

Statistical literacy in South Africa: ICOTS6 and beyond

Jacky Galpin¹ and Pali Lehohla²

**University of the Witwatersrand, School of Statistics and Actuarial Science*

1 Jan Smuts Avenue, Braamfontein, Johannesburg

Private Bag 3, WITS, 2050, South Africa

galpin@stats.wits.ac.za

Statistics South Africa, Pretoria, South Africa

palil@statsSA.gov.za

1. Introduction

Economic literacy is a national priority in South Africa (SA), and statistical literacy is seen as a pre-requisite. The two are needed at all levels of the population, in order to enable citizens to engage in meaningful discourse, understand what the government is doing, participate in decision making and to make informed choices.

2. Training of teachers

Statistics has only recently been introduced into the school syllabus, and the syllabus itself is still under development. Many of the teachers are not equipped to teach statistics, as this was not part of their training, particularly because of lack of mathematical training at in schools. During ICOTS6 (the 6th International Conference on Teaching Statistics, held in Cape Town in July 2002), training sessions were held. These were designed and presented by members of SASA (South Africa Statistical Association) and AMESA (the Association of Mathematics Educators of South Africa). Some 80 mathematics teachers and subject advisors attended the sessions, sponsored by UNESCO, the Department of Education, Standard Bank of South Africa and Statistics South Africa.

During ICOTS6 a workshop was also presented on the South Africa experience of [Census@school](#), a project in which the Royal Statistics Society (RSS) was involved. This not only allowed teachers to become acquainted with the data from South Africa, but also that from the United Kingdom, Italy and other countries. The delegates also work-shopped the use of this data as well as encourage teachers of other subjects to include it in their teaching (for example in social studies).

Many of these teachers also attended the annual AMESA conference the week before ICOTS6. A pre-condition for this sponsorship was that the teachers return to their home province and present similar workshops there, using materials provided at ICOTS6. This includes manuals concerning the course material, probability packs, and (soon) video-tapes of the actual sessions and the [cenus@school](#) workshop. As of 12 April 2003 more than 20 workshops have been presented in the various provinces, and more workshops are planned.

3. Training of official statisticians

Currently no university in South Africa has an undergraduate program in official statistics. StatsSA is sending their staff to EASTAC in Tanzania and Makerere University in Uganda. The University of the Witwatersrand (Wits) has started postgraduate degrees in official statistics, where students with a general degree in statistics can be trained in more detail on sampling theory (including weighting) and analysis (standard methods, plus data fusion and data mining). The postgraduate degree allows students with a degree in demography, social sciences, economics etc., to fill in missing areas of expertise, as well as to develop into the new areas.

This experimental program, an initiative between StatsSA and Wits has already revealed some fundamental deficiencies in getting the right crop of students, the majority of them lack mathematics. An internal mathematics program has been initiated for employees of StatsSA to address this shortcoming.

4. Training of government officials

A bigger demand is in training for the national statistics system. In a civil service of a million population, there would be need to train at least a minimum of 20 000 in handling official statistics, information management as well as in monitoring and evaluation. Improving the skill base remains a fundamental challenge because of the poor skill base and foundation in quantitative subjects in the population. How do you transform paper pushers who have no understanding whatsoever of their actions on policy? Improving the compilation of administrative records and eliciting their statistical significance is one of the areas that require urgent attention.

5. Literacy of the general population

While the challenge of competency is primary, another general challenge is that of literacy at the level of the general population and those who inform. These are journalists, Members of Parliament and employees of Non-governmental organizations. A targeted program on statistical literacy and appreciation of statistical thinking is being developed for this purpose.

6. Where to from here?

The challenge at first looks insurmountable, however, South Africa is in a fortunate position in that it has a multiplicity of institutions of higher learning, so the infrastructure for implementation exists, the people requiring training are identifiable and what remains is to develop the programs, timetable implementation and mobilize the resource. In this regard there is fruitful collaboration with the Department of Education to see this through. While this may take long to achieve, the compelling reason is that there are very few options to pursue. It has to be done if South Africa is to be part of the information and knowledge society.

RÉSUMÉ

Le gouvernement a déclaré que l'éducation économique et statistique est tout à fait prioritaire pour tous les citoyens sud-africains. Cet article décrit le progrès fait jusqu'à présent, ainsi que les plans d'avenir. Un progrès considérable a été fait en profitant de l'occasion offerte par la conférence ICOTS6 en 2002 et la [Census@School](#) qui a eu lieu en 2001.