DOCUMENT RESUME

ED 382 372 PS 023 258

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TITLE Cross-Sectional and Longitudinal Assessments of Changes in Motivational Beliefs of Elementary and Middle School Children.
PUB DATE Mar 95
NOTE 15p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (61st, Indianapolis, IN, March 30-April 2, 1995).
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Age Differences; *Beliefs; Cross Sectional Studies; Elementary Education; *Elementary School Students; Evaluation; Longitudinal Studies; Middle Class Students; Middle Schools; Performance Factors; *Student Attitudes; *Student Motivation
IDENTIFIERS *Middle School Students

ABSTRACT

Motivational beliefs of children in grades 5 through 8 (ages 10 years, 9 months to 13 years, 7 months) were assessed in a cross-sectional and a longitudinal study. Children attended a nonsectarian, private school in which the method of evaluating academic performance changed over grades from an individualized, mastery-oriented approach to a normative, comparative one. The school served families of middle to upper-middle SES levels. Only 9% of the children were of minority backgrounds. Children were asked to respond to questionnaires assessing beliefs concerning goal orientations, the value of school, attributions of academic success and failure, and perceived academic competence. Sixty-five of the original 122 children again completed the questionnaire 2 years later. In each study, children's motivational beliefs changed over grade level, so that mastery orientation, perceptions of the value of school, and the use of effort attributions for academic success all decreased over grades 5 through 8, while work avoidance increased. (Author/DR)

Cross-Sectional and Longitudinal Assessments of Changes in Motivational Beliefs of Elementary and Middle School Children

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Abstract

Motivational beliefs of children in grades 5 through 8 (ages 10-9 to 13-7 years) were assessed in a cross-sectional and a longitudinal study. Children attended a nonsectarian, private school in which the method of evaluating academic performance changed over grades from an individualized, mastery-oriented approach to a normative, comparative one. The school served families of middle to upper-middle SES levels. Only 9% of the children were of minority backgrounds. In each study, children's motivational beliefs changed over grade level, so that mastery orientation, perceptions of the value of school, and the use of effort attributions for academic success all decreased over grades 5 through 8, while work avoidance increased.

Cross-Sectional and Longitudinal Assessments of Changes in Motivational Beliefs of Elementary and Middle School Children

Several investigators (Harter, 1981; Nicholls, 1984; Stipek & Daniels, 1988) have shown that children's conceptualizations of their own academic competence and their goal orientations with regard to academic work vary across age and are related to particular characteristics of their schools. The present study used data from a longitudinal sequential study to examine changes over grade level in the motivational beliefs of children attending a school in which the nature of evaluation changed over grade level. Through fourth grade, the school stressed individual effort and mastery of academic tasks; during fifth grade, the children began to receive normative feedback about their work, but did not receive traditional letter grades; in sixth grade and beyond, they received traditional grades on tests, quizzes, and papers. Thus, the motivational orientation of the school changed over time from an individualized to a normative model. Comparisons were made of children at different grade levels, using a cross-sectional and a longitudinal design, to determine whether children's motivational beliefs changed in accord with changes in their school experiences.

Method

Children were asked to respond to questionnaires assessing beliefs concerning goal orientations (mastery, ego, and work avoidance), the value of school, attributions (effort, ability, and external) used to explain academic success and failure, and feelings of perceived academic competence. Items included in each scale and internal consistency estimates are shown in Tables 1 through 4. These measures were developed with a sample of 276 children, of grades 5 through 8, from several different schools and representing various ethnic and socioeconomic groups.

The 122 children participating in the present study attended a non-sectarian private school serving a predominantly white, middle- to upper-middle-class population. At the time of the initial testing the children were in grades 5 through 8, and had begun

the school year only a few weeks earlier. There were 35 fifth graders (mean age = 129 months (12 years, 9 months), SD = 4.6), 30 sixth graders (mean age = 141 months (11 years, 9 months), SD = 4.3), 38 seventh graders (mean age = 151 months (12 years, 7 months), SD = 4.9) and 19 eighth graders (mean age = 163 months (13 years, 7 months), SD = 6.4). At each grade level, the distribution of females and males was quite similar; overall, 58 males and 64 females participated.

Two years later, 65 of the children in the original study completed the questionnaires again. This sample included 30 children (17 males and 13 females) who had participated in fifth grade and who took the questionnaires again in seventh grade; and 25 children (11 males and 14 females) who had originally participated in sixth grade and were retested in eighth grade. Thus, five children were lost from the first to the third year in each of the grade level groups tested in the longitudinal study.

Results

Cross-sectional comparisons of children of Grades 5 through 8 showed decreases over grade in the extent to which children endorsed a mastery orientation as the basis for school effort, with a concomitant increase in work avoidance. There was also a decrease in the positive value children expressed for school. Children declined over grade in the extent to which they attributed academic success to effort. These conclusions are based on findings of a multivariate analysis of variance, including Grade and Gender as independent variables and the eleven motivation measures as dependent variables. This analysis yielded an overall effect for grade level, $F(33,307) = 1.63$, $p = .018$. Follow-up univariate ANOVAS and tests of linearity indicated the differences shown in Table 6, with linear decreases over grade in mastery orientation, the value of school, and effort attributions for success. Work avoidance increased in a linear fashion over grade. Comparisons of mean scores were made using Neuman-Keuls' tests of the means. The findings summarized in Table 6 emphasize the difference between the fifth grade group and the older children, although tests of linearity showed significant linear

trends for each of these variables. Several motivational variables did not show significant change over grade level: ego orientation, perceived academic competence, ability attributions and external attributions for success and failure, and effort attributions for failure.

In the longitudinal study, within-subject comparisons (Table 7) largely replicated the findings of the cross-sectional design. A multivariate analysis of variance carried out with ten motivational measures as dependent variables included Grade and Gender as between-subjects variables and Time of Test as a within-subjects variable. This analysis showed significant differences between grade level groups, $F(10, 42) = 3.29$, $p = .003$, as well as significant change over the two year period, $F(10, 42) = 3.27$, $p = .003$. According to follow-up univariate analyses of variance, the same variables that showed change in the cross-sectional study also varied over grade and time of test in these comparisons: In particular, mastery orientation decreased over time in both groups, and was lower overall in the older group than in the younger group. Similarly, the value of school showed a decrease over time and was lower in the older group. Effort attributions for success tended ($p = .08$) to decrease over time, and were used less by the older children than the younger. Finally, work avoidance increased over time in both groups.

Only a few differences attributable to gender were seen. In the cross-sectional study, males obtained higher mean scores than females on ego orientation and work avoidance, while females were higher in the perceived value of school. In the longitudinal study, gender differences in work avoidance seen in the first testing disappeared two years later, as females' level of work avoidance increased to that of males. Over time, males showed an increase, and females a decrease, in the tendency to attribute academic success to ability.

Discussion

In a school in which evaluation changed over grade level from individualized to normative, both cross-sectional and longitudinal comparisons showed a pattern of less and less positive beliefs about academic experiences over grade. As the perceived value of school declined, interest in mastery of academic material decreased and work avoidance increased. Belief in one's own effort as the basis for academic achievement also showed a decline. Contrary to expectations, however, perceived competence in the area of academic achievement did not change over grade.

The importance of school motivational climate is emphasized in contrasting these findings with those for similar-aged children attending schools that used traditional evaluative grading from early grades. In these schools, we do not see such decreases in motivational beliefs over time (Obach, 1994). It is likely, then, that the children's concepts were changing in response to their school experiences.

As Nicholls (1984) has suggested, in attempting to prepare children to deal with a competitive society, schools may be discouraging the motivational beliefs that would facilitate exploration and creative individual achievement.

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Table 1

Items Used to Assess Goal Orientations

Mastery Orientation Items

I prefer class work that is challenging so I can learn new things.
I like to find out something new in school.
I want to learn as much as possible.
The work we do in class makes me want to learn more.
I feel involved in my work.
I think that my schoolwork is interesting.
In school, I like to solve hard problems.
I like classes that make me think about things.

Internal Consistency: Alpha = .84

Ego Orientation Items

I want others to think that I am smart.
It is important to me to do better than the other students.
It is important to me that the teacher thinks I do a good job.
I want to show people that I'm good at schoolwork.
I want to do the work better than other kids do.
I want to know more than the other students in the class.
I'm happy when I'm the only one who can answer the teacher's questions.
I want to score higher than the other students on tests we have in class.

Internal Consistency: Alpha = .86

Work Avoidance Items

I want to do things as easily as possible in school.
I don't want to work very hard in school.
I just want to do what I am supposed to do in class, and get it over with.
I want to do as little work as possible in school.
I feel successful in school when all the work is easy.
I like class when the teacher doesn't ask me any hard questions.
I feel good when the teacher doesn't call on me in class.
I feel successful when I don't have to take any hard tests in school.
I feel successful when I don't have to do any homework.
I like a class when I already know everything that is being taught.

Internal Consistency: Alpha = .81

Table 2

Items Used to Assess Valuing of School

It is important for me to learn what is being taught in school this year.

I think that I will be able to use what I am learning in this class in other classes later on.

I think that what I am learning in school is useful for me to know.

I think that what we are learning in school is valuable.

In my opinion, what is taught in my classes is not worth learning. (R)

I don't care about getting an education. (R)

I would rather not be in school. (R)

I don't think it is important for me to learn a lot in school. (R)

Note: Items labeled (R) are reversed in scoring.

Internal Consistency: Alpha = .75

Table 3

Items Used to Assess Children's Attributions

for Academic Success and Failure

The following items were used to obtain children's rankings of five possible attributions for academic success and failure:

You got all the words right on the weekly spelling test. Why did this happen?

The teacher asked you to stay after school to rewrite a paper you wrote about a famous explorer. Why?

The teacher asked you to read a paragraph aloud to the class. You read it loudly and clearly without missing a word. Why did this happen?

Your class had a math test and you missed a large number of problems. Why did this happen?

The first day of school, the teacher asked everyone to write a paper about what he or she did last summer. When your paper was handed back to you, your teacher had written "excellent paper" on it. Why did this happen?

You were assigned a poem to practice reading. A few days later, when the teacher asked you to read the poem aloud to the class, you mispronounced a lot of words and didn't read the poem very well. Why did this happen?

Ranking Choices:

_____ I was (un)lucky.
_____ It was hard (easy).
_____ I'm (not) good at _____.
_____ I did not try.
_____ I don't know why.

Internal Consistency:

Effort Attributions for Success: Alpha = .68
Effort Attributions for Failure: Alpha = .76
Ability Attributions for Success: Alpha = .62
Ability Attributions for Failure: Alpha = .60
External Attributions for Success: Alpha = .66
External Attributions for Failure: Alpha = .68

Table 4

Items Used to Assess Self-Efficacy:

The Scholastic Competence Scale of Harter's

Self-Perception Profile for Children

Some kids feel that they are very good at their schoolwork. BUT
Other kids worry about whether they can do the school work assigned to them.

Some kids feel like they are just as smart as other kids their age. BUT
Other kids aren't so sure and wonder if they are smart.

Some kids are pretty slow in finishing their school work. BUT
Other kids can do their school work quickly.

Some kids often forget what they learn. BUT
Other kids can remember things easily.

Some kids do very well at their classwork. BUT
Other kids don't do very well at their classwork.

Some kids have trouble figuring out the answers in school. BUT
Other kids almost always can figure out the answers.

Internal Consistency: Alpha = .73

Table 5

Mean Scores and Standard Deviations on All Motivational Measures for Children of Grades 5 through 8 (Cross-Sectional Study: N=122)

Measure	M	SD
Goal Orientations		
Mastery Orientation	4.06	.71
Ego Orientation	3.61	.90
Work Avoidance	2.72	.82
Valuing of School	4.51	.55
Attributions		
Effort Attributions for Success	4.22	.78
Effort Attributions for Failure	4.04	1.06
Ability Attributions for Success	3.71	.84
Ability Attributions for Failure	2.87	.95
External Attributions for Succes	2.73	.52
External Attributions for Failure	3.01	.57
Perceived Academic Competence	2.99	.65

Note: For the first ten variables, the maximum score is 5.00. For the Perceived Academic Competence variable, the maximum score is 4.00.

Table 6

Mean Scores on Motivational Measures for Children of Grades 5 through 8 (Cross-Sectional Study)

Motivational Measure	Grade 5 (N = 35)	6 (N = 30)	7 (N = 38)	8 (N = 19)
Goal Orientation				
Mastery Orientation	4.46a	4.08b	3.89bc	3.63c
Work Avoidance	2.33a	2.69ab	2.92b	3.09b
Valuing of School	4.79a	4.53b	4.36b	4.29b
Effort Attributions for Academic Success	4.51a	4.29ab	4.04b	3.95b

Note: Within each row, means bearing the same letter do not differ.

Table 7

Mean Scores on Motivational Measures for Children of Grades 5 and 6 Tested Two Years Later (Longitudinal Study: N=55)

Motivational Measure	Grade 5	6	7	8
Goal Orientation				
Mastery Orientation^{GT}	4.46		3.83	
		3.94		3.53
Work Avoidance^{T}	2.35		2.94	
		2.69		3.06
Valuing of School^{GT}	4.81		4.35	
		4.46		4.10
Effort Attributions for				
Academic Success^{G}	4.50		4.41	
		4.31		3.93

Notes: 30 children of Grade 5 were retested in Grade 7; 25 children of Grade 6 were retested in Grade 8.
G superscript indicates significant differences between the younger and older groups on the variable indicated.
T superscript indicates significant differences between testing times.