

President's Column — May 2008

A mixed bag

I have a mixed bag of news to report, some of it good (the mathematical sciences are being noticed by the new Rudd government), and some of it very concerning indeed (I'm referring here to the devastating pressure faced by our colleagues at the University of Southern Queensland, as their institution attempts a very misguided rationalisation).

On 14th February last, Senator Carr, the Minister for Innovation, Industry, Science and Research, delivered a speech at the Australian Academy of Science on the subject of "Enhancing the quality of the experiences of post-docs and early career researchers." His opening words addressed issues that will bring some hope to all of us:

Over the last ten years or so, Australia has been losing some of our brightest researchers, from disciplines right across the board. With our universities strapped for the kind of funding needed to support the best research, too many scholars and scientists have been lured abroad.

And we have also seen bright youngsters turning away from the enabling disciplines (maths, physics and chemistry) and engineering — enticed by more lucrative careers in other fields, such as the finance sector.

In mathematics the problem has been particularly acute. Someone has called mathematics "the language of the sciences" but it is also, in important ways, the language of business, economics, social policy and the trades.

A nation that cannot turn out top-notch mathematicians and statisticians is a nation in deep trouble. Unless we turn around the trends that have bedevilled this discipline over the last decade or so — in schools, in universities and in research — we will not be able to meet our needs for people with a sound knowledge of mathematics that they can put to use across the economy and across all fields of knowledge.

Against the recognised need for more mathematics, expressed by Senator Carr, the University of Southern Queensland announced, on 17th March, cuts of more than 50% to its mathematics and statistics disciplines. Eight out of fourteen staff will lose their jobs, and the university's mathematics and statistics course offerings will be reduced to service courses only — no majors in mathematics or statistics will be countenanced in the future. Moreover, USQ's mathematics and statistics programs will be handicapped by a student to staff ratio of 75 to 1. So much for the education revolution!

Ironically, USQ had been developing, in collaboration with education specialists, a unique program for mathematics teacher training. This innovative program, which is now on the scrap heap before it even started, would have offered courses both on campus and at a distance, to support in-service and pre-service teacher training across the nation.

Many recent reviews, for example that by the Productivity Commission, have called for proper attention to be paid to the mathematics teacher shortage. Moreover, mathematicians and statisticians are in short supply throughout the economy. The demand for trained mathematical scientists rose by 52% in the eight-year period to 2004, and is forecast to grow by at least another 32% in the next eight years. (These figures come from the 2006 Audit of Science, Engineering and Technology Skills.) This is greater than, or equal to, the predicted growth in employment demand in fields of engineering. For example, it is almost three times the future growth in demand for mechanical and industrial engineers, and one third more than the predicted demand for civil engineers, during the same period. Yet each year our universities are graduating fewer mathematicians and statisticians.

Against this background, USQ's actions are worse than deplorable. Hopefully, by the time you read this we'll have made some progress in turning the problems around.