



## Expecting the best for students: Teacher expectations and academic outcomes

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**Background.** Research into teacher expectations has shown that these have an effect on student achievement. Some researchers have explored the impact of various student characteristics on teachers' expectations. One attribute of interest is ethnicity.

**Aims.** This study aimed to explore differences in teachers' expectations and judgments of student reading performance for Maori, Pacific Island, Asian and New Zealand European students. A further objective was to compare teacher expectations and judgments with actual student achievement.

**Sample.** The participants were 540 students of 21 primary teachers in Auckland schools. Of these students, 261 were New Zealand European, 88 were Maori, 97 were Pacific Island and 94 were Asian.

**Methods.** At the beginning of the year, the teachers completed a survey related to their expectations for their students' achievement in reading and, at the end of the year, they judged the reading levels their students had actually achieved. The survey data were compared with running record data.

**Results.** Teachers' expectations for students in reading were significantly higher than actual achievement for all ethnic groups other than Maori. Maori students' achievement was similar to that of the other groups at the beginning of the year but, by the end of the year, they had made the least gains of all groups.

**Conclusions.** Sustaining expectation effects are one explanation for Maori students' limited progress. For Pacific Island, Asian and New Zealand European students, positive self-fulfilling prophecies may be operating. Future research could investigate the learning opportunities provided to these ethnic groups and the relationship of these to teachers' expectations.

Several years of research into teacher expectation effects has provided clear evidence that expectations do exist in regular classroom situations and that they can positively and/or negatively influence student performance and achievement (Babad, 1993; Brophy, 1982; Cooper & Good, 1983; Good, 1987; Jussim, Smith, Madon, & Palumbo,

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1998; Weinstein, 2002). Such expectations may be exemplified in the learning opportunities provided, in the affective climate created and in the interactional content and context of the classroom.

Teacher expectation effects may be categorized as sustaining expectation effects or self-fulfilling prophecy effects (Cooper, 1985; Cooper & Good, 1983; Good & Brophy, 2003). Sustaining expectation effects occur when teachers expect students to continue to act or perform according to previously established patterns and may disregard contradictory evidence of change (Cooper & Good, 1983; Good & Brophy, 2003). Researchers must argue that particular aspects of teacher behaviours act to sustain student performance levels by interfering with the teachers' ability to perceive changed student behaviour. Self-fulfilling prophecy effects occur when an initially erroneous belief leads to its fulfilment (Weinstein, 2002). Such expectations must alter student performance in some way (Jussim, 1989). Hence, self-fulfilling prophecies create change in student performance, whereas sustaining expectations thwart the potential for any change (Good, 1987). The major self-fulfilling prophecy effects are known as *Golem effects* and *Galatea effects*. Golem effects are undesirable and negative effects, which are the result of low teacher expectations that impede student academic achievement. Galatea effects, on the other hand, are desirable and positive effects, which are the result of high teacher expectations that augment student academic achievement (Babad, Inbar, & Rosenthal, 1982).

It is often claimed that teachers use information related to a host of individual student characteristics in the formation of their expectations (e.g. Bandura, 1997; Keogh, 2000; Muller, Katz, & Dance, 1999). A large number of individual student characteristics have been identified as possibly influencing teacher expectations and there has been a plethora of research into the significance of these for student learning (e.g. Baron, Tom, & Cooper, 1985; Obiakor, 1999; Solomon, Battistich, & Hom, 1996). These include gender, ethnicity, social class, stereotypes, diagnostic labels, physical attractiveness, language style, the age of the student, personality and social skills, the relationship between teacher and student background, names, other siblings and one-parent background. This paper will explore the influence of ethnicity on teacher expectations.

Whether or not teachers form expectations based on student ethnicity is of interest to researchers particularly given the poor relative academic achievement of ethnic minority groups in many countries (Hattie, 2003; Muller *et al.*, 1999; Pellegrini & Blatchford, 2000; Weinstein, Gregory, & Strambler, 2004) and the consequent detrimental effect that lowered teacher expectations may have on the academic achievement of these groups. Some of the research does point to ethnicity being a factor in teachers' expectations. Meta-analyses carried out by Dusek and Joseph (1985) and Baron *et al.* (1985) both suggested that teacher expectations were influenced by ethnicity although the effect size across both experimental and naturalistic studies was small (.11). A further analysis by the latter researchers of only naturalistic studies provided an effect size of .22 and further reinforced the original finding.

More recent research has continued to find ethnic variations in teachers' expectations. In a study of teacher expectations for 156 former Head Start and 114 non-Head Start children when they entered first grade, Wigfield, Galper, Denton, and Seefeldt (1999) had expected to find differences in teacher perceptions by social class. These were not found. Instead, they found differences related to ethnicity. That is, teachers' expectations for white students were considerably more positive than for African-American students; teachers rated African-American children lower on the

academic scales. They also rated the ability of these students to make friends and their own enjoyment in working with them lower than their ratings for white students.

Entwisle and Alexander (1988) found in their study of 825 first-year students that the African-American students started school with slightly higher standardized test results in reading than the white students. Because of this and other background variables of the students that the researchers took into account, they predicted that the African-American students would gain better grades on their first reports than the white students would. In fact, the reverse was the case with a small positive difference in reading grades favouring whites. By the end of the year, this had translated into a significant difference, which was also reflected in standardized reading test results at that time. This led the researchers to conclude that the teachers' expectations, which were reflected in their grades, had had a significant impact on the educational achievement of the students.

Research into the effects of lowered expectations for ethnic minority groups has also been carried out in the United Kingdom. The Swann Report (Swann, 1985) looked at the effectiveness of education for ethnic minority groups in the United Kingdom. Pellegrini and Blatchford (2000, p. 169) reported that one of its main findings was that low expectations for these students were a major factor in their poor academic achievement.

The evidence as to whether student ethnicity is a factor in the formation of teachers' expectations is, however, inconclusive. Many researchers claim that it is less ethnicity and more social class that influences teachers' expectations (e.g. Jussim *et al.*, 1998). Most of the research around teachers' expectations and ethnicity has taken place in the United States where teachers' expectations for white students and African-American students have been explored, but since a large proportion of the African-American students attend school in the poorest areas, teachers' expectations for those students may inevitably be connected to their social class and so whether or not it is ethnicity or social class (or both) that influences teachers is difficult to unravel (Ennis, 1998).

It has been suggested that minority group students are more susceptible to teachers' low expectations than are white students and that this may serve to further widen the achievement gap when such students accept and confirm teachers' negative expectations (e.g. McKown & Weinstein, 2002; Nichols & Good, 2004). Weinstein has shown that students are well aware of their teacher's expectations for their performance, particularly in classrooms where teachers make more rather than less differentiation in the interactional and communication context for students (Weinstein, 2002).

One of the primary ways in which teachers' expectations mediate student achievement is through opportunity to learn. As researchers have shown, minority students are simply not given the opportunities to enhance their learning that could decrease the achievement gap (Nichols & Good, 2004; Weinstein, 2002). Furthermore, by being frequently placed in low academic groupings where they are publicly labelled and categorized minority students have few opportunities to redress their racial, social and economic disadvantage (Weinstein *et al.*, 2004).

In New Zealand, the poor academic performance of Maori and Pacific Island students has been well documented (e.g. Hattie, 2003; Wagemaker, 1993). Some researchers have attributed the achievement of these ethnic minority groups to their socio-economic status (Fergusson, Lloyd, & Horwood, 1991) because, indeed, many of these students fall into the lowest socio-economic groups. It has recently been suggested, however, that the deficit theorizing of teachers in relation to Maori students may result in lowered expectations for their achievement and a corresponding negative self-fulfilling prophecy for them (Ministry of Education, 2003). Steele (1997) has indicated that there is

a 15-point IQ gap between Maori and New Zealand European students (and indeed between ethnic minorities and the dominant group across several other countries). He has suggested that such groups are vulnerable to stereotype threat and that the negative stereotyping of minority groups by teachers who are often white and middle class can lead to poorer school performance, higher drop-out levels and subsequent behavioural difficulties for students from minority groups. Sadly, Maori students fit this mould.

One study that investigated teacher expectations for 90 year 5 students in five New Zealand classrooms was carried out several years ago by St. George (1983). She was interested in teacher expectations for Maori given their low academic achievement and what was then the relatively recent work of Brophy and Good (1974) and Cooper (1979). St. George combined the Maori ( $N = 20$ ) and Pacific Island students ( $N = 3$ ) into one group, due to the small numbers in her study, which she called Polynesian. St. George found that teachers had less positive views of the Polynesian students' study skills (perseverance,  $r = -.23$ ; independence,  $r = -.24$ ; reaction to new work,  $r = -.25$ ; interest,  $r = -.37$ ; task concentration,  $r = -.23$ ; participation,  $r = -.29$ ) and of home background factors (parent attitudes,  $r = -.40$ ; home environment,  $r = -.33$ ) than they did of New Zealand European students. All point biserial correlation coefficients were significant; they were negative as teachers had less positive views of Polynesian students. Moreover, more than half of the Polynesian students in the study were assigned by teachers to the low expectation group, whereas less than a third of the New Zealand European students were placed in this category. Standardized testing revealed that the teachers' expectations of achievement were mostly accurate but for the students this meant that most of the Polynesian students experienced different dyadic interactions with their teachers to the New Zealand European students. The teachers interacted differently with low and high expectation students in ways that served to sustain their academic achievement. St. George hypothesized that the lowered expectations and negative views of Polynesian students may be due to racial stereotyping where Polynesian students were viewed as having less ability than their New Zealand European counterparts. She suggested that this was exacerbated by teacher views that school-related problems were due to home factors, which then exonerated teachers of responsibility for student failures.

In a further New Zealand study of 20 teachers' perceptions of their 393 5- to 7-year-old students' social skills, it was reported that teachers perceived New Zealand European students to be the most socially skilled of all ethnic groups while Maori were seen as being the least socially skilled (Stoddart, 1998). Stoddart found significant differences in teacher perceptions (with those for Maori always being significantly lower) for knowledge of strategies needed to perform socially appropriate behaviours, for the ability to perform socially acceptable behaviours, and for awareness of the effects that the child's actions have on the social environment. These results align somewhat with the findings of St. George (1983) who found that teachers had less favourable views of the academic work skills (e.g. perseverance, independence, participation and interest) of Polynesian students than they did of New Zealand European students.

As discussed earlier, most research exploring relationships between teachers' expectations for white students and other ethnic groups has mostly concentrated on a two-way comparison, between white students and one other minority group, most often African-American. This makes the unravelling of expectations related to social class and ethnic group perplexing. One aim of the current study was to compare teachers' expectations and student achievement between the predominant white group in New Zealand and the three other largest minority groups: Maori, Pacific Island and

Asian. It was hypothesized that if teachers' expectations were related to social class rather than ethnicity, as other researchers have argued, then teachers' expectations for Maori and Pacific Island students would be similar, given that these students mostly live and attend school in lower socio-economic areas. Asian students have only recently become a sizable body in New Zealand schools but mostly attend schools in middle-class areas so, again, if expectations are related to social class rather than ethnicity, then it was thought that expectations for their achievement may more closely resemble those for New Zealand European students even though they are an ethnic minority. Hence, the research questions for the current study were:

- (1) Do teachers' expectations differ for various ethnic groups?
- (2) If they differ, do teachers' expectations align with student social class and achievement?
- (3) How accurate are teachers' judgments of student performance for various ethnic groups?

## Method

### Participants

The participants in this study were 21 practising primary school teachers from 12 different schools in Auckland, New Zealand. Table 1 provides details of the teachers

**Table 1.** Ethnic, class level and socio-economic details for students and teachers

Teacher No.	Student ethnicity				Total class size	Teacher ethnicity	Class level	Decile
	NZ Euro	Maori	PI	Asian				
1	2	14	6	2	24	NZ Euro	1/2	Low
2	8	2	8	7	25	NZ Euro	1/2	Low
3	8	6	6	2	22	NZ Euro	2	Low
4	3	7	15	1	26	PI	2	Low
5	1	13	18	0	32	PI	5	Low
6	4	12	6	2	24	Maori	5/6	Low
7	7	8	8	3	26	PI	5/6	Low
8	18	1	9	1	29	NZ Euro	5/6	Low
9	5	8	6	6	25	Asian	5/6	Low
10	21	2	1	0	24	NZ Euro	1/2	High
11	19	2	0	6	27	European	1/2	High
12	10	1	2	9	22	Asian	1/2	High
13	19	0	0	6	25	NZ Euro	1/2	High
14	17	1	2	4	24	European	2	High
15	18	0	1	7	26	NZ Euro	2	High
16	6	2	0	6	14	European	5	High
17	17	4	1	5	27	NZ Euro	5	High
18	25	0	0	9	34	European	5/6	High
19	13	3	2	7	25	NZ Euro	5/6	High
20	19	0	2	8	29	Maori	5/6	High
21	21	2	4	3	30	NZ Euro	5/6	High
Total of each ethnicity	261	88	97	94	540			

and their class levels and the ethnicities of their 540 students. Within the table, NZ Euro is used to indicate New Zealand European teachers ( $N = 10$ ) and students ( $N = 261$ ); PI is used to indicate Pacific Island teachers ( $N = 3$ ) and students ( $N = 97$ ); European is used to identify teachers who are British immigrants ( $N = 4$ ); and Asian is used to indicate students ( $N = 94$ ) and teachers ( $N = 2$ ) from south-east Asia and the Indian subcontinent. Decile refers to the socio-economic level of the school. In New Zealand, the Ministry of Education assigns a decile ranking from 1 to 10 to all schools based on the latest census data and hence is an indication of the socio-economic level of each school. All schools with a ranking of five or less were categorized for the purposes of this study as 'low', while those with a ranking of six or above were deemed to be 'high'. As can be seen from the table, 9 of the teachers taught in low socio-economic schools, while 12 worked in high socio-economic areas. Of the participating teachers, 10 taught at the junior level (Year 1 and/or 2) and 11 taught at the senior level (Year 5 and/or 6). There were 18 female and 3 male teachers in the sample. Teaching service ranged from 1 year to 33 years with five teachers having less than 5 years experience, six teachers having taught for between 6 and 10 years, five with teaching experience ranging from 11 to 20 years, and five teachers with 21 or more years of service. None of the teachers had had any of their students in their classes the previous year.

Table 1 also provides the ethnic details of the students and shows that Maori and Pacific Island students are more frequently located in low socio-economic schools and that New Zealand European and Asian students are found proportionately more often in high socio-economic schools. The 540 students included in the current study were those students who were present during both data collection phases.

### **Measures**

The participants completed one survey near the beginning of the year of data collection and another at the end. The initial survey asked teachers to decide what levels they expected their students' to achieve in reading by the end of the year. A further survey was designed to explore the teachers' judgments of their students' achievement at the end of the year. A 7-point Likert scale was used at both time periods. The gradations were as follows: 1 = very much below average, 2 = moderately below average, 3 = slightly below average, 4 = average, 5 = slightly above average, 6 = moderately above average, 7 = very much above average. In order to ensure some consistency in teachers' perceptions of what constituted each of these relative positions, definitions of each were provided in terms of the New Zealand curriculum documents. Students considered to be of average ability would normally complete one curriculum level every 2 years although, because students learn at different rates, there may be children working at different levels within one class (Ministry of Education, 1994, p. 13). This would mean, for example, that an average Year 5 student would be beginning Level 3 at the beginning of their year in that class. Hence, for children in Year 5, at the beginning of the year, the definitions were: 1 = I would expect this child to be about half way or less through the work at Level 2 of the curriculum by the end of this year; 2 = I would expect this child to be almost completing the work at Level 2 of the curriculum by the end of this year; 3 = I would expect this child to be beginning the work at Level 3 of the curriculum by the end of this year; 4 = I would expect this child to have almost completed half the work at Level 3 of the curriculum by the end of this year; 5 = I would expect this child to have completed half the work at Level 3 of the curriculum by the end of this year; 6 = I would expect this child to have completed the work at Level

3 of the curriculum by the end of this year; 7 = I would expect this child to be working at level 4 of the curriculum by the end of this year. Hence, the definition related to '4' on the 1-7 scale was the expected norm.

Results of running records were collected by the researcher at the beginning and end of the academic year for all classes. Running records enable teachers to meticulously record a child's oral reading behaviours using a set of carefully developed procedures and conventions. Once the running record has been completed, the teacher analyses the student's reading behaviours to facilitate their teaching and the child's learning (Ministry of Education, 2000, p. 4). In New Zealand, almost all primary schools require teachers to conduct running records on their students for reading at regular intervals to ensure that every child's instructional level is current and accurate. The results collected at the beginning of the academic year for all children were those that had been given to the teachers by the previous classroom teacher. The running record results collected at the end of the year were conducted by the individual teachers on their own classes. While this meant that the data came from different sources, a senior staff member in all participating schools was responsible for monitoring the accuracy of the running records across all classes in their department. In order to enable a parallel comparison with the teacher surveys of whether students were below average, average or above average all running record reading ages were converted to the 1-7 scale outlined above.

#### **Data collection procedures**

The initial expectation survey was conducted 1 month into a new academic year in order to allow teachers to become familiar with their students and to form their own expectations of them. Earlier research had shown that by that time teachers would have formed academic expectations of their students independent of factors such as former playground encounters or physical attractiveness (Dusek & Joseph, 1985; Jussim *et al.*, 1998; Raudenbush, 1984).

The teacher surveys were conducted on a computer using the Smartadata program (Davies, 2001). This program enabled teachers to complete the surveys on a floppy disc and when teachers entered the appropriate number for each student, the computer program reinforced their choice by providing the definitions. The first author was able to automatically upload all the data into a database when the floppy disc was placed in his/her computer. This eliminated data entry errors. The running record data was obtained from the senior staff members at each school responsible for monitoring and storing such data.

#### **Data analyses**

The analyses of measures across the year were addressed by using a group (student ethnicity)  $\times$  time (beginning of year surveys/assessments; end of year surveys/assessments) mixed model repeated measures ANOVA with repeated measures on the second factors. Analyses of one measure across ethnic groups were conducted using one-way ANOVAs. For both these forms of analysis, *post hoc* tests using Tukey's HSD procedure were performed. In some instances, comparisons were made between two measures for each ethnic group. Analyses of this type were conducted using paired-samples *t* tests. Effect sizes were calculated using Cohen's *d*. Three students who did not fall into any of the four main ethnic groups were eliminated from all analyses.

## Results

### Teacher expectations and teacher judgments

There was a statistically significant difference between ethnic groups for teacher survey measures,  $F(1, 3) = 6.41, p < .001$  (see Table 2). *Post hoc* tests showed that there were statistically significant differences between the teachers' expectations and judgments of Maori and New Zealand European students ( $p < .001$ ), between Maori and Pacific Island students ( $p < .05$ ) and between Maori and Asian students ( $p < .004$ ). There were no significant differences for the teachers' expectations and teacher judgments between any other ethnic groups. An examination of the means in Table 2 shows that these are lower for Maori than they are for any other ethnic groups.

These results provide some evidence that teachers had differing expectations and judgments of achievement in reading according to student ethnicity. It was possible, however, that the teachers' expectations were realistic and that the achievement of Maori students was below that of all other ethnic groups in reading. Hence, it was important to not only examine teacher expectations and judgments in reading but also to look at these alongside actual achievement.

**Table 2.** Mean scores for teacher expectations for end of year and teacher judgments of achievement in reading by ethnic group

Measure	Ethnic group	M	SD	N
Teacher expectation for end of year	NZ European	4.55	1.83	261
	Maori	3.68	1.44	88
	Pacific Island	4.20	1.41	97
	Asian	4.60	1.76	94
Teacher judgment of achievement at end of year	NZ European	4.77	1.58	261
	Maori	4.19	1.21	88
	Pacific Island	4.71	1.20	97
	Asian	4.67	1.55	94

### Teacher expectations and beginning of year achievement

In order to ascertain any differences between teacher expectations and actual achievement in reading by ethnicity a repeated measures ANOVA was conducted for beginning of year achievement and expectations for achievement at the end of the year. The mean scores for this analysis are shown in Table 3. There was a statistically significant difference between ethnic groups for the two measures,  $F(1, 3) = 7.61, p < .001$ . *Post hoc* tests showed that there were statistically significant differences between Maori and New Zealand European ( $p < .002$ ), between Maori and Asian ( $p < .04$ ), between New Zealand European and Pacific Island students ( $p < .001$ ) and between Pacific Island and Asian students ( $p < .03$ ) in the teachers' expectations for achievement and actual achievement in reading.

The next step was to examine any differences for each separate ethnic group between teachers' expectations and actual achievement in reading. Hence, a paired-samples *t* test was performed for each ethnic group. The results of these analyses were as follows: for New Zealand European,  $t(261) = 3.36, p < .001$ ; for Maori,  $t(88) = -0.31, p < .76$ , for Pacific Island,  $t(97) = 9.22, p < .001$ ; and for Asian,  $t(94) = 3.22, p < .002$ . It can be seen from these analyses that there were statistically

**Table 3.** Mean scores for teacher expectations for end of year achievement and actual achievement in reading at beginning of year by ethnic group

Measure	Ethnic group	M	SD	N
Teacher expectation for end of year	NZ European	4.55	1.83	261
	Maori	3.68	1.44	88
	Pacific Island	4.20	1.41	97
	Asian	4.60	1.76	94
Actual achievement at beginning of year	NZ European	4.20	1.77	261
	Maori	3.74	1.81	88
	Pacific Island	3.23	1.40	97
	Asian	4.01	1.74	94

significant differences between teacher expectations and actual achievement in reading for all ethnic groups except Maori. An inspection of the means in Table 3 shows that for all ethnic groups other than Maori, teachers' expectations for achievement were significantly above actual achievement in reading. In other words, teachers had high expectations for the achievement in reading for all ethnic groups other than Maori.

Further examination of the means for expectation using a one-way ANOVA showed that there was a statistically significant difference between ethnic groups,  $F(1, 3) = 6.78$ ,  $p < .001$ . A *post hoc* test showed that the statistically significant differences were between Maori and New Zealand European ( $p < .001$ ) and between Maori and Asian ( $p < .002$ ). The means in Table 3 show that the expectation for the achievement of Maori students was significantly below that of New Zealand European and Asian students. Turning to beginning of year achievement, a further one-way ANOVA again showed a statistically significant difference between ethnic groups,  $F(1, 3) = 8.05$ ,  $p < .001$ . *Post hoc* tests showed that there were statistically significant differences in achievement between Pacific Island and European students ( $p < .001$ ) and between Pacific Island students and Asian students ( $p < .009$ ). In both cases, the achievement of the Pacific Island students was significantly below that of the other two ethnic groups (see Table 3). There were no statistically significant differences in achievement at the beginning of the year between Maori and any other ethnic group so at the beginning of the year, Maori were achieving at similar levels in reading to all other groups.

#### **Teacher judgment and end of year reading achievement**

Given that teachers generally had high expectations for all ethnic groups other than Maori, it was anticipated that teacher judgment of Maori levels of achievement might also differ from those for other ethnic groups. In order to ascertain any differences between teacher judgments and actual achievement in reading by ethnicity at the end of the year, a repeated measures ANOVA was conducted for teacher judgments of reading achievement at the end of the year and actual achievement. The mean scores for this analysis are shown in Table 4. Again, there were statistically significant differences between ethnic groups on the two measures,  $F(1, 3) = 8.55$ ,  $p < .001$ . *Post hoc* tests showed that there were statistically significant differences found between New Zealand European and Maori ( $p < .001$ ), New Zealand European and Pacific Island ( $p < .005$ ), Asian and Maori ( $p < .006$ ), and Asian and Pacific Island students ( $p < .04$ ).

We decided to examine any differences for each separate ethnic group between teachers' judgments and actual achievement in reading. Hence, a paired-samples *t* test

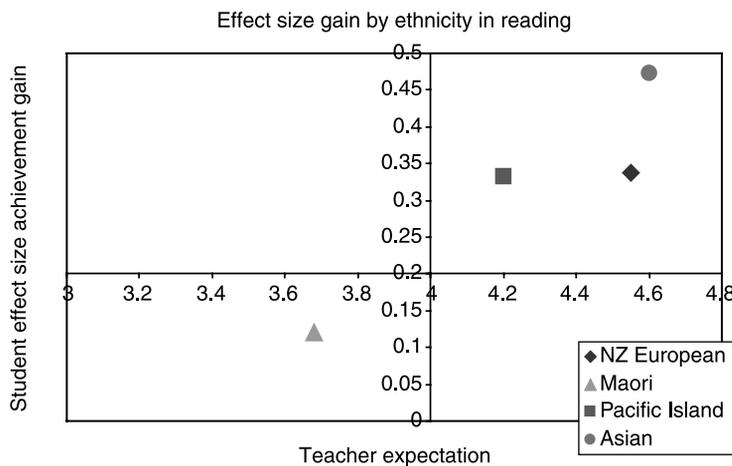
**Table 4.** Mean scores for teacher judgments of end of year achievement and actual end of year achievement in reading by ethnic group

Measure	Ethnic group	M	SD	N
Teacher judgment for end of year	NZ European	4.77	1.58	261
	Maori	4.19	1.21	88
	Pacific Island	4.71	1.20	97
	Asian	4.67	1.55	94
Actual achievement at end of year	NZ European	4.80	1.78	261
	Maori	3.95	1.69	88
	Pacific Island	3.76	1.77	97
	Asian	4.85	1.81	94

was performed for each ethnic group. The differences between teacher judgments and actual achievement in reading at the end of the year for each ethnic group were as follows: for New Zealand European,  $t(261) = -0.28$ ,  $p < .78$ ; for Maori,  $t(88) = 1.12$ ,  $p < .27$ , for Pacific Island,  $t(97) = 5.39$ ,  $p < .001$ ; for Asian,  $t(94) = -1.13$ ,  $p < .26$ . Because there were no statistically significant differences between teacher judgments of student achievement and actual achievement in reading for New Zealand European, Maori and Asian students, then teacher judgments of student achievement for these groups may be considered accurate. The only ethnic group for whom there were statistically significant differences between teacher judgments and actual achievement in reading was the Pacific Island group. For this group, teacher judgments of student achievement were significantly higher than the actual performance of the students (see Table 4).

Further examination of the teacher judgment means using a one-way ANOVA showed that there was a statistically significant difference between ethnic groups,  $F(1, 3) = 3.51$ ,  $p < .02$ . *Post hoc* tests revealed that the only statistically significant difference in teachers' judgments of achievement lay between Maori and New Zealand European with Maori being judged to be achieving at significantly lower levels than New Zealand European (see Table 4). Turning to actual achievement at the end of the year, a further one-way ANOVA showed that there was a statistically significant difference in achievement between the groups at the end of the year,  $F(1, 3) = 12.06$ ,  $p < .001$ . *Post hoc* tests showed that there were statistically significant differences between Maori and New Zealand European ( $p < .001$ ), between Maori and Asian ( $p < .004$ ), between Pacific Island and New Zealand European ( $p < .001$ ), and between Pacific Island and Asian ( $p < .001$ ). At the end of the year, the achievement of the Maori students and Pacific Island students was significantly below that of the two other ethnic groups (see Table 4). Hence, the achievement of Maori was significantly below that of New Zealand European students in line with teachers' judgments. On the other hand, the teachers judged Pacific Island students to be achieving at similar levels to the New Zealand European and Asian students; this was not the case.

Mean effect size gains in achievement were calculated for each ethnic group over the year. Figure 1 shows these gains in relation to the mean teacher expectations for each ethnic group's achievement. This shows that both teacher expectations and the achievement gain for Maori were less than for any other ethnic group.



**Figure 1.** Mean effect size gains over one year by teacher expectation for end of year achievement for each ethnic group.

## Discussion

This study has shown that ethnicity may be a factor in teachers' expectations independent of social class and student achievement. Teachers had expectations for Maori students' achievement in reading that were below their expectations for other ethnic groups. This was despite the finding that Maori students' performance was not below that of any other ethnic group at the beginning of the year. This was not true for Pacific Island students. Teachers had expectations for the achievement of Pacific Island students that were similar to their expectations for the achievement of New Zealand European and Asian students and yet the achievement of Pacific Island students at the beginning of the year was substantially below that of both New Zealand European and Asian groups. Hence, although it was hypothesized that teachers' expectations would differ for students by social class rather than by ethnicity, and in accordance with achievement, this was not what was found. Instead, it appeared that teachers' expectations were high for all groups other than Maori and that this was not based on student achievement.

Teachers' judged the achievement of Maori to be low by the end of the year and, by that time, their achievement had fallen to be significantly below that of both New Zealand European and Asian students. Nonetheless, Pacific Island students were judged to be achieving at similar levels to their New Zealand European and Asian counterparts and yet their achievement was substantially below that of these groups, as it had been at the beginning of the year. These results suggest that teachers' expectations, at least for Maori and Pacific Island students, had more to do with their ethnicity than with their social class. Both groups of students are generally mostly found in lower socio-economic areas and that was the case in this study. Future research examining teacher expectations for more than two ethnic groups across socio-economic groups could add weight to the findings in the current study.

One explanation for teachers' differing expectations and judgments of student achievement by ethnicity may be that certain teachers adhere to societal stereotypes. Anecdotal evidence from teachers subsequent to obtaining the results in the current

study suggest that there are beliefs among teachers that Asian students are conscientious and industrious and that their parents place a premium on their children gaining a good education. Pacific Island students are believed to come from homes where there is strict discipline, where church and family are important but where parents care about their children and their education. Maori students, on the other hand, are believed to come from families where education is not valued and where parents are not encouraging of teachers' efforts. St. George (1983) made similar comments in relation to her finding that teachers judged the Polynesian students in her study (most of whom were Maori) to come from less supportive home backgrounds than the New Zealand European students. She stated that, in most cases, teachers had not met the parents, let alone visited their homes and hence such judgments were most likely made on the basis of ethnic stereotypes and staffroom conversations. Nichols and Good (2004) have shown that there are similarly differential societal expectations for certain youth within American society.

While cause and effect cannot be determined in the current study, it is possible that differing expectations could result from such stereotyping. When teachers have such beliefs about particular ethnic groups, this may result in lowered expectations for particular groups of students. There is evidence that when this occurs teachers may alter their teaching practices and thus student opportunity to learn (Ennis, 1995, 1998; Good & Weinstein, 1986; Solomon *et al.* 1996). For example, teachers may slow the pace of lessons for particular student groups (Good & Weinstein, 1986), and they may create a more structured environment for them where behaviour is carefully controlled (Ennis, 1995, 1998). In such environments, students are given little independence, few cognitively demanding tasks, and little opportunity to interact with their peers. Classroom environments such as this may restrict student progress, and yet teachers with specific beliefs and expectations about particular ethnic groups are likely to explain the lack of student progress by referring to their lack of innate ability or home background factors rather than assuming the responsibility for student learning themselves (Ennis, 1995, 1998; Good & Weinstein, 1986). On the other hand, where teachers have high expectations for other groups of students, they are more likely to offer the students challenging learning opportunities, greater independence and choice, and opportunities to work cooperatively with their peers. Weinstein (2002) has claimed that differential opportunities to learn are a prime mechanism for teacher expectation effects.

The current study may provide evidence for the high expectation student groups of the Galatea effect (positive self-fulfilling prophecy) identified by Babad *et al.* (1982). In contrast, teachers' expectations for Maori were aligned with their achievement and their learning gains in reading were considerably below those of all other ethnic groups. This perhaps suggests a sustaining expectation effect (Cooper & Good, 1983). It may be that Maori students were given learning opportunities that maintained their achievement at similar levels throughout the year, while the other groups were provided with more challenging learning opportunities that significantly augmented their achievement.

Whether teachers' expectations did affect student achievement and the actual mechanisms for this cannot be determined in this study. There are other possible explanations both for the lesser progress of Maori students over the year and also for teachers' differential expectations. It may be that Maori students are aware of their teachers' expectations through a range of dyadic and more subtle interactions with their teachers, that they accept and respond to these expectations, and thence make less progress than do their peers. Weinstein (2002) has highlighted the student role in the

reinforcement of teachers' expectations. Moreover, McKown and Weinstein (2002) have shown how African-American students are more sensitive to teachers' expectations; it may be that Maori students are similarly susceptible. A further possibility is that Maori students are aware of the stereotypes about them and become anxious about performing in line with such stereotypes such that the resulting anxiety actually causes declines in performance - the stereotype threat that Steele and Aronson (1995) identified. The explanation may even lie in a combination of all of these factors. Weinstein *et al.* (2004) have discussed the complex ways in which expectation effects are nested within interrelated environments such as school, home, and community. Future research could examine more closely factors other than the teacher that may explain their differential expectations for different ethnic groups. Such research could tease out the relative importance of various interrelated factors.

Home-school congruence has also been shown to be an important factor in student achievement (McCaslin & Murdock, 1991; Nichols & Good, 2004). When school reflects different values, beliefs, and understandings to the home, this can have detrimental effects on student adjustment to school and subsequent success within the school environment. Smith and Smith (1996) have considered ways in which the core values of schools in New Zealand differ from those found in the homes of Maori students. They consider this an important mechanism in the low achievement levels and high drop out rates of Maori students in New Zealand.

This study has several limitations. Firstly, the role of the ethnicity of students as a factor in teachers' expectations was one aim of the paper and so other potential factors that may better explain the differential expectations of teachers and rates of progress of students were not explored. For example, social class was not used as a covariate in the analyses and possibly may have been a factor. Future research could more closely consider variables alongside teacher expectations (e.g. student and/or home factors) that may account for the differential achievement found in the current study. Observations of teacher classroom interactions and practices with particular ethnic groups would also enhance current understandings of ways in which teacher expectations for particular groups may be mediated.

The ethnicity of teachers was not considered as a variable that could have influenced their expectations. There was a range of teacher ethnicities in both low and high socio-economic schools making such an analysis problematic. It is of note, however, that all three Pacific Island teachers in the current study were located in schools with larger numbers of Maori and Pacific Island students. It is possible that they may have had higher expectations for the students from similar backgrounds to themselves and that this could have influenced the finding of more positive expectations and achievement for Pacific Island students when compared with Maori.

A third limitation of the study is that the running record data used to determine student achievement was obtained from two sources. Although both data sets for each student were obtained from one senior staff member charged with monitoring the accuracy of teacher-implemented running records, it is not known how carefully the data were scrutinized or how much cross-checking was carried out. It was clear that senior staff members did randomly conduct running records on students within their departments to verify teacher decisions.

The current study has provided a means of quantitatively assessing teachers' expectations and judgments and comparing these with student achievement. Few studies provide such explicit details of how teacher expectations have been determined

and it is hoped that the clear methodological description in this paper will be useful for future research.

This study has several implications for practising teachers and teacher education departments. Although teacher expectation research has been carried out for almost 50 years, the ways in which teacher expectations can significantly influence student opportunity to learn should be stressed. That students are well aware of teachers' expectations and may respond accordingly is also a critical factor. Moreover, several researchers have found evidence that some teachers believe that students' home background may create a barrier to learning and that students cannot therefore be expected to make the academic progress of other students without these 'deficits' (e.g. McNaughton, Phillips, & MacDonald, 2000; Warren, 2002; Zohar, Degani, & Vaaknin, 2001). In such instances, expectations for achievement are lowered and teachers may not take responsibility for student learning. In New Zealand, it may be that such lowered expectations for Maori result in teachers limiting student opportunity to learn. In a climate where several nations have introduced policies aimed at improving the academic results of ethnic minorities, teachers should be encouraged to examine their beliefs, stereotypes, and consequent expectations to see if these could be variables that ultimately affect students' life chances.

Schools could make more effort to work with their communities to enhance student achievement and to find out how parents might best be supported. Maton and Hrabowski (2004) described a successful programme in the United States aimed at increasing the numbers of graduating African-American science, mathematics and engineering students. One of their findings was the important role that parents had played earlier in facilitating their children's success in primary and high school through emphasizing the role of education in society, through focusing on high levels of achievement for their children, through becoming involved in school activities and engaging with teachers and through advocating for their children. Not all parents from minority ethnic groups have the strength or the knowledge to become so intimately involved in their children's school life. Schools have an important role in supporting all parents in their hopes for their children's futures.

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