Professional Learning and Development Accreditation

Personal Profile

First name and Surname	Sandra Cathcart

Professional Learning and Development Overview

- Deep curriculum and assessment knowledge in mathematics and statistics from **level 1 to level 8** of the curriculum including NCEA **.**
- Models of inquiry linked to the New Zealand curriculum
- Mathematics senior secondary curriculum and course planning and review.
- Subject specific literacy
- Whole school building of evaluative capability in teachers and leaders
- Analysis and interpretation of qualitative and quantitative data across the school and within departments
- Leading change using strategic planning and systems management across the whole school
- Classroom observations
- NCEA assessment practices
- Student engagement in Mathematics
- Helping teachers understand and use the Learning Progression Framework
- Assessment for learning
- Culturally responsive pedagogies
- Digital learning technologies -ability to strategically use a range of technology tools for varied purposes in a Mathematics context.
- Collaborative expertise and building relational trust.

Professional Information

1992: Master of Educational Administration (Hons), Massey University

1987: Diploma in Education, Massey University

1981: Diploma in Social Science, Massey University

1978: Bachelor of Arts, Massey University

Experience in the delivery of professional learning and development

Sandra has worked as a facilitator since 2007 within various contracts held by the University of Auckland. This has involved:

- For the last 5 years as the National Mathematics and Statistics coordinator within the Secondary Student Achievement contract at Team Solutions. This role involved providing a strategic overview of the mathematics and statistics learning area as well as support for regional facilitators in their professional development work with middle leaders in secondary schools.
- As a coordinating facilitator working with groups of facilitators from Team Solutions to provide in-depth focused support in Auckland and Northland schools, with a particular focus on raising student achievement. This is both across school and within curriculum areas.
- Sandra has been responsible for implementing and supporting a number of Ministry of Education initiatives including the Secondary Numeracy Project as regional co-ordinator.
- Facilitating regional and national workshops in Mathematics and Statistics
- Facilitating cluster meetings to support regional Mathematics
- Working within mathematics departments to provide specific and focussed PLD
- Providing subject specific PLD to private providers

Programme writing and development
Writing of mathematics resources for both nzmaths and NZAMT (New Zealand Association of Mathematics Teachers). Both available on line for whole community.

Conference presentations:
2005-2015: Delivered workshops at NZAMT National Conferences.
2010 - present: Delivered workshops at regional Mathematics conferences e.g. Bay of Plenty, Auckland and Northland. These included "beginning teacher" and subject-specific literacy workshops.

Publications: co-authoring a level three textbook for Cambridge University Press *"Focus on Level 3"*
Contract writing for the *Figure it Out* books.

Summary of examples of practice

Sandra's practice as a facilitator is extensive.

Coordinating change in practice in schools that vary in size and decile rating and those with a high Maori roll, includes facilitating systemic and pedagogical change. Senior leaders, middle leaders and teachers can all, or separately, be the focus of the PLD.

Systemic change includes analyzing and defining school wide problems and developing appropriate solutions. This could include such things as the developing and embedding of "Teaching as Inquiry" across the whole school using appropriate models. Identifying and analyzing student achievement data and developing whole school and department tracking systems using the data to help raise student achievement especially for priority students is a major focus for this work.

Pedagogical change is focused on mathematics and statistics. Sandra's in-depth knowledge of mathematics pedagogy and associated learning theory informs and guides her practice. Change is developed around relational trust and collaborative decision making with mathematics departments. The focus for this work is the design and development of engaging, culturally responsive mathematics teaching and learning programmes based on the New Zealand Curriculum.

Another aspect of practice is facilitating large groups of teachers in a workshop environment. The focus of this is mathematics and can be around assessment, pedagogy, analysis of student work, clarification of NCEA standards and generally supporting teachers.

Across all facilitation is an emphasis on using technology strategically to find and evaluate information, connect and collaborate with others, produce and share original content, and use the Internet and technology tools to achieve success in reports, investigations and experiments.

Referees

Referee One

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Referee Two

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