

SOUTH AFRICAN WOMEN IN PHYSICS: ARE WE GETTING SOMEWHERE?

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“...All of us must take this on board, that the objectives of the Reconstruction and Development Programme (RDP) will not have been realized unless we see in visible and practical terms that the condition of the women in our country has radically changed for the better, and that they have been empowered to intervene in all spheres of life as equals with any other member of society”. (President Nelson Mandela, Inaugural Speech April 1994)
Intervention by women in all spheres of life depends on their ability to comprehend the processes of nature, interpret processes in a way that will improve the socio-economic status of their families, the community, and ultimately the world they live in. Physics as a mother of science cannot be treated separately as far as the issue of equality and women empowerment is concerned.

RESEARCH AND EXPERIMENTAL DEVELOPMENT

It is worth noting that women researchers have increased from 36% (2001/02) to 38% (2003/04) of researchers. In the different sectors in 2003 women researchers were: 25.7% - business, 37.0% - government, 40.7% - higher education, 51.0% non-profit sector. Employment equity is a priority as far the constitution of South Africa is concerned. Science, Engineering and Technology are also subject to the labour laws of this country. The gender representation in higher positions of the national research facilities is shown in Figure 1.

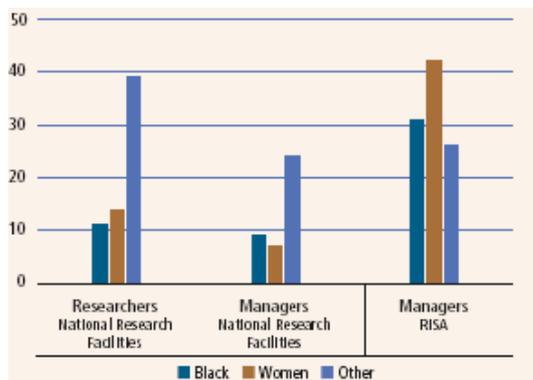


Figure 1: Managers and researchers at national research facilities

RECOGNITION OF WOMEN

“Until women are fully represented in the fields of science and engineering, society is losing out on the talents of a vast number of potential contributors. Academic institutions are losing out. Individuals are losing out. We all lose out.” Carol B. Muller, Ph.D., Founder, MentorNet
South Africa has experienced an improvement beyond the year 2002, with more recognition, appreciation, and motivation for women in science and engineering. The awards made available include the Women Scientist Fellowships, Best Emerging Young Woman Scientist Award, Distinguished Woman Scientist Award, The Frances Ames Lecture, and L’Oreal South Africa Fellowships for Women in Science, Distinguished Scientist Award for Contribution to the Improvement to the Quality of Life of Women. It is however, worth noting that most of these require one to have a PhD qualification, and many active women in physics do not have the relevant qualification.

FUNDING OPPORTUNITIES FOR WOMEN

There are more funding opportunities for women in South Africa today than in 2002 or before. An increase in the number research grants awarded to women (as well as the monetary value) by the national research foundation NRF has increased since 2002. The year 2001 saw the birth of the Thuthuka programme of the national research foundation (NRF), with only 17 grant holders. This programme has offered preferential funding opportunities for women researchers, and has grown from a composition of 39% male and 61% female in 2002 to 29% male and 71% female in 2004. This is the programme that contributes to acquisition of higher degrees on the part of women.

Government expenditure by major research field has also increased for the natural sciences and engineering sciences. Figure 2 shows the increase from 2001 to 2003.

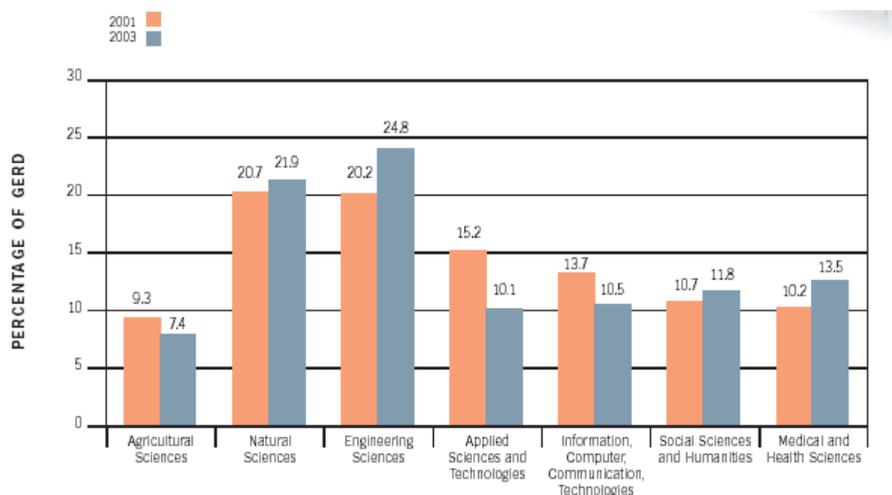


Figure 2: Expenditure by major research field

ATTRACTING AND KEEPING GIRLS IN THE PHYSICAL SCIENCES

There are more initiatives to attract and keep girls in the physical sciences than there were in 2001. The Department of Science and Technology also realised the need to contribute toward improving the participation and performance of girls in the natural sciences. More companies are now availing their funds for girls who perform at high schools, for continuation at institutions of higher learning.

There is however, a need to help the underachievers in the natural sciences. Also one can still identify problems in reaching girls in rural areas, mainly due to lack of finances and time constraints on the part of role models who want to encourage girls.

MOVING FORWARD

Despite the pace at which we are moving relative to the fully developed countries, there are signs of success that one can put on a scoreboard. The areas that still needs improvement includes, the establishment of an easily accessible database, women's forum specifically for the physical sciences, the involvement and financing of role models and mentors, more collaborations between women and the industry, involvement of the media on issues such as recognition of women who, against all odds, manage to make a difference, attracting and keeping girls in the physical sciences, and awareness on the part of the community.

Clearly, with the resources we have, our best chances of success still depends on our ability to work together as women scientists, become initiators, and focus on our potential strengths while staying well connected to international research.

ACKNOWLEDGEMENTS

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