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Great expectations: enhancing learning and strengthening teaching in primary schools with diverse student populations through action research

In 2004 and 2005 this Teaching and Learning Research Initiative (TLRI) project investigated school-based action research for school improvement. Researchers from the University of Waikato (and later, The University of Auckland) worked with teacher-researchers from six primary schools to explore ways of changing the classroom practices of teachers.

It is now widely recognised that more detailed school and classroom research is needed to uncover the complexities of teaching and learning (Ministry of Education, 2002). One of the greatest challenges in this kind of research is to describe what happens when teachers, students, and communities work together, in order to understand the relationship between teaching action, expectation, and student achievement (Nuthall, 1999). Within New Zealand and elsewhere, investigations have looked into the impacts of assessment (for both formative and accountability purposes), the use of achievement evidence to inform teaching moves (Hill, 2003; Timperley & Parr, 2004), learning styles, leadership impacts, and teacher coaching (Robertson, 2005). Another factor known to be of considerable importance in teaching and learning is that of teacher expectations (Galton, Hargreaves, Comber, Wall, & Tell, 1999; Timperley & Phillips, 2003). While externally provided professional development has been shown to have an effect on teacher expectations, feelings of self-efficacy, and student achievement (for example, Timperley & Phillips, 2003), the rationale for this study was to investigate how schools themselves could draw on existing research and, through their own efforts, initiate and sustain high expectations and increased student achievement.
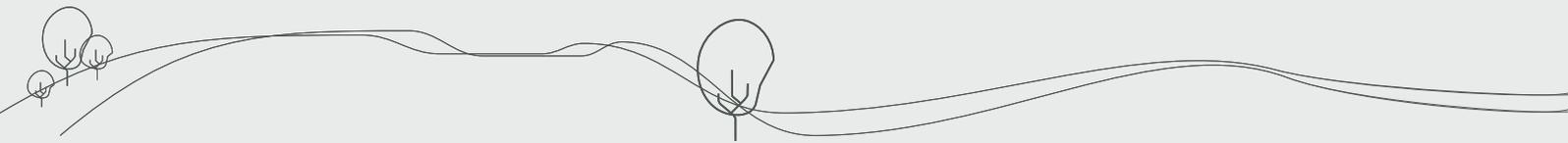
Aims of the project

The main aim of the project was to add to existing knowledge of teaching and learning in primary classrooms and use this new knowledge to inform and help teachers and students. Together, the teacher-researchers identified factors such as expectations that were linked to improving student achievement and teacher practices within their respective schools. Teaching strategies that led to improved achievement—especially in literacy and numeracy—were identified, using a range of classroom research methods.

Building the capacity of teachers to reduce inequalities and maintain high student achievement in schools with diverse student populations was also an important aim of this project. An associated aim was to increase the research capability of the teacher-researchers within each of the participating schools, in order to enhance their professional learning and research qualifications.

Objectives

In order to achieve these aims, the research team:

- identified the current achievement of students at each school, especially with respect to literacy and numeracy;
- undertook exploratory investigations of several innovative approaches to improve their teaching;
- analysed the data collected on the basis of categories and criteria developed by the research team;
- shared the findings with the other teachers in each school, between participating schools, and with other schools and interested parties as the project proceeded;
- developed further observational and analytic techniques that contributed to learning outcomes across these schools with diverse student populations; and
- communicated the findings to broader teacher, policy, and research audiences.

Research questions

The six main research questions that guided the study were:

- How well are students achieving currently in each participating school?
- What expectations are held for students within each school?
- What teaching and school leadership practices strengthen learning in each context?
- How should teaching change to improve learning and achievement consistently throughout classrooms in each school?
- What capabilities do teachers and teacher-researchers need to sustain constant improvement within their school?

- How can the findings of teacher research be best communicated to a wider audience of professionals, academics, and officials?

Research design

Over the two years of the project (2004–2005), each of the six schools investigated the research questions through action research designed to raise both achievement and expectations. Case-study methodology (Bassey, 1999; Hill, 2000) within an action-research framework (Robertson, 2000) provided the research design. We used our overarching conceptual framework (Robertson, Hill, & Earl, 2004) to refine, investigate, and report on the research questions in terms of expectations, achievement, teaching, learning, assessment, professional learning communities, and leadership approaches.

Within this framework, each school designed and implemented its own action research project to investigate aspects relating to the research questions. Four symposia were held to plan, develop, discuss, and support the research. The fifth symposium, in November 2005, was a more public event open to teacher-researchers nationally, who were invited to share their experiences and findings. It was attended by over 100 teacher-researchers and included an international keynote speaker (Dr. Lorna Earl, from the University of Toronto, Canada), 25 presentations, and workshops covering such aspects of research as ethical responsibilities, rigour and credibility, how to gather data effectively from children, and using theory to interpret qualitative data. University researchers and teacher-researchers from each of the six schools in the Great Expectations project also led workshops and made presentations at this symposium.

The project began in 2004 by gathering baseline information from the schools about student learning and achievement, their expectations for their students, and the changes they were planning to implement and investigate. From late 2004 through to the end of 2005 each school used cycles of action research to plan interventions, implement them, observe and research their effects, and reflect on the results. Most schools moved through at least two full cycles of research over the two years.

Findings

The results indicated that the schools were able to:

- sustain continuous improvement through their own action research efforts;
- enhance learning and raise achievement through changed school and classroom practices;
- increase expectations about achievement for students;

- facilitate and sustain teacher research as an established school practice;
- work successfully in partnership with university colleagues in a range of ways; and
- present their research to peers and at research conferences.

In all six schools the teachers were able to identify not only what they intended students to learn and teachers to teach, but the assumptions that underpinned the reasons for their educative actions. These teachers also sought evidence to ensure that the changes that they were making worked for other teachers in their schools and were successful in improving students' learning outcomes.

In addition, the school leaders were concerned to improve the practice of teachers within their schools. All had begun by extending their professional reading and learning. All of them gathered baseline information about student achievement in at least one area within their schools, and most gathered other information about teaching, such as the staff reactions to student learning meetings and information about the feedback they were providing on students' work samples.

The findings also provided evidence that all six schools hold clear, appropriate, and challenging expectations for their students. To varying extents and using a range of appropriate tools, all now measure academic achievement against national norms and all have developed mechanisms for reporting their performance to various audiences.

There were substantial benefits for the schools in having their teachers become researchers of their own practice—increased commitment to the research, changes in school-wide culture and practice, raised expectations for learning and achievement, and new skills and knowledge about the professional development and learning of teachers. Benefits of the partnership aspect of this research included:

- trying different ways of teaching;
- learning to work as researchers as well as teachers;
- sharing the process and findings with like-minded colleagues;
- enjoying collegiality and making a difference;
- in-depth learning about using assessment tools for evidence-based teaching; and
- using action research and coaching as professional development.

School leadership was essential to the success of the innovations in each school. When the principal was involved in motivating, leading, supporting, and resourcing changes to improve the learning outcomes, change happened fairly rapidly and tended to produce a consistent improvement in learning across the school. When the principal was not involved, or simply gave tacit approval, less change and improvement resulted.

This project demonstrated how teachers and universities can work together to promote evidence-based practice in New Zealand schools. Rather than provide a narrow interpretation of evidence-based practice that refers to the use of assessment data by teachers, we have shown how teacher-researchers can become familiar with large amounts of research literature as part of their work as teachers and use it to plan interventions to improve their practices, change their school cultures, and inform their communities.

Recommendations

Our findings indicated that teacher-researchers were most comfortable with the action aspects of changing teaching and monitoring progress. Further assistance is needed to improve teachers' knowledge of assessment and assessment techniques, and their skills in writing about and presenting their research. We recommend that future research projects involving teachers provide assistance for them in these areas, resource and support teacher research sufficiently, and investigate the sustainability and scaling up of school-based teacher research.

Although papers were presented and published throughout the course of this project, the very small amounts of university researcher time covered by the funding has not permitted in-depth analysis, discussion, and dissemination of the findings. We recommend that TLRI funding for future projects allows for the organisation of research seminars and the writing of books and articles for refereed journals.

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The full reports of all TLRI projects are published on the TLRI website (www.tlri.org.nz).

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