This report presents the findings of ERO’s recent evaluation of what schools were doing to raise the achievement of Years 4 to 8 students in the mathematics learning area. The report has recommendations for school leaders, teachers, trustees and the Ministry of Education.

The evaluation focussed on three questions:
- the design and review of each school’s mathematics curriculum
- the use of achievement information by trustees, leaders, teachers and students
- the acceleration of progress of priority learners

While many schools were collecting achievement information, not as many were using that information to inform their practice and resourcing decisions. Effective self-review processes would enable these schools to better respond to learners’ interests, strengths and needs.

Design and review of the maths curriculum
A few schools were highly effective at using their achievement information. They used it to change their curriculum and to decide which strands or concepts they should spend more time teaching, and which teaching practices were the most effective for their learners.

About 50 percent of the schools collected and analysed mathematics achievement data but did not use the information to change their curriculum. With a more confident and integrated approach, these partially effective schools could make a considerable difference and move to having highly effective curriculum review and design processes.

Use of achievement information
Achievement information was well used by trustees, leaders and teachers in a quarter of the schools. Not so for students - achievement information was well used by students in only seven percent of schools.

The report has examples of what ‘well used’ means for leaders, teachers, trustees and students.

Accelerating progress for priority learners
Most schools were very good at identifying students in Years 4 to 8 who were achieving below or well below the mathematics standards. However, the programmes and initiatives in place for these learners did not necessarily accelerate their progress.

Some leaders and teachers did not understand what ‘accelerated progress’ means, nor did they know how to accelerate progress in mathematics.

Some schools took a systematic and deliberate approach to accelerating progress. Leaders questioned their previous use of resources such as teacher aides and explored alternative solutions and strategies.
Self-review questions and indicators for schools*

How effectively is your school’s maths curriculum designed, enacted and reviewed to respond to all students?

- Our school has a clear rationale for the choices made in designing the mathematics curriculum and in selecting learning areas of emphasis.
- Our learning programmes support students with diverse needs.
- Teachers confidently use their knowledge of: learning area content; pedagogy; the deeper features of The New Zealand Curriculum; their students and their needs; and the school’s vision, values and learning priorities when selecting content and designing their teaching approach.
- Teachers use evidence from research; their colleagues; and their own past practice to reflect on and improve their teaching.
- Teachers recognise students’ identities, languages, abilities and talents and ensure their learning needs are addressed.
- Teachers undertake regular professional learning relating to pedagogy, their teaching areas, and pedagogical content knowledge.
- Our school uses self-review processes to investigate the effectiveness of curriculum decision-making in improving student engagement and achievement.
- The opinions and views of students, parents and whānau are incorporated as part of ongoing review and development of the curriculum and learning programmes.
- The board is engaged in the design of the school’s curriculum.

Use of achievement information

To what extent is student achievement information used by your school leaders, the board, teachers and students?

- Student achievement information provides clear evidence of how well students are achieving in relation to the National Standards.
- The board receives comprehensive, clear and accurate reports about achievement and uses this information to plan for improved student outcomes.
- The analysis of student achievement data is used to inform the curriculum and teaching strategies, as well as identify individuals or groups of students who need support and areas of teaching professional development.
- Achievement information is shared with students so they are able to set goals and reflect on their progress in relation to the National Standards.
- Teachers demonstrate the belief that all learners can achieve regardless of their ethnicity, social background, gender, ability or needs.
- Teachers use their knowledge of their students to decide on the teaching content and approach that will motivate and challenge them.

*Please refer to the full report for more self-review questions