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D = Teaching high expectation strategies to teachers through an intervention process

Abstract

This study describes the outcomes of an intervention focused on the strategies and practices of high expectation teachers. Specifically, the intervention involved 84 teachers who were randomly assigned to control and intervention groups. The research methodology was primarily qualitative grounded in the interpretive tradition. Data collected from workshop evaluations, cluster meeting reports, and pen-and-paper evaluations were analyzed using a thematic approach. Findings revealed that teachers involved in the intervention refined and changed their practices by creating flexible grouping, enhancing the class climate, and supporting students' goal setting. The teachers reported benefits as well as challenges and barriers to intervention implementation.

Keywords: teacher expectations; goal setting; class climate; flexible grouping; professional development

Introduction

Teacher expectations are defined as “inferences that teachers make about the future behavior or academic achievement of their students based on what they know about these students now” (Good & Brophy, 1997, p. 79). When teachers have high or low expectations for students they communicate their expectations both verbally and non-verbally (Babad, Bernieri, & Rosenthal, 1989). Students may interpret and internalize the expectation and achieve in accordance with the teacher's expectations (Weinstein, 2002). Teacher expectations are important because if teachers have high expectations for all students, then all students are likely to be challenged and extended ultimately, leading to greater learning progress for all (Rubie-Davies, 2008a).

Despite the literature establishing associations between high teacher expectations and student learning (e.g., Rubie-Davies, 2008a; Weinstein, 2002), we are unaware of an experimental study of this association. Thus the purpose of this investigation was to address this empirical gap. Specifically, we sought to change teacher expectations for their students by informing them about the strategies and practices used by high expectation teachers. A randomized control design was employed, enabling researchers to determine whether this intervention did alter teacher expectations and whether those changes resulted in improved learning outcomes and positive self-beliefs for students.

In the current study we focus on the extent to which randomly assigned teachers reported that they could employ the practices and strategies of high expectation teachers and their evaluation of the effectiveness of these practices and strategies. This paper is based on the teachers' self-reported perceptions during the first year of the study and does not include observations of students or their test scores. Hence, the focus of the current paper is on the qualitative data.

The intervention strategies taught to the teachers were based on previous literature (e.g., Rubie-Davies, 2006; 2007, 2008b; Rubie-Davies & Peterson, 2011) which noted that the areas where the practices of high expectation teachers differed from those of other teachers were in flexible grouping of students; creating a positive socio-emotional climate in the classroom; and making a positive difference to students' learning experiences through goal setting, teacher feedback, and encouragement of student motivation and autonomy. None of these practices were consistently found in any classes of low expectation teachers. Further, students in the classes of high expectation teachers made large learning gains in one year ($d = 1.05$; Rubie-Davies, 2007) and hence the teaching of the strategies and practices that were particular to high expectation teachers appeared to be worthwhile.

The practices of high expectation teachers as related to research findings

The key areas in which the practices and teaching strategies of high expectation teachers differed from those of other teachers were in mixed ability grouping; the fostering of a positive class climate; and motivation, evaluation, feedback, and promotion of student autonomy through the use of goal setting. The literature related to each of these three areas will be briefly presented below.

As described by Hanushek and Woessmann (2005), the central argument behind homogeneous ability grouping is that it permits a focused curriculum and appropriately paced instruction leading to maximum learning for all students. In contrast to this argument, Hattie (2009), in his meta-analysis, reported an effect size of only 0.12 for the effect of ability grouping on student achievement. Flexible grouping refers to the practice within classrooms of ensuring students encounter a range of grouping configurations. When students work in flexible groups it might be that they are matched with other students in relation to readiness, interests or social groupings. Students are instructed in ability groups but have different grouping arrangements for their learning activities. Strickland (2007) commented that the practice of working in flexible groups helps students look at themselves in new roles, new

contexts, and new situations and might also assist students to discover strengths or uncover areas of weakness.

Research findings (Rubie-Davies & Peterson, 2011) have indicated that the socio emotional environment high expectation teachers create in their classrooms is likely to be more positive and caring than that of other teacher groups. High expectation teachers appear to give students more feedback about their learning and as a result, the partnership between student and teacher in developing student learning is clearer. High expectation teachers build positive learning and socio emotional classroom environments and it appears that their perceptions of student attitudes are overwhelmingly positive. As a consequence, high expectation teachers are likely to be affirmative in their assessments of students' attitudes to schoolwork, student relationships with others, and the support students receive from their families (Rubie-Davies, 2010).

If teachers are to become more competent and sustain teaching approaches where students are motivated and encouraged to be independent, it is important that goal setting becomes a central focus, a practice used and encouraged by high expectation teachers (Rubie-Davies, Hattie, Townsend, & Hamilton, 2007). Research in the field of motivation has indicated that 'students' competence-related beliefs have strong associations with their achievement-related outcomes' (Duchesne, McMaugh & Krause, 2013, p.278). Goal setting and the achievement of goals encourages student beliefs in their capabilities. Midgley and colleagues (2002) have shown the significance of mastery goals (aiming to improve individual skills) as opposed to performance goals (aiming to outdo peers) in promoting motivation. The goal setting and motivation component of the current project focused on mastery goals since these were the goals that high expectation teachers employed (Rubie-Davies et al., 2007).

Teacher beliefs

It is frequently acknowledged that it is difficult to change teacher beliefs (Turner, Christensen, & Meyer, 2009). However, some research (Timperley, Parr, & Bertanees, 2009) focusing on changing teacher practice and providing evidence for the consequences of the new practices for student achievement has been more successful in noting changes in teacher beliefs. It appears that focusing on teaching strategies and practices may be a more successful approach when also wanting to change teachers' beliefs. This is the approach taken in the current paper. The authors propose that when equipped with the strategies of high expectation teachers (outlined above), the changed behaviors are likely to have notable effects on

teachers' expectations and on student learning leading to changed beliefs. Further, while high teacher expectations can raise student achievement considerably (Rubie-Davies, 2007) no studies have been conducted into the extent to which an intervention can successfully change the practices and strategies of randomly assigned teachers into those of high expectation teachers.

Timperley and Phillips (2003) stated that raising expectations needs to become an important part of all professional development for teachers. Raising expectations applies to students ranging from below average through to well above average (i.e., the conception that all students will move at an accelerated rate whatever their initial achievement). One goal of professional development is to change teachers' classroom practices, and in so doing change their attitudes and beliefs as they realize that student learning outcomes have improved as a result of the changed practices (Guskey, 2002). Guskey reported that through professional development, teachers can alter their professional practice and bring about change in classroom practices.

Higher teacher expectations come from seeing improved student outcomes when new practices are introduced (Timperley, 2008). Using the strategies of high expectation teachers, students learn more because they are given additional opportunity to learn. The change process is therefore more likely to be an "iterative process rather than a sequential one where the changes teachers make based on beliefs, actions or outcomes are both shaped and built on each other" (Timperley & Phillips, 2003, p. 630). In the current project, based on teacher expectation work by the third author (Rubie-Davies, 2008b; Rubie-Davies et al, 2007, Rubie-Davies & Peterson, 2011), the intervention involved teaching teachers how to use flexible grouping, improve the class climate, and use goal setting to enhance learning.

Professional development of teachers

The primary aim of teacher professional development is to improve student learning. Frequently, however, teachers engage in professional learning and there is no measure of the success of the learning in changing teacher practice and positively influencing student outcomes (Timperley, Wilson, Barrar, & Fung, 2007). Certain conditions appear to enhance the success of teacher professional development. In a synthesis of available evidence, Timperley et al. (2007) documented conditions associated with effective professional development. First, teachers have to recognize that students could achieve at higher levels than currently. Second, they have to accept the value of the professional development undertaken and be prepared to try innovative practices. Third, teachers need some autonomy

in designing activities and programs they believe are appropriate for their context and will result in improved learning for their students. Fourth, teachers need to be supported by researchers or professional developers in order to effectively implement changed practices. Fifth, the effectiveness of the professional development needs to be measured in terms of both teachers and students. These core elements were incorporated into the design of the intervention that formed the basis of the current study.

The current study

Over the past 30 years, teacher expectation research has provided insight into “basic developmental, educational and social phenomena” (Jussim & Harber, 2005, p.153). The current study sought to explore the experiences of the intervention teachers as they introduced and trialed new teaching practices associated with high expectation teachers. Student achievement differences are attributable to identifiable distinctions in the instructional practices and strategies (Rubie-Davies, 2007, 2008b, 2010) of high and low expectation teachers respectively. Therefore, becoming a high expectation teacher involves much more than merely accumulating skills and strategies. The inference would be that if teachers can be taught the specific behaviors of high expectation teachers, student outcomes could improve and thus teacher expectations for all students may increase. However, for the learning of teachers to be successful it needs to be framed in terms of effective professional development.

The aim of the first year of the current three-year research study was to teach the intervention teachers the beliefs and practices of high expectation teachers. The study was based largely on the work of Rubie-Davies (cited above) because she is the only researcher to have identified the practices and beliefs of high and low expectation teachers. This conception focuses the teacher expectation field away from viewing expectations as a student phenomenon (something about the student causes the expectations in the teacher) to conceiving of expectations as a teacher-related phenomenon (teachers have differing pedagogical beliefs that moderate expectation effects). The primary research questions pertaining to this paper were:

- 1) How are the strategies and practices of high expectation teachers manifested in the intervention teachers’ teaching?
- 2) How effective did teachers involved in an experimental study perceive that the intervention was in changing their teaching strategies and practices to reflect those of high expectation teachers?

Methodology

Participants

The study involved 12 elementary schools in New Zealand. Within these schools, 90 teachers agreed to be part of the study representing approximately 86% of eligible teachers of whom 25 were male and 65 were female. Teaching experience ranged from 1-41 years with most (56%) having taught for 10 years or less. Teachers taught at differing levels: 26 (29%) taught Years 3-4 students (Grades 2-3), 34 (38%) taught Years 5-6 (Grades 4-5) and 30 (33%) taught Years 7-8 (Grades 6-7). Schools represented all socioeconomic levels; 18 (20%) teachers were in low socioeconomic areas, 18 (20%) were in high and the remaining teachers (60%) were in middle socioeconomic areas. Socioeconomic areas (decile ratings) in New Zealand schools are identified from census data. Deciles 1-3 are in low socioeconomic areas, deciles 4-6 are in middle income areas and deciles 7-10 are in high socioeconomic areas.

High expectation intervention and procedures

Teachers were randomly assigned within schools to either the control or the intervention group. This resulted in 47 teachers randomly assigned to intervention and 43 to control group. However, during the year, 6 teachers left the study for personal reasons, resulting in a final sample of 43 teachers in the intervention group and 41 in the control group. In the first year of the study, the focus of this paper, the control group was used to ascertain the effect on student learning as a result of the strategies taught to the intervention teachers in order to determine if they were worthwhile. The current paper reports teacher perspectives of the effectiveness of the practices. Although the control group was not directly involved in the findings presented for the current paper, they did participate in their school's regular professional development. It is compulsory for all teachers in New Zealand to engage in professional development every year. Hence, all teachers, both control and intervention, did participate in professional development during the year reported. Further, during the second year of the study, the control group was taught the high expectation teacher practices. The final year of the study involved ascertaining further effects on student achievement and social outcomes, as well as the degree to which all teachers maintained the practices they had been taught. Having gained ethical approval for the study, all participating teachers were fully informed of the randomization of participants and that data would be being collected from both groups throughout the study for comparative purposes. Consent forms were signed on

that basis. (A fuller description of the methods for this study is contained in Rubie-Davies, Peterson, Sibley and Rosenthal; in press).

Because this paper concerns the first year of the study, only the intervention group participated in the workshops described below. This paper draws on qualitative results from the intervention group in terms of their evaluations of each workshop described below, comments collected during support visits described below and end-of-year evaluation of the project in relation to the intervention.

In the first year of the project, those in the intervention group completed four workshop days where they were introduced to the specific teaching areas in which high expectation teachers differed markedly from lows. The first workshop introduced the teacher expectation area in general and more specifically the beliefs and practices of high expectation teachers. The teachers were shown how particular beliefs of high expectation teachers led them to practice in ways which differed from those of low expectation teachers. The three major areas of difference were: grouping and learning experiences, classroom climate, promoting student motivation, engagement and autonomy and providing effective teacher monitoring and feedback which in the current project were subsumed under the heading 'goal setting'.

Over the next three workshops, teachers were introduced successively to each of the three key areas. At each consecutive workshop they learnt more about the beliefs and practices of high expectation teachers in relation to the professional development focus. They were introduced to literature in other fields that suggested support for the practices and beliefs of high expectation teachers. Intervention teachers spent each afternoon working with fellow research participants planning how they would introduce the high expectation teacher strategies into their classrooms. Planning for implementation has been shown to be more likely to result in teachers introducing new practices into their classrooms (Timperley, 2008). However, planning with the support of colleagues and the researchers also helped to ensure fidelity of what was being planned with the core ideas being presented as part of the intervention.

Following the workshops, the researchers visited schools on three further occasions to ascertain the degree to which intervention teachers were implementing the practices and where support, if any, was needed. For these support sessions, because there were 12 schools and six researchers, each researcher met with participants from the same two schools each time at one of the schools. The intervention teachers brought suggestions of activities they

had implemented and examples of student work that arising from the changes teachers had introduced. These sessions prompted supportive discussion among teachers and researchers. At times the researchers visited classrooms during these sessions, which helped to validate the teacher reports of their engagement with the project and of their development. Again, these discussions provided an opportunity for researchers to assess the fidelity of the intervention implementation.

At year's end, all teachers (intervention and control) and principals attended a session where intervention teachers shared student work, their assessment of the effectiveness of the intervention and changes they had made to their practice. Before attending this session, the intervention teachers completed a program evaluation.

Measures

Data for the current paper were collected using three different methods. The first was a workshop evaluation (designed by the principal investigator) comprised of open-ended questionnaire items completed at the end of each of workshop day. These evaluations aimed at establishing if and how intervention teacher beliefs had changed and what teachers would implement into their classrooms. An example of an open question was, "Will you take anything back to your class from workshop 4? If so, what?".

The second form of data collection related to qualitative notes from follow-up workshop cluster meetings with researchers. These meetings and discussions related to on-going implementation of ideas generated from the workshops. The research team planned the discussions around the themes of grouping and learning experiences; classroom climate; and goal setting in line with the workshops, and recorded notes on what was reported.

The third form of data collection used was a pen-and-paper evaluation (designed by the principal investigator) completed at year's end after participants had had several months to implement changes. The data collection aimed at establishing the extent to which participants believed that they were able to implement changes into their classrooms as a result of the intervention and whether they thought the changes had made a difference to their classroom and to student outcomes.

Analysis of data

Thematic analysis was used to code the data from the surveys, reports, and evaluations in relation to the key areas of the intervention. The justification for using thematic analysis was that this form of data analysis allowed the combination of both deductive and inductive approaches thus enabling flexibility (Braun & Clarke, 2006). With

the deductive approach the categories are based on the researcher's theoretical knowledge, and the data searched for which may be relevant to the research. In the current study the analysis was linked to the research questions and pre-defined codes and categories in relation to the intervention strategies taught to the teachers during the workshops. The inductive approach meant themes were strongly linked to the data themselves and included the uncovering of unexpected data, for example the challenges and barriers the participants noted that arose from implementing aspects of the intervention into classes.

Coding is central to analysis as it is specifically designed to discover regularities within the data (Punch, 2005). In order to ascertain codes, the data were read through several times by the first and second authors. Developing a coding system involved searching the data for patterns and topics, and recording words and phrases to represent the topics as coding categories (Braun & Clarke, 2006). In order to ascertain the reliability of the coding, another experienced researcher independently coded nine transcripts. The first two transcripts were used for training purposes with the remaining seven to check reliability. The resulting percentage agreement score ($\text{agree} / (\text{agree} + \text{disagree}) \times 100$) between the two coders was satisfactory at 90%.

As outlined above, the three major areas in which participant practices were refined and changed were the use of more flexible grouping with greater activity choices; enhancing the classroom climate; and supporting students to set their own goals. Hence comments inevitably related to these three intervention strategies. The participants also reported that their engagement, motivational practices and beliefs had been challenged as a result of the intervention creating innovation in their instructional practices. These themes will be presented below, with comments from participants included.

Ethical considerations

Ethical principles considered for this study were voluntary participation, informed consent, invasion of privacy and confidentiality. The participants were fully informed about what the study was about and what it involved. Both principals and teachers were told the purpose of the research, that is, that it was designed to raise teachers' expectations for all students and to lift student achievement, by changing teacher practices to reflect those of high expectation teachers. Principals and teachers were provided with background understandings. They were warned that participation would involve substantial commitment from teachers because it was a large-scale project running over three years. They were provided with clear guidelines around the proposed annual time commitment. Potential participants were informed that the

study would involve random assignment of teachers to either intervention or control groups to enable the researchers to determine if the intervention caused changes in teacher beliefs and practices (reported in the current paper) and whether any changes had effects on student academic and social outcomes (not reported in this paper but available in a related paper; Rubie-Davies et al., in press). They were given details related to measures of students and teachers to be undertaken in the project and of the random assignment. Potential participants were informed that those randomly assigned to the control group would, in the second year, be taught the intervention practices by the researchers and then supported by their intervention colleagues to introduce the new practices into their classrooms. All principals and teachers received detailed participant information sheets (PIS) and had the opportunity to have issues clarified when the project director visited each school prior to the study's commencement. Participants were clearly informed that they could withdraw at any time without giving a reason. Written consent was gained. Individuals were invited to participate but, as noted in the limitations, were not unknown to all researchers. Participants were given an assurance of confidentiality of data sources and assured that any potentially personally identifying information would be reported anonymously. They were informed that although data would be reported anonymously, their participation could not be anonymous because their data needed to be tracked over the three years of the project and because all teachers, during the project, would be working closely with the researchers.

Results and findings

The three main themes evident in the data, namely flexible and mixed ability grouping, enhancing classroom climate, and goal setting were directly linked to the intervention strategies taught and further sub-themes could be found for these themes. The intervention teachers' voices are presented below through direct quotes. Following each stand-alone quote, codes are used related to the teachers whose data are being presented. For each teacher, M or F means male or female; the next number, for example, 23 indicates 23 years teaching experience; the third code, for example, 5-6, means the teacher had a Year 5/6 class; and the final code (1, 2, or 3) relates to the socioeconomic level of the school, 1 = low, 2 = mid and 3 = high. So [M/12/7-8/1] would be interpreted as a male teacher with 12 years of experience teaching a Year 7/8 class at a low socioeconomic school.

Flexible and mixed ability grouping

Increased use of flexible groupings

Results from workshop evaluations indicated a shift in participants using flexible grouping and providing a wider range of choices with 97% of participants claiming to use flexible grouping by the end of the year compared with none prior to the intervention.

Responses collated from the follow-up project partnership meetings indicated participants were becoming more comfortable with using flexible groups, particularly in mathematics and reading. Participants reported that having mixed groups and additional learning opportunities were working well and children, especially middle ability children, were highly interested in the tasks and were enjoying working in mixed groups. Lower ability children were found to be using their more able peers to extend themselves.

By year's end, after participants had had more time to implement the intervention strategies, pen-and-paper evaluations indicated a large proportion of participants felt that flexible grouping was making a positive difference to students' learning outcomes in areas such as reading, mathematics, spelling, writing, and to a lesser extent topic studies with 83% agreeing or strongly agreeing and 17% taking a neutral stance. However, while 52% of participants claimed to have integrated flexible grouping fully or mostly into their reading programs, only 56% reported being fully or highly satisfied with how they had integrated flexible grouping. Interestingly, too, although the intervention had primarily targeted the reading, only 22% reported fully integrating flexible grouping into their reading programs whereas 63% reported doing so in mathematics. Nevertheless, 86% of participants agreed or strongly agreed that flexible grouping was making a positive difference to their classroom relationships.

Choices of learning activities

There was consensus, particularly during the partnership meetings and in the end-of-year evaluation, that they were now offering children a far greater range and choice of learning activities. This had required huge shifts in practice for some participants, and as one teacher stated at a partnership meeting: *I am getting more confident in allowing students to choose the activities they want to do, choose who they work with, and letting go of control* [M/4/5-6/1].

One participant claimed she was now more aware that she had been controlling the learning of her lower level students and not giving them freedom of choice. She reported in the end-of-year evaluation that giving students choice had: *given them greater ownership of the activities and has raised the bar in their learning* [F/2/3/2]. Of the participants, 22% reported that they were now providing instructional sessions specifically related to skill

development and students either chose to opt into them or were specifically asked to participate. Participants emphasized that although children enjoyed choosing activities, teachers still needed to model these through explicit teaching and skills workshops.

Challenging and similar activities for all?

In the end-of-year evaluations, approximately two-thirds of participants said that they were providing more inquiry centers, a wider range of activities, and greater choices for all students. Buddy systems had been set up for students and children were actively seeking help from one another rather than from the teacher.

At the project meetings, participants reported introducing a wide range of innovative ideas including: literacy circles where children chose their own books but worked with friends to answer the same questions; ‘reciprocal teaching for reading’ cards where children ran the groups and the teacher participated as a group member, and reading response activity boxes which included a wide range of interest-based books and activities. In the end-of-year evaluations, over 90% of participants reported providing their students with choices related to their learning experiences.

Advantages and benefits of flexible grouping

By the end of the year, 11% of participants reported greater fluidity of groups where children moved according to their needs. Some positive outcomes included improved attitudes towards reading, as one participant explained: *I grouped less confident readers with more confident readers and I found that both groups really enjoyed this. The struggling readers had buddies to support them and the more capable readers thrived with the responsibility* [F/3/4-5/1].

While 19% of participants stated at year’s end that they were still using ability grouping for instructional reading because of the wide range of abilities within their classes, 8% said they used the grouping on a needs basis only.

Challenges and barriers

In end-of-year evaluations, 10% of teachers reported not being fully or highly satisfied with their students’ outcomes in reading after implementing flexible grouping. Reasons included that the reading ages of students were too diverse, some children did not cope with choosing activities while others thrived on having choices, and some children were unable to access the material used for other groups:

It is a slow process and difficult to continue the momentum as groups change and some finish tasks much faster than others. I am concerned with ... children who find it difficult to stay on task [F/15/6/2].

Perhaps the most candid comments were about the enormity of the task of changing their well-entrenched practice of ability grouping to that of flexible grouping, explained by this participant in her beginning of year evaluation:

What a lot I have to do and think about! I want to try all these ideas, but need time to process all my thoughts [F/40/7-8/1].

Of the participants, 28% indicated this was just the beginning of the journey for them and that they wished to continue and improve further.

Enhancing classroom climate

Participants' views and thoughts on enhancing the classroom climate

Following the classroom climate workshop, all participants expressed satisfaction with it. Similarly, all participants commented positively about what they had learned and indicated that they felt enlightened, particularly regarding the idea that there was research supporting the power of positive emotions, positive classroom climate and that teacher warmth was a strong predictor of academic achievement. Arguably the most honest remark by a participant when asked what he had learnt was:

Lots – about myself and about my class. Me! I am responsible for the climate in the class [M/23/7-8/2].

Increased efforts to enhance classroom climate

End-of-year survey results showed that 97% of participants reported working on their classroom climate. Further, 75% of participants agreed or strongly agreed that what they had done in relation to changing the classroom climate had made a positive difference to students' reading outcomes while 25% took a neutral stance. More participants (92%) agreed or strongly agreed that the changes made to the classroom climate had made a positive difference to their classroom relationships, with the other 8% taking a neutral stance. However, only 58% of participants claimed to have fully or almost fully made changes to their classroom climate; 25% claimed to have made some changes, and 17% said they had made few changes. Most participants (75%) were satisfied with the changes made, 19% were neutral and 6% were less satisfied.

Approaches for enhancing classroom climate

As outlined above, most participants changed their practices by implementing new ideas gleaned from the workshops as well as their own ideas. Innovative or improved practices presented at the project meetings included creating time to fit in activities about positivity, including more positive approaches into their teaching, administering sociograms and class inventory surveys to gauge the implicit social structure of the classroom, and making children more responsible for the classroom climate. Teachers were generally enthusiastic about the changes they had made illustrated by this comment in the end-of-year survey:

I believe that working on my classroom climate has had a significant impact on ... the reading levels in my class. After changing / implementing strategies from the workshop I could see huge changes in the students' self-management and their feelings towards learning and BELIEVING in themselves! [F/3/4-5/1].

Participants further reported at the project meetings focusing on creating a positive classroom environment by introducing 'clock buddies' where children with the same eye color or birthday month, for example, worked together; 'Club Fridays', a type of book club, where children shared favorite books over a soda and biscuits; and allocating wall space or 'brag walls' where children as well as staff put things up to celebrate successes.

In the end-of-year survey, participants were eager to explain the reasons for the successes they had experienced with respect to classroom climate:

I have been certain to affirm to each student by way of feedback, their successes and next steps. The dedication and interest shown in their work has meant positive attitudes towards their learning which has in turn helped with the classroom climate [M/33/7-8/1].

Advantages/benefits of an enhanced classroom climate

Several participants reported that children were more confident, excited, and motivated, and were exercising choice as a result of the high expectation strategies implemented. Teachers noted enhanced student-student relationships:

I used the sociogram and the atmosphere has changed – every two weeks the children move desks and it means they have all got to know one another and there is more harmony in the classroom [M/14/8/3].

Some participants who used sociograms to set up 'family groups' in the classroom, reported success, leading to a more cohesive class atmosphere. Students who previously did not get on were now working well together as a result. One participant reported her intrigue regarding student perceptions of peer relationships stating:

I have discovered how very perceptive they [students] are in terms of knowing who rates socially in the class [F/13/3-4/1].

Challenges and barriers to enhancing the classroom climate

While many participants' comments were affirmative indicating benefits of having a positive classroom climate, some barriers were alluded to. One participant spoke of the difficulty of making changes:

It was extremely difficult to make changes after being set in ones's way for so long - (Facial expression, body language, etc.) [M/28/7-8/2].

Goal setting to enhance student motivation and autonomy

Increased use of goal setting

Survey results following the goal setting workshop showed that all participants evaluated the goal setting workshop as being good, very good or awesome:

I am keen to begin goal setting in my classroom as I think this could be very helpful in focusing my children on their next steps and also in committing [them] to achieving their goal F/35/7-8/1.

Although goal setting constituted the final workshop, by year's end 92% of participants reported using goal setting. Of these, 85% indicated that they either believed or strongly believed the strategies implemented were making a positive difference to students' reading outcomes with 15% neutral but only 76% believed the new goal setting strategies had improved classroom relationships. Fewer (50%) reported fully or mostly implementing goal setting because of the timing of the workshop. Goal-setting was the focus of the final workshop and some teachers chose to focus on introducing flexible grouping strategies in Terms One and Two (first half of the year), class climate in Term Three and did not attempt goal setting until the final term:

Simply have not yet done enough goal setting - plenty of feedback but have not helped students to convert this into meaningful goals [M/40/7-8/1].

This may explain why only 50% were satisfied with the changes made with regards to goal-setting and 12% reported a level of dissatisfaction.

Methods of implementing goal setting

Participants reported that following the workshop, they were consciously implementing goal setting in a variety of ways and using various assessment tools for example, e-asTTle to guide children's goal setting. As an assessment tool, e-asTTle is used in New Zealand to assess students' achievement and progress in reading, mathematics, and

writing. It is particularly effective in fostering goal setting as through individual student reports it lists the learning objectives that students have already achieved taking their achievement level into account and provides the next student learning objectives. This helps teachers and students to monitor each student's learning progress and plan the way forward. Participants believed this gave students greater ownership of their learning and was particularly motivating, especially when students were able to self-select areas from their e-asTTle results to set goals.

One of the participants described a writing progression table resource he had developed to enhance goal setting:

As a class we look at specific goals from the progression table. The students focus on 2-4 goals at their level and have a focused writing session... we can both look at the writing piece and highlight the successes from the table and circle goals for next time [M/9/4/2].

Advantages and benefits of goal setting

Most participants reported positive benefits of goal setting for students. In the project meetings the teachers expanded on what they had found useful which included students being able to stay focused on their next learning steps, co-constructing success criteria, setting targets, and self and peer assessing of goals. Some participants reported that goal setting was enabling children to self-manage their learning and identify their own levels and gaps within these. In the year-end surveys, participants stressed the importance of children setting goals that were measurable and attainable, and reflecting on these goals regularly:

I used goal setting and reflections on achievement each Friday and found it beneficial in improving the students' autonomy over their own learning. They became much more articulate and reflective about what they needed to improve or work on [F/11/5/2].

Challenges and barriers

Some found goal setting to be nothing new: ... *at our school goal setting has always been a strong component of our practice [M/4/5-6/1].* Nevertheless, others wanted to work more on making goal setting effective: *I would like to fine-tune what I set up, maybe allowing more time for reflection [F/20/6-7/2].* The teacher added that although she was confident and satisfied with short term goal-setting, she did not feel that she was able to help students autonomously develop 'meaty goals' yet and needed to work on this aspect more.

Changed practices and beliefs

Apart from the aforementioned practices, teachers were asked, following the final workshop: ‘To what extent has being involved in this project changed your practice?’

Responses included:

‘I have closely scrutinized and changed a lot of my practice... taking the time to actually hear what they have to say, planning programs and reading activities that give student choice, not just teacher wants!’[F/8/6/2].

Others revisited or reinforced dormant practices: *In some cases it has confirmed my thinking and teaching practice.* [F/35/7-8/3]. Regardless of how much or how little teachers had managed to do, they were unanimous in their confidence and determination to continue implementing the practices of high expectation teachers.

Discussion

This study provided evidence that for the intervention teachers, becoming a high expectation teacher through improved instructional practices was about enhancing student learning outcomes. Through the professional development, teachers were managing the classroom effectively through flexible grouping and student choice and appeared more confident to motivate and engage students in their learning through goal setting, providing skills workshops for students so they learnt to become more self-managing and reflective. There were some challenges, benefits and barriers for the intervention teachers. It appeared that the teachers perceived the intervention was effective in changing their practices to reflect those of high expectation teachers.

Timperley (2008) commented that as teachers discover new professional knowledge and practice what they have learned, they begin to feel more effective as teachers and this outcome has a positive effect on student learning. The majority of the teachers came into the teacher expectation project because the opportunity was offered and they thought it would be beneficial to their teaching practice and students’ learning, and would consequently raise student performance and achievement. The teachers wanted to learn new strategies for engaging and extending students. Guskey (2002) suggested professional development is an important part of attempting to change classroom practices of teachers and that change in practice precedes change in beliefs. This was the approach taken in the current paper which acknowledges the difficulties associated with changing teachers’ beliefs. The design was aimed at teaching teachers the practices and strategies of high expectation teachers.

The importance of the study for pre-service and beginning teachers is worthy of note. Hoy and Spero (2005) concluded that pre-service and beginning teachers often underestimate

the complexity of teaching. Consequently, it could be beneficial to teach them pedagogical beliefs and practices associated with high expectation teachers, since first, there seem to be clear benefits for student outcomes and second, the project provides a clear structure for organizing the classroom and implementing change. Although not reported in the current paper, it is notable that the intervention had significant positive effects on student achievement for those whose teachers were intervention teachers when compared with students whose teachers were control—many of whom underwent quite intensive professional development themselves over the year of the current study (Rubie-Davies et al., in press).

Flexible grouping and activity choices

It appeared from the findings that most intervention teachers were enthusiastic about using flexible grouping. Several teachers commented that they felt the implemented changes had made a positive difference to students' learning outcomes. Teachers believed flexible grouping enabled them to give greater choices to all students and students were able to encourage one another in their learning. This finding supports previous work of Rubie-Davies (2007; 2008b) who showed how high expectation teachers worked in flexible ability groups, enabling choice of activities, exposure to a variety of challenging experiences and the setting of student learning goals. Strickland (2007) explained that students, when given the opportunity to work in more flexible roles and contexts, discovered that they had strengths they were not aware of, or alternatively, areas of weakness they needed to work on.

Enhancing classroom climate

The classroom should be a secure environment. The intervention teachers appeared positive about the changes made as a result of the new teaching strategies and practices. Wilson (2004) commented that an important component of classroom climate was when students felt connected to what was happening and could be defined as “the degree to which a student experience[d] a sense of caring and closeness to teachers” (p. 294).

Some teachers commented that they had used the suggested classroom climate strategies but noted few improvements thus far. It would be interesting to note if these teachers make further changes in the final two years of the project. Several teachers commented on the awareness of their students as to where each student was placed socially although research does show how acutely students understand the implicit social structure of the classroom (Weinstein, 2002). Findings indicated that teachers had been working on enhancing the classroom climate, believing that what they were doing was making a positive difference to student learning outcomes.

Goal setting to enhance student motivation and autonomy

The intervention teachers mostly reported that the implementation of goal setting and feedback to enhance student motivation and autonomy was having a positive effect and making a difference to student learning outcomes. Teachers seemed to believe that having the students set goals helped to focus and give them greater ownership of their learning. Locke and Latham (1990) indicated how critical goal setting was for improving learning, and suggested enhanced performance was a result of goals which were specific, challenging and linked to feedback.

Further, teachers stated that teaching students the importance of measurable and attainable goals led to student self-reflection and conferencing with students one-on-one. Then students were able to determine where their learning gaps were and could self-manage their learning. In some cases students also had access to their own assessment data, for example, e-asTTle results, and were able to set learning goals from the individual reports the program produced. Timperley and Phillips (2003) explained that goals are central to self-regulation of learning and that student feedback regulates engagement, decisions, and actions in relation to learning.

Limitations

There are some limitations to the current study. The participants were known to the researchers because of their work within the project. It might be possible to conclude that some comments in the written evaluations were more positive than perhaps if the participants had been anonymous. Further, it may be that although many teachers chose to be part of the study (consequently becoming members of the intervention or control groups), it could be that those who volunteered were more motivated to change and improve than those who did not. A further limitation was that much of the data came from self-reporting (see introduction). It would be interesting to note whether the intervention teachers sustain the high expectation strategies in the future. A factor to be considered in future papers could be whether all teachers become more positive over time in their expectations for all students once they have implemented the strategies of high expectation teachers.

Conclusions and implications

As the teachers became more able to understand and use the intervention strategies, their willingness to change and adapt their teaching strategies increased. Many reported changes in their beliefs as a result of evidence from changed practices. The study showed that when teachers used flexible grouping with greater activity choices in their programs, this

enhanced their classroom climate and supported students' self-regulation through goal setting and feedback. For the intervention teachers this was important for their involvement in the research. Teacher beliefs play a critical role for teachers because they filter new knowledge which influences how teachers learn to teach, plan to teach, make decisions, and interact with students (Borko & Putman, 1996). It seems important that professional development is closely linked to monitoring changes in practice if beliefs are to change. Guskey (2002) concluded that, for most teachers, becoming a better teacher simply meant enhancing the learning outcomes for the students they teach.

This paper provides guidance in terms of the future development of both pre-service and in-service teachers since the results suggest that teacher expectations can change when teachers are given specific practices and strategies through professional development that align with those of high expectation teachers. Further, the intervention was designed around effective principles of professional development (Timperley et al., 2009) and the approach taken appears to have been successful in changing teachers' approaches.

Some changes to the intervention may enhance teacher learning further. This particular intervention was complex, involving changes to three key areas of teacher practice. Were time available, it may have been fortuitous to have introduced one intervention component and monitored the authenticity of its implementation before moving to the next. Similarly, it may have been better to have ensured that one set of changed practices was in place before introducing more. The researchers could have worked more closely with teachers to evaluate the fidelity of the implementation of changed strategies. Further, classroom observations and feedback to teachers may have assisted in ensuring the integrity of the intervention. Finally, teachers did come together with researchers to discuss their progress and share ideas, and this seemed important to their professional development.

This study aimed to change teacher behaviors in order to change beliefs and expectations about what students can achieve, rather than targeting beliefs in the hopes that behaviors will change, which is more common in research. Providing pre-service and in-service teachers with teacher development that involves presenting them with research evidence as well as the opportunity to plan changed practices as in the current study, provides an effective framework to produce changed teacher practice. The paper further contributes to new understandings about relationships between teacher beliefs, expectations and practice. It provides direction for offering an effective structure for professional development and enhancing expectations for all students.

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