



Professional Learning and Development Accreditation

The following summary of practice provides a personal profile and a summary of your expertise.

Personal Profile

First name and Surname	Trevor Bills
Your iwi (optional)	
Personal statement (optional)	

Professional Learning and Development Overview

- Providing professional development on implementing BES Exemplar1; Developing Communities of Mathematical Inquiry, (Ministry of Education, 2003) into schools
- Providing mentoring (coaching or facilitating) to individual teachers in classrooms to support their growth of pedagogical practices including culturally responsive teaching, inquiry mathematics teaching and teaching as inquiry.
- Provide support in writing culturally relevant mathematical tasks that focus on mathematical big ideas
- Lead teachers within schools in a well-researched process termed Lesson Study. Lesson Study is a form of professional development which puts the agency for the process in the hands of the teachers developing teaching as inquiry..
- Provided professional leadership and mentoring (coaching) to teachers to scaffold them to become mentors within their own schools and across other school communities.
- Lead parent workshops
- Lead professional development workshops with teachers and school leaders.

Professional Information

- Bachelor of Arts (1995) Auckland University.
- Graduate diploma of teaching (primary) (2003) Auckland College of Education
- Currently undertaking study towards a masters of education – Massey University
- Completed masters level courses which include mathematics education papers.

Research Areas:

- Culturally responsive teaching in mathematics
- Equity and Social Justice - equitable outcomes for diverse learners. Education for Social Justice
- Critical Education and Mathematics
- Ethnomathematics (relationship between mathematics and culture)
- Financial Literacy and Indigenous Communities

- Three years' experience delivering BES Exemplar1; Developing Communities of Mathematical Inquiry, (Ministry of Education, 2003) professional development and working as a mentor alongside teachers in 32 schools in South Auckland, Porirua, Tauranga and Christchurch.
- Developed experience in developing mathematical inquiry communities (DMIC) in 2013. During this time I provided professional development and learning opportunities to other teachers. and facilitators in my role as a classroom teacher.

Programme writing and development:

- Development of Professional learning programmes for Schools in Mathematics
- Developing Mathematics Curriculum Overviews with Schools: developing school overviews which provide a balanced mathematics programme. This supported schools to understand how to construct a balanced mathematics programme, a well-planned and taught lesson and assessment. It also allowed for the growth over time of teacher knowledge as they gained experience in planning and enacting carefully thought through lessons.
- Development of appraisal systems: Supporting governance and management through providing professional leadership to school management in relationship to appraisal of teachers' mathematics teaching.
- Development of school wide programmes of assessment to understand student achievement in mathematics against the National standards.
- Development of professional development to upskill support staff (teacher aides, and other SENCO workers) who work with diverse and/or priority learners within mathematics classrooms

Conference presentations:

- Merga (2014) Sydney: Roberta Hunter, Jodie Hunter, Zain Thompson & Trevor Bills: Co-constructing Mathematical Inquiry Communities through Professional Development with Teachers
- Presentation to the Pasifika@Massey 7th Annual Research Conference. *Enhancing Partnerships on Pacific Research and Development* (2014) Palmerston North: Developing Mathematical Inquiry in a Learning Community: The importance of culturally responsive teaching in creating equity for Pāsifika Learners in Mathematics
- Primary Maths Association (PMA) (2014) Developing equitable opportunities for Pāsifika students to engage in mathematical practices.
- Merga (2015) Sunshine Coast: Bills, T., & Hunter, R. (2015). The role of cultural capital in creating equity for Pāsifika learners in mathematics
- Merga (2016) Bills, T.; Hunter, R.' Hunter, J. (2016). Pāsifika students perceptions of mixed ability grouping in Mathematics

Publications:

- Bills, T., & Hunter, R. (2015). The role of cultural capital in creating equity for Pāsifika learners in mathematics. In M. Marshman, V. Geiger, & A. Bennison (Eds.). *Mathematics education in the margins (Proceedings of the 38th annual conference of Mathematics Education Research Group of Australasia)*, (pp. 109–116). Sunshine Coast: MERGA.
- Hunter, R., Hunter, J., Bills, T., & Thompson, Z. (2016). Learning by leading: Dynamic mentoring to support culturally responsive mathematical inquiry communities. In J. Clark (Ed.), *Opening up mathematics research. (Proceedings of the 39th annual conference of the Mathematics Education Research Group of Australasia)*, (pp. 109–116). Adelaide: MERGA.

Special interest areas that you have been particularly active in:

- Culturally responsive teaching and ethnomathematics
- Critical Pedagogy
- Teaching as inquiry
- Developing Mathematical Inquiry communities

Memberships of networks of expertise, boards, committees etc.

- Mathematics Education Research Group Australasia

Summary of examples of practice

Provided professional leadership in developing mathematical learning communities across schools and within schools. This includes the following projects: *Developing Mathematical Inquiry Communities (DMIC)* and *Pasifika Success*. These projects currently involve 32 schools which include school leaders, teachers, parents, and students across different urban areas of New Zealand – Tauranga, Rotorua; West and South Auckland, Porirua, and Christchurch.

Led professional learning and development days in which the focus has been placed on developing the following: teacher mathematics knowledge; pedagogical content knowledge; teacher knowledge of diverse learners (including priority learners) and culturally responsive teaching. This has included a focus on Pasifika and Maori learners. The school management and teaching and support staff have examined and explored how the cultural values can inform school and classroom practices in culturally appropriate ways. These professional learning opportunities have included examination of inclusion of other priority learners including special needs, and English as an additional language children. Part of this work has included supporting teachers to establish inclusive classroom social norms and mixed ability grouping.

Provided professional leadership in the development of mathematical tasks. This includes ensuring that they were mathematically correct and challenging as well as culturally appropriate to support culturally responsive practices in mathematics classrooms. This includes using digital materials as appropriate.

Provided professional leadership in the process of teaching as inquiry and reflective practices including using digitally recorded records to aid reflective teacher inquiry practices.

Supported governance and management through providing professional leadership to school management in relationship to appraisal of teachers' mathematics teaching; student achievement in mathematics; assessment processes; school wide programmes in mathematics; school support for teaching as inquiry; and school support for developing culturally responsive practices.

Provided mentoring (coaching/facilitating) to individual teachers in classrooms to support their growth of pedagogical practices including culturally responsive teaching, inquiry mathematics teaching and teaching as inquiry.

Led teachers within schools in a well-researched process termed *Lesson Study*. Lesson Study is a form of professional development which puts the agency for the process in the hands of the teachers. This supports teachers to reflectively appraise themselves and others in the act of teaching mathematics. It supports sustainability of best practice using digitally recorded records of work.

Provided professional leadership and mentoring (coaching) to teachers to scaffold them to become mentors within their own schools and across other school communities.

Facilitated professional workshops in schools and within communities to upskill support staff (teacher aides, speech language therapists and other SENCO workers) who work with diverse and/or priority learners within mathematics classrooms.

Led parent workshops on working with their children in mathematics at home and sense-making of the mathematics at school. Provided professional leadership to teachers about engaging with parents in ways that developed a reciprocal learning exchange of mathematics contexts in the home and school context.

Referees

Referee One

Referee Name	Stan WHATA
Contact Number	09 275 9194
Contact email address	stan.whata@koru.school.nz

Referee Two

Referee Name	Sue DAWSON
Contact Number	09 267 8535
Contact email address	principal@clendonpark.school.nz