Teachers' Communication of Goal Orientations in Four Fifth-Grade Classrooms

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Abstract

We investigated the explicit and implicit ways in which 4 fifth-grade teachers communicated an emphasis on mastery and performance goal orientations to their students. We used survey data about perceptions of the classroom mastery and performance goal structures from 223 students in 10 classes to identify 4 classrooms with significantly different motivational profiles. We then used observational data to describe teachers' talk and practices regarding tasks, authority, recognition, grouping, evaluation, time, social interactions, and help-seeking in those classes. We found that teachers perceived as having a high mastery focus spoke about learning as an active process, and this was reflected in their practices. They required involvement from all students, emphasized effort, and encouraged student interaction. Those teachers also exhibited social and affective support for, and concern about, students' learning and progress. These practices were not observed in low mastery-focused classes. The teachers perceived as having a high performance focus emphasized formal assessments, grades, and students' relative performance to a substantially greater extent than the low performance-focused teachers.

Goal orientation theory has emerged as a useful framework for understanding students' motivation for, and engagement in, schoolwork (e.g., Ames, 1992; Maehr, 1984; Nicholls, 1984). This theory is concerned with the purposes students perceive for engaging in achievement-related behavior and the meanings they ascribe to that behavior. A mastery goal orientation (sometimes called a task goal, e.g., Maehr, 1984, or a learning goal, e.g., Dweck, 1986) refers to wanting to gain understanding, insight, or skill, whereby learning is valued as an end in itself. In contrast, a performance goal orientation (sometimes called an ego goal,
e.g., Nicholls, 1984, or an ability-focused goal, e.g., Maehr & Midgley, 1991) refers to wanting to be seen as being able, whereby ability is demonstrated by outperforming others or by achieving success with little effort. These contrasting goals have been related consistently to different patterns of achievement-related affect, cognition, and behavior (Dweck & Leggett, 1988; Pintrich & Schunk, 1996). Being mastery focused has been related to adaptive perceptions and behaviors, including feelings of efficacy, the use of effective learning strategies, and achievement (e.g., Meece, Blumenfeld, & Hoyle, 1988; Pintrich & De Groot, 1990). Although the research on performance goals is less consistent, this orientation has been associated with maladaptive achievement beliefs and behaviors, particularly for children who perceive that they are low in ability (e.g., Anderman & Young, 1994; Meece et al., 1988; Nolen, 1988).

Despite the evidence of associations between students’ personal goal orientations and important achievement-related outcomes, little is known about how teachers influence their students’ perceptions of the goals that are emphasized in the classroom. This is an important research question, both to help expand theory and to help practitioners create desirable learning environments (Blumenfeld, 1992). In this study, therefore, we considered the associations between teachers’ behaviors and practices and their students’ perceptions of the goal structure of their classes. In particular, we were interested in understanding the explicit and implicit ways in which teachers communicated to their students an emphasis on mastery and performance goals. Our goal was to provide rich, detailed descriptions of classroom practices that were associated with students’ reports that a mastery-focused or performance-focused goal structure was emphasized in their classroom.

**Classroom Goal Structures**

Goal orientation theorists (e.g., Ames, 1992; Maehr & Anderman, 1993; Midgley, 1993) frequently emphasize six categories of teacher practices that contribute to the classroom learning environment. These categories, represented by the acronym TARGET, described originally by Epstein (1983), and their focus are: (1) Task (Are class activities meaningful? challenging? interesting?); (2) Authority (Do students have some autonomy and share responsibility for rules with the teacher?); (3) Recognition (Available to all students? Is progress recognized? Opportunities for social comparison?); (4) Grouping (Based on ability? Do students work and interact with different peers?); (5) Evaluation (Are grades and test scores emphasized? Made public? Interpreted in terms of improvement and effort or ability?); and (6) Time (Is scheduling of activities rigid?) (Ames, 1992; Maehr & Anderman, 1993). The importance of some of these dimensions has been supported by experimental studies (e.g., Ames & Ames, 1981; Butler, 1987; Covington & Omelich, 1984; Elliott & Dweck, 1988; Jagacinski & Nicholls, 1984) that have shown that different personal goal orientations can be induced by emphasizing factors such as self- or norm-referenced standards of evaluation, by increasing or decreasing interpersonal competition, or by allowing or not allowing retest opportunities.

Research in classrooms and schools has also provided ecological support for the benefits of a mastery-focused goal structure and the drawbacks of a performance-focused goal structure (e.g., Anderman & Maehr, 1994; Maehr & Midgley, 1996). Researchers (e.g., Ames, 1990, Midgley et al., 1996) used the TARGET dimensions as the basis for the development of scales to assess the goal structure in the classroom. Students’ perceptions that their learning emphasizes a mastery focus have been related significantly to a personal mastery goal orientation (Midgley, Anderman, & Hicks, 1995) and also to adaptive patterns of engagement and learning (e.g., Ames & Archer, 1988; Kaplan & Midgley, 1999). In contrast, students’ perceptions of their
learning environment as having a performance focus have been associated with a personal performance goal orientation (Midgley et al., 1995) and with maladaptive learning and engagement patterns (e.g., Kaplan & Midgley, 1999; Ryan, Gheen, & Midgley, 1998; Urdan, Midgley, & Anderman, 1998).

To date, research on classroom goal structures has tended to rely on surveys of students’ perceptions of the classroom environment (e.g., Ames & Archer, 1988; Anderman & Midgley, 1997). These self-report studies have contributed to an understanding of how students’ perceptions of classrooms are related to the goals they pursue and the behaviors they exhibit. However, there is a need for “unpacking” these perceptions by investigating what teacher behaviors are associated with students’ perceptions of their classroom goal structure. This may be achieved best by using qualitative methods, either alone or in conjunction with surveys (Blumenfeld, 1992). Qualitative approaches can provide rich descriptions of learning environments and can contribute to theory development by identifying which teacher practices are most salient to students and are most strongly linked to students’ perceptions, thus enabling a more nuanced understanding of theory (Turner & Meyer, 1999).

Qualitative Research on Classroom Environments and Student Motivation

One approach to investigating classroom motivational environments has been to use a combination of quantitative and qualitative methods. The procedure has typically involved using student reports to identify classrooms that are perceived to be different from each other on some dimension, and then using qualitative methods to identify and describe in more detail what it is about those classes that differs. For example, Marshall and Weinstein (1986) compared features that differed between elementary classes perceived as being high or low in teacher differential treatment of students. In addition to survey questions, they used observers’ narrative records, quantitative observational measures, and teacher interviews. Their findings were complex; they found different patterns for lower- versus upper-level classes and evidence that features did not operate singly but in interaction.

Turner et al. (1998) investigated teacher practices that differentiated upper-elementary math classrooms in which students reported being highly involved from those in which students reported low involvement. Using discourse analysis, they found that high student involvement was related to scaffolded instruction, wherein the challenge involved was matched well to the students’ level of skill. Conversely, highly teacher-controlled patterns of instruction, an emphasis on procedures, and extrinsic motivational strategies were related to reports of low student involvement.

One of the few investigations that has used classroom observations within a goal orientation framework was conducted by Meece (1991). She used student surveys and observed in fifth- and sixth-grade science classrooms taught by teachers identified by their principal as exemplary. Using the survey data, Meece found that students in two of the 10 classes, on average, had a stronger personal mastery goal orientation than did students in two other classes. She then examined the observation data to see if there were differences in teacher practices between these two kinds of classrooms. She found little variation among classrooms in terms of the cognitive demands on students or in teachers’ questioning patterns. However, students whose teachers used an active instructional approach, adapted instruction to the developmental levels and personal interests of their students, supported student autonomy and peer collaboration, and emphasized the intrinsic value of learning adopted a greater personal mastery goal orientation than those whose teachers did not.
To date, however, no researcher has used observational data to investigate what teacher practices are related to students’ perceptions of their classroom goal structures. This, therefore, was the objective of the current study.

Social Factors and Student Motivation
Recently there has been heightened interest among educational researchers in the association between the academic and social domains of students’ lives (e.g., Goodenow, 1992; Juvonen & Weiner, 1993; Juvonen & Wentzel, 1996). Research has indicated that students’ adaptive motivation for academics is related to a number of social factors within the classroom. These include students’ relationships with their teacher (Harter, 1996; Patrick, Hicks, & Ryan, 1997), teacher support (Midgley, Feldlaufer, & Eccles, 1989), teacher practices that promote respect among classmates (Ryan & Patrick, 2001), relationships with peers (Patrick et al., 1997), and social goals (Anderman & Anderman, 1999; Wentzel, 1993). Further, students’ help-seeking in the classroom—which includes features of both social and academic behavior—has been related both to personal goal orientations (Ryan, Hicks, & Midgley, 1997) and to perceived classroom goal structures (Ryan et al., 1998).

Once again, however, these studies have relied on students’ self-reports of the social environment of their classrooms. Observational studies that describe how academic and social aspects of the classroom relate to each other may help to expand the understanding of goal orientation theory. Accordingly, we included attention to social factors and help-seeking in our observations.

Importance of the Beginning of the School Year
Research has indicated that classroom norms and practices tend to become established relatively quickly in the school year and then remain comparatively stable. For example, Evertson and Emmer (1982) conducted classroom observations during the first 3 weeks of the school year and then once every 3 to 4 weeks throughout the rest of the year. They found that more and less effective managers could be differentiated by the practices that were observed during those initial 3 weeks. Similarly, Deci, Schwartz, Sheinman, and Ryan (1981) found that associations between teachers’ autonomy and control orientations and their students’ perceptions of them became established during the first 2 months of school and remained essentially stable thereafter. Based on this research we believed that instructional practices established during the early part of the school year would be especially salient in contributing to the perceived goal structures of the classroom. We also believed that at this time teachers would make explicit statements about the meaning of academic tasks and achievement that convey an emphasis on mastery and performance goal structures (Anderman & Maehr, 1994). Therefore, we began observations in each classroom on the first day of school. We continued observations during the first 3 weeks of school and also made observations later in the year.

Summary
Our aim was to clarify and expand goal orientation theory in several ways. First, our study included attention to the classroom dimensions goal theorists (e.g., Ames, 1992) have focused on most closely. Second, we used both qualitative and quantitative data to investigate associations between survey measures of student perceptions of the classroom goal structure and observational records of teacher and student behavior. Third, we incorporated recent trends in motivational research (Juvonen & Wentzel, 1996) by attending to social aspects (e.g., social support, student-teacher relationships) of classrooms. Fourth, our observations began on the first day of school in each classroom. Thus, we were present when class rules were established and when teachers gave explanations for their classroom practices and explicit messages about their ex-
pectations. Additionally, we continued observations during the first 3 weeks and made observations later in the year. And fifth, we observed regular (rather than exemplary) teachers in self-contained classrooms in ethnically and economically diverse school districts.

Method

Participants and Selection of Classrooms

The participants in this study were four fifth-grade teachers and their students from two school districts in southeastern Michigan who were participating in a larger, ongoing study of the learning environment and adolescent development. These classes were selected from a pool of 10 classrooms for which we had both student survey and classroom observational data.

We used the survey data to select the four classrooms for further analysis with the observational data. We conducted analyses of variance (ANOVAs) to investigate mean differences between the 10 classes in students’ perceived mastery and performance goal structures, for both fall and spring. There were significant differences between the classrooms for all four ANOVAs. We then conducted post-hoc Tukey significant difference tests to identify two classrooms high, and two low, in perceived mastery structure and two high and two low in perceived performance goal structure. Our criteria for selecting classrooms were that (1) there were significant differences between the two high and two low classrooms, but that the high classrooms were not significantly different from each other, nor were the two low classrooms; and (2) this pattern was consistent in both fall and spring data. The classrooms selected did not always represent the most extreme perceptions of these goal structures, but all met our criteria of similarity, difference, and consistency of student perceptions. As a more stringent test of classroom differences, we repeated the ANOVAs with just those four classrooms. The means, standard deviations, and F statistics from the second set of analyses are presented in Table 1.

Two teachers were African American and taught in a school district in which 61% of the students were African American and 37% were European American. The other two teachers were European American and taught in a district that served European-American students almost exclusively. All schools offered kindergarten through fifth grade. The four teachers’ students came from communities characterized by school principals as being either urban (but not inner-city) or suburban, and where the majority of families were described as “middle income.” There was wide variability within all classrooms regarding student achievement; there was a range of at least 68 percentile rankings on students’ fifth-grade California Achievement Test scores. The mean achievement scores of three of the classes were similar, ranging from 51.61 to 59.89, whereas the mean in Mr. Laurey’s class, at 72.57, was significantly higher ($F = 3.15, p < .05$). All names of teachers, students, and schools are pseudonyms. Profiles of the four teachers follow:

Ms. Miller taught 29 fifth graders in an urban school of approximately 250 students. She is European American, has a master’s degree, and had been teaching for 4 years, all of those at Arthur Elementary School. Her students perceived her class as having a high mastery focus and a low performance focus (the M of her name denotes a high mastery focus).

Mr. Laurey taught 30 fifth graders, also at Arthur School. He is European American, had been teaching for 26 years, 12 of those at Arthur School, and did not disclose his highest educational qualification. His students perceived her class as having a high mastery focus and a low performance focus (the L denotes low in both goal structures).

Ms. Peters taught 24 fifth graders in a suburban school of approximately 550 students. She is African American, has a master’s degree, and had been teaching for 11 years, 1 of those at Bush Elementary School.
Ms. Peters's class was perceived by her students as having a low mastery focus and a high performance focus (the P denotes high performance focus).

Ms. Hillman taught 30 fifth graders in an urban school of approximately 350 students. She is African American, has a bachelor's degree, and had been teaching for 24 years, 3 of those at Cleveland Elementary School. Her students perceived her class as having a high mastery focus and a high performance focus (the H denotes high in both goal structures).

Measures and Procedure

Qualitative data. Prior to beginning data collection, all observers received extensive training and practice in observing and recording classroom behaviors. During the first phase of training, group members watched videotapes of fifth-grade classrooms and wrote continuous running records, following the observation protocol (see Appendix A) that had been developed. Observers then read and discussed what they had written and established consensus regarding the important features to include in the records. This process continued over five sessions until all the observers consistently identified features relevant to the protocol. At the conclusion of one session observers typed their running records. These records were given anonymously to a colleague to check for consistency among observers. The relatively few inconsistencies were discussed with observers in a follow-up meeting.

The second phase of training involved observing in fifth-grade classrooms for three mornings during summer school. During this time, team members observed a given class in pairs and then discussed and compared their field notes. Dilemmas or inconsistencies that arose were brought back to group meetings for discussion. The field notes of the summer school sessions were typed and sent to a second colleague familiar with observational research to check for consistency among observers' records. Once again, feedback was provided to the group and consistency was verified.

Observations in the classrooms participating in this study began 1 month after the conclusion of the training period. These observations took place in the morning and included both math and language arts lessons. Teachers were told that we were interested in observing classrooms to better understand regular, daily classroom life during fifth grade and were assured that all information would remain confidential. Observers wrote continuous running records, recording details about behaviors and speech that related to the following classroom features: the nature of tasks, the locus of authority in the classroom, methods of
recognition, grouping, evaluation, the use of time, social interactions, and the students' approaches to seeking help when needed. Because we were interested in the communication of goal structures to the class as a whole, our primary focus was on the teacher and his or her comments and behavior. However, observers also recorded students' behavior and comments, to the extent that they illuminated the interpretation of the motivational climate.

Each classroom was observed for the entire morning (approximately 180 minutes) on each of the first 3 days of the school year. Each classroom was then observed for five 90-minute sessions, spread throughout the remainder of the first 3 weeks of school. Therefore each classroom was observed for approximately 990 minutes during these first 3 weeks. We conducted ongoing consistency checks throughout the fall observation period by having a senior observer who was not otherwise involved in data collection visit randomly selected classes and independently take running records. Then, the project leader compared the two records to check for consistency in the events recorded that were relevant to the observation protocol and gave feedback to the observer. In addition to the fall observations, we conducted three additional 90-minute observation sessions within a 1-week period during the spring semester. These later observations enabled us to investigate whether teachers' practices changed from those evident at the beginning of the school year.

**Overview of Analysis**

Analysis of the observational data involved examining the running records of the four classrooms to identify commonalties and differences in teacher behaviors and instructional practices. Our objective was to provide a rich picture of classrooms higher and lower in perceived mastery goal focus, regardless of performance goal focus, and classrooms higher and lower in perceived performance goal focus, regardless of mastery goal focus. Therefore, for each dimension we considered shared features of two classrooms that were perceived in a similar way to each other and how they differed from classrooms that were perceived differently on that dimension. This approach is similar to the one Meece (1991) used in her investigation of teacher practices associated with personal goal orientation.

Analysis moved through many phases, as outlined by Miles and Huberman (1994) and Strauss and Corbin (1990). Because project members were aware of the quantitative classifications of the classrooms before beginning the qualitative analyses, we sought to minimize bias in our analyses by following closely recommendations by Strauss and Corbin (1990, pp. 75–95). First, project members met weekly for several months to read and discuss the field notes and to de-

After the first wave of survey data collection, the performance goal structure scale was modified and improved. These scales have been used in previous studies (e.g., Kaplan & Midgley, 1999; Ryan et al., 1998; Urdan et al., 1998) and have shown good reliability and validity.

Pairs of trained research assistants read instructions and survey items aloud to students in their regular classes during the fall of 1994 and spring of 1995. 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 in the survey would be kept confidential.

**Quantitative data.** The survey data involved students' responses to the Perceived Classroom Goal Structure scales from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 1996). The items in these scales were scored on a five-point Likert-type scale and are shown in Appendix B. The measure for classroom mastery goal structure involved six items ($\alpha = .77$ and .80 in fall and spring, respectively). The measure for classroom performance goal structure involved two items ($\alpha = .56$) in the fall and six items in the spring ($\alpha = .74$).
velop the analysis scheme, Observing Patterns of Adaptive Learning (OPAL; Patrick et al., 1997). We developed a list of codes organized around the eight categories of our observations (task, authority, recognition, grouping, evaluation, time, social, help-seeking), and a ninth category (messages—general comments about teachers’ beliefs, assumptions, and expectations about school and schoolwork not linked to a specific academic activity) identified from the collected data. We wrote definitions of behaviors indicative of each category, and for each identified several exemplars from the running records. Creating these definitions enabled the group to develop a shared, consistent understanding of the representation of each category.

We then coded the running records, which involved identifying each occurrence within the running records of a behavior or comment that represented one of the defined categories. The codes were not mutually exclusive; that is, events could be, and were, given more than one code. For the first class, six project members (including the first, third, and fourth authors) coded all running records. This process involved iteratively coding running records individually, followed by group discussion that included negotiation of criteria and reaching consensus. This process continued until all records for the classroom were coded and there was group consensus and consistency regarding coding. Once all records from the class were coded, they were sent to one of the original observers (second author) to check for consistency. Where differences arose, these were discussed electronically until consensus was reached. The first author then coded the running records for the remaining three classrooms in this study.

The next step of analysis involved creating a matrix display of all the coded data for each classroom, whereby each cell of data corresponded to a coding category (see Miles & Huberman, 1994, pp. 90–122). The first author created the matrix, the second and third authors independently checked the running records and data tables for consistency and completeness, and we discussed any differences and resolved them through consensus. Next, we summarized the coded data within each category and case and stacked these four summarized matrices in a “metamatrix” (Miles & Huberman, 1994, p. 178). We took this approach because “the chances of drawing and verifying valid conclusions are much greater than for extended text, because the display is arranged coherently to permit careful comparisons, detection of differences, [and] noting of patterns and themes” (Miles & Huberman, 1994, p. 92). Therefore, these displays enabled us to compare and contrast teacher practices across the cases and to identify patterns and themes in the data. The final stage of analysis involved iterative cycles of examining the summary and data tables, comparing teacher practices to differing class motivational profiles, generating hypotheses about similarities and differences among the classes, and searching for confirming and disconfirming evidence until we could identify no new patterns and we felt certain that our results represented the data accurately.

Results

We used the matrix displays and metamatrix (Miles & Huberman, 1994) as the basis for which to compare and contrast teacher practices within the four classrooms. We report our observations separately for each of the OPAL categories. However, several coding categories tended to cluster together, making a clean distinction difficult at times. Furthermore, these clusters tended to form different configurations for different teachers (e.g., recognition with affect, authority, or task procedures). There was marked consistency within each classroom in all categories from the beginning to the end of the year. As expected, teachers engaged in considerably more dialogue about the reasons for procedures and practices at the beginning of the year; therefore we focus pre-
dominantly on the data from the beginning of the year. We do present, however, observations from the spring.

Task

In this section we note the content, products, and procedures associated with tasks, in addition to teacher and student affect regarding task engagement, and teachers’ comments regarding their beliefs and expectations about tasks.

Content and products. All four teachers used traditional academic activities throughout the year. All used worksheets or textbook exercises for mathematics, and punctuation exercises and worksheets in language arts. Ms. Peters, Ms. Miller, and Ms. Hillman had students also respond in journals to questions such as, If you were stranded on a desert island how would you communicate for help? and When you need help at school is it easy for you to ask for it? Ms. Hillman’s students wrote a letter and practiced taking notes, whereas Mr. Laurey’s students wrote a diary entry from the perspective of a book character. We also observed Ms. Peters and Ms. Hillman teach science (3 days and 1 day, respectively). Ms. Hillman’s students observed and wrote descriptions of bugs they had collected on a field trip, and Ms. Peters’ students read and discussed the textbook and completed worksheets.

Procedures. The instructional formats of the lessons in all four classrooms were consistent throughout the year. They typically involved a combination of teacher-led instruction to the entire class followed by demonstration at the blackboard and then a period of individual seatwork. All teachers spent time at the beginning of the year outlining classroom procedures, such as their expectations for formatting written work and routines for where students should put completed work and homework.

Participation. Both Ms. Hillman and Ms. Miller (high mastery) ensured that all students participated in classroom talk about academic activities, and any student in their classes may have been called on to answer questions. Equal student participation was established in Ms. Miller’s class by her procedure of assigning each student a number and then drawing numbers from a basket to determine who would answer questions (this procedure was used also for nonacademic tasks, such as selecting crossing monitors). Ms. Hillman routinely called on students to participate and called on many different students. Student opportunities for participation in tasks were unchanged in both classes during the spring observations; Ms. Miller continued to select numbers from her basket, and Ms. Hillman continued to call on a wide range of students, generally regardless of whether they volunteered.

In contrast, at the beginning of the year neither Mr. Laurey’s nor Ms. Peters’s (low mastery) practices encouraged participation from all students. On the second day Mr. Laurey assured students that he would only have volunteers answer questions, saying, “I don’t want you to worry that I am going to call on you.” The only time he was observed to call on a student who had not volunteered, he gave her an excuse for not participating. He said, “Do you want to try or are you still waking up like me?” She declined to give an answer. Although he did sometimes request that more students volunteer, explaining, “It’s not fair that some hands are not raised,” he did not call on nonvolunteers to answer. Ms. Peters called on students to answer questions; however, she explained this was a punishment for not paying attention. For example, on the first day of school she told the class that if she found they were not paying attention, then she would call on them to answer a question. She later warned Chenise, “Remember to pay attention because I will call on you at any time,” and said later to the class, “If I call your name, you know you probably were not paying attention.” By spring Mr. Laurey sometimes called on students who had not volunteered to answer. Ms. Peters continued to call on students, but in spring
we did not observe her connect being called on with misconduct or punishment.

**Affect.** Both Ms. Miller and Ms. Hillman exhibited consistent, high levels of genuine enthusiasm, and each day’s running records mentioned displays of positive affect and enjoyment by these teachers with respect to engaging in academic tasks. The following comments were characteristic of how Ms. Miller spoke to her students during math: “We are going to do some wonderful things—algebra, geometry,” and “Now let’s try finding the range. I enjoy doing this.” Both teachers’ students appeared also generally to enjoy engaging in the classroom activities and, particularly in Ms. Miller’s class, often protested when a lesson ended. The following extract, taken from field notes during a science lesson in Ms. Hillman’s class, captures the teacher’s and students’ considerable enjoyment and interest. Students had collected insects the previous day on a field trip and were now noting observations about them.

The teacher takes a slug out of the tank, saying to the group of four boys, “Here’s the slug—look—look—he’s wonderful.” She places it onto a paper towel, saying, “Watch how he’s crawling! Watch how he’s stretching his body! You should be writing this down [i.e., their observations].” The boys study it intently. After a minute or so the teacher puts the slug back into the tank, and attention moves to a grasshopper in the tank. The grasshopper is walking upside-down on the lid, avoiding the breathing holes that have been punched in. The teacher encourages them to look hard at the underside of the grasshopper and then to count the number of legs. She then asks them, “Do insects communicate with each other?”

Ms. Hillman typically coupled strong positive affect with the recognition she gave students; it was not uncommon for her to squeal or hug students, applaud them, or shake their hands. One example occurred while she monitored students’ writing during a language arts lesson. After reading one boy’s writing she stopped the class to read a sentence aloud: “I liked yesterday afternoon because we were learning and having fun at the same time.” She then smiled broadly, squealed, hugged him, and told the class to clap; he beamed.

Neither Ms. Peters nor Mr. Laurey (low mastery) appeared to convey the palpable interest and enthusiasm for academic tasks that we saw from the other two teachers. Although Mr. Laurey said on three occasions that he wanted students to enjoy lessons, without exception he appeared quiet and calm and exhibited little overt affect or energy. Further, he appeared to try to prevent anxiety, particularly about tests. For example, before a spelling test he told students the test would not be graded and that they should not worry if they forgot how to spell words. Prior to a math test he told students not to put pressure on themselves, that the test was “a kind of worksheet.”

Ms. Peters made contradictory comments about interest and enjoyment to her students. On each of the first 3 days she made general affective statements to the class, such as “Learning will be fabulous and fun and exciting,” and, “Fifth grade is not going to be boring.” Perhaps straining her credibility, she also told students on two occasions that taking timed tests was fun. Further, during an activity on the first day, she said, “You may find this to be boring, and I don’t disagree with you. This information is important. It may be boring, but when the time comes, you will need to know it.” Throughout all the observations in her classroom we saw no evidence that either she or her students found any aspect of academics exciting.

Like Ms. Hillman, Ms. Peters typically gave recognition with considerable affect; however, the affect was negative. She made negative public comments daily to students, such as, “Angela, don’t start playing with your hair—that’s all you did last year.” One salient instance of marked student affect occurred in a math class during the second week of school. At the beginning of home-
work review, Carolyn started to ask a question when the teacher interrupted to tell the class that Carolyn did not write her homework down. When Carolyn tried to explain that she did but that she was not able to do it, Ms. Peters disagreed, and Carolyn began to cry. The teacher responded by telling her that crying is a bad habit, that she was doing it for effect, and to "straighten up [her] act now or get out." We observed Carolyn crying for 50 minutes during that lesson. Students often seemed ill at ease in Ms. Peters's class. For example, when Matt was called on to answer a question, he replied nervously, "I wasn't talking. I wasn't talking."

We continued to observe high levels of teacher and student positive affect about academic tasks in Ms. Miller's and Ms. Hillman's classrooms in the spring. Students often seemed ill at ease in Ms. Peters's class. For example, when Matt was called on to answer a question, he replied nervously, "I wasn't talking. I wasn't talking."

Task messages. At the beginning of the year all four teachers made explicit statements about learning. Both Ms. Miller and Ms. Hillman spoke about learning as a process that requires active student involvement. At the beginning of the year Ms. Miller said to her class, "There are three ways to learn: from seeing, hearing, doing. I will try to use all of those ways." Ms. Hillman, too, told her class, "I don't have a problem when you talk. You are learning while you are discussing." Later she said to a student who was writing in his journal, "You've got to think, be creative, use your mind. You get ideas from meeting people, talking to your peers. Don't stay cooped up in your little box."

In contrast, both Ms. Peters and Mr. Laurey spoke about learning as an individual process, achieved by listening to information and following directions. For example, Mr. Laurey told his class, "Most learning takes place when we learn to listen." Even more explicitly, Ms. Peters told her class on the first day, "Learning, understanding, and following instructions—that's basically what fifth grade will be for you this year. Understanding and following rules... If you understand what I'm saying to you and you follow what I'm telling you, you will be a high achiever. There's no way around it." A few days later Ms. Peters explained to her students that "understand means you listen." She also seemed to suggest that experience, while another route to learning, is not usually as good as being told. She said to her class, "It seems like learning and listening may come hand in hand. Can learning come without listening?" Some students called out in response, "No." Ms. Peters countered with, "Yes, we can learn something without listening, but it's not always the best way to learn." She elaborated by giving an example of a person riding a bike through a stop sign without stopping and said, "We can learn from experience, but it's not always pleasant."

With regard to teacher talk about tasks, both Ms. Miller and Ms. Hillman focused on student understanding of content and improvement considerably more than on getting the answer correct. For example, while her students were working individually on math problems, Ms. Miller said, "Let me come around and see if you all have got the concept." Both teachers mentioned repeatedly that mistakes are a natural part of the learning process. For example, Ms. Hillman said to her class during a language arts lesson, "We're going to practice over and over again. That's how you get good. And you're going to make mistakes. That's how you learn."

In contrast, however, neither Ms. Peters nor Mr. Laurey commented about students' understanding. Mr. Laurey seemed most concerned that students get the answers correct, and he frequently encouraged students to work slowly, not to "get tricked," and to focus on getting the right answer. He also appeared to take away challenges, reduce pressure, and encourage students not
to expend full effort, perhaps to ensure that they could work error free. For example, during a math lesson he said, "I am not expecting a perfect paper. I am happy with about half. Don’t put pressure on yourself." Similarly, during a language arts lesson he told the class he only wanted them to write notes and not perfect sentences, to which some students responded by crumpling up their papers and starting over. Ms. Peters focused most on students’ mistakes and typically attributed difficulties to not paying sufficient attention. For example, when Brandon was not able to answer a math problem, she admonished him with, "Do you realize that your learning is in jeopardy? You could fail through not listening."

In the spring Ms. Miller and Ms. Hillman continued to focus on task content and student understanding and improvement. For example, during both math and language arts lessons in Ms. Miller’s classroom, we observed several discussions about why some answers were correct and others not. There was still a strong emphasis on following procedures and on having the correct answer in both Ms. Peters’s and Mr. Laurey’s classes. We did not see students being asked to be thoughtful in either class, and in Ms. Peters’s class students were often hurried if they did not give an answer quickly enough.

Authority

Rules. In three of the four classrooms there was discussion about class rules on the first day of school. Ms. Miller engaged the class in generating the rules, whereas both Ms. Peters and Ms. Hillman presented their rules to the students. Ms. Peters emphasized rules and sanctions for not following them. She spent almost the entire 3 hours of the first day of school talking about her rules and expectations. Every day that we observed her she emphasized students listening, not talking when she was, and doing what they were told. Both Ms. Hillman and Ms. Miller barely mentioned rules after the first day of school. Also, their rules did not prohibit student talking; conversely, they told students at the beginning of the year that they wanted student interaction. Ms. Hillman was explicit that students’ talk must be task related, whereas a more general "stay on task" was one of the rules posted in Ms. Miller’s class.

Mr. Laurey, in contrast, did not ever explicitly identify or talk about class rules with his students. However, he frequently emphasized the need to be a good citizen and publicly praised students who were. Although all teachers talked to their class about being role models, this was a strong and consistent focus of Mr. Laurey’s management practices. During the spring observations we did not observe any teacher talking about rules.

Autonomy. Both Ms. Miller and Ms. Hillman (high mastery) gave students considerable freedom within the classroom (e.g., talking to classmates, eating snacks, getting up to sharpen pencils when necessary), provided they did not get distracted from the academic tasks at hand or distract others. Additionally, Ms. Hillman gave students some choice about the order in which they worked on morning activities, whether they worked alone or with others of their choosing, if they used a microphone while reading to the class, and what to write in their journals. In the spring, students in Ms. Hillman’s class had considerable autonomy in choosing the order in which they worked on tasks. The teacher listed the morning’s tasks on the board, and students chose how to allocate their time.

In Mr. Laurey’s and Ms. Peters’s (low mastery) classrooms there was considerably less student autonomy and more teacher direction, with a focus on following rigid procedures. For example, both teachers indicated to students when they could and could not be approached to answer questions. In neither classroom could students get up and sharpen their pencil whenever they needed to; Mr. Laurey’s students were sent to sharpen pencils row by row at particular times, whereas Ms. Peters’s students
could only do so before class started. There was a standard procedure for leaving Mr. Laurey's room, and when Russell did not walk down the designated aisle he was told to return to his desk and do it again.

Recognition

Teachers' recognition practices, including the focus of recognition, the predominance of praise or criticism, whether individual students were identified, and expectations for students' future learning, were consistent for each teacher but differed among teachers.

Ms. Hillman's and Ms. Miller's (high mastery) recognition practices were characterized by warm praise that was also task related, clear, contingent, and credible. Ms. Hillman's praise was focused on individuals' improvement and was typically directed at specific students; however, it was not limited to a small group of students. For example, while Jared was reading a passage from the text aloud, he came to a word he did not recognize, struggled, and finally read it correctly. Ms. Hillman commended him for not giving up and for trying to pronounce it and called him a good reader. She said, "Nobody helped, you tried it on your own. You are learning," and she clapped. On another day, while reading students' science reports, Ms. Hillman looked at Carlos's report and then read it aloud to the class. She noted approvingly to everyone that he had put a comma between each of the "bugs" he listed. "Yesterday I told them not to put 'I saw a slug and a spider and a grasshopper and a beetle,' and he paid attention." In contrast, Ms. Miller tended to direct praise to the whole class. For example, when many students raised their hands to answer a question she had asked, she exclaimed, "Boy, look at all the hands! What a bright class!" and "Do you know how long it takes most classes to catch on to this? You catch on fast!"

Both Ms. Hillman and Ms. Miller publicly identified specific students when they appeared to need help or reminding to stay on task. The feedback, though, was focused consistently on the academic activity and included suggestions for improving students' performance. Furthermore, these teachers generally conveyed positive expectations, repeatedly making comments that indicated that they believed their students could do the work even if they were currently having difficulties. For example, Ms. Hillman gave the following feedback: "William, I want you to look at that sentence and read it again . . . You need to calm down and concentrate on what you're doing. This is very serious. A good reader doesn't add words. You're a good reader, but there are some things I'm observing that you need to change."

The behaviors that Mr. Laurey and Ms. Peters (low mastery) recognized students for were consistent with the emphasis they placed on following directions; verbal recognition addressed behavior and not task content or understanding. Mr. Laurey praised students who followed procedural requests and social responsibility norms, and praise appeared to serve primarily a management function. The following comments were typical of his praise: "David's a good role model. Michael's a good role model. You have both of those items out—nothing else. They have done exactly what I asked and are now sitting quietly," and "I like the way you are being very patient, letting people finish." When he did have something negative to say to a student, which only occurred once during our observations, Mr. Laurey took the student out into the hallway to speak with him.

Instead of praising behavior that conformed to her expectations, Ms. Peters tended to use punishment, or threats of punishment, with students who did not do what they were told. For example, she made comments to the class such as, "Listen. Don't talk while I'm talking or you will be embarrassed," and "I don't give lots of homework. But if the class doesn't do the little homework that I do assign, I will assign more." She also mentioned students
who did not do what she wanted. For example, while discussing how to solve a math problem, she said, "We don't do it like Stephen did the other day."

Neither Mr. Laurey nor Ms. Peters conveyed confidence in their students' abilities to learn the material. Mr. Laurey did not express high expectations for his students' learning, and his frequent suggestion that students not push themselves appeared to discourage effort. For example, after a language arts lesson he publicly announced the number of lines of text students had written. Most students had written between five and seven lines; when he came to a paper with eight lines, he commented, "I didn't ask for anything that long." Mr. Laurey said at times that he was not interested in the content of students' work but in the form, such as neatness or if they were doing what they were asked. For example, he said, "When I looked at your work, I looked at whether you're expressing yourself in a complete sentence. I did not look at whether or not you had complete thoughts."

Ms. Peters sent mixed messages about her expectations for students. On four occasions in the first 3 days she made comments such as, "You are high achievers. You are A students." However, as noted previously, she expressed criticism and negative expectations toward individual students daily. For example, Ms. Peters asked Andrew to read his journal entry. He did so, very quietly. She said that she could not hear and neither could the class. "Andrew, I probably will never pick you out for Super Citizen. That sounds hard, but do you know why? Because I've asked the class to speak out. You don't have to scream, but speak out." In the spring we continued to see little evidence of high teacher expectations in Mr. Laurey's class, and we saw many examples of negative expectations for individual students in Ms. Peters's class.

Aspects of individual students' performance were public within all classrooms, and there were frequent opportunities for students to make social comparisons. Ms. Miller posted students' homework grades on the board, and during lessons she asked students to raise their hands to indicate whether they understood the lesson; Ms. Hillman read students' work aloud and identified students' work as positive examples; Ms. Peters identified individual students' scores publicly, and Mr. Laurey read students' grades aloud.

Another similarity among the classrooms was that all teachers used rewards. Ms. Miller gave candy to students who gave correct answers; Ms. Hillman gave passes to excuse students from homework as a reward for turning assignments in on time; Ms. Peters rewarded students for listening and following directions by giving out pencils and making them "Super Citizen" for the week and promised a class swimming and pizza party for reading 10 books; and Mr. Laurey gave students special tasks and responsibilities for following directions promptly.

Grouping

Students in Ms. Hillman's class formed two heterogeneous groups on the first day, with each group arranged by two inward-facing lines of desks. Students typically talked and worked together within their groups while engaged in individual seat work. During the science lesson the students worked in pairs or groups of three and could choose with whom they worked.

The students in Ms. Peters's class sat at desks pushed together to form three groups. However, students were not allowed to talk to each other, and we observed no group work. Ms. Peters talked about groups, telling students on 2 days that she would form math and reading groups based on their pretest scores for those subjects. For example, she said, "You will be working on different levels. What you know and have not been taught will determine your assignments," and "Hopefully there will be only one reading group, but I know better than that. Everyone reads on a different level." We did not observe any group activity, however.
Ms. Miller’s and Mr. Laurey’s students were seated individually in rows, without desks touching, facing the front of the room. On 5 of the 8 days we observed at the beginning of the year, Ms. Miller mentioned that students would be working in groups during math and language arts. However, we saw only whole-class lessons and individual seatwork in her class. Mr. Laurey did not mention groups, and lessons were also whole class or individual, with the exception of one math lesson in which students worked in pairs.

Evaluation

Students in all four classes took tests at the beginning of the year, particularly in mathematics. However, there was a pervasive focus on tests and the implications of test scores in only two of the four classrooms. At the beginning of the year, Ms. Peters mentioned tests and grades on each of the 8 days we were in her class, including Michigan Educational Assessment Program (MEAP) tests on 2 of those days. Similarly, Ms. Hillman talked about grades on 7 of the 8 days we observed in her class. Ms. Peters’s students took math tests on 3 days and completed two handwriting samples. She told the class she would form math and reading groups on the basis of their classroom test scores and indicated that she expected students would show differential performance. In answer to a student’s question about whether they would receive a grade for a math test, Ms. Peters told them they would not, but “this [test] will determine where your math abilities are.” She then linked the math test to the MEAP and California Achievement Test, saying, “They are important for some people, and this test is important for me.”

Ms. Hillman also tended to emphasize students’ performance, and she talked frequently about test scores, relative performance, and differential prestige. For example, when talking about the upcoming spelling program, she said, “We will have a classroom bee, and the best two people from here [i.e., the classroom] and the two best from Ms. Granger’s room [i.e., other fifth-grade class] will have a spelling countdown. And the top person from that will compete against all the other district schools, and then the best there will go all the way to the district spelling bee. Last year the two top people from this class [her fifth-grade class last year] were the top two girls in the district. And they got a plaque, and winnings, and a lovely dictionary.” Students seemed very aware of whether their work would be graded in both Ms. Hillman’s and Ms. Peters’s classes. For example, before beginning assignments or worksheets, students often asked whether or not they would be graded and whether they would receive extra credit.

In contrast, neither Mr. Laurey nor Ms. Miller emphasized test scores and grades or students’ differential performance on tasks. In fact, there was little mention of formal assessments by these two teachers, even though they also conducted assessments at the beginning of the year and often made aspects of students’ performance public. Ms. Miller explained that students would have pretests and tests weekly; however, she mentioned this in a matter-of-fact manner and did not link test scores to other factors such as their ability, differential grouping, or prestige. Mr. Laurey also conducted tests, but he played down their importance in what appeared to be an attempt to decrease student anxiety or concern. For example, when introducing a math test, he said, “Oh, this isn’t a test. I shouldn’t have even said that—this is to let me know the things that I need to highlight in the fifth grade.”

Three of the four teachers (Miller, Hillman, and Laurey) mentioned using portfolios in their classrooms, although each focused on different aspects. Mr. Laurey emphasized the inherent individuality in portfolios, Ms. Miller told students that they would have some choice as to what was included in their portfolios, and Ms. Hillman focused on portfolios documenting
students' individual improvement throughout the year. For example, she said, "Even though you're showing mistakes in your portfolio, that's okay, because it's showing learning." She suggested that students could look back at their earlier writing and notice such things as, "Now I write on the lines, the curves [of the letters] are better, I indent."

In the spring, teacher talk about grades and relative performance continued to be a salient feature of both Ms. Peters's and Ms. Hillman's classes. In the 3 days we observed in Ms. Peters's class during spring, she administered two tests. We did not observe any mention of grades or differential performance in Ms. Miller's and Mr. Laurey's spring classes, although Ms. Miller gave a test in one of her classes.

Time

Both Ms. Hillman and Ms. Peters posted time schedules on the board each day, whereas Ms. Miller referred to time allocation for different activities but did not display the schedule. For each task, Ms. Miller informed students how much time was allocated, reminded them frequently while they worked how much time remained, and at times hurried the students along. Typical comments were, "We won't do this too often, it takes too much time," "We have to move at a quicker pace," and "We need to step on it." Mr. Laurey did not display or refer to a time schedule. He never hurried students along, but during 5 of the 8 days he was observed at the beginning of the year, Mr. Laurey stressed that students should pace themselves and not rush. Typical comments were, "I want you to take your time. You are not roadrunners, and you are not turtles either" and "I like the way you take time with your handwriting. You are not hurrying." Both Ms. Hillman and Ms. Peters sent mixed messages about time to their students. Whereas Ms. Hillman often told students not to hurry, she also reminded them frequently how much time they had left. Ms. Peters's concern with time appeared to differ depending on the type of task; she consistently told students not to rush while they completed tests, but she hurried them during regular class activities. For example, during a lesson Ms. Peters told the class she would speed up and they had to keep up with her; she gave Rolando and Michael 30 seconds to correct a sentence on the board, hurrying them by counting down from 10 seconds; and she told Tonisha, who was answering a math question at the board, to do it quickly or sit down.

Social

Student interactions. Both Ms. Hillman and Ms. Miller (high mastery) encouraged students to talk among themselves and help one another during seatwork. Ms. Hillman insisted that students' conversations be focused on the task at hand. For example, when she overheard two boys' off-task conversation, she did not tell them to stop talking but encouraged them to return to the task: "Chris, are you talking spelling? I hear some neat things going on, but some are not on-task." Ms. Miller also made comments such as, "When we are in [math] groups, your group members can help. We are all here to help one another. It does not bother me at all if you ask your neighbor for help when we are in groups." In the spring we continued to see much interaction and cooperation among students during whole-class activities and individual seatwork.

In contrast, there was little interaction or cooperation observed among students during seatwork in Mr. Laurey's and Ms. Peters's (low mastery) classes. Ms. Peters did not allow student talk, and both teachers encouraged students to keep their work covered and not to look at others' papers during seatwork. For example, Mr. Laurey told the class during journal writing, "Cover your paper. Shh. I don't want to see you looking at other papers." Another example occurred when two girls in Ms. Peters's class were working individually on
solving a math problem at the board. Ms. Peters said to them, “Don’t get ideas from each other,” and shortly afterward she told Chenise to sit down because she was “stealing Tashare’s idea” for working out the problem. In spring there was still little interaction among students in these classes, although by this time we did not hear the teachers comment about student talk.

**Student-teacher interactions.** All teachers appeared to attempt to develop a relationship with their students on the first day of school. They all disclosed personal information about themselves, such as a home phone number, and commented about their summer vacation, children, or memories of experiences from fifth grade.

Teachers’ apparent respect and enthusiasm toward their students’ progress and their confidence in students’ ability to learn the material, conveyed through their recognition practices and affect, were a feature of the relationship between two teachers and their students. As noted earlier, both Ms. Miller and Ms. Hillman (high mastery) commented daily that they believed their students could do the work, even if they were currently having difficulties. Their interactions with students were characterized by giving warm praise that was informational and focused on the task.

This feature of respect toward students as students and confidence in their academic ability was not evident in Mr. Laurey’s or Ms. Peters’s (low mastery) interactions with students. Mr. Laurey appeared to create a positive, warm, and nurturing environment and to be concerned with students’ physical and psychological comfort. He often expressed interest in students’ lives and frequently encouraged them to talk about things that happened outside school. Mr. Laurey treated his students with considerable personal respect, making comments such as, “Thank you for your cooperation” and “I have been talking for half an hour, and you have been kind enough to be patient.” However, as noted, he did not convey confidence that students could do the work but encouraged less than maximal effort. Ms. Peters was not respectful in her interactions with students. In addition to publicly voicing negative expectations about students, as noted earlier, she told the class on the second day that, “Sometimes I sound harsh because you have gotten on my nerves.” In another example, during the second week she explained to students that they could not correct their own papers because they would cheat.

**Help-Seeking**

Both Ms. Miller and Ms. Hillman (high mastery) commented about their availability to help students understand the content. For example, Ms. Miller said to her class, “Math is an essential part of life. I want you to get math. Don’t ever hesitate to ask me for help,” and “I love to answer questions. Don’t let me get paid for standing here and doing nothing. Don’t hold your questions.” Furthermore, we did not observe any instance when either teacher was unavailable to answer questions. In contrast, Ms. Peters and Mr. Laurey (low mastery) were available to answer students’ questions only at designated times during the day.

As noted in previous sections, students in Ms. Miller’s and Ms. Hillman’s classes were encouraged to view each other as resources and to help each other if they could. Students in both Ms. Peters’s and Mr. Laurey’s classes were encouraged to cover their work, even in nontest situations, and Ms. Peters talked about “stealing ideas” from others. Students in Ms. Peters’s class were allowed to ask a classmate if they had a work-related question; however, they could only ask one specific peer—their “buddy,” whom she had designated. Mr. Laurey’s students asked each other questions, but we did not hear him suggest that they do so. In the spring it was typical for students in Ms. Miller’s and Ms. Hillman’s classes to seek help from, and give help to, each other, whereas it was not in Ms. Peters’s and Mr. Laurey’s classes.
Discussion

This study adds to the understanding of classroom motivational environments in important ways. We have begun to "unpack" students' perceptions of the classroom goal structure by identifying teacher practices that were associated with classrooms high and low in mastery and performance focus. This is an important contribution because although goal orientation theory is now the most frequently used approach to understanding students' motivation (Pintrich & Schunk, 1996), ecologically valid studies have not described teacher practices associated with students' perceptions that their classrooms are higher or lower in an emphasis on mastery and performance goals.

Both the quantitative and the qualitative data in our study indicated considerable consistency in classroom environments from the beginning to the end of the school year. This stability of both teacher practices and student perceptions is consistent with research that identified the beginning of the year as an important time for establishing classroom environments (Deci et al., 1981; Evertson & Emmer, 1982).

For the most part, our findings were consistent with goal orientation theory and previous research. There were, however, some instances where our observations identified nuances and distinctions in teachers' practices associated with the perceived goal structures. For example, both high and low mastery-focused teachers identified students' grades publicly or made other aspects of their performance public. However, the high mastery-focused teachers presented performance information in a matter-of-fact manner without implying effort or ability, whereas the low mastery-focused teachers' comments about performance were affect-laden and included expectations about whether they thought students could succeed or should exert effort trying. Although this pattern is consistent with Brophy's (1981) discussion of the use of effective praise in fostering students' motivation, this perspective has not been emphasized in most of the goal orientation literature.

Similarly, both the high and low performance-focused teachers conveyed information about students' performance on academic tasks and gave out rewards to selected students for answering questions correctly. However, the high and low performance-focused classrooms differed in the emphasis that teachers gave to formal assessments, grades, and students' relative performance. In the low performance-focused classrooms the teachers did not stress these factors as being important in indicating relative ability or in signaling expectations for future performance, whereas teachers in the high performance-focused classrooms emphasized them. Thus, it was not the presence or absence of rewards or of salient social comparison information in the classroom that was important for communicating classroom goal structure but rather the way teachers used those practices and the meanings that were associated with them. The meaning given to events and situations is an integral aspect of goal orientation theory (e.g., Maehr, 1984) but one that can be forgotten, especially when making recommendations for practice.

We also identified some behaviors and practices associated with classroom goal structures that have not been mentioned in goal orientation theory. Of considerable interest is the association we identified between the classroom mastery goal structure and the comments teachers made about how students learn (see Task Messages section). Furthermore, teachers' practices were consistent with these apparent beliefs, including behaviors and comments about mistakes, class participation structures, interaction patterns among students, seatwork procedures, and recognition patterns. The two teachers perceived as being high mastery focused spoke about learning as an active process that requires student involvement; that understanding, rather than memorization and replication, is important; and that interaction is a key feature. Not surpris-
ingly, their focus on having all students participate, encouraging students to interact and assist each other during seatwork, and recognizing effort and improvement was consistent with such a belief. In contrast, the two low mastery-focused teachers made statements suggesting that they believed learning involves the successful transmission of intact and well-defined bodies of knowledge and is indicated by following procedures correctly, mastering skills through direct instruction and independent practice, and by remembering. Additionally, their practices of not requiring all students to participate in lessons, not allowing or encouraging students to interact and assist one another, and their focus on getting correct answers rather than ensuring understanding were consistent with this belief. Accordingly, this study suggests that teachers’ implicit theories of how students learn may be related to the motivational environments they create in their classrooms.

Another new and interesting finding was that social and affective teacher support for and concern about students’ learning and progress, in addition to concern for students’ physical and emotional comfort, was evident in the high, but not the low, mastery-focused classrooms. That is, conveying intellectual respect by indicating both high expectations and confidence in students’ ability to meet those expectations was related to promoting a high mastery-goal focus in the classroom. The teacher who communicated concern for students’ well-being and comfort but not for their learning and progress was perceived by his students as having a low mastery focus. This finding suggests that teachers’ implicit theories of how students learn may be related to the motivational environments they create in their classrooms.

The current study suggests that social and affective features, in addition to purely instructional features of the classroom, may be an integral component of students’ perception of that classroom’s mastery goal focus. This finding underscores Blumenfeld’s (1992) point that “more attention should be given to how the teacher as a person and as an instructor influences perceptions of classroom goal orientations” (p. 276). Although our finding that the classroom social environment was related to the motivational climate is consistent with other research (e.g., Marshall & Weinstein, 1986), this dimension has not previously been incorporated into goal orientation theory.

This study has illustrated clearly the orthogonal nature of goal emphases within classrooms. Although it has been noted for some time (e.g., Nicholls, Cobb, Wood, Yackel, & Patashnick, 1990) that emphasizing mastery goals is not related to emphasizing performance goals, there appears still to be a tendency to think of classrooms as predominantly being either mastery or performance focused. Our findings of similarities in practices among (in particular) high mastery-focused teachers, regardless of their perceived performance goal focus, emphasize the independence of these two goal structures.

A strength of the present study is its high ecological validity. It was conducted with regular classroom teachers, and the students in those classrooms represented a range of racial and economic backgrounds. Our data collection was extensive in that we collected observational data in 10 classrooms at two times during the year. Nevertheless, our analysis of the four classrooms that differed most in terms of goal orientation is based on a relatively small sample from which to generalize. Accord-
ingly, further research is needed to support our findings.

One limitation of the study is the low internal consistency of the class performance-focused goal scale in the fall. Our concerns over reliably identifying classrooms high and low in performance goal focus in the fall, however, were allayed somewhat when the distinction between classes on this dimension remained consistent in the spring when we used a revised scale with higher internal consistency. Another limitation of the study is that we were aware of the quantitative classification of the classrooms' motivational profiles while engaging in the qualitative analyses. Although we attempted to reduce bias by following procedures outlined by Strauss and Corbin (1990), there is still the potential that our knowledge of the classrooms' means on the survey measures led us to construe the observations in a different way than if we had not had this knowledge.

An interesting avenue for further research involves investigating the extent to which there is an association between teachers' beliefs about learning and the goal structures they emphasize in their classes, as suggested by the present study. Additionally, all the teachers who participated in the current study used relatively traditional practices, such as predominantly whole-class instruction and individual seatwork, and traditional pen-and-paper tasks. Further research could extend our findings by sampling classes in which teachers use more constructivist-based, student-centered curricula.

Our aim for the present study was to clarify and expand goal orientation theory by describing similarities and differences in observed teacher practices associated with classroom goal orientations. These descriptions highlighted the necessity of examining practices in the context of the whole classroom environment in that they indicated nuances in the meanings associated with teachers' practices. Furthermore, the study illustrated the value of using rich observations to understand and portray the climate of classrooms by alerting us to the apparent importance of teachers' beliefs about learning, and of positive affect to support students' learning, for the motivational climates they create.

Appendix A

Observation Protocol

Write a running description of all the activities that occur within the class, focusing on the teacher and his or her interactions with the students. Record the flow of events continuously. In particular describe the following:

Task

- The content of the task.
- The participation structure(s) required or suggested by the teacher.
- The expected product.
- Anything the teacher says about the reason for doing the task, its value, or the difficulty.
- Routines, rules, and procedures for doing the task.
- Materials and resources used, and how the materials are distributed.

Authority

- What the class rules are (get a hard copy).
- Who determines the rules.
- What implicit rules are assumed or referred to.
- What the implications are for noncompliance to norms or rules.
- Whether there is a discipline system in place.
- How consistently sanctions are imposed or rules are followed through on.

Autonomy

Any instance in which students have choice (and note the degree of choice) over:

- The order in which students complete their tasks.
- The content of the task.
- The form of the product.
• With whom the students work.
• When they have completed the task.
• How their work is evaluated.

Recognition
• Whether the teacher’s praise and criticism is public or private.
• What the teacher’s praise and criticism is contingent on (e.g., conduct, participation, achievement).
• What the praise or criticism is attributed to (e.g., effort, ability, luck).
• Any concrete forms of recognition beyond praise (e.g., candy, stickers).
• Any nonverbal recognition.

Grouping
• The number of groups.
• The size of groups.
• The basis of group formation (e.g., ability, cooperation, competitive teams).
• If the groups are formal or informal arrangements.
• The extent to which groups are stable or flexible.
• Whether students have different roles in the group, and if so, how the roles are allocated and what they involve.
• The characteristics of the groups (e.g., gender, ethnicity, special-needs students).

Evaluation
• Whether evaluation occurs within the class or elsewhere (e.g., teacher grading away from class).
• What the criteria for evaluation are.
• Whether students evaluate their own work.
• Whether students evaluate one another’s work.
• If any attributional statements are made for success or failure.
• Any statements that are made about the implications of success or failure.
• How students’ previous successes or difficulties are referred to.

Time
• If there is a set time schedule. If so, get a copy.

• The extent to which time schedules are adhered to, and under what circumstances they are or are not.
• Any comments made by the teacher or students about time restrictions.

Social
• Anything the teacher says about students interacting with one another during activities, what is allowed and what is reprimanded.
• Anything the teacher says about social responsibility (e.g., following rules, being helpful, sharing, actions that are for the good of the group).
• Anything the teacher says about interpersonal relationships or conflicts.

Help-Seeking
• What students do when they are unsure of what is required of them.
• The manner in which students seek help from the teacher (e.g., publicly or privately).
• If students seek help from one another.
• What the teacher says about getting help.

Appendix B
Perceived Classroom Goal Structure Scales
Classroom Mastery-Focused Goal Structure

Our teacher tells us that really working hard is more important than anything else.
Our teacher thinks mistakes are okay as long as we are learning.
Our teacher wants us to understand our work, not just memorize it.
Our teacher really wants us to enjoy learning new things.
Our teacher recognizes us for trying hard.
Our teacher gives us time to really explore and understand new ideas.
Classroom Performance-Focused Goal Structure

Our teacher points out those students who get good grades as an example to all of us.
Our teacher lets us know which students get the highest scores on a test.
Our teacher makes it obvious when students are not doing well on their work.
Our teacher tells us how we compare to other students.
Our teacher calls on smart students more than other students.
Only a few students do really well.

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