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Ethnomathematics: A Cultural Bridge from Indigenous Knowledge to the Scientific World - the Somali Case. Part II

Introduction

The aim of this second part of the paper is to seek possible ways to apply an 'ethnomathematical program' while re-examining the Somali mathematics curricula and textbooks. In this regard, significant attention should be paid to the preparation of new 'Professional Educators' (by the term 'Professional Educator' we refer equally to public, private and Qur'anic school teachers). The paper describes briefly the current situation regarding teachers.

Needs of new strategies for the preparation of new professional educators

The author refers here the educational system in Somaliland which he visited recently and where he participated in a workshop to draft a document for the National Education Plan. In Somaliland, for the 1997/98 school year, a total of 1368 professional educators were registered in the public and private schools (1070 in the elementary schools, 37 in the secondary, 255 in the private schools, and 6 in the university (MNPC 1988).

To this number should be added the Qur'anic schoolteachers. Because of the lack of statistical data, it is at this point too difficult to quantify, with any certainty, the number of Qur'anic school teachers in Somaliland. In 1987, a UNICEF survey indicated that in Somaliland there was one Qur'anic school in every 300-500 meters among the settled population (Green n.d., SDR-UNICEF 1987).

The majority of in-service teachers in Somaliland have no qualification to teach: 53% of the elementary teachers are untrained. The worst case is the Togdheer region (62.9%), followed by Awdal (58.8%), Sahil (56.4%), Sanaag (56.1%), Northwest (50.7%) and Sool (41.7%). The average ratio of students per teacher is approximately 31:1 for the elementary schools and 25:1 for secondary schools at the national level (the data refers to the 1997/8 school year). For the elementary schools, this ratio ranges from the worst case in the Northwest region with 50:1 down to 23:1 in the Sool region. (MNPC 1998)

The teacher growth rate is not following the same lines of the student growth rate. For example, during the period between 1994-1998, the number of students in the elementary schools went up from 13,243 to 33,004, while the number of teachers increased from 911 to 1070 (i.e. the number of students per teacher in 1993/4 was 14, and in 1998 it had reached 31, in the elementary schools). The Ministry of Education, Youth and Sport (MOEYS) estimated the need to 1200 new primary and secondary teachers between 1999-2003. A draft document of the proposed National Educational Program reported:

A 'crash' emergency program will be necessary to educate 1,200 new teachers, requiring the determined commitment and resources of the Central Government and the development agencies.

Moreover, during the 1998-99 school year, 75 secondary school teachers were registered in the 5 secondary schools operating in Northwest and Awdal regions, the enrolment totalling

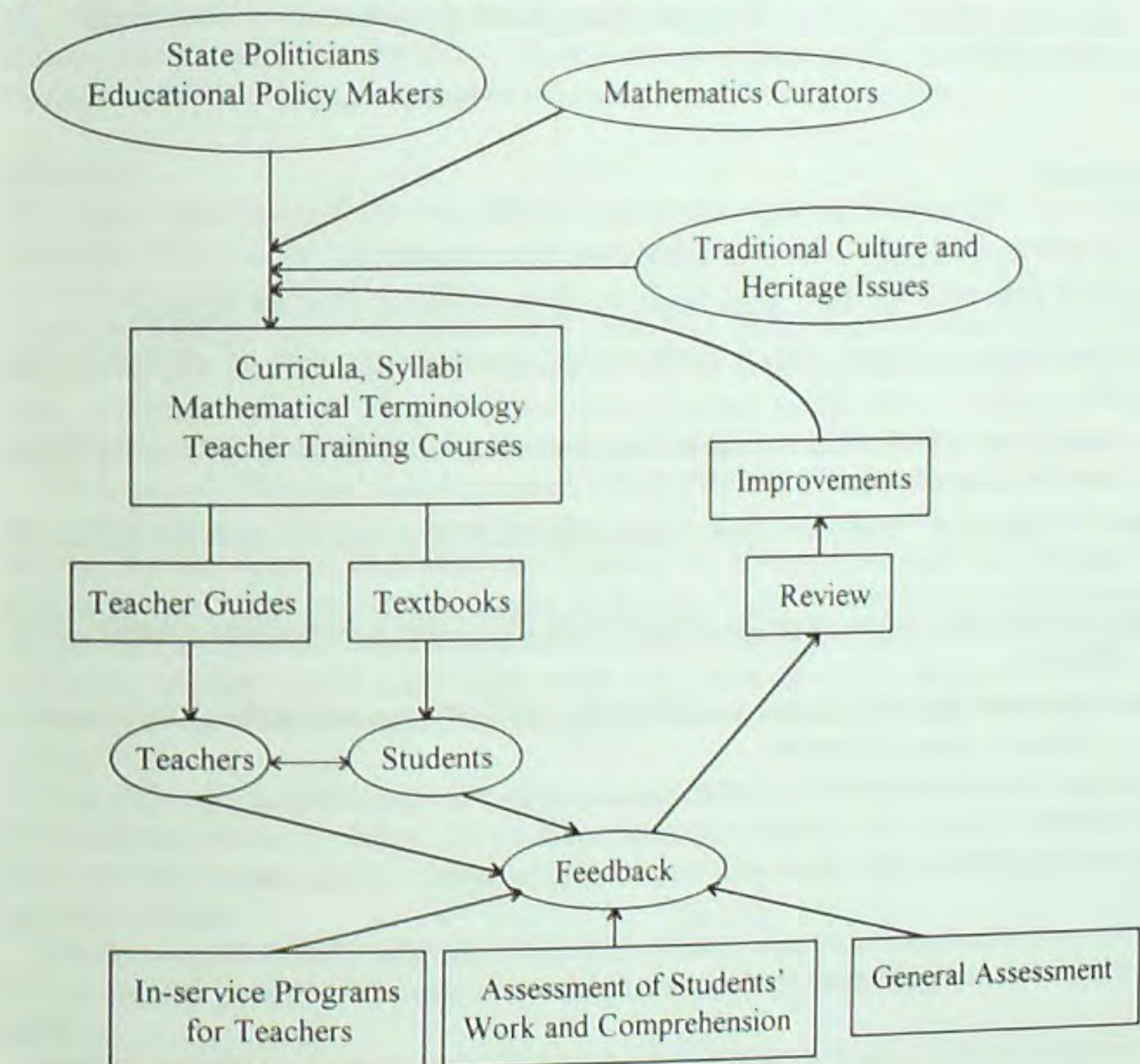
1152 (MOEYS: National Education Plan, unpublished draft). The MOEYS estimated the need to be 95 secondary classrooms in the period of 1999-2003, hence at least 100 secondary school teachers. (The estimation of the number of secondary school teachers is that of the author).

The above mentioned figures obliges the Educational Policy and other National Decision Makers to consider these as Professional Workers in the same way as they consider other most needed professional national workers. Thus, there is a basic need to plan new strategies for the formation of the educators in Somaliland.

Proposing a strategy

It is within these new formation strategies that cultural issues should be considered very seriously. For the mathematics teachers, in particular, an ethnomathematical program is of utmost necessity. The following diagram shows where and how the cultural issues should be considered in the Somali schools.

Figure 1. Including cultural issues in educational policies.



As indicated in the schematic framework above, Educational Policy Makers with Mathematical Curators should review the contents of both the mathematics curricula and teacher training courses in order to take into consideration also traditional knowledge. Curricula, syllabi and mathematical terminology should take into account the Somali culture.

Education and Culture

As a consequence, mathematics textbooks and teacher guides reflecting these new programs can be produced. These textbooks and teacher guides will use traditional examples to present mathematical notions. In that way, the students will receive a pedagogical program arising from their own culture. In Jama Musse and Favilli (forthcoming) and Jama Musse (1999) significant examples to introduce basic mathematical notions are presented. This methodology will need a transitional period, during which ongoing reviews and improvements, based on in-service programs for the teachers and assessment on students' work and comprehension, are carried out.

In conclusion

While the proposition in this paper does not indicate that curricula should be changed by simply substituting traditional contents for others, it does argue in favour of considering more fundamental kinds of changes, in re-examining of the mathematics education in Somaliland. The basic idea is to permit students and their culture to be active participants in the design of their pedagogical program. This idea is in line with the one proposed by Freire:

The content of an education for critical consciousness must be developed by searching with the students for experiences which give meaning to their lives.
(Freire 1970)

References

- Freire, P. (1970): *Pedagogy of the Oppressed*. New York: Seabury.
- Green, R.H. (nd): *UNICEF and Somali Survival and Development 1996-98*. Nairobi.
- Jama Musse Jama and Franco Favilli (forthcoming): *Mathematics under an African acacia tree*
- Jama Musse Jama (1999): 'The Role of Ethnomathematics in Mathematics Education: Cases from the Horn of Africa.' *ZDM* 99/3:92-95.
- Ministry of Education, Youth and Sport: unpublished draft document for National Education Plan.
- Ministry of National Planning and Co-ordination (MNPC) (1998): *Somaliland Figures 1998* Hargeisa.
- Somali Democratic Republic (SDR) and UNICEF (1987): *Women and children in Somalia - A Situation Analysis*. Nairobi.