STUDENT PERCEPTIONS OF TEACHER EXPECTATIONS IN ELEMENTARY CLASSROOMS

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ABSTRACT: Teacher-student interaction and teacher expectancy phenomenon is investigated in this study in relation to student perceptions. The Teacher Treatment Inventory(TTI) was conducted to 311 4th grade elementary students. The subjects were questioned about how their teachers would behave toward "hypothetical low and high achievers" in their classroom. Following the first application, the perceptions of the students in the classrooms defined as "high / low differentiating" were investigated. The results show that students perceive differentiating teacher behaviors toward hypothetical high and low achievers. In classrooms where students reported a greater differential treatment toward high and low achievers, students' perceptions of their teachers' expectations about themselves were more closely related to teacher expectations. The results are discussed in relation to the theoretical framework and in terms of practical application.

KEY WORDS : *Teacher Expectancy Effect, classroom interaction process, teacher-student relation.*

ÖZET: Bu çalışmada, sınıf-içi öğretmen öğrenci etkileşim süreci ve öğretmen beklenti etkisi fenomeni öğrenci algılarına dayalı olarak incelenmiştir. 311 ilkokul dördüncü sınıf öğrencisine Öğretmen Davranım Ölçeği-ÖDÖ(Teacher Treatment Inventory- TTI) uygulanarak öğretmenlerinin sınıflarındaki "hipotetik başarılı ve başarısız öğrencilere" nasıl davrandığını belirtmeleri istenmiştir. Araştırmanın ikinci aşamasında öğretmen davranışları açısından "yüksek farklılaştırıcı" ve "düşük farklılaştırıcı" sınıflardaki öğrencilerin algılamaları karşılaştırılmıştır. Sonuçlar, öğrencilerin öğretmenlerinin sınıflarındaki hipotetik başarılı ve başarısız öğrencilere yönelik davranışlarında farklılaşmalar algıladıklarını ortaya koymaktadır. Başarılı ve başarısız öğrencilere yönelik öğretmen davranışları açısından yüksek farklılaşmanın belirtildiği sınıflarda, öğrencilerin öğretmenlerinin kendilerine yönelik beklentilerini daha kolay algıladıkları görülmüştür. Bulgular, kuramsal açıdan ve sınıf-içi etkileşim süreçlerinin önemi kapsamında tartışılmıştır.

ANAHTAR SÖZCÜKLER : *Öğretmen beklenti etkisi, sınıf-içi etkileşim süreci, öğretmen öğrenci ilişkisi*

1. INTRODUCTION

Lawler defines expectancy as "the person's estimate of the probability that he/ she will accomplish his intended performance, given the situation in which he finds himself."[1] People react to one another based upon their expectations. These reactions become norms that reflect achievement standards for most people, and in result expectations for a person's behavior in certain situations.

Teachers develop different expectations for their students. A teacher's expectation can be thought of as his or her estimate of a child's probable academic performance within the classroom. When individuals know what other people expect from them, their behavior conforms this pattern. Thus what a teacher expects in the classroom can influence pupil perceptions and behaviors. Rosenthal and Jacobson suggest that if teachers expect certain children to have high academic performance, those children will perform well, and if teachers expect certain children to perform poorly, those children will perform poorly [2].

Type of expectations reported by Rosenthal and Jacobson in the "Pygmalion in the Classroom" (1968) were expectations that were created, or "induced" in the minds of teachers by leading them to believe that particular students had unusually high learning potential, when, in fact, those students had been selected randomly. Believing these students to have unusual potential, teachers communicated their positive expectations in a variety of ways, which helped these students to increase their achievement levels. Other studies on "induced expectations" [3,4] have arrived at similar conclusions. Additional support for expectancy effect comes from research that investigates "natural

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expectations", defined as teachers own expectations formed based on their own experiences [5,6]. Research has led to consensus that teachers' expectations can and sometimes do affect teacher-student interaction and student outcomes [7,8,9, 10,11].

Teachers develop different achievement expectations for individual students early in the year. Students are treated in accordance with teachers' expectations of them. Simultaneously, students perceive different treatments received by other students with different achievement levels. If the teacher's treatment is consistent over time, it might begin to affect student's self-concept, aspiration, motivation, and interpersonal relations [12].

Many teachers are unaware of the subtle differences in their behavior toward different students. However, it is through these differences that teachers systematically communicate their expectations to students. Students' perceptions of teachers' differential treatment seem to moderate the relationship between teacher expectations and student achievement.

Weinstein found that students perceive differential teacher treatment toward high and low achieving students [13]. Interviews with elementary students indicate their awareness of their teachers as projecting higher achievement expectations and providing more opportunities to higher achievers. By contrast, teachers were perceived to structure activities of lower achievers more, offering them both more help and more negative feedback (Weinstein, 1985; Weinstein, Marshall, Brattessani& Middlestadt, 1982; Weinstein, Marshall, Sharp& Botkin, 1987; Weinstein& Middlestadt, 1979b) [14,15,16,17].

Rubovitz and Maehr's study demonstrated that although the amount of interaction remained constant among students, there was a critical difference in the "quality of the interaction" between teacher and students [18]. Good in the study of

students' perceptions, found that classes also differ in the quantity of differentiating teacher behaviors[19]. In high differentiating classrooms, students emphasized greater differences in their teachers' behavior toward high and low achievers [20].

The purpose of this study is to examine the teacher expectation effect phenomenon. It is hypothesized that teacher expectations can be an important determinant of student achievement and self-perception in elementary schools. This belief depends mainly on the structure of the system at the elementary level, in which the same teacher goes along with the same students from the beginning to the end of elementary education. This long-term interaction between the teacher and the same students can affect the development and consistency of the teacher's expectations, the students' perceptions of their teacher's expectations of other students and, of themselves, and the development of self-expectations for students' achievement level and motivation.

The following research questions guided the study:

1) Do students perceive differentiating teacher behavior toward high and low achievers?

2) How does the students' perceptions of their teacher's behavior differ between high and low differentiating classes?

3) Would the achievement level of the student have an effect on his or her perception of the teacher's behaviors?

This paper will report the findings related to these questions and discuss the implications.

2. METHOD

2.1. Instrument

The instrument used in this study is Weinstein and Marshall's "Teacher Treatment Inventory" (TTI) [10]. The Likert type inventory (TTI) con-

sists of three dimensions with ten items each, totaling 30 items. The dimensions and the sample items are:

1. Negative feedback and teacher direction : Teacher decides how he/she will spend work time in class; teacher tells who he/she will work with; teacher scolds when he/she can't give the correct answer; teacher watches him/her closely during classwork.

2. Work and rule orientation : Teacher asks him/her if the subject is understood; teacher helps him/her to find the correct answer to the questions; teacher reminds him/her the rules; teacher scolds him/her for not following the rules.

3. High expectations, giving opportunity and support : Teacher gives him/her oppurtunity to answer the questions; teacher gives him/her responsibility during class activities; teacher praises him/her for working hard; teacher praises him/her for answering correctly.

In addition to the TTI-Long Form, the TTI-Short Form and the TTI-Self Forms are used in the study. TTI-Short Form and the TTI-Self Form are developed from the items with the highest mean difference in teacher behaviours toward high and low achievers. The TTI-Short Form and the TTI-Self Form consists of the same three dimensions with four items each, totaling 12 items.

All forms of TTI are applied as asking students to imagine their teacher's treatment toward a) a hypothetical high/low achiever in their classroom (for TTI-Long Form and TTI-Short Form), b) themselves (for TTI-Self Form). The high achiever and the low achiever versions of the TTI-Long Form and TTI-Short Form are differentiated by a definition given at the beginning of the items. The standard instruction on the forms is as:

High Achiever Form : Imagine there is a student named S.R. in your class. This student is a high achiever. He/she always gets the highest grades. How would your teacher behave toward this student?

Low Achiever Form : Imagine there is a student named S.R. in your class. This student is a low achiever. He/she always gets the lowest grades. How would your teacher behave toward this student?

The items of TTI-Short Form and the TTI-Self Form are same. The two forms are separated by the beginning instructions, in which the student is asked to think of himself/herself in class and the teacher's behaviors towards them in the TTI-Self Form.

Student's response to the items are determined by a 4-point scale with a range of, "always" (4), "sometimes" (3), "often" (2), and "never" (1).

2.2. Participants

This study consists of two parts. In the first part, the sample was 311 fourth grade students in ten different classrooms at two elementary schools. To control student socioeconomic background and academic achievement levels, the sample was chosen from two schools which were considered homogeneous in student socioeconomic status, and achievement.

Students' age ranged from nine years old (4.5%) to twelve years old (5.47%). The majority of the students were ten years old (67.2%), and eleven years old (22.19%). Among the 311 students were 49.84% of girls and 50.16% of boys. On a 4-point achievement scale with one being the highest level and four the lowest level, student achievement levels consisted of 21.54% at level one, 38.91% at level two, 23.79% at level three, and 15.76% at level four.

Other variables to be controlled for were the 10 teachers' years of experience in the teaching profession, and the years teaching the same class. Seven teachers had taught the same class since the first grade, and the other three teachers had been with their classes for two years. Four of the teachers had 10-15 years of teaching experience, three had 16-20 years, one had 24 years, and the last two had 26-30 years.

Following the first administration of the TTI-Long Form, four classes were selected from the first ten, two with the highest teacher treatment differentiating scores and two with the lowest teacher treatment differentiating scores. TTI-Short Form and TTI-Self Form were given to the same students during the second application.The sample size of the second application was 118.

2.3. Procedure

Before the administration of the instrument in the classrooms, the teachers were given information explaining the purpose of the study. High achiever and low achiever versions of the TTI-Long Forms were distributed equally in every classroom.The first application in ten classes was done at one time with the help of assistants in each classroom. The goal of the first application was to gather data about students' perceptions of teachers' behaviors toward hypothetical low and high achievers and to determine the high differentiating and low differentiating classes. Students were instructed to imagine that there was a student similar to the one defined in their form and think how their teacher would act toward that student.

After a one month interval, the second part of the study was conducted on the selected four classes. Classroom total differentiating scores were used to select the classes for the second application. For every class, mean score differences of low and high achiever forms was calculated for three dimensions. Classroom total differentiating scores were determined by the absolute total of the mean score differences of the three dimensions.During the second application, each student was given a set consisting of the TTI-Short Form and the TTI-Self-Form.

2.4. Results

The data gathered from the ten classes about students' perceptions of their teacher's behavior toward "hypothetical high/low achievers" indicate

some differences in relation to the three dimensions defined in the inventory. The scores are shown in Table 1 below.

Table 1: Subject Responses In Relation With Dimensions

Dimensions/ Stimulus condition	Mean	St. Dev.	N
Negative Feedback			
High Achiever	27.428	5.309	159
Low Achiever	30.868	4.510	152
Work Orientation			
High Achiever	28.660	4.968	159
Low Achiever	30.816	4.815	152
High Expectations			
High Achiever	34.472	5.316	159
Low Achiever	31.467	6.902	152

The first dimension consists of teacher behaviors that reflect negative feedback and teacher direction. In this dimension, the mean score for low achievers is higher, and difference between low and high achievers is statistically significant $F (1,309) = 37.78$, $p < 0.01$.

In the second dimension, the difference is statistically significant, again with higher mean scores for low achievers ($F(1.309) =15.07$, $p<0.01$). Depending on the scores, it can be argued that teacher behaviors that reflect work and rule orientation are perceived more toward the low achievers.

The third dimension is related to high expectations reflected by the teacher, giving opportunity and positive teacher support toward the students. It can be seen from the data that this dimension has higher mean scores for high achievers. The difference between the scores of the two achievement levels is statistically significant ($F (1.309) =18.59$, $p<0.01$).

The second part of the study seeks to examine how students differentiate their teacher's behaviors toward them and other students in "high differentiating" and "low differentiating" classes.

First, data collected from the TTI-Short Form will be examined. This application was necessary to control the consistency of students' responses in time, and to determine whether or not selected classes reflect the defined differentiation in a reliable way. Table 2 shows the scores from this application.

In high differentiating classes, perceived difference in teachers' behavior toward high and low achievers is statistically significant, as seen in Table 2. In high differentiating classes, students could differentiate their teachers' behaviors toward students of different achievement levels. Students are able to perceive consistency in their teachers' behaviors. Teachers are perceived as giving more negative feedback while working with low achievers, and having a more directed, work- and rule-oriented relationship with low achievers, while exhibiting more supportive behavior, giving more opportunity to, and expecting higher performance from high achievers.This differentiation of behaviors is perceived more easily in high differentiating classes. An interesting finding is that in low differentiating classes, the only significant difference between high and low achievers was in the third dimension, perceived high expectations toward high achievers.

The following section examines analysis of students' perceptions of their teacher's behaviors toward them. The scores discussed in this section are gathered from the application of the TTI-Self Form.

The students' actual achievement levels are important determinants of their perceptions of the teacher's behavior toward them. Students' actual achievement level were determined in the beginning of the study from examination grades. Students' perceptions of their teacher's behaviors toward them were analyzed in the two different class types, and the results are discussed relative to the data given in Table 3.

Students' achievement levels affect their perceptions about teacher behavior in relation to them. Although the perceptions of students are statistically significant in both class types within the first dimension, important differences can be seen depending on the achievement level of the student. When compared with low differentiating classes, the variations of mean scores in high differentiating classes are striking, especially the range between highest achievers (=6.933) and lowest achievers (= 10.714).

In the work and rule orientation dimension, no significant differences were found between students' perceptions in the low differentiating classes. In the high differentiating classes, statistically significant differences were found, mainly in the perceptions of the highest achievers (=8.200).

Table 2. Subject Response Depending On The Differentiation Level Of Classes

Dimensions/ Stimulus Condition	Low Differentiating Classes				High Differentiating Classes			
	N	Mean	St. Dev.	F	N	Mean	St. Dev.	F
Negative Feedback								
High Achiever	32	9.187	2.348	0.87	28	8.107	2.601	13.73**
Low Achiever	28	9.750	2.319		30	10.367	2.025	
Work Orientation								
High Achiever	32	10.937	2.139	2.30	28	9.107	2.409	7.43**
Low Achiever	28	11.786	2.183		30	10.967	2.760	
High Expectations								
High Achiever	32	11.937	2.190	9.35**	28	11.321	2.681	16.10**
Low Achiever	28	9.929	2.879		30	8.200	3.199	

s.d. = 1.58 and s.d. = 1.56   ** = p<0.01

Table 3. Student Response To TTI-Self Form In Different Type Of Classes

Dimensions/ Stimulus Condition	Low Differentiating Classes				High Differentiating Classes			
	N	Mean	St. Dev.	F	N	Mean	St. Dev.	F
Negative Feedback								
1	13	8.615	1.938		15	6.933	1.792	
2	25	8.480	2.480	4.88**	26	8.692	1.892	6.72**
3	18	10.944	2.578		10	9.200	1.814	
4	4	11.750	1.500		7	10.714	2.628	
Work orientation								
1	13	10.462	2.436		15	8.200	2.704	
2	25	10.640	1.955	0.45	26	10.808	2.263	4.26**
3	18	11.167	2.229		10	10.800	2.098	
4	4	11.500	2.517		7	10.857	2.911	
High Expectations								
1	13	11.923	2.139		15	11.000	2.878	
2	25	10.280	2.372	1.59	26	9.654	2,.058	2.52
3	18	10.556	1.947		10	8.700	2.751	
4	4	10.250	3.594		7	8.714	1.380	

Students are listed 1 to 4 according to their achievement levels as 1 = highest level and 4 = lowest level
s.d. = 3.56   ** = $p < 0.01$

As seen from the mean score differences of the highest achievers in high differentiating classes, the perception about negative aspects of their teacher's behavior is significantly lower than both those of the other students in the class and the highest achievers in low differentiating classes.

The same variation of scores is seen in high differentiating classes relative to positive aspects of teacher behavior, but the differences between mean scores were not statistically significant. Again, the range between the scores of the highest achievers (=11.000) and the lowest achievers (= 8.714) is much more striking in high differentiating classes. Although the mean scores of the highest achievers are close in both class types (L.D.C.=11.923, H.D.C.=11.000), the variations of mean scores are very different between achievement levels in high differentiating and low differentiating classes. The mean score differences of low achievers between high differentiating and low differentiating classes are also interesting. It seems that as the achievement level goes down, the low achievers' perceptions of teacher support and opportunity in classroom activities also decrease, especially in classes where the teacher sends clear messages about achievement expectations.

3. DISCUSSION

Previous research [7, 21, 22, 23] indicates that students' realizations and interpretations are important mediating variables for understanding the classroom dynamics. In these studies, students' perceptions were the main variable used to understand the ongoing process.

The findings of this study indicate that students do perceive consistent differences in their teachers' behaviors toward hypothetical low and high achievers. Students perceive more negative feedback and teacher-directed controlling relationships in their teachers' interaction with low achievers. In teachers' relationship with high achievers, more positive support and higher expectations are perceived, along with special privileges

and opportunities to do special things in the classrooms. These findings are consistent with other research on the same topic [19, 24, 10, 16].

Brattessani, Weinstein and Marshall [10], argue that high differentiating teachers transmit more open clues about the achievement level in which they see the student, and also of their expectations of the student. These clues give feedback to students about their own and others' capacities in the classroom. As a result, we would expect that in high differentiating classes, the differences in teacher behavior toward high and low achievers would be much more significant. The findings of this study indicate that students' perceptions of their teachers' behavior toward other students and themselves differ between high differentiating and low differentiating classes. The results also indicate that students do perceive greater difference in teacher behaviors in high differentiating classes. In contrast with high differentiating classes, students' perceptions of teacher behavior toward high and low achievers were statistically significant only in the third dimension at low differentiating classes. This finding also supports those of other studies on this issue.

Significant differences between high differentiating and low differentiating classes are seen in students' responses to the TTI-Self Form. In both class levels, the highest achieving students perceive less teacher control and negative feedback, and also more support from the teacher. The mean scores of high achievers are significantly different from those of the whole group, especially in high differentiating classes. Another interesting finding concerning teacher support and expectations is seen in the mean scores of low achievers in high differentiating classes. These means are significantly lower than those of the whole group. In comparison with the other achievement levels in their classes and also with low achievers of low differentiating classes, the low achievers in high differentiating classes seem to perceive teachers' support the least. This finding becomes more important when it is evaluated together with the finding that low achievers of high differentiating

classes perceive significantly higher negative feedback and teacher direction. Research findings support the idea that certain types of teacher behaviors occurring in the classrooms may induce passivity in low achievers. Students who need the most help often are the ones who are least likely to seek assistance [9,25,26]. Newman and Goldin found that among sixth graders, the lowest achievers had both the greatest perceived need for help and the greatest resistance to asking for it [27].

The findings of this study, together with other research in this area, demonstrate that teachers must become more aware of their verbal and nonverbal communication in the classroom. Researchers and teacher educators need to develop special training for teachers to help them become aware of their possible biases and to use this awareness to become more effective.

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