

Socialist Mathematics

By Chris Essex

The last sentence of the book "The World of the Stars" by the Russian astronomer P.P. Parengo describes Joseph Stalin as the "greatest genius of all mankind". Grandiosity aside, such a claim about a dictator having no connection to astronomy whatever is so jarringly irrelevant in a book about stars that it seems comical to us, half a century and half a planet away. Of course comedy is relative: terrible events in Parengo's time made any comedy in his words difficult for many of his contemporaries to recognize, let alone appreciate. They would regard Parengo's statement as normal, if not inevitable, but certainly not funny. Likewise, others in another time and place might find our routine foibles, printed here and now, to be side-splitting nonsense.

As our candidate for this sort of cross-time, cross-cultural comedy, I have in mind a publication that surely would make Parengo laugh: Provincial Standards: Mathematics of the Government of Ontario for 1993. It contains, despite its title, neither standards nor mathematics to speak of, although it surely is provincial.

It is 60 or so pages of incoherent filler punctuated by irrelevant ideology. In that document, under "Key Components of Mathematics Learning", we are informed that "Reasoning is fundamental to the knowing and doing of mathematics" and "Mathematics is a language that must be made meaningful to students if they are to communicate mathematically..." The inanities throughout are so numerous that I am surprised that there is no chapter on breathing and posture in mathematical problem solving.

The document uses the word 'standards' in headings of long, vague, point-form protocols calling for students to variously 'select', 'estimate', 'recognize', 'classify', and so on. However, the objects of these forthright verbs, where the real mathematical requirements apparently are meant to lie, are mumbled collections of undefined, example-free jargon, often having little or nothing to do with mathematics. For example, "poses and solves a wide variety of problems and conducts a variety of investigations in geometric contexts".

There are tortured compromises made between ideological fads in education and common sense. For example, the trendy view that it is bad to rank performance with grades through testing co-exists awkwardly with platitudes about quality control. The attempt is made to have it both ways by abolishing pesky grades in favour of euphemisms for grades and preaching alternatives to "traditional paper and pencil tests". Who really thinks that having students prepare 'journals' about their mathe-

mathematical experiences or holding 'student self-assessments' can be any substitute for genuine testing?

There plainly is discomfort here with the notion of individual achievement. This discomfort appears in its most bizarre form in the explicit quotation of maximum limits on what can be expected of a student's mathematical performance by the end of grade six.

Although the anonymous authors of this document claim to have had the input of various agencies representing the community of mathematics teachers, it is clear that the guiding hand of the final document reflects little understanding of the nature and importance of mathematics in the modern world. I cannot believe that the many sensible and competent mathematics teachers that I have met over the years have had much say in this document.

Nowhere in the text is this more evident than in the requirement that children in grade three should "identify examples from their own cultures that demonstrate the contributions to mathematics, science and technology of people of both genders and from a variety of racial/ cultural backgrounds". Furthermore, students are asked to "bear in mind that many currently held views reflect a Eurocentric perspective".

The message on mathematics standards to Ontario's many long-suffering mathematics teachers is clear: you are on your own!

Japanese Mathematics - Grade Two

- horizontal and vertical addition and subtraction
- equations with 2 or 3 numbers, addition up to 999
- parentheses in three-number equations, eg. $45 + 23 =$, $(23 + 69) + 44 =$, $999 - 351 =$
- mixed units, eg. $7 \text{ cm } 6\text{mm} + 5 \text{ cm } 4\text{mm} =$
- place values up to 10,000, eg. $4000 + 5000 =$
- multiplication up to 9×9

Grade Four

- addition and subtraction - decimal numbers with 2
- decimal points eg. $.487 + .87 =$, $6.38 + 5.3 =$
- mixed fractions eg. $23 + 3 =$
- multiplication of numbers of 4 digits eg. $4050 \times 4600 =$
- parentheses in 4-number equations eg. $(87-37) \div (4+6) =$
- division of decimals with 1 decimal place eg. $21.6 \div 36$
- dividing 4-digit numbers eg. $81700 \div 340$

Grade Six (first term only)

- multiplication of fractions eg. $2: x a \times e =$
- multiplication of fractions by decimals eg. $.7 \times 2 \times c =$
- division of fractions eg. $2: \div 3f =$
- ratios eg. $3 : d = ? : 3$

	Hours Spent in Class per Week					
Grade	1	2	3	4	5	6
Japan	19	20	21	22	22	22
Ontario	24	24	24	24	24	24

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