

Professional Learning Using the Mathematics Standards

A GUIDE TO THE REPORT

This report, by Alan Bishop, Barbara Clarke and Will Morony investigates the extent to which the AAMT *Standards for Excellence in Teaching Mathematics in Australian Schools* are able to be used to support the professional learning of teachers of mathematics. The AAMT (Australian Association of Mathematics Teachers Inc.) was commissioned to investigate the usefulness of their professional standards in the context of in-school, collaborative professional learning programs.

The report's Executive Summary summarises:

- the professional development work undertaken in schools;
- the findings of the study; and
- the authors' conclusions regarding the usefulness of the standards.

Background (Chapter One)

This project is the third major project undertaken by the AAMT in its program to develop and implement a set of standards for excellence in mathematics teaching. A previous study demonstrated that the standards could be used as a basis for identifying highly accomplished teachers of mathematics.

The current project was designed as a systematic exploration of the use of the standards to support professional learning.

Project Overview (Chapter Two)

Two groups of government and non-government primary and secondary schools were involved in the project. One cluster centred on a regional city and involved some rural schools, while the other was in a capital city of a different state.

The schools were responsible for designing their own professional learning programs to meet local needs. The projects tended to focus on assessment and measuring students' maths achievement, the use of ICT in maths teaching and specific areas of the maths curriculum.

The project was evaluated through the collection of qualitative and quantitative data at the beginning and end of the project.

Use and Effectiveness of the Standards (Chapter Three)

The project demonstrated that the AAMT Standards can be used effectively to support a range of types of school-initiated professional learning programs in a range of schools. In particular, the standards were used to:

- Articulate professional needs;
- Help set directions and targets; and
- Establish a 'distance travelled' by teachers in their learning.

Conclusions (Chapter Four)

The major benefits from using the standards are synthesised by the authors from the evidence provided by the teachers, teacher-leaders and the professional learning plans and programs. There were five areas in which the standards were useful:

- Determining the *structure* and organisation of activities, based on self-assessment against the standards;
- The provision of a common *language* within which teachers could discuss their work and learning priorities;
- Determining the *priorities* of the professional learning programs;
- As *subject-specific* standards, they were particularly useful for identifying particular needs and deficiencies in mathematics teaching; and
- Providing challenging *Assessment* standards for the groups involved.

The authors conclude that the AAMT Standards are useful for developmental purposes with groups of teachers in schools, providing not just a basis for encouraging school-level professional learning, but also as a reference tool for deciding what is most desirable to pursue, and for measuring progress with professional development.