

A quantum leap backwards

For a shy student afraid of reading aloud to class, who now specialises in the minuscule and complex world of quantum physics, Michelle Simmons has delivered a big message in a loud voice. Professor Simmons's Australia Day address on Tuesday provided cut-through common sense about action needed to improve education. This esteemed physicist, who was trained in Britain before moving to Australia and taking up citizenship, deals daily in research tasks too physically small for most of us to comprehend and too intellectually vast for us to grasp. The work towards quantum computing that Professor Simmons pursues provides some of the most prospective technological opportunities for humankind. Yet her address gave us some overdue advice for educators.

Professor Simmons, who is based at the University of NSW, said she was "horrified" to learn how the high school physics curriculum had been "feminised" in NSW. "In other words," Professor Simmons said, "to make it more appealing to girls, our curricula designers in the bureaucracy substituted formulae with essays! What a disaster." As we reported yesterday this muddle-headedness has seen difficult mathematical examination questions requiring specific answers about real scientific outcomes replaced by questions needing only expositions about science-related observations. Professor Simmons said that in her experience, and that of her students, this had left high school graduates underprepared for university studies.

The good news is that the NSW Education Standards Authority says it is aware of these problems and they will be addressed by the implementation of new course content, starting next year. The Australian Mathematical Sciences Institute has supported Professor Simmons's comments and declared the downgrading of maths studies in our schools as a real problem. Sometimes, it seems, it takes a quantum physicist to call a spade a spade. But we are glad she did. That our bureaucrats could allow such anti-intellectual degradation to occur is of deep concern. Remedial action and constant attention clearly are needed across the nation.