

A fix to count on

The decline in maths achievement in primary schools needs an immediate solution, not a five-year plan, writes KEITH WILLIAMSON.

Mathematics teaching and learning in primary schools are in crisis. Providers of early-childhood education are doing well. And to be fair, most primary schools are doing their best while working under a leaky umbrella of inefficiency and a lack of support. But 20 years ago, New Zealand primary schools ranked near the peak worldwide. Not now.

Unfortunately, our Ministry of Education wrongly adopted flawed programmes from other countries. This, combined with input from some academics who may have had little or no experience teaching in a primary classroom and ministry staff who had taught only secondary levels, meant the “revised” curriculum programmes were fraught with problems.

The ministry’s Numeracy Development Projects have been critiqued as a cause of NZ primary schools’ alarming decline internationally. The ministry has indicated that a five-year plan is being prepared. But movement is needed now, not in five years.

The basic principles of mathematics do not change. The excellent Modern School Mathematics series, once used in Kiwi classrooms, merely requires some simple modification. It isn’t a huge job and could be done in six months.

Our primary programmes 17 years ago were successful. We had attractive texts, supportive teacher lesson-guides and a continuum for learning from Years 1 to 8. Best of all, there were mathematics advisers available to schools.

The leader of last year’s Royal Society Te Apārangi investigation into maths education, Distinguished Professor Gaven Martin, confirmed the subject was in a “goddamn mess”. The academics and others on the investigation panel did an admirable job, but more input from quality primary school maths teachers was required.

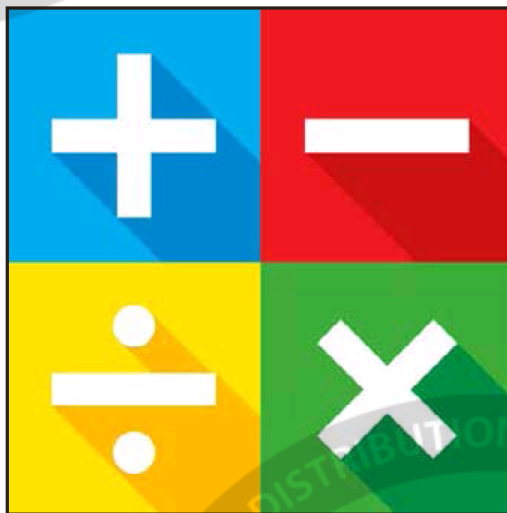
Many secondary school teachers are appalled by the standards coming through. Sadly, there is little continuum or “spiral curriculum” – a progressive deepening of knowledge – happening. Schools tend to select photocopied resources randomly and there are few matching programmes. There are ministry-supplied booklets, but these are easily lost and lack backbone.

School principals must insist that mathematics is taught every

school day for at least 45 minutes. The debate over streaming has also not helped. Teachers need to use “flexible groupings”, which ensure all pupils are being challenged.

The devolvement of teachers’ colleges was another ill-considered decision. Formerly, these were staffed by ex-classroom teachers, several on secondment. Trainees were taught behaviour management, planning, teaching strategies and classroom organisation, along with other practical skills and methodologies.

I recall an ex-junior class teacher having 40 student teachers for a maths lesson, all manoeuvring Cuisenaire rods and other practical items crucial for young learners. They soon understood.



Teachers’ colleges should be reintroduced, with a three-year course independent of university faculties.

With university faculties of education having taken over teacher training, too many of the lecturers have not spent significant time in front of primary classes. In-class practice under the guidance of quality tutor teachers is vastly important, as is using ex-primary teachers as lecturers.

Computers have their place but rely too much on pupil honesty. Feedback from the teacher is difficult and the range of abilities extensive. In maths, children learn from their mistakes and direct feedback is essential.

Too many ministers of education have had a yearning to leave their mark on the portfolio and made rushed, radical and ill-informed decisions. All of this has led to the disaster we have right now. Millions of dollars have been wasted, and more funding has been provided, yet we still have seriously declining outcomes.

It is fair to say that teacher trainees are no better and no worse than they were 40 or more years ago. Teachers’ colleges should be reintroduced, with a three-year course independent of university faculties. Degree options could run as an adjunct. Most of the very best primary-level teachers I worked alongside had no university qualification. They were naturally gifted as teachers.

I taught in primary schools for 46 years. Every primary teacher has a favourite subject. Mine was mathematics. ■

Keith Williamson is a retired teacher and principal, and also worked as a consultant in nearly 50 schools in the lower North Island and South Island.