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Research chairs initiative fails to increase doctoral student numbers

The research chairs have failed to impact positively on doctoral student numbers because of the concomitant phasing in of the National Research Foundation (NRF)'s Incentive Funding scheme.

The recent allocation of 60 new research chairs over the next 2 years is remarkable for the fact that the emphasis is unashamedly on equity, rather than on merit. This recent allocation – under the NRF South African Research Chairs Initiative (SARChI) – brings the total number of chairs awarded to 152, although we are told that another 198 are on the cards over the next 8 years. The number of institutions hosting chairs has increased from 16 to 21 of the country's 23 universities. The total allocation of chairs awarded to universities of technology has quadrupled from 2 to 8, and that to comprehensive institutions (amalgamations of former universities and technikons) has risen from 9 to 13. Whatever happened to Dr Blade Nzimande's plans for differentiation in the sector?

It is unclear whether the allocation reflects policy differences between the Departments of Science and Technology (DST) and Higher Education and Training, or whether it reflects the NRF not yet having caught up with government's revisionist thinking, albeit now almost two years old. The emphasis on universities of technology in the current round is not only puzzling in a policy context. At a SARChI workshop in 2010, the incumbents of chairs in these universities complained bitterly of a lack of institutional infrastructural support. It is unclear how providing such institutions with additional chairs would be wise unless these problems have been resolved.

In terms of allocations to particular disciplines, 10 of the chairs are now in rural development, food security and land reform, and another 11 in education. Sadly, we do not need more research into what action is required to improve national efforts in these areas nearly as much as we need the political will to make the requisite changes, and the capacity in the civil service to implement them. We need qualified science and maths teachers, not researchers who can reiterate for the umpteenth time what is wrong with our system.

The extent to which the tertiary research sector is now reliant on the SARChI scheme is illustrated by Nicola Illing in an article on page 1 (<http://dx.doi.org/10.4102/sajs.v108i3/4.1161>) of this issue, in which she analyses current funding of grant income in the Faculty of Science at the University of Cape Town (UCT). UCT has the highest number of both rated researchers and research chairs nationally, and the scheme now accounts for 36% of its science faculty's grant income. The consequences of the scheme's implementation, in tandem with the phasing out of the NRF's Focus Area Programmes, is that several disciplines (notably Geological Sciences, and Molecular and Cell Biology) have suffered significant declines in funding, whereas others (such as Astronomy) have benefitted enormously.

Astronomy's good fortune is unsurprising, as it has been allocated 10 chairs, of which UCT, with the country's only dedicated department in this field, has two. Of great concern is the fact that Geological Sciences and Molecular and Cell Biology are being starved of funds, as both are disciplines crucial to the country's economy as well as its research enterprise. Unlike Astronomy, both are disciplines in which supervisors require significant budgets for running expenses in order to train students. With the demise of the Focus Area Programmes, neither the studentships nor the associated running expenses are available, and neither can be supported by the pocket money the foundation dishes out in the form of Incentive Funding.

Most significantly, Illing found that the number of grants (including those associated with SARChI) in the faculty has declined by almost half – from 170 in 2006 to 87 in 2011. Researchers are divided into 'haves' versus 'have nots', particularly in fields requiring running expenses. A few holders of research chairs have more graduate students than they can manage, whereas some researchers have limited resources to train a few postgraduate students, and others are unable to train any because they have no funding apart from the rating-linked incentive award. It would be interesting to determine the extent to which this pattern is reflected nationally.

What is clear is that the number of PhD students supported by the NRF nationally has declined from 2221 to 2015 between 2006 and 2010 (for a detailed breakdown until 2009 see <http://www.sajs.co.za/index.php/SAJS/article/view/501/473>), despite the introduction of the SARChI and Centres of Excellence. This pattern is mirrored at UCT, where the number of combined MSc and PhD graduates in science peaked in 2008 and has since declined. This prediction was made to the NRF's current President, Albert van Jaarsveld, more than once when he toured tertiary institutions in 2008 to announce the replacement of the Focus Area Programmes with Incentive Funding. Thus the NRF itself must take responsibility for this ill-advised change which has contributed greatly to the recent decline in South Africa's research base. Robbing Peter to pay Paul will not result in more doctoral students.

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