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UNSW Mathematicians warn on National Curriculum

In letters published in the *Sydney Morning Herald* in Mar 2010, UNSW pure mathematicians Peter Brown and Ian Doust warned of a lack of attention to some of the basics of mathematics in the proposed National Curriculum.

In the Letters column of Mar 13, Peter Brown wrote:

Some of the new maths syllabus does not add up

Mary Coupland of the Mathematical Association of NSW says that on the whole the draft national curriculum is "positive" ("Teachers give poor marks to national curriculum", March 12). Yes, there are some good things in the syllabus, such as fractions in primary and some geometry.

However, readers should be aware of some shortcomings. The seven times tables are not to be taught. Why? Who knows? There are many errors in the document - some typographical, some grammatical and some arising from a lack of understanding of basic mathematics. There are also many statements that are so cryptic they make no sense.

Most horrible is that the syllabus will force all teachers from kindergarten onwards to use calculators in the classroom. Until year 8 calculators are generally a hindrance.

How can the teacher convince children to learn their times tables or to add two fractions when the machine on their desk does it all for them? Destroying the foundations of arithmetic by the misuse and early introduction of calculators simply leads to frustration and failure for those who wish to progress beyond grocery bill arithmetic.

Students in years 9 and 10 advanced classes will find the new syllabus does not compare well with what they do now. If it is implemented, NSW students will pay the price for the decline in standards in some other states.

Peter Brown Lecturer in mathematics, University of NSW

In the Letters column of Mar 17, A/Prof Ian Doust, Head of Pure Mathematics at UNSW, wrote:

We should hold grave fears for our ability to produce scientists and engineers if the national curriculum writers share Ed Lewis's views (Letters, March 16) on what is important mathematically.

Agreed, doing arithmetic with fractions is hard for many students, but even harder is progressing through basic algebra to higher mathematics if you still believe that ½ + ? = 1/5. If we avoid hard topics because some students may struggle, the better students will be seriously disadvantaged.

As for calculators, most teachers seem to realise there are many better tools for helping children develop number sense. It is noticeable how often bright students from those states where graphing calculators are prevalent lack basic knowledge because "the calculator does all that".

Technology is great, but we won't develop the next generation of clever tools by hiding hard concepts and turning mathematics into a black box exercise.

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