there was no teacher intervention.

On the first day Ms. Weber told her class, “No gossiping, no saying nasty things about each other, um—you don’t like someone, just don’t say anything. ... You don’t like someone, you don’t have to spend time with them. But you just don’t talk about them.” However, her practices were not consistent with her comments. Ms. Weber assigned a “mentor” to each of the three new students. She did not establish that the mentors were willing, however, and one boy who did not seem to want the job or like Mark, his mentee, frequently made disapproving faces to his friends at the back of the class. His actions were never reprimanded. During the second morning Ms. Weber noticed that Mark was actually on the other sixth-grade teacher’s class register. When this information became public there were audible half-whispered exclamations of “YES!” by a number of the students, and many students smiled that he would be leaving their class. Ms Weber never responded to the public reactions in her class, even though she had previously told students that it was unacceptable to talk about other students in a hurtful way.

Nonsupportive environments. Despite a few comments to the contrary, the teachers’ messages in the nonsupportive environments did not seem aimed at creating an atmosphere of community or respect among students. Mr. Parsons did tell students that he wanted to “encourage the development of trust, cooperation, and responsibility,” and that he would not tolerate fighting or name-calling. Ms. Clark welcomed new students to the class and told the others to make them feel welcome, and said, “We are a team. We are a group. We are a relationship in this classroom.” However the teachers’ actions that would support these statements were not evident. In fact, unlike the ambiguous environments where teachers were passive, teachers in the nonsupportive environments made comments that appeared to model the very opposite of respectful, supportive behavior. For example, while Mr. Parsons was assigning lockers he mentioned that some students would need to share. He asked who wanted to share a locker with Joe, who was absent. Many students called out that they did not want to, but one student volunteered with a sigh. Mr. Parsons replied, “I didn’t say that you had to share with Joe” and then said, “I’ll get Joe one by himself.” Shortly afterward Serena complained that another student “is teasing Joe even though he is not here,” to which Mr. Parsons smiled and said, “Well, I heard about him and have heard the report that he has a habit of making some nasty sounds.” Other students then laughed and made noises.

Summary. Teachers in supportive environments voiced explicit expectations that the classroom would be an inclusive one and that students would treat each other respectfully, whereas teachers in ambiguous environments said similar positive things but did not insist that students met those expectations. Teachers in nonsupportive classrooms made brief positive comments about treating each other well, but also modeled responses to students that were not respectful.

Outlining Rules and Management Structures

Supportive environments. Teachers in the supportive environments identified classroom rules, explained the reasons for them—mostly in terms of respect for others—and emphasized fairness. They also all gave clear examples of appropriate behavior, and identified behaviors that would not be acceptable. Both Ms. Davis and Mr. Guthrie talked succinctly about their rules and management structures, whereas Ms. Robinson spent considerable time detailing an extensive management system. All three, however, appeared to send similar messages. They shared a strong emphasis on students behaving responsibly and with respect and self-control and being part of a community. They all expressed expectations confidently that students would behave and lightened the tone with their lively sense of humor. For example, when Mr. Guthrie told students they could not use the telephone on his desk he said, “It’s like the President’s phone—it’s red. That gets me directly to the White House, and you don’t want to mess with that.” And Ms. Robinson said, “I don’t care if Sally Sue’s class is coming down the hall, turning cartwheels with no hands. Backwards! Ms. Robinson’s class will be standing like nice little soldiers. Or, should I say, mature sixth graders, with their mouths closed, waiting to go to their classes.” Furthermore, there was little sense of the teacher needing to wield power over students—their expectations were that students would be responsible for their behavior. The teachers also seemed to prevent student restlessness. For example, after a while of predominantly teacher talk on the first day Mr. Guthrie took students outside to see the garden and pond, where he talked about the plants and what they would do in science.

All three teachers were consistent in the enforcement of their expectations. For example, Ms. Robinson was quick to scold a student who threw paper basketball-fashion into a trashcan and another who did not say thank you when she passed out a morning snack. After students were too noisy during the first visit to their lockers, Mr. Guthrie told them, “I know you guys had a good time out there talking to your friends and getting your locker done, but that was a good example of too loud.”

Ambiguous environments. Teachers in ambiguous environments also told students their rules; however they were not consistent with following through and enforcing them. The three teachers differed in their messages about classroom procedures and management. Ms Anderson's practices involved her control over students' actions, whereas both Ms. Marks and Ms. Weber were vague regarding management, and emphasized self-control but enforced the procedures inconsistently or ineffectively when "tested" by students.

Both Ms. Marks and Ms. Weber spoke about students having self-control, but they did not provide the structures to support it. Ms. Marks engaged her students in a discussion of classroom rules. She asked students to suggest rules, then showed that all the suggestions were encompassed by the one rule "respect others" and explained that they did not need any other classroom rules. She framed the discussion as wanting a positive environment; "We want to have some fun this year, so that means that we have to have some rules that we need to go by in the classroom, to keep the classroom at a pleasant environment." She also mentioned that she should not have to control the students; "I should not have to have control over you. You shouldn't have to have control over me." However, she did not emphasize and provide structures for students having self-control; she talked about management procedures but did not enforce them. Consequently, Ms. Marks seemed to spend a lot of time putting out fires and reprimanding and made very few positive comments.

Ms. Weber told students her classroom procedures and emphasized that she expected students to be self-controlled; "Boys and girls, I'd really like to depend on you to control yourself at all times." However, she did not hold them accountable. For example, she allowed students to talk during tasks, told them she expected them to stay on task, but did not monitor their behavior. Typically, after some time she would realize that students' attention had moved from the task and would become frustrated. Her response then was to threaten students with a punishment system, but even then she sounded inconsistent. For example, she said, "Unfortunately, I'm going to have to do what I did last year. I'm going to have to have a list of all your names with me at all times. Every time you disrupt the class you'll get a check next to your name. And five checks in one week you get a detention. ... On Monday we're going to start that. (*pause*) Maybe we can delay it. Maybe we don't have to use the checklist. It really depends on you and your behavior."

Nonsupportive environments. Both Ms. Clark and Mr. Parsons spent a considerable amount of time on the first day talking about rules, procedures and management, and disciplinary measures—Ms. Clark for approximately 2 hours and Mr. Parsons for almost the 3 hours (all but his brief previewing of the curriculum).

Both Mr. Parsons's and Ms. Clark's management structures involved a high degree of teacher control, rather than promoting students' development of responsibility, and they referred largely to following procedures rather than why they were important for learning. Both of the teachers' management systems involved a sequence of cards that were turned over with each succeeding infraction. Ms. Clark gave explicit procedural rules for every activity of the day, from first to last bell. For example, when listing the required supplies, she said students should not tear papers out of spiral notebooks. "I don't like [it when] you pull out of the spiral and then you have little pieces hanging, I call that fringe. I hate fringe. I've even taken [points] away for fringe. ... I may send you back and have you cut off that fringe. That's how I feel."

These teachers were the only ones who spent a significant amount of time detailing specific rules and procedures. The rules that they presented were not explained to students and did not communicate clearly what was expected of them. Mr. Parsons focused almost exclusively on what students were not allowed to do and gave numerous examples of extreme misbehavior. He told students not to forge, sexually harass, or bring weapons to school because they would get caught, not to be truant because their parents would get into trouble, and to follow emergency drills to earn points and avoid tedious writing punishments.

The three rules that Ms. Clark gave were positive but abstract and nonspecific: "obey class rules, do your best, follow the golden rule." Further, her talk about rewards and punishments may have appeared arbitrary and unpredictable. She said, "I'll say 'Oh my goodness, look how nicely they're working together cooperatively.' I may go up and give them a [point]. But she doth giveth merits and taketh away. SO, if I notice that ... I go and TAKE A FEW OFF! I may not even say a word to them. I'll just go up and take it off."

Summary. Teachers in supportive environments told students their rules, gave reasons for them, expressed positive expectations, and emphasized student self-control but also monitored student behavior and held students accountable. In contrast, teachers in nonsupportive environments spoke at length about rules, voiced negative expectations of students, and instituted authoritarian management systems. The teachers in ambiguous environments spoke about students' self-control but did not support or demand it; consequently they appeared to have more misbehavior to respond to than the other teachers on the first days of school.

Consistency of Teacher Discourse Patterns Across the School Year

Patterns of motivational and organizational discourse that were conceptually similar to those identified in the beginning of the year are shown in

Table 3. Percentages for teacher motivational and organizational discourse categories in spring math lessons

| | | Supportive Moti- vational | Non- supportive Motivational | Supportive Organi- zational | Non- supportive Organizational |
|---------------|----------|---------------------------------|------------------------------------|-----------------------------------|--------------------------------------|
| Supportive | Davis | 19.9% | 1.4% | 26.9% | 2.0% |
| | Guthrie | 17.7% | 1.7% | 25.8% | 1.3% |
| | Robinson | 22.5% | 0.7% | 24.2% | 4.2% |
| Ambiguous | Anderson | 8.3% | 0.9% | 21.2% | 9.4% |
| | Marks | 6.9% | 2.0% | 23.1% | 10.1% |
| | Weber | 6.6% | 4.7% | 19.8% | 3.9% |
| Nonsupportive | Clark | 11.2% | 5.2% | 19.8% | 6.1% |
| | Parsons | 6.1% | 3.9% | 20.4% | 3.4% |

Note: For discourse collection procedures, codes, descriptions, examples, and coding procedures, see Turner et al. (2002).

Table 3. Most messages about tasks, learning and expectations, as well as statements about relationships with the teacher and among students, were coded in the motivational discourse categories. Most statements about rules and management were coded in the organizational discourse categories. Therefore, motivational and organizational discourse from the spring math classes served as triangulation for the patterns developed from discourse at the beginning of the year.

Table 3 shows that classroom environments in mathematics classes in the spring were consistent with patterns developed at the beginning of the school year. Teachers in the initial supportive environments used more supportive, and less nonsupportive, motivational discourse than did teachers in ambiguous or nonsupportive environments. This suggests that these teachers were successful in building positive classroom climates focused on learning and student academic and emotional support. In addition, these teachers used more supportive organizational discourse than did the other teachers, indicating that they may have been adept at orchestrating smoothly run classrooms and preventing disruptions. This implies that management systems established earlier were functioning well.

Compared to teachers in the supportive environments, those in the initial ambiguous environments used supportive motivational discourse less often in their classrooms in the spring. Students may have interpreted the relatively low levels of motivational support as showing a lack of caring and a failure to help when they needed it. As such, using avoidance strategies may have seemed logical responses to low levels of teacher support. Teachers in the ambiguous environments also used a smaller percentage of supportive, and a larger percentage of nonsupportive, organizational

statements. Ms. Anderson and Ms. Marks had the highest percentage of nonsupportive organizational discourse (e.g., 9.4% & 10.1%) of all the classrooms. This indicates that there were more disruptions in these classrooms and supports the interpretation that these teachers were inconsistent in management practices.

Motivational discourse patterns of teachers in the nonsupportive environments were somewhat similar to those in the ambiguous classrooms, although Ms. Clark had higher percentages of both types of motivational discourse. On average, these teachers used less nonsupportive organizational discourse than did the teachers in the ambiguous environments. Their highly structured management systems may have contributed to this difference.

In summary, there was strong consistency between classroom patterns at the beginning of the year and those during spring. Classrooms that appeared supportive at the start of the year had higher percentages of supportive motivational and organizational discourse, and lower reports of nonsupportive discourse, than did other types of classrooms. In ambiguous and nonsupportive classroom environments there was less supportive motivational and organizational discourse and, on average, more nonsupportive discourse. Next we provide examples of teacher discourse during spring mathematics classes to illustrate how teachers used motivational and organizational discourse to send messages about learning, about teacher and student relationships, and about rules and management.

Supportive environments. In the initial supportive environments, teachers continued to emphasize the value of the math curriculum and their confidence that students could learn. For example, Mr. Guthrie asked Brandon, "Does this make sense?" When Brandon said "no," the teacher replied, "No, not yet right? OK, let's stop then." He explained again, but continued to monitor Brandon's understanding. Later, as he worked with Brandon, he encouraged him: "Once you get this it's going to be real, really, really easy. It REALLY is. It's just that you haven't seen the light yet."

In addition, these teachers continued to show concern for students' feelings, to emphasize respect, to offer help when needed, and to use humor to alleviate anxiety, support positive emotions, and to make learning enjoyable. When Sam made a mistake measuring angles, Ms. Davis responded to his embarrassment by putting her hands on his shoulders and emphasizing to the class that all could learn from it. "I want to point it out to you here, because it is probably THE MOST common mistake that students make in using a protractor to construct angles." Indicative of how supportive teachers encouraged positive classroom management, Ms. Davis encouraged her students to give their full attention with a humorous

statement: “First, sit up straight and take a deep breath. One more. Don’t you feel yourself getting smarter? You look smarter already.”

All teachers emphasized their willingness to help and there was evidence of students helping each other voluntarily in these classes. In Ms. Robinson’s class, students were required to work with many different partners to foster community. After Ms. Robinson required two reluctant students to work as partners, she complimented them on their accomplishment and reiterated the value of working together: “They make a good team together. They didn’t want to work together. When they put their heads together, they did a pretty good job ... but it just blew my mind that they didn’t want to work together and when they DID work together, they came up with all the answers correct. I don’t even think I could do that myself.”

Ambiguous environments. Messages about learning and expectations were more muted in the early ambiguous environments. In general, teachers made fewer supportive motivational statements and they may not have conveyed the same assurance that students were learning as those of supportive teachers. Rather than encouraging, as the supportive teachers did, teachers in ambiguous environments often scolded, as some had at the beginning of school. When students showed misunderstanding of how to dissect angles, Ms. Marks commented, “All of these angles are not drawn properly. ... We’re playing. We’re not serious about what we’re doing. ... You know, we gotta care about what we’re doing here. And we know how to draw angles, but yet we take them and we just draw them all in, we don’t care.”

These teachers continued to send mixed messages. For example, when students were having trouble estimating angles Ms. Weber acknowledged their difficulty and gave clues: “Boys and girls, stop working for a minute please. I see a lot of confusion here. Remember to measure each angle according to your benchmark figure, which is a right angle. If the angle is LARGER than a right angle, it has to be MORE than 90 degrees. If it’s SMALLER than a right angle then it has to be SMALLER than 90 degrees.” However after noting their struggle she immediately publicly admonished individuals who had not completed enough of the questions. She said to Hilary “We’ve been at this for 10, 15 minutes and all you have is a triangle sketched,” and, to Brian, “Come on, get moving. All you have is the square done.”

Teachers also sent mixed messages about their expectations. One example was when Ms. Weber demonstrated how to play a two-player game that involved identifying and adding angles within a circle. She emphasized, “You’re supposed to do it in your head! I want you to do

mental math with this.” However at one point in the game she wrote down numbers before adding them. A student called her on this, saying “You put it on paper,” and the teacher replied, “Yes, I know. I cheated.” Students laughed and called out “Ewwwww!” Later, when students were playing the game in pairs, Ms. Weber admonished students who wrote down the numbers; “You need to do the math in your head. Otherwise it’s just like a first-grade game where you just, you know, it’s just too easy.”

Although teachers wanted students to cooperate and had stressed the contribution of each member of the group at the beginning of the year, students continued to show disrespect, accuse each other of cheating, and refuse to work together. For example, one student in Ms. Anderson’s room was anxious not to be blamed for secretly using a protractor instead of “estimating” angles. She said, “She asked me if she could use it. ... She’s the one cheating, not me!” Ms. Anderson replied, somewhat ineffectually, “We don’t use that word in here.” The other student shot back, “She’s cheatin’ too if she writes what I got there!”

It was not clear at the beginning of the year that teachers in the ambiguous environments were successful in communicating and enforcing rules and procedures. In the spring interruptions were common in both Ms. Marks’s and Ms. Anderson’s class, as indicated by the high percentage of nonsupportive management discourse (10.1% & 9.4%, respectively).

Nonsupportive environments. By spring messages about learning and expectations differed between the initial nonsupportive classes. However, as the percentages for supportive motivational discourse indicated (11.2% & 6.1%), there were fewer comments that encouraged students or acknowledged what they had learned or accomplished than in the supportive environments (17.7–22.5%). Ms. Clark did note Aaron’s learning achievement when she said, “I know Aaron can do this because he did it after school very nicely.” More often, though, teachers blamed students for not recalling information or implied that they would cheat or cut corners. For example, Ms. Clark was trying to lead the students to see that if an equilateral triangle has 180 degrees, then each angle would measure 60 degrees. In apparent exasperation, she announced, “They’re the same! If I have 180 degrees and three angles, how much is each angle? (*silence*) Duhhhh!” This was an expression that she used often and in a manner that appeared to indicate that students should have known what to do; since they did not know, they were not very able.

Mr. Parsons continued to suggest that students would probably do poorly, as he did at the beginning of the year. His practice of offering extra credit for easy assignments also suggested his low value of both student effort and the tasks. It may have been that he did not believe his students

could earn passing grades unless he offered these extra incentives. For example, he offered extra credit for a question that could be answered with a variety of answers, implying that even students who did not know the content could earn the points. “You can’t get number 44 wrong, so for number 44 I’m going to give you 15 points toward your grade.” This statement also implied that mathematics was about earning points, not about understanding the material.

In spring the teachers in the nonsupportive environments often made comments that may have seemed rude or disrespectful, like they did at the start of the year. For example, during a game Mr. Parsons prefaced hints about the degrees in an angle by saying, “Just a little help for those of you who are having brain farts left from spring break.” To Michael he replied, “Did you play any moves [in the game]? Then I suggest you shut your mouth. If you can do it.”

As the relatively high percentage (5%) of her nonsupportive motivational discourse indicates, Ms. Clark often interrupted her instructional sequences with reprimands or statements that might have been publicly embarrassing or disrespectful to students. For example, while trying to elicit student suggestions for drawing a 20-degree angle, Ms. Clark encountered student silence. She commented to the observer, “You know, I think they just looove to totally waste time and wait for somebody else to think of an answer.” She followed that aside with a series of continuous comments and questions in which she abruptly shifted between asking the class about the math and reprimanding individual students: “Did you take your Band-Aid off? So, you’re gonna sit and pick at your cut? Don’t mess with it either. You just might as well say you’re pickin’ at it! Good way to get an infection. While you were gone, we talked about the 15-year-old who died from a sinus infection that went to his brain. *(to the class)* What am I gonna do with this 90-degree angle to make 20 out of it? *(to a student)* April, I sure hope your hair is helping you know this geometry. *(to the class)* How would I make a 150 degrees?” These abrupt turns from student reprimands to math and back again may have emphasized teacher control and the arbitrary nature of discourse and behavior in this classroom.

In summary, messages about learning and expectations, teacher and student relationships, and rules and management detected at the beginning of the school year were apparent in math classes in the spring in teachers’ motivational and organizational discourse.

DISCUSSION

The focus of this study was on how teachers create classroom environments at the beginning of the year, and one aspect of why those early

environments are important—they may encourage students to avoid learning. We found that despite considerable differences in the specific practices that the teachers used at the start of the year, there were strong similarities among clusters of teachers. Teachers' early classroom environments appeared to be one of three different kinds—supportive, non-supportive, or ambiguous.

There was striking consistency within both initially supportive and non-supportive classrooms with regard to teachers' explicit and implicit messages and practices across all areas of learning, social relationships, and management. During the first days, teachers in supportive classrooms appeared generally warm, approachable, and expressed positive expectations with respect to the school year in terms of learning, relationships, and management. Teachers in non-supportive environments appeared just the opposite—they presented reasons for students to adopt avoidance strategies, expressed views of learning as outperforming others and completing tasks for the extrinsic rewards or to avoid penalties, and did not build community.

In contrast, ambiguous classrooms were characterized by inconsistency. Teachers in those classrooms tended to say much of what teachers in supportive classrooms said, but they did not follow up and insist that students meet their expectations. This seemed to provide an environment in which students could not put faith in what the teacher said. Students appeared to realize that their teacher was not monitoring them and holding them accountable from the first day, and the students' understandable responses seemed to lead to considerable teacher frustration. It appeared that these teachers believed they were saying the right things and sending their intended messages, so they appeared to consequently criticize or blame the students; they did not seem to realize that their contradictory actions were undermining their positive verbal messages. They also did not seem to understand or connect with students, despite exhibiting apparent good intentions.

There was strong congruency between classroom environments at the beginning of the year and both teachers' discourse and students' reports later in the year. Students in classrooms that appeared to be supportive, respectful, and learning focused during the first 2 days of school reported they perceived their mathematics classrooms that way late in the fall and also during the spring. Similarly, students in classrooms that did not appear to be supportive, respectful, and encourage learning at the start of the year reported those same perceptions in the fall and spring. These results support previous findings of the stability of classroom motivational environments from the first days of school (e.g., Deci et al., 1981; Patrick et al., 2001) and underscore how crucial that time is for teachers and students in terms of sowing the seeds for adaptive or maladaptive patterns of engagement.

Of particular importance are the findings of students' perceptions of ambiguous classrooms. As noted, teachers in these classrooms made much the same kinds of comments as the teachers in the supportive classrooms, although they also sent conflicting messages. However, students' perceptions in the ambiguous classrooms were more similar to those of students in the nonsupportive classrooms than to those in the supportive classrooms. This finding suggests that to create adaptive classroom environments—ones in which students perceive the teacher as being supportive, promoting mutual respect, and emphasizing a mastery goal orientation—teachers must be consistent and unwavering in their positive messages about learning, relationships, and management.

As we expected, students' reports of avoidance strategies in mathematics differed significantly among the different classroom environments. Furthermore, students' use of avoidance strategies was consistent with our perceptions of the classroom at the beginning of the year. That is, students reported least avoidance in supportive classrooms in which teachers appeared to foster approachability (i.e., towards academics & learning, towards others) and in which they perceived the teacher to be supporting them through promoting respect, emphasizing a mastery goal orientation, and giving little emphasis to a performance goal orientation. Students reported, on average, significantly more avoidance in classrooms that appeared either nonsupportive or ambiguous at the beginning of the year. Interestingly, there tended to be no difference in avoidance between those two environments. In nonsupportive classrooms teachers seemed to accentuate avoidance (i.e., towards academics and learning, towards others) and in ambiguous classrooms teacher actions appeared to send mixed messages (i.e., approachability was not unequivocal). Thus, the most avoidance occurred in environments where students perceived their teachers as being less supportive, promoting less mutual respect, promoting a mastery goal structure less, and emphasizing a performance goal structure. This is consistent with findings from research in goal theory, in which reports of avoidance strategies are related negatively to classroom mastery goal structure and related positively to performance goal structure (Urdan et al., 2002). The present study extended that research to indicate that perceived teacher support and respect in the classroom are also related negatively to a range of avoidance strategies. It also explored how teacher discourse was related to establishing classroom psychological environments and to students' reports of avoidance strategies.

The present study also provides insight into general management recommendations given to teachers for the first days of school (e.g., Evertson, Emmer, Clements, & Worsham, 1997). This study suggests that these practices are not self-evident or neutral. There are a variety of ways in which teachers can preview the curriculum, define relationships, and

establish classroom rules and procedures, and these ways appear to influence students' motivation. How, not just whether, teachers fulfill these roles may have significant effects on the adaptive and maladaptive patterns students report later in the year. When teachers implement beginning of the year practices in ways consistent with those in supportive classrooms, there is remarkable convergence between management and motivation. This relates closely to the argument made by McCaslin and Good (1992) that teachers' management practices are associated integrally with their students' learning and motivation. They argue that authoritative classroom management (i.e., giving opportunities for students to take responsibility and control, and gradually increasing those opportunities in response to increasing student self-control) is necessary to promote adaptive learners who take risks, and develop problem-solving, critical thinking, and self-regulation. The specifics of management practices, however, must be developmentally appropriate. The findings in this study regarding teacher practices in the supportive environments relate to early adolescents; these practices may not be appropriate for younger, or older, students.

There are a number of implications for teachers that arise from this study. First, it appears imperative that teachers' words and actions are consistent; inconsistency seemed to be perceived by students as negatively as nonsupportive practices and was associated with just as much use of avoidance strategies. Second, the study identified the importance of teachers being affirming and caring (intellectually & emotionally), and creating a positive socioemotional environment. Teachers who, at the outset, were unwavering in expressing positive expectations for all students, and provided assistance so that students could be successful, had the least amount of avoidance in their math classes. And third, this study demonstrated that first impressions of teachers and their practices are incredibly powerful. Teachers' practices on the first days of school appeared to contribute to distinct classroom environments, and these first impressions were associated with student perceptions of their classroom later in the school year. Accordingly, old adages such as, "Don't smile until Christmas" and "Start out the year tough," which are often recommended to new teachers, may work against the very goals that teachers are trying to achieve.

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Notes

1 The original sample of nine teachers included one who was beginning her first year of teaching. We dropped her from the analysis because we did not feel confident in interpreting her practices or messages.

2 Items for the promoting mutual respect scale were not included in the survey administered in the spring.

3 For discourse collection procedures, codes, descriptions, examples and coding procedures, see Turner et al. (2002) and Meyer and Turner (2002).

4 All names of teachers and students are pseudonyms.

5 We previously called this teacher Ms. Christian (Meyer & Turner, 2002; Turner et al., 2002), and thank an anonymous reviewer for suggesting a change in pseudonym.

6 Words in capital letters indicate that the teacher raised his or her voice for emphasis.

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