

Differences Between Elementary and Middle School Teachers and Students: A Goal Theory Approach

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The early adolescent years are characterized by a negative shift in motivational orientation for a number of children. It has been suggested that this change is related to differences between the learning environments in elementary and middle level schools. In particular, some goal theorists have suggested that middle level schools stress performance goals more and task goals less than do elementary schools. In this study, comparisons based on survey data indicated that middle school teachers and students perceive the school culture as more performance-focused and less task-focused than do elementary teachers and students. In addition, elementary school teachers use instructional practices that emphasize task goals, and endorse task-focused achievement goals for their students, more than do middle school teachers. A perceived stress, in the school, on task goals predicted self-efficacy both for teachers and students, whereas a perceived stress on performance goals was unrelated to self-efficacy.

A number of studies have indicated that the early adolescent years are characterized by a negative change in motivational orientation and a decline in academic performance for a number of children (Eccles & Midgley, 1989). Recently, researchers have linked those changes to the transition from elementary to middle level schools (Eccles & Midgley, 1989; Simmons & Blyth, 1987; Wigfield, Eccles, MacIver, Reuman, &

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Midgley, 1991). A direct link has been found between differences in the classroom environment before and after the transition and changes in young adolescents' motivation in mathematics (Mac Iver & Reuman, 1988; Midgley, Feldlaufer, & Eccles, 1989a, 1989b).

It has been suggested that elementary and middle level schools are very different organizations with a different "ethos" and that this influences students' motivation and performance (Midgley, Feldlaufer, & Eccles, 1988). Midgley, Maehr, and their colleagues theorize that the policies and practices in middle level schools stress relative ability more, and task mastery less, than the policies and practices in elementary schools (Maehr & Anderman, 1993; Midgley, 1993; Urdan, Midgley, & Wood, this issue). This builds on considerable work that has indicated that learning environments, at both the classroom and school level, can be characterized in terms of the achievement goals that are stressed (Ames, 1990, 1992a, 1992b; Blumenfeld, 1992; Maehr & Fyans, 1989; Maehr & Midgley, 1991; Meece, 1991; Nicholls, 1984; Nolen & Haladyna, 1990). In particular, two contrasting goal stresses have been identified and shown to influence students' personal achievement goals, their self-perceptions, and their approaches to learning. When task goals are salient, students perceive that what is valued is effort, improvement, mastery, and understanding. When performance goals are salient, students perceive that what is valued is the demonstration of ability, and that how they stand in comparison to peers is the measure of their success.

Ames used the acronym TARGET (Epstein, 1989) to conceptualize the broad constellation of classroom processes that contribute to a task-focused or performance-focused learning environment (Task, Authority, Recognition, Grouping, Evaluation, and Time). Ames worked with teachers to develop specific classroom strategies within each of these areas to emphasize task goals. At the end of one year, at-risk students in those classrooms perceived that the learning environment stressed task goals more than did their peers in control classrooms. In addition, those students showed a stronger preference for challenging work, had more positive attitudes toward math and school, had higher self-concepts of ability, were more intrinsically motivated, and used more effective learning strategies than did the students who served as controls (Ames, 1990).

Looking beyond the classroom environment, Maehr, Midgley, and their colleagues have pointed to a host of school-level policies and practices that contribute to a stress on task or performance goals (Maehr, 1991; Maehr & Buck, 1993; Maehr & Midgley, 1991; Maehr, Midgley, & Urdan, 1992; Midgley, in press; Midgley & Urdan, 1992). There is some

evidence that the goal stresses which characterize the school culture have an increasing influence on student motivation at successive grade levels (Maehr & Fyans, 1989). In elementary school, students spend much of their day in one classroom, and therefore the larger school culture may be less salient to them than is the case for students in the middle grades, who often move from class to class throughout the school day.

In each of the six areas identified by Ames (1990) and Epstein (1989) there is reason to believe that middle level schools are more performance-focused and less task-focused than are elementary schools. For example, in the area of tasks, there is evidence that academic tasks and classwork are less challenging and complex in middle level schools than at the elementary level (Eccles & Midgley, 1989). Regarding authority, reviews and empirical studies conducted by Eccles and her colleagues (Eccles & Midgley, 1989; Feldlaufer, Midgley, & Eccles, 1988; Midgley & Feldlaufer, 1987; Midgley et al., 1988) indicate that middle level classrooms, compared with elementary classrooms, are characterized by a greater emphasis on teacher control and fewer opportunities for student decision making and autonomy. In the area of recognition, honor rolls, honor societies, and special privileges associated with relative ability may first be experienced by students when they move to middle level schools. For the first time, in middle level schools students may be assigned to classes on the basis of ability, indicating a more performance-focused approach to grouping. A number of studies indicate that evaluation becomes more frequent and formal as children progress through school (Gullickson, 1985; Harter, Whitesell, & Kowalski, 1992; Hill & Wigfield, 1984). Some children receive letter grades on report cards for the first time when they move to middle level schools, and those grades may be based more on relative ability and less on effort than was the case in elementary school (Midgley & Urdan, 1992). Finally, in most middle level schools, scheduling prevents the creative use of time. Based on the work of Ames in elementary classrooms (1990), all of these differences would suggest that middle level schools are more performance focused and less task focused than elementary schools.

The goals that are salient in a learning environment are related to students' achievement beliefs and approaches to learning. In particular, a perceived stress on task goals in the environment is associated with positive achievement beliefs, and a perceived stress on performance goals in the environment is associated with negative achievement beliefs (Ames & Archer, 1988). One achievement belief that has received a great deal of attention in the literature is self-efficacy, which is a powerful motiva-

tional construct that has been linked to positive affect and behaviors both in children and adults (Armor et al., 1976; Bandura, 1988, 1989; Berman, McLaughlin, Bass, Pauly, & Zellman, 1977; Schunk, 1981). Students and teachers who perceive that they are in an environment which stresses effort, improvement, and challenge are likely to feel efficacious, whereas perceiving that the environment stresses relative ability and competition may undermine feelings of efficacy.

In considering such a relationship, we were interested in determining how aspects of the learning environment might come to influence individuals' views of self. Does the perception of a particular goal orientation in the school directly influence students' feelings of self-efficacy, or does this perception of the environment influence personal achievement goals that, in turn, relate to self-efficacy? Our studies have indicated that espousing personal task goals is positively associated with self-efficacy, whereas espousing personal performance goals is negatively associated with self-efficacy (Park, Pintrich, & Midgley, 1992). It may be that students internalize the goals they perceive in the school environment and that those personal goals mediate the relationship between the goals that are salient in the learning environment and feelings of self-efficacy.

Beliefs about the nature of intelligence as a fixed, unchangeable quantity, or as a body of skills and knowledge that can be increased with effort, also are related to personal achievement goals and to patterns of thinking and behaving (Bandura & Dweck, 1981; Dweck & Leggett, 1988; Leggett, 1985). Nicholls (1990) pointed out the importance of differentiating between beliefs about intelligence and beliefs about ability. In the current school-based study, it seemed appropriate to assess beliefs about the nature of school ability. Students and teachers who believe that any student can do well in school if he or she studies hard would be likely to feel efficacious. Teachers would feel that their efforts can influence students' outcomes, and students would believe that they can do well if they try. Students who believe that school ability is modifiable may espouse personal task goals that, in turn, would positively influence their sense of efficacy. However, the role of personal goals in mediating the relationship between ability beliefs and self-efficacy may differ for elementary and middle school students in that this is a developmental stage at which children's understanding of the nature of ability is undergoing conceptual change (Nicholls & Miller, 1983, 1984).

In this study, we will examine differences between elementary and middle school teachers and students using a goal theory perspective. In particular, we will test the following hypotheses:

1. Middle school teachers and students perceive that their schools stress performance goals more and task goals less than do elementary teachers and students.
2. Middle school teachers use instructional practices and endorse achievement goals for their students that are more performance focused and less task focused than do elementary teachers.
3. Middle school students espouse personal performance goals more, and task goals less, than do elementary students.
4. Perceiving that the school stresses task goals and endorsing the belief that school ability is modifiable are positive predictors of feelings of efficacy both for students and teachers.
5. Both for elementary and middle school students, personal goals mediate the relationship between (a) the goals that are perceived to be salient in the environment and feelings of self-efficacy, and (b) beliefs about school ability as modifiable and feelings of self-efficacy.

METHOD

Data for this study were collected during the first year of a 3-year program aimed at improving school environments by changing policies and practices in a way that increases the emphasis on task goals and decreases the emphasis on performance goals (Buck & Green, 1993; Maehr & Anderman, 1993; Maehr & Midgley, 1991; Midgley, 1993; Midgley & Urdan, 1992; Urdan et al., this issue). Surveys were administered before the reform effort was initiated.

Sample

The teachers and students participating in this study came from two elementary and two middle schools located in a largely blue-collar community near a major metropolitan center. Approximately 25% of the students in the school district qualify for free or reduced fee lunches. In the district as a whole, the majority of students are White and 17% are African American.

The teacher sample consisted of 50 elementary teachers (43 females and 7 males) and 108 middle school teachers (63 females and 45 males), for a total of 158 teachers. They represent 96% of the classroom teachers in the four schools. The student sample consisted of 291 fourth- and fifth-grade elementary school students and 678 sixth- and seventh grade middle school students. Male and female students were equally

represented. At the elementary level, 96% of the students received parental permission to participate. At the middle school level, 77% received permission.

Measures

Teachers were given surveys to fill out and return in a stamped mailer. The elementary teachers completed surveys in the late fall and the middle school teachers completed the same survey in the early winter of the same school year (1990-1991). They were assured that their answers would be kept confidential. The teacher survey contained items assessing their achievement goals for their students and their perceptions of the school culture, conceptualized in terms of task and performance goals. The survey also included questions about the instructional practices that teachers use in their classrooms. In addition, teachers completed items assessing their personal teaching efficacy and their beliefs about the nature of school ability as fixed and unchanging, or as modifiable. Some of the survey items were original and some were adapted from instruments constructed by Ames and colleagues (Ames, 1990; Ames & Archer, 1988), Armor and colleagues (1976), Ashton and colleagues (Ashton, 1985; Ashton, Webb, & Doda, 1983), Guskey (1986), Braskamp and Maehr (1985), Dweck and colleagues (Bandura & Dweck, 1981; Leggett, 1985), and Eccles, Midgley, and colleagues (Midgley et al., 1989a). All items use a 5-point scale. Factor analysis and face validity guided scale construction (see Buck, Lee, & Midgley, 1992, for a more detailed description of this process). The reliability of each scale was assessed using Cronbach's alpha. See Table 1 for a list of scales with sample items and alpha coefficients.

Students responded to the Patterns of Adaptive Learning Survey (PALS) (Midgley & Maehr, 1993). Elementary students completed their surveys in November, and middle school students completed theirs in February of the same school year. Surveys were read aloud to students in their classrooms and took approximately 40 minutes to complete. Students were assured that their answers would be kept confidential. Some of the survey items were original and some were adapted from previous instruments (Ames, 1990; Ames & Archer, 1988; Harter, 1981; Maehr & Braskamp, 1986; Maehr & Fyans, 1989; Nicholls, Patashnick, Cheung, Thorkildsen, & Lauer, 1989; Nolen & Haladyna, 1990; Pintrich & DeGroot, 1990; Weinstein, Palmer, & Schulte, 1987). All items are on a 5-point scale. A wide range of constructs are included in the PALS; however,

TABLE 1: Scales With Sample Items and Alpha Coefficients

<i>Teacher Scales</i>		
Goals for students		
Task goals	6 items	$\alpha = .73$
Focusing mainly on their own improvement		
Attempting very challenging tasks or projects		
Performance Goals	5 items	$\alpha = .76$
Getting high scores on tests		
Knowing who is best and striving to do as well		
Pedagogical beliefs		
Task beliefs	8 items	$\alpha = .63$
If it were up to me, I would grade students solely for effort		
Students should be encouraged to take academic risks		
Performance beliefs	7 items	$\alpha = .74$
Competition among students enhances learning		
Parents should be told how their child is doing compared to others in the class		
Instructional practices		
Task Practices	7 items	$\alpha = .62$
I encourage my students to take risks academically		
I encourage students to ask other students to help them with their work		
Performance practices	7 items	$\alpha = .73$
I give special privileges to students who do the best academically		
I point out the students who do well academically as a model for other students		
Efficacy and ability beliefs		
Personal teaching efficacy	6 items	$\alpha = .72$
I can deal with almost any learning problem		
I am good at helping all the students in my class make significant improvement		
School ability - fixed	6 items	$\alpha = .62$
Natural ability is more important than effort for success in school		
If the brains aren't there, there isn't a great deal a student can do to learn at a high level		
School ability - modifiable	4 items	$\alpha = .67$
Any student can do well in school if s/he studies hard		
Any student can succeed academically if he or she studies hard		

(continued)

TABLE 1: Continued

Perceptions of the school culture		
School Culture - Task Goal Stresses	8 items	$\alpha = .92$
This school makes teachers want to work hard		
The administration at this school is always working to improve teaching		
School culture - performance goal stresses	7 items	$\alpha = .79$
Power and influence count a lot around this school		
The administration in this school actively encourages competition among teachers		
<i>Student Scales</i>		
Personal goal orientation		
Task Goals	7, 8, items ^a	$\alpha = .70, .81$
I don't care what grade I get as long as I understand my work		
When I work hard in school, it's mainly because I like learning new things		
Performance goals	7, 3 items	$\alpha = .62, .62$
Doing better than other kids in my class is important to me		
If I were the only one in class who could answer a question I'd feel really good		
Efficacy and ability beliefs		
Self-efficacy	6, 5 items	$\alpha = .66, .71,$
Even if the work is hard in my class, I can learn it		
I can do almost all the work in school if I keep working at it		
School ability - modifiable	4, 4 items	$\alpha = .61, .72$
Kids who don't do well in school can get to be very smart if they work hard		
All kids can learn the most difficult school work if they try		
Perceptions of the school culture		
School culture - task goal stresses	5,5 items	$\alpha = .55, .67$
In this school any student can be successful		
In this school teachers think how much you learn is more important than test scores		
School culture - performance goal stresses	5, 5 items	$\alpha = .71, .69$
In this school only a few kids get praised for their school work		
In this school teachers treat students who get good grades better than other students		

a. First number of items and first alpha are for the elementary sample; second number of items and second alpha are for the middle school sample.

scales specific to the hypotheses were selected for this study. Scales used in this study assess students' perceptions of the school culture and their personal achievement goals conceptualized in terms of performance and task-goal stresses. In addition, scales were included that assess students' sense of self-efficacy and beliefs about the nature of school ability. The number of items assessing each construct differs in some cases at the elementary and middle school level. Although most of the items are identical at the two levels, some are different. The reason for this is that at the time the data were gathered, scales were still being refined. However, the constructs tapped by the scales are the same. Factor analysis was used to guide scale construction. See Table 1 for a list of scales with sample items and alpha coefficients. Alphas on the scale measuring beliefs about school ability as fixed were unacceptable at both the elementary and middle school level; therefore, only the scale measuring beliefs about school ability as modifiable was used in this study.

RESULTS

Differences Between Elementary and Middle School Teachers and Students

To examine differences between elementary and middle school teachers' achievement goals for their students, instructional practices, and perceptions of the goal stresses in their schools, we conducted *t* tests for independent samples. The results of these analyses are shown in Table 2. To examine differences between elementary and middle school students' goals, beliefs, and perceptions of the goal stresses in the school culture, and to test for interactions with gender, a two-way ANOVA was conducted. There were no significant interactions between student gender and school level. The results of these analyses are shown in Table 3.

The first hypothesis, that middle school teachers and students perceive that their schools stress performance goals more, and task goals less, than do elementary teachers and students was confirmed. Middle school teachers perceived a greater schoolwide stress on performance goals than did elementary teachers ($t = -2.44, p < .05$), whereas elementary teachers perceived a greater stress on task goals than did middle school teachers ($t = 3.48, p < .001$). Middle school students perceived that their schools stress task goals less ($F = 31.51, p < .001$), and performance goals more ($F = 40.62, p < .001$), than did elementary school students.

TABLE 2: Tests of Significant Differences Between Elementary and Middle School Teachers

<i>Variable</i>	<i>Elementary School Teachers</i>		<i>Middle School Teachers</i>		<i>t</i>
	\bar{X}	SD	\bar{X}	SD	
School culture - task	3.69	0.88	3.11	0.77	3.48***
School culture - performance	2.50	0.84	2.88	0.68	-2.44*
Task goals for students	4.34	0.40	4.15	0.54	2.27*
Performance goals for students	2.62	0.72	2.97	0.65	-2.60**
Instructional practices - task	3.78	0.57	3.52	0.55	2.40*
Instructional practices - performance	2.63	0.59	2.75	0.67	-1.09
Modifiable ability	2.95	0.62	3.14	0.72	-1.53
Fixed ability	2.32	0.56	2.59	0.52	-2.53**
Teacher efficacy	3.84	0.59	3.46	0.62	3.35***

NOTE: For elementary teachers, $n = 50$; for middle school teachers, $n = 108$.

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

The second hypothesis, that middle school teachers use instructional practices and endorse achievement goals for their students that are more performance focused and less task focused than do elementary teachers was confirmed for goals but only partially for instructional practices. Middle school teachers reported that they stress performance goals to their students, such as getting top grades in class, more than did elementary teachers ($t = -2.60, p < .01$). In contrast, elementary teachers reported they stress task goals, such as focusing mainly on one's own improvement, more than did the middle school teachers ($t = 2.27, p < .05$). Although elementary teachers reported using task-focused instructional practices, such as cooperative learning in mixed-ability groups, more than did middle school teachers ($t = 2.40, p < .05$), there were no differences in their reported use of performance-focused instructional practices, such as giving special privileges to students who do the best academically.

The third hypothesis, that middle school students endorse personal performance goals more, and task goals less, than do elementary students, received support. Students at the middle school level endorsed personal performance goals, such as being concerned about doing better than other students, more than did elementary school students ($F = 26.15, p < .001$). In contrast, students at the elementary level endorsed personal task goals, such as being concerned with understanding more than with grades, more strongly than did students at the middle school level ($F = 93.83, p < .001$).

TABLE 3: Analysis of Variance on Differences Between Elementary and Middle School Students

Variable	Elementary School Students		Middle School Students		F
	\bar{X}	SD	\bar{X}	SD	
School culture - task	4.00	0.60	3.72	0.76	31.51***
School culture - performance	2.20	0.87	2.58	0.85	40.62***
Personal task goals	3.76	0.71	3.24	0.80	93.83***
Personal performance goals	2.74	1.10	3.10	1.01	26.15***
Modifiable ability	4.15	0.72	4.17	0.76	0.19
Self-efficacy	3.54	0.71	3.65	0.03	5.66*

NOTE: For elementary students, $n = 291$; for middle school students, $n = 678$.

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

Other interesting differences between elementary and middle school teachers and students emerged from these analyses. Teachers at the elementary level felt significantly more efficacious than their colleagues at the middle school level ($t = 3.35, p < .001$). In comparison to elementary school teachers, middle school teachers were more likely to believe that school ability is fixed ($t = -2.53, p < .01$). The belief that school ability is modifiable did not differ across school levels. Comparisons between elementary and middle school students indicated that students at the middle school level felt more efficacious than did elementary students ($F = 5.66, p < .05$). As was true for teachers, there were no differences between elementary and middle school students in their belief that school ability is modifiable.

Relationships Among the Variables

The second stage of analysis was an exploration of the relationships among the teacher and student variables. Pearson product-moment correlations were calculated separately for teachers at the elementary and middle school levels, and separately for students at each level. The results of these analyses are displayed in Tables 4 and 5.

For elementary teachers, perceiving a stress on task goals in the school was positively associated with feeling efficacious, whereas perceiving a stress on performance goals in the school was negatively associated with efficacy, but these associations were not significant. For middle school

TABLE 4: Intercorrelations Among Variables for Elementary and Middle School Teachers

Variable	1	2	3	4	5	6	7	8	9
1. School Culture-Task	—	-.77**	.40*	.47**	.03	.11	.41*	-.13	.31
2. School Culture-Performance	-.49**	—	-.34*	-.33	-.12	-.14	-.29	.11	-.32
3. Task Goals For Students	.00	-.01	—	-.32	.61**	.03	.21	-.31	.23
4. Performance Goals For Students	.26**	.01	-.03	—	-.08	.45**	.26	-.09	-.07
5. Instructional Practices-Task	.11	-.05	.45**	-.03	—	-.06	-.15	-.23	.21
6. Instructional Practices-Performance	.26*	-.05	.01	.54**	.12	—	.18	.09	-.20
7. Modifiable Ability	-.06	.00	.10	.16	.07	.00	—	-.35*	.41*
8. Fixed Ability	.12	-.00	-.40**	.22*	-.22*	.18	-.27**	—	-.28
9. Teacher Efficacy	.24*	.01	.37**	.07	.32**	.07	.20*	-.21*	—

NOTE: For elementary teachers, $n = 50$; for middle school teachers, $n = 108$. Elementary teachers are above the diagonal; middle school teachers are below the diagonal.

* $p < .05$; ** $p < .01$.

TABLE 5: Intercorrelations Among Variables for Elementary and Middle School Students

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. School culture - task	—	-.34*	.31*	-.08	.46*	.26*
2. School culture - performance	-.31*	—	-.06	.30*	-.22*	-.06
3. Personal task goals	.40*	-.22*	—	-.02	.20*	.28*
4. Personal performance goals	.16*	.16*	.18*	—	-.01	.03
5. Modifiable ability	.39*	-.17*	.36*	.13*	—	.21*
6. Self-efficacy	.31*	-.10*	.37*	.18*	.37*	—

NOTE: For elementary students, $n = 291$; for middle school students, $n = 678$. Elementary students are above the diagonal; middle school students are below the diagonal.

** $p < .01$.

teachers, perceiving a stress on task goals was positively and significantly related to feelings of efficacy, but a perceived school stress on performance goals was unrelated to efficacy. For both elementary and middle school teachers, endorsing performance goals for their students, such as getting high scores on tests and using classroom instructional practices that reflected an emphasis on performance goals, were positively and significantly correlated. The same was true for goals and practices reflecting a task orientation.

For students at both school levels, perceiving a stress on task goals in the school was positively and significantly associated with believing that school ability is modifiable and with self-efficacy. Perceiving that the school stressed performance goals was significantly negatively related to the belief that school ability is modifiable for both elementary and middle school students. However, perceiving that performance goals were salient in the school was significantly (negatively) related to self-efficacy only for middle school students. At both levels, there was a significant positive relationship between perceiving that the school stresses task goals and students' personal task goals, as well as between perceiving that the school stresses performance goals and personal performance goals. However, at the middle school level, perceiving that the school stresses task goals and holding personal performance goals also were related positively and significantly. For elementary students, personal task goals were positively related to self-efficacy, whereas personal performance goals were unrelated to self-efficacy. For the middle school students, both task-

TABLE 6: Multiple Regression Predicting Teacher Efficacy

<i>Variable</i>	<i>Beta</i>
School culture - task	.28**
School culture - performance	.12
Task goals for students	.15
Performance goals for students	-.08
Instructional practices - task	.23**
Instructional practices - performance	-.02
Modifiable ability	.29***
School level	-.17*

NOTE: For the school-level variable, elementary school = 0, and middle school = 1; $R^2 = .33$.***

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

and performance-focused personal achievement goals were positively related to self-efficacy.

Predictors of Teachers' and Students' Efficacy

We hypothesized that perceiving a schoolwide stress on task goals and believing that school ability is modifiable would be positive predictors of efficacy for both students and teachers. We used multiple regression to examine the effect of perceived task and performance goal stresses in the school, personal achievement goals, and the belief that ability is modifiable on students' efficacy beliefs. For teachers, we also included their reported instructional practices. We included a two-level variable, representing school level (0 = elementary; 1 = middle), to account for school-level effects on efficacy. The results for teachers are presented in Table 6, and the results for students are presented in Table 7.

Results indicate that perceiving that the school stresses task goals ($\beta = .28$, $p < .01$) and believing that school ability is modifiable ($\beta = .29$, $p < .001$) were the strongest predictors of efficacy for teachers. Using task-focused instructional practices ($\beta = .23$, $p < .01$) and school level ($\beta = -.17$, $p < .05$) also were significant predictors of teacher efficacy. The predictors accounted for 33% of the variance in teacher efficacy. For students, holding personal task-focused achievement goals and believing that school ability is modifiable were the strongest predictors of effi-

TABLE 7: Multiple Regression Predicting Student Efficacy

<i>Variable</i>	<i>Beta</i>
School Culture - Task	.13***
School Culture - Performance	.01
Personal Task Goals	.23***
Personal Performance Goals	.07*
Modifiable Ability	.19***
School Level	.15***

NOTE: For the school level variable, elementary school = 0, and middle school = 1; $R^2 = .19^{***}$

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

cacy ($\beta = .23, .19$, respectively, $p < .001$). In addition, perceiving that the school stresses task goals ($\beta = .13, p < .001$), holding personal performance-focused achievement goals ($\beta = .07, p < .05$), and school level ($\beta = .15, p < .001$) predicted efficacy for students. These variables accounted for 19% of the variance in students' self-efficacy.

We were interested in determining whether students' perceptions of the goals stressed in the school and their beliefs about school ability as modifiable had a direct effect on self-efficacy or were mediated by their personal achievement goals. We used path analysis to look at these relationships separately for elementary and middle school students. Results for the elementary school sample are presented in Figure 1, and for the middle school sample in Figure 2.

Believing that school ability is modifiable is not a predictor of self-efficacy in the path model for elementary students, and does not predict either performance-focused or task-focused personal achievement goals. However, perceiving that the school stresses task goals has a direct effect on self-efficacy and an indirect effect through personal task goals. Perceiving that the school stresses performance goals has a direct effect on elementary students' personal performance goals, but not on self-efficacy. At the middle school level, a perceived stress on task goals in the school and believing that ability is modifiable have direct effects on self-efficacy and indirect effects through personal achievement goals. However, the effect of perceiving a school stress on performance goals on self-efficacy is mediated by personal goals and does not have a direct effect on efficacy.

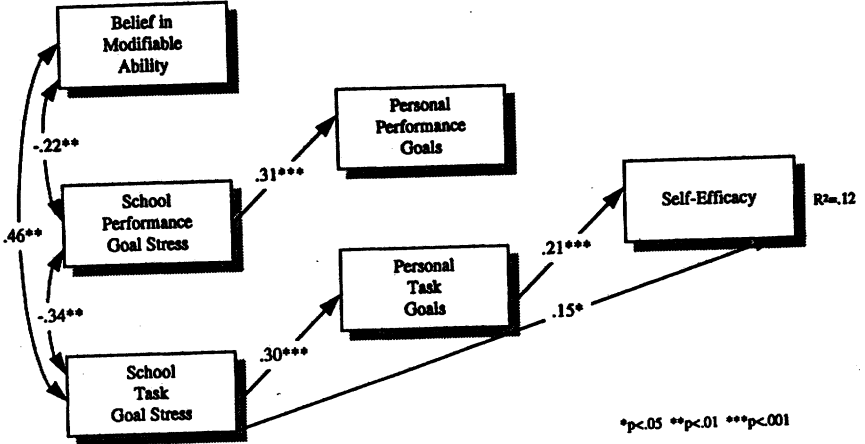


Figure 1: Path Model for Elementary Student Self-Efficacy

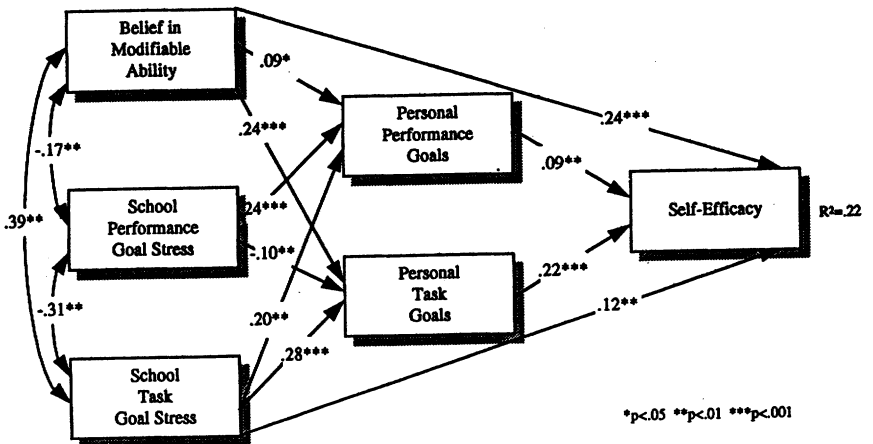


Figure 2: Path Model for Middle School Student Self-Efficacy

DISCUSSION

This study joins together, for the first time, two parallel strands of research. First, there is the work examining changes in the learning context and in student motivation at early adolescence, particularly in conjunction with the transition to middle level schools. Second, there is the work conceptualizing the learning environment in terms of the achievement goals that are stressed and relating students' personal goals to their motivation and approach to learning. The middle school teachers and students in this study perceive that the school culture is more performance focused and less task focused than do the elementary teachers and students. Although we had hypothesized this to be true, this is the first study to demonstrate this using goal theory constructs. Similar findings emerged for elementary and middle school teachers' use of task focused instructional strategies and their personal achievement goals for their students. Given these differences in the perceived school culture, the goals teachers have for their students, and the instructional strategies they use in their classrooms, it is not surprising that sixth- and seventh-grade middle school students adopt personal achievement goals that are more performance focused and less task focused than do fourth- and fifth-grade elementary students.

It is not surprising, but it is very unsettling. When task focused, students try harder, persist longer, take on more challenging work, and are more creative than when they are performance focused (Ames & Archer, 1988; Archer, 1989; Elliott & Dweck, 1988; Maehr, 1989; Meece, Blumenfeld, & Hoyle, 1988; Nicholls, Patashnick, & Nolen, 1985). In addition, when task focused, students tend to use deep-processing strategies, including discriminating important from unimportant information, trying to figure out how new information fits with what one already knows, and monitoring comprehension. When performance focused, students tend to use surface-level strategies that include rereading text, memorizing, and guessing (Ames & Archer, 1988; Golan & Graham, 1990; Meece et al., 1988; Meece & Holt, 1990; Nolen, 1988; Pintrich & DeGroot, 1990). The negative shift in motivational orientation and academic performance experienced by a number of children during the early adolescent years may be related to changes in their achievement goals, precipitated by differences in the goal stresses in elementary and middle level schools.

It is disturbing that middle school teachers feel significantly less efficacious than elementary teachers do. Teacher efficacy has been linked to

students' self-perceptions (Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1979; Midgley et al., 1989a), student achievement (Armor et al., 1976; Ashton et al., 1983; Berman et al., 1977), and successful implementation of curriculum innovation (Armor et al., 1976; Berman et al., 1977). Although there has been much discussion about the inhospitable nature of the middle school environment for students, we need to consider that middle schools may provide a difficult environment for teachers as well, which undermines their feelings of efficacy.

The variables used in this study do not explain much of the variance in self-efficacy for students, particularly at the elementary level. Other factors are obviously contributing to students' sense of efficacy and to differences in elementary and middle school students' self-efficacy. At the elementary level, where students spend most of their day in a self-contained classroom, perceived classroom goal stresses may account for more of the variance in self-efficacy than perceived school goal stresses. In addition, the nature of the work given to students may have a strong effect on their feelings of efficacy. There is some evidence that the academic work given to students in middle level schools is less complex and challenging than the work given to students in the upper elementary grades (Eccles & Midgley, 1989). Upper elementary school students may feel less certain than middle school students about their ability to do their work because the work itself is more difficult and complex.

Both for students and teachers, believing that their schools stress task goals is a positive predictor of self-efficacy. For teachers, using task-focused instructional practices also predicts feelings of efficacy, whereas for students, holding personal task goals predicts their feelings of efficacy. In contrast, a stress on performance goals in the school is not a predictor of efficacy beliefs. When Ames (1990) works with teachers to change the goal stresses in classrooms, the emphasis is on increasing the salience of task goals rather than decreasing the salience of performance goals. The current study provides support for that approach if one believes it is important to enhance students' feelings of efficacy.

There is some support for the hypothesis that personal achievement goals mediate the relationship between the goals that are perceived in the environment and feelings of self-efficacy for students. At both the elementary and middle school levels, personal task goals mediate the relationship between the perceived stress on task goals in the school and feelings of self-efficacy. At the middle school level, personal performance goals also serve in this mediating role. At the middle school level, there is also a direct relationship between perceiving a stress on task goals

in the environment and feelings of self-efficacy. This suggests that students, in fact, may internalize the goals they see stressed in their schools, and that these personal goals relate to their feelings of self-efficacy. It also suggests that instructional practices which lead to perceiving the environment as task focused may also be related directly to increased feelings of efficacy.

In considering the relationship between beliefs about the nature of school ability and other variables of interest, several points need to be made. First, we are continuing to refine these scales. In various samples, including this one, we have found that the scale measuring students' belief that school ability is fixed is moderately negatively correlated with the scale measuring the belief that ability is modifiable. It may be that these constructs are not orthogonal, but rather represent opposite ends of a continuum. In this sample, the items assessing students' beliefs that school ability is fixed did not form a reliable scale, and thus that scale was not used in the study. The belief that school ability is modifiable was unrelated to personal goals or self-efficacy for elementary students in the path model. However, for middle school students, this belief was related to individual performance and task goals, as well as to self-efficacy. As Nicholls and Miller have shown (1983, 1984), during early adolescence, children's conception of the nature of ability becomes more differentiated and more like that of an adult. The differences in the role this belief plays for elementary and middle school students may be a reflection of this developmental change.

This study has several limitations. Alphas on a few of the scales are lower than is desirable, although only one is below .60. Items in the scales measuring the constructs for elementary and middle school students are not identical, although there is much overlap. In future studies, it will be important to use scales with identical items. These data are cross-sectional. Longitudinal studies that follow children from elementary to middle school and assess changes in the perceived goal stresses in school and in their personal achievement goals, motivational orientation, and approaches to learning are needed. In addition, future studies should include a larger sample of elementary and middle level schools.

It should also be kept in mind that the scales which assess teachers' perceptions of the school culture focus on the perceived goal stresses in the teachers' workplace, and not teachers' perceptions of the goal stresses in the school for students. For example, teachers are asked if *teachers* try to outdo each other in the school or if *teachers* have the opportunity to

learn new things. Recently we developed items to assess teachers' perceptions of the goal stresses in the school for students. We will be interested to see if teachers, as well as students, perceive that the middle school environment is focused more on relative ability and less on effort and improvement for *students*. We will be interested also to see if teachers' sense of efficacy is related to their perceptions of the school goal stresses for students.

This study represents a first step in conceptualizing differences between elementary and middle level schools in goal theory terms. We are hopeful that this study and subsequent studies will provide information that will be helpful in guiding school reform. With our colleagues, we have been collaborating with teachers, administrators, and parents in both an elementary school and a middle school to make changes in policies and practices consistent with a shift to a more task-focused learning environment (Maehr & Anderman, 1993; Midgley, 1993; Midgley & Urdan, 1992). We already have evidence that elementary school policies and practices can be examined and changed in a way that emphasizes task goals and de-emphasizes performance goals (Buck & Green, 1993). Using goal theory as a basis for change at the middle school level has been more difficult (see Urdan et al., this issue). If indeed subsequent ones confirm that middle level schools are more performance focused and less task focused than are elementary schools, and if these differences predict negative changes in students' motivational orientation, this will be important information for those who seek to reform middle level schools.

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