DOCUMENT RESUME

ED 219 447 TM 820 472

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TITLE Students' Descriptions of the Ecology of the School Environment for High and Low Achievers.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Mar 82
GRANT NIE-G-79-0078
NOTE 20p.; Paper presented at the Annual Meeting of the American Educational Research Association (66th, New York, NY, March 19-23, 1982).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Classroom Environment; Feedback; Grade 4; *High Achievement; Intermediate Grades; *Low Achievement; *Student Attitudes; *Student Teacher Relationship; *Teacher Response

ABSTRACT

Students' descriptions of characteristics of high and low achievers and their treatment by peers and teachers were examined through semi-structured interviews with 133 fourth-graders. Coded interviews were anlayzed for differences in descriptions of the characteristics and peer and teacher treatment of high and low achievers; and whether these descriptions differed for students in classrooms which vary in the amount of differential teacher treatment perceived to be given to high and low achievers. Students described high achievers as having more positive academic task behaviors and a more positive attitude towards themselves and school than do low achievers. Differences in how teachers treat high and low achievers were described mainly in the areas of evaluation and feedback, help, and learning opportunities. High achievers were portrayed as receiving more positive evaluations, more rewards and privileges, and less criticism and punishment than low achievers. High achievers also received more learning opportunities, but less pressure to achieve and less help. (Author/BW)

STUDENTS' DESCRIPTIONS OF THE ECOLOGY OF THE SCHOOL ENVIRONMENT FOR HIGH AND LOW ACHIEVERS

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A paper presented at the annual meeting of the American Educational Research Association, New York, March 1982.

This research was supported by the National Institute of Education Grant G-79-0078 to Rhona S. Weinstein, principal investigator. The opinions expressed herein do not necessarily reflect the position or the policy of the National Institute of Education, and no official endorsement should be inferred. Acknowledgements and thanks are due to Elizabeth Hartke for her assistance in data analysis and to Margaret Moffett for her clerical support.

Recent research on the classroom environment and its influence on students and their achievement has documented that students are aware of differences in the ways that teachers treat high and low achievers. In a study in which students were asked to rate the frequency of pre-set categories of teacher behaviors, students reported that high achievers received higher expectations and more opportunity and choice than low achievers; and low achievers were the recipients of more negative feedback and teacher direction, and more work and rule orientation than high achievers (Weinstein, Marshall, Brattesani & Middlestadt, in press). Furthermore, classrooms were found to vary in the amount of perceived differential teacher treatment between high and low achievers. Classrooms with high amounts of differential teacher treatment differed from those with low amounts of differential teacher treatment in that in high differential treatment classrooms, teacher expectations were more closely matched with those of their students and were a more powerful predictor of student achievement (Brattesani, Weinstein, Middlestadt & Marshall, 1981).

This paper explores further the classroom environment as it exists for high and low achievers by investigating whether students perceive differences in the characteristics and peer treatment of high and low achievers and whether differences in these descriptions of high and low achievers are heightened in classrooms where there are high amounts of differential teacher treatment. This research utilizes open-ended interviews to obtain a fuller description of students' views of high and low achievers and their treatment by teachers as well as by peers in order to supplement the information obtained through the student ratings of teacher behaviors.

Until recently, there has been a paucity of research on children's descriptions of others' abilities, attitudes and conceptions of how environmental contexts affect others' behavior (Shantz, 1975). Investigators have now begun to delve into the area of children's views of student characteristics and classroom contexts. However, most of this research has been limited by fixed response choices. In addition to the study of students' ratings of differential teacher treatment cited above (Weinstein et al, in press; Cf also Cooper & Good, in preparation), students have been asked to rate male high and low achievers on certain academic and interpersonal characteristics, such as attentiveness, friendliness, success (Weinstein & Middlestadt, 1979). Research on attributions has had students select reasons for success and failure mainly from internal characteristics of ability and effort and external factors of task difficulty and luck (e.g. Weiner 1979).

Lately several studies in this area have used more open-ended formats to look at, for example, students' reasons for nominating peers as smart, as hard-working, and as good thinkers(Blumenfeld, Pintrich, Meece & Wessels, 1980; Stipek, 1981) and children's understanding of several types of inappropriate behavior (Rohrkemper, 1981).

Some of this research has also explored the relationship of student perceptions to differences in classroom environmental factors. For example, Rosenholtz and Wilson (1979) found the degree of student-teacher consensus about peer ability to be related to classroom task structure and Rohrkemper (1981) has shown that students' understanding of inappropriate behavior was related to classroom socialization style.

The study reported here was designed to obtain a richer description

of the differences between types of students and their interactions with teachers and peers that are salient to the students themselves within the context of variations between particular classroom settings. Open-ended, semi-structured interviews that focused on naturally occuring events in the students' own classrooms were used to examine students' views of differences in the characteristics, peer treatment, and teacher treatment of high and low achievers in classrooms which vary in the amount of differential teacher treatment perceived by students.

Method

Subjects

The subjects were 133 fourth graders from 16 classrooms within an urban ethnically-mixed school district. These subjects were a sub-set of 234 fourth, fifth and sixth graders from the same classrooms who participated in a larger study designed to investigate the role of student perceptions in the processes that mediate between hypothesized differential teacher treatment and learner outcomes (Weinstein, 1980). The classrooms were selected to represent a broad spectrum of educational philosophy from open to more traditional classrooms. Based on the prior year's Reading Achievement score, approximately eight students from each classroom--two male high achievers, two male low achievers, two female high achievers, and two female low achievers--were selected for interviews. In order to offset students' absences and the small number of fourth graders in some multi-graded classrooms, additional students were interviewed from some classrooms.

Measures

The questions from a semi-structured interview schedule (developed by Weinstein & Middlestadt, 1979) on which this report is based are

(1) What is school like for smart and not so smart children? (2) What are smart/not so smart students like? (3) How does your teacher work with smart/not so smart students? and (4) How do other kids act with smart/not so smart students?

The interviews, which lasted approximately half an hour, were individually administered, recorded on tape, and transcribed. The transcribed interviews were coded according to a coding system derived from a systematic study of the children's responses as well as from a review of the literature on classroom structure, expectations, attributions and social cognition.

Characteristics of high and low achievers fell into five categories: (1) Performance, consisting of correctness, output, rate, ease, and general performance; (2) Ability; (3) Academic task behaviors including task conformance, independence, and effort*; (4) Social behaviors of cooperation/competition, interpersonal relations, and conceit (bragging); and (5) Attitudes towards school, self, and learning. For each category, students' responses were rated on a 3-point scale of 1= low (or negative), 2= both or absence mentioned, and 3= high (or positive).

Students' responses concerning Teacher Treatment of high and low achievers could be classified into six categories: (1) Evaluation and reward, including marks, display of performance, praise and criticism, rewards and punishment, nonverbal indicators, and indirect reports of evaluation; (2) Grouping; (3) Help from teacher, peers, parents, aides as well as encouragement from teacher; (4) Learning opportunities, consisting of (a) task difficulty, time allowed for work, opportunity for learning,

* Effort was later dropped from this category since high effort was more frequently reported for low achievers, whereas high task conformance and independence were more frequently described as characteristics of high achievers.

amount called on, and (b) more remedial types of work, expectations for work, and pressure to achieve*; (5) Locus of responsibility, which included student responsibilities, teacher direction, and monitoring of behavior; and (6) Quality of relationships: positive, general or negative. Again responses were rated on a 3-point scale from 1= low (or negative), 2= both or absence mentioned, 3= high (or positive); with the exception of Help where 1= absence or little help, 2= help sometimes and 3= a lot of help.

Four categories were used to code Treatment from Peers: (1) Friendship (1= negative and avoidance, 2= general, 3= positive); (2) Help (1= seek help from, 2= sometimes help, 3= helper); (3) Attitude by peers (1= inferior, 2= as good as, 3= superior) and (4) Feelings of sympathy, jealousy, anger and respect. The latter category was considered a nominal category as responses could not be rated on a single, evaluative dimension.

Coders blind to the sex, achievement level, and classroom membership of the respondents scored the transcripts. Inter-coder reliability (overall percent exact agreement) ranged from .80 -.94 for three pairs of coders, with disagreements resolved by a third coder.

Measure of Differential Teacher Treatment. Students in the whole sample completed the Teacher Treatment Inventory (TTI), consisting of 44 items describing ways in which teachers work with students (Weinstein, Marshall, Brattesani & Middlestadt, in press). Students indicated on a four-point scale how often their own teacher worked in these ways with one of four hypothetical target students described on the questionnaire--a male high achiever, a male low achiever, a female high achiever, or a female low achiever. High and low achiever forms were assigned by a

* Direction reversed.

randomized block procedure to high and low achievers within each classroom.

Results

Since students responded freely to the open-ended questions and often gave multiple responses for each question, more than one of their responses could fall within a single category or across several categories. For example, a student could say that not so smart students did their work fast but got their answers wrong. Both of these responses would fall into the performance category. Because each response could have a different rating, an individual mean was calculated for each student. Classroom means were then calculated based on the individual means for the students in each classroom.

To determine the amount of perceived differential treatment occuring in each classroom, the mean response given for the low target was subtracted from the mean response given for the high target for each of the three TTI scales and the absolute values of the three scale differences were added together. A median split of these sums indicated the high vs. low differential treatment classrooms.

To investigate whether students described the characteristics, teacher treatment and peer treatment differently for high and low achievers and whether these descriptions varied in classrooms in which teachers showed high or low amounts of differential treatment, the classroom served as the unit of analysis for several two-facotr repeated measures analyses of variance. High vs. Low Achiever was the repeated factor and High vs. Low Differentiating Classroom was the between factor. These analyses were conducted for each category for which the total number of students (across classrooms) giving a response for each type of achiever was greater than 32.

For those categories with an insufficient number of responses for the analyses of variance, matched pair t tests were conducted using the individual student as the unit of analysis. The presence of a response was assigned 1 and the absence of a response was assigned 2. These tests were carried out to examine differences in how students described the characteristics and teacher and peer treatment of high and low achievers collapsed across both types of classrooms.

Characteristics of High and Low Achievers. Significant main effects for type of student were found for Academic Task Behaviors $F(1,14) = 118.75$, $p < .001$, and Attitude towards School and Self, $F(1,14) = 182.28$, $p < .001$, with high achievers being described as displaying greater task conformance and independence and as showing a more positive attitude towards self and school. (See Table 1.) No significant differences were found for Performance Characteristics or for Social Behaviors.

A significant Classroom X Characteristic interaction was found for Academic Task Behaviors, $F(1,14) = 11.51$, $p < .01$ indicating that students perceive greater difference between high and low achievers' demonstrating academic task behaviors in high differential treatment classrooms than in low differential treatment classrooms. (Table 1.)

Furthermore, inspecting the means of the within-classroom standard deviations for Academic Task Behaviors indicates that the standard deviations within high differential treatment classrooms are smaller than those within low differential treatment classrooms. (See Table 2.) (The high standard deviations in the low differential treatment classrooms are not attributable to the number of responses on which the standard deviations are based.) These findings suggest that students in high differential treatment classrooms agree more about the academic task behaviors of high achievers

and about the academic task behaviors of low achievers than do students in low differential treatment classrooms.

Ability was infrequently mentioned as a student characteristic. However, when high ability was mentioned, it was reported only for high achievers (n = 21) and low ability was reported only for low achievers (n = 19).

Peer treatment. No significant effects were found in the analysis of variance for Friendship. Students appear to view peers as seeking or avoiding high and low achievers for friends similarly.

Less often mentioned were peer help and attitudes of peers. When students did describe peer help, they noted that peers seek help from (n = 19) rather than try to give help (n = 0) to highs and help (n = 19) rather than seek help from (n = 0) low achievers. In those few instances where students reported attitudes of peers, students said that peers felt superior to low achievers (n = 17) rather than inferior (n = 1) ($t = 3.98$, $p < .001$). (Inferior and superior attitudes about high achievers were expressed only twice.)

Teacher Treatment. Significant main effects for type of student were found for Evaluation and Reward, $F(1,14) = 66.62$, $p < .001$; Help, $F(1,14) = 36.11$, $p < .001$ and Learning Opportunities, $F(1,14) = 8.85$, $p < .05$. These results indicate that students describe high achievers as receiving higher marks, more rewards and privileges, and more opportunities for learning but less help and pressure to achieve than low achievers, and low achievers as receiving poorer marks, fewer rewards and privileges and more criticism, more help, and greater pressure to achieve and stick to their work than high achievers.

Teacher Relationships, Locus of Responsibility and Grouping were rarely mentioned. When reported, high achievers were described as more frequent recipients of positive (n = 17) rather than negative (n = 1) teacher relationships ($t = 3.98$, $p < .001$). No difference was found in the number of times students reported low achievers as receiving positive (n = 5) and negative (n = 4) relationships.

Responsibilities were seen as assigned to high achievers (n = 13) but not to low achievers (n = 0) and high achievers were put into high (n = 8) not low (n = 0) groups, and low achievers into low (n = 7) not high (n =0) groups.

Discussion

Our results indicate that when students are asked to describe the characteristics and treatment of high and low achievers, they report different characteristics and different teacher treatments. Peer treatment differences are less frequently cited. Students describe high achievers as having more positive academic task behaviors and a more positive attitude towards themselves and school than do low achievers. The difference between the academic task behaviors and attitudes of high and low achievers is illustrated by one student who said about smart students:

> Well, after they do their work, they just sit down and read a book. They don't walk around the room, go up to people and bug 'em. They'll go up to the teacher and ask 'em all these questions and --- They take care of their self and not other people.

And about the not so smart students:

> Well, they just sit around. They don't do nothing. And they talk and they jabber all the time an' they never get anything done. And that's why that they -- they say 'I can't do this' and that means that they just don't want to do it and you tell yourself you can't. So you just give up on it and you can't do it.

In contrast to the frequent use of academic task behaviors as descriptors, effort was rarely mentioned as a student characteristic. When it

was mentioned, high effort was more often attributed to low achievers (n = 12) than to high achievers (n = 4), in comparison to the description of high achievers as displaying high task conformance and low achievers as demonstrating low and negative task conformance. This finding suggests that students may recognize that low achievers need to work harder. Yet, similar to findings from attributional research (e.g. Weiner, 1979), when these students were asked how one gets to be a smart student, effort was commonly cited as a cause of smartness (Weinstein, Marshall, Brattesani, & Sharp, 1980).

No differences were reported in how students view the performance characteristics or social behaviors of highs and lows. Only occasionally did they refer to their ability. On first glance, it may seem surprising that the social behavior of high achievers was not described in more positive terms. In fact, the mean for social behavior is close to 2.00, indicating neither a positive nor a negative rating. Inspection of the subcategories for social behavior and of the interviews themselves reveals that many of the negative descriptions for high achievers refer to bragging and showing conceit. Students have told us, for example:

> Well, some are different from others. Some people, some smart people they um, they, you know, think 'oh wow, you know, I'm smart, I'm better than everybody' - you know, and they go bragging around to people. And then the people that they brag it to say, you know, 'whoopee you're smart and I'm not.' Um. You know? Or um, 'I am too.' Ah, and they and other people they um, you know, keep it to theirselves and they know that, you know, it wouldn't do much good to brag it around to everybody, you know, that it's just a gift that they got and that they're using it.

Peer treatment differences did not generally emerge in the area of friendship. As one student said about peer treatment of high and low achievers:

> They play with 'em. Like they don't category 'em like smart kids 'n' not so smart kids. They just play with 'em regular, like a friend.

When differences in peer treatment were noted, they centered on helping behaviors and attitudes, with peers seeking help from high achievers and helping low achievers and having a superior attitude towards low achievers.

Differences in how teachers treat high and low achievers were described mainly in the areas of evaluation and feedback, help, and learning opportunities. High achievers were portrayed as receiving more positive evaluations, more rewards and privileges and less criticism and punishment than low achievers as well as more learning opportunities but less pressure to achieve and less help. Less frequently, high achievers were mentioned as having positive rather than negative relationships with teachers and being assigned responsibilities. We were told, for example:

> She works with the smart not very many times. She works with the not so smart people a lotta times cuz she wants them to be smart. --- (And the not so smart kids?) --- Well, they usually get yelled at a lot. They don't really get to do that many special privileges.

Students' open-ended descriptions of teacher treatment differences are consistent with and expand upon those yielded from student questionnaire ratings of teacher behaviors (Weinstein et al, in press). Thus, despite a tendency not to report differential teacher treatment--especially when asked directly if the teacher treats smart and not so smart students the same (Clements, Gaitley & Malitz, 1980; Weinstein & Marshall, 1981), students can and do report differences in teachers' treatment of high and low achievers, either when asked to rate separately the frequency of teacher behaviors for these students (Weinstein et al, in press) or when asked to describe them in open-ended interviews.

Of those teacher behaviors that classroom observers have found to discriminate between teachers' behavior to high and low achievers, only a few emerge in students' free responses to the question of how their teacher

works with smart and not so smart students. Similarities occur for low achievers receiving more criticism and high achievers having more "call on" opportunities. (Cf Good, 1980.) A number of factors operate to provide student participants and outside observers with a different perspective, such as difference in the focus of the question, length of time and involvement in the setting, developmental level of student as opposed to the observer, and particular frames of reference from which to view interactions.

In both high and low differential treatment classrooms, students described similar differences between the characteristics and teacher and peer treatment of high and low achievers. The only area in which the amount of differential teacher treatment in the classroom made a difference in students' descriptions was that of academic task behaviors. In high differential treatment classrooms, students describe a greater divergence between the academic task behaviors of high and low achievers than do students in low differential treatment classrooms. In addition, the students in the high differential treatment classrooms seem to show more agreement about high achievers displaying positive academic task behaviors and low achievers demonstrating negative academic task behaviors than do students in low differential treatment classrooms. Cues about these academic task behaviors may be more apparent in the high differential treatment classrooms.

The salience of academic task behaviors has been noted in other research. Stipek (1981) found that by third grade, the most frequent category used to evaluate others' smartness was work habits. Similarly, in their study of second and sixth graders, Blumenfeld and her associates (1980) also

found that reasons for nominations of smart students were most frequently based on student behavior and work habits, rapidity and completion of work, and teacher feedback. In our study, when the fourth graders were asked about the characteristics of smart and not so smart students (rather than reasons for smartness), they used categories of academic task behaviors (work habits), as well as attitudes, social behavior and performance (in almost equal numbers).

It is also noteworthy that when these students were asked to describe how they learned about their own good and poor performance, the few attributions by teachers that were reported referred most often to task conformance behaviors (Weinstein, 1981). Likewise, when students were asked how a person gets to be a smart student, task conformance was the most frequent first response cited (Weinstein, Marshall, Brattesani & Sharp, 1980).

Given the importance of these academic task behaviors to socialization into the student role and the finding that academic task behavior was the only variable for which descriptions of low versus high achievers were more divergent in high differential than low differential treatment classrooms, it will be interesting to explore whether the apparent salience to students of these behaviors is also observed in our current series of observations of high and low differential treatment classrooms.

Analysis of this interview data is continuing. Some difference in the number of students from high and low differential treatment classrooms citing performance characteristics and evaluation and reward to describe the characteristics and treatment of high and low achievers is apparent (Table 1). This finding suggests that analyzing the proportion of students within a classroom utilizing each category may provide information about whether students in different types of classrooms use qualitatively different cues to describe the classroom experiences of high and low achievers.

The results of the data from these open-ended interviews contribute to a picture of differences in the characteristics and teacher and peer treatment of high and low achievers from the students' own perspective, thus providing information about factors which may be relevant to their own interactions within varying classroom environments.

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Table 1

Means and Standard Deviations for Ratings of Characteristics, and Peer and Teacher Treatment of High and Low Achievers

		High Differential Treatment		Low Differential Treatment	
		High Achiever	Low Achiever	High Achiever	Low Achiever
Characteristics					
Performance Characteristics	M	2.02	1.74	1.78	2.29
	SD	.58	.81	.61	.45
	n	38	32	32	24
Academic Task Behaviors	M	2.92	1.10	2.45	1.50
	SD	.13	.15	.66	.33
	n	31	47	25	30
Social Behaviors	M	2.00	1.49	2.11	1.93
	SD	.45	.66	.42	.74
	n	40	24	38	29
Attitude	M	2.65	1.23	2.30	1.19
	SD	.23	.23	.38	.27
	n	34	39	23	40
Peer Treatment					
Friendship	M	1.94	1.96	2.05	1.78
	SD	.35	.28	.54	.22
	n	45	49	35	41
Teacher Treatment					
Evaluation Reward	M	2.54	1.12	2.25	1.05
	SD	.47	.19	.85	.12
	n	15	24	17	14
Help	M	1.54	2.42	1.71	2.40
	SD	.13	.39	.48	.20
	n	45	42	42	45
Work	M	2.58	1.40	2.90	1.38
	SD	.80	.73	.19	.39
	n	14	19	14	18

Table 2

Means of Within Classroom Standard Deviations of Student Responses

Differential Treatment	Achiever: High M	High n	Low M	Low n
High	.20	31	.21	47
Low	.65	25	.76	30

Note: Means are based on all classrooms with more than one response. Three classrooms had only one response.