



## AAMT Position on National Curriculum in Mathematics

### Preamble

High quality teaching and learning of mathematics in our schools is a matter of urgent national need. A high quality mathematics curriculum document as the 'intended curriculum' can contribute to this, but there are many pressing needs to ensure that the 'enacted curriculum' — what happens in schools and classrooms — is of consistently high quality across the country. In order to achieve internationally recognised standards of excellence in teaching practice and student outcomes, Australia must make a concerted and sustained effort and commitment of resources to:

- attract and retain well-prepared teachers;
- provide for the ongoing professional learning for all teachers of mathematics in the face of profound changes in the discipline and substantial development in our knowledge of how mathematics is learnt;
- actively and significantly reduce the differential performance of students that is based on factors other than their interest and potential in mathematics (eg city/country, Indigenous/non-Indigenous, high/low socio-economic status);
- develop and provide access to high quality teaching and learning resources and technologies; and
- ensure there is adequate time in the school week for students to learn the mathematics necessary for them as involved and productive people in the 21<sup>st</sup> century.

The work to develop a national curriculum in mathematics needs to be done in the context of a strong commitment to address these issues at the same time.

### The AAMT Position

*The AAMT supports a national curriculum for mathematics in Australian schools, provided the work (ie process and product) incorporates the following principles in relation to the:*

- *mathematics curriculum itself*
- *purposes and audience of the national curriculum*
- *process for developing a national curriculum*

### Principles regarding the nature of the national mathematics curriculum

Schooling should prepare students for their lives as global citizens. Their experiences with mathematics should provide the knowledge, disposition and confidence to use mathematics in their lives. To achieve this, a national mathematics curriculum should:

- acknowledge that all students can and should learn mathematics;
- focus on deep learning of the *Big ideas* and key *Mathematical Concepts and Actions*;
- encourage teachers to set high, achievable goals for their students;
- provide pathways to enable all students to maximise their mathematical learning;
- be flexible to assist teachers to elaborate on the curriculum to suit the needs of their students;
- be realistic in terms of expectations on teachers;
- provide a sense of scope and sequence; and
- be concise, explicit and written in clear and easily understood language.

## Principles regarding the purpose and audience for national curriculum

A national mathematics curriculum should help teachers to teach well, and help students to learn well. To achieve this the curriculum should:

- be written for teachers (pre-school to post-compulsory);
- be separately elaborated in a document that communicates its values, purposes and approaches to parents and the wider community; and
- ensure that high quality resources and effective teaching practices developed anywhere in Australia can be used and adapted across the nation; and
- be the basis for subsequent national assessment that provides teachers with diagnostic information.

## Principles regarding the processes for developing and renewing a national curriculum

To be successful a national mathematics curriculum should be *universally supported*. In order to achieve this:

- the process for development should be open and transparent;
- people with expertise and interest should be actively and purposefully engaged in the development of the mathematics curriculum, including:
  - mathematics teachers
  - mathematicians
  - mathematics education researchers and educators
  - mathematics curriculum writers
  - industry and professions
  - parents
  - community
- the process for development, and the curriculum statement itself, should allow for transition from the current setting where there are local differences in curriculum, teachers' content knowledge and teaching practices to national consistency;
- the process for development should specify an ongoing process for quality assurance, review and renewal over time that incorporates meaningful consultation with people from the groups (above) at the state, territory and national level

To be successful a national curriculum should be *properly funded*. This means that:

- the total current funding across the nation on curriculum development and implementation should not be reduced; and
- funds released through adopting a singular, national curriculum should be used for on-going quality support of teachers and schools to implement the national curriculum and, in particular, to elaborate on the curriculum for the needs of their students.

To be successful the national curriculum should be *internationally respected and well regarded*. This means that the writers of the national mathematics curriculum should:

- be experts in mathematics education and experienced writers of mathematics curriculum for teachers;
- be able to draw on high quality research on mathematics teaching and learning; and
- have a thorough<sup>1</sup> understanding of mathematics, its structure, history and emerging directions as well as its place in, and relevance to, our culture.

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<sup>1</sup> Knowledge that is profound in the sense meant by Liping Ma, Deborah Ball and others when discussing teachers' knowledge of mathematics