

Evaluating a Teacher Expectation Intervention: A Meta-Analytic Approach

C. M. Rubie-Davies^a, R. Rosenthal^b, A. Flint^a, L. Garrett^a, L. McDonald^a, P. Watson^a

^aFaculty of Education, The University of Auckland, ^bDepartment of Psychology, University of California at Riverside

Abstract

This study investigated whether an intervention had effects on student math achievement. Teachers were randomly assigned to control or intervention groups and taught the practices of high expectation teachers (those who have high expectations for all their students). Student achievement in math was measured at the beginning and end of year and the outcomes for control and intervention groups were compared through a series of meta-analyses for schools, grades, socioeconomic level, student ethnicity, and gender. Effects were analyzed using both fixed and random effects analyses. In all analyses the intervention had positive benefits when compared with the control group. Educational and research implications are discussed.

Research questions:

- 1) Can randomly assigned teachers be taught the beliefs and practices of high expectation teachers?
- 2) Will the changed psychosocial and instructional practices result in improved student learning?
- 3) Will any improvements be greater for some groups than others?

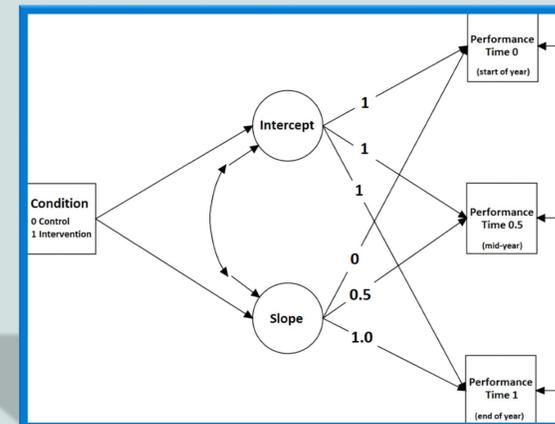
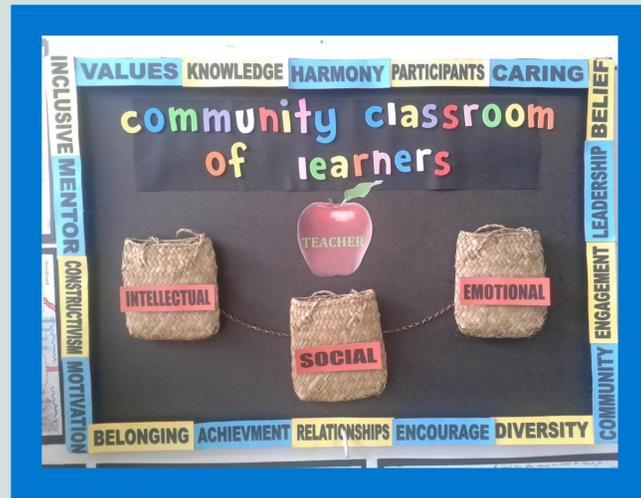
Methods

Participants: 84 randomly assigned teachers; 10 elementary schools, socioeconomic spread, range of teaching experience

2408 students, aged 8-13, 49% NZ European, 18% Maori, 17% Pasifika, 14% Asian, 12% 1 with intervention teachers

Measures: Standardized math test

Procedures: Students completed math test pre- and post-intervention. Intervention teachers attended four full-day workshops and three support meetings.



Results

- Bayesian latent growth curve model: no differences between control and intervention of year.
- End of year intervention group students gained 28% additional learning in math compared with control – three months additional learning in one year.
- Effects of the intervention analyzed in a series of meta-analyses for levels of schools, grades, school socioeconomic levels, ethnicity, and gender comparing gains over one year for intervention versus control students..

Units of analysis	Fixed effects		Random effects	
	r^*	p	r	p (one-tailed)
10 schools	.078	.0042	.61	.024
6 grades	.126	.0000069	.85	.008
6 SES levels	.070	.0043	.82	.012
5 ethnic groups	.100	.0018	.86	.014
2 gender groups	.086	.0011	.87	.164

*Mean r s are the unweighted average r s

Conclusions

- No previous intervention study designed to raise teachers' expectations for all students
- Substantial positive benefits for intervention group students across all schools, grades, socioeconomic groups, ethnic groups, and both sexes
- When taught the practices of high expectation teachers, all teachers could raise student achievement for similar students in similar schools
- Changing teachers practice may be a way forward to change teacher beliefs



Introduction

- Teacher expectations can have a self-fulfilling prophecy effect.
- Traditionally researchers have examined expectations for individual students..
- Expectations at the class level are more important because teachers interact and make instructional decisions at the class level far more frequently than they do at the individual level.
- Class-level expectations mean that some teachers have high expectations for all students whereas others have low.
- Can such teachers be identified?
- Yes, they can, and they have (see selected references).
- High expectation teachers have large positive effects on student learning..
- Beliefs and practices of high expectation teachers differ from those of low expectation teachers.

Selected references

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