

RESPONSE

June 5th, 2014

Bottom of the Maths Class?

South Africa is, yet again, reportedly bottom of the maths and science class. According to the World Economic Forum's Global Information Technology Report, South Africa is placed 140th out of 144 countries for the quality of our education system and 143rd out of 144 for the quality of our maths and science education. This is not news at all. The 2003 Trends in International Mathematics and Science (TIMSS) test indicated that 90% of students in Grade 9 failed to reach the 'low' level of achievement. There was a slight improvement in 2011, with 'only' 76% of students failing to achieve this level.

There is a strong argument, however, that the ranking system used by the WEF is problematic. It does not rely on any standardised testing system, but instead makes use of an 'expert opinion' approach. The ranking is based on surveys conducted with business executives – 45 of them in South Africa's case. The questions asked were: *'How would you assess the quality of maths and science education in your country's schools?'* and *'How well does the educational system in your country meet the needs of a competitive economy?'*ⁱ The report is thus based on the perceptions of the executives rather than actual data. The small sample adds to the questionable value of the ranking; there is no way of knowing if these 45 executives were properly representative of employers throughout the country and its economic sectors.

These considerations, among others, were noted by the Department of Basic Education when it rejected the ranking system of the report. Similarly, Stellenbosch University's Research on Socio-Economic Policy Unit echoed this argument in their response to the WEF's earlier reportsⁱⁱ.

What these arguments, and counter-arguments, suggest is that reports such as the WEFs should be dealt with a little more circumspectly. In this regard, it would have been helpful if the Democratic Alliance – which publicised the figures – and the various media which headlined the report, had probed them a little more deeply. Our education challenges are complex, and there is no doubt that improvements in the fields of maths and science are desperately needed. But unreliable or questionable research is unlikely to assist us to meet those challenges.

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ⁱ Ben Kelly (2013): *SA's maths and science: when are stats not stats?* Mail & Guardian Online.

<http://mg.co.za/article/2013-04-19-sas-maths-and-science-when-are-stats-not-stats>

ⁱⁱ <http://resep.sun.ac.za/index.php/wef-rankings-on-education-unreliable/>