

Working in Mathematics Education with Namibian Primary Teachers

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Namibia (formerly South West Africa), is one of the most sparsely populated countries in the world, consisting mostly of thorny scrub, mountains and desert. After its Independence from South Africa in 1989, the European Community earmarked money to help free its education from the previous *apartheid* system. This had consisted of 11 separate education authorities; one for whites, one for coloureds and nine others for the different indigenous black ethnic groups - *in that order*. This particular project, called INSTANT (In-service Training and Assistance to Namibian Teachers), was implemented by the Vrije University of Amsterdam.

Part of the Project's task was to run in-service workshops in mathematics to as many of the country's primary school teachers as possible. Decisions were made *in situ* as to how best to do this and a number of 'training of trainers' workshops were held. This involved taking the 'best' rural primary teachers and preparing them to take workshops of their own with the teachers from their own immediate areas.

Visits were also made to the remoter areas of Namibia such as Kaokoland and Bushmanland in order to assess teachers' needs in mathematics. Most of the rural schools had nothing and so any practical suggestions made for teaching and learning aids had to be based on locally available waste materials such as empty soap packets, oil containers, bottle tops etc. A number of workshops were set up to in-service teachers who had not undergone any formal teacher-training. The workshops allowed teachers to demonstrate to fellow teachers, how they would teach particular topics using their own ideas and those of the tutor. Balances made of paper and paperclips, metre rules from newspapers and string timers were some of the measurement aids made and demonstrated. Geometrical figures such as squares, pentagons, hexagons; octagons etc. were constructed by simply folding paper, together with 3-dimensional figures made from old envelopes or strips of paper.

Whilst the Project was not specifically a research project, many insights into overfamiliar mathematical concepts arose in these workshops, providing much food for thought (and research). For example, are sorting, ordering and matching activities really necessary for learning about number? Are sets the basis of mathematics? In practice, many rural children learn mathematics successfully without these, (see:

Game, Set and Match; Times Educational Supplement, 8.10.93). Again, the *exact* meaning of *add*, *multiply*, *find the difference*, etc. is brought into sharp focus when trying to communicate the meaning of these terms in English to teachers whose first language is (e.g.) Herero and whose second language is Afrikaans. (See for example, *What's Simple About Arithmetic* T.E.S. 22.5.92)

Some time was also spent devising a 'rural schools' mathematics kit, which would provide teachers with the basic equipment for teaching clearly the early concepts of mathematics.

[Note: The conference session was not well attended, due no doubt to the failure of participants to see what relevance third world teaching had to their own particular research interests!]