

BENCHMARKS IN AN EARLY NUMBER CURRICULUM

Kath Hart

UK

The United Nations has stated that in the not too distant future all children should be attending school. What will a child, the first in his family to ever be educated, need to learn in mathematics? In many parts of the world the process of universal education has begun, although the schools are ill-equipped, over –crowded and staffed by untrained [or under-trained] teachers. Malawi, Ghana and Zambia in sub-Saharan Africa are three countries with multiple problems. Each however has a national mathematics curriculum which is long and shows little regard for the general conditions in which it is taught. Schools, communities and international donors are continually disappointed by the seeming lack of achievement of children in their first few years in school. In Malawi, 40 per cent of pupils leave school at the end of grade one

The poster is to present a suggested progression of achievable Number concepts based on discussion with educators, interviews and tests of children [N = 1000] in grades one to four in Malawi, Zambia and Ghana. It is proposed as a start for a curriculum which could be taught in very basic conditions and which could be built on when confidence has returned.

Interviews and questions have been informed by the work of Clarke and his team [2001], Fuson [1992], Wright [1996], Davis [1992] and Hart and Yahampath [1999]. All of these had investigated some aspect of what appeared to be cognitively demanding in ‘Early Number’ but nobody has a detailed progression supported by evidence. In spite of the fact that any mathematics syllabus purports to be a progression of increasingly sophisticated concepts.

The poster will show four stages of Whole Number Learning, illustrated by some suggestions for assessment, based on evidence [although limited] from disadvantaged pupils. It is hoped that conference participants will engage in discussion and hypothesis further steps.