

The importance of developing endogenous mathematics and science curriculum in African languages: methodology and examples

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In History, no country ever developed using foreign languages. The development of science and industry in Europe went along with the writing of science in vernacular languages instead of Latin.

All Asiatic countries, confronted with European science, went into a period of important translations and neologism creations in order to appropriate European knowledge.

Up to now, nothing of the sort has been done in Africa, living the continent as a follower in modern science.

Not only science and technology cannot be created using African terminologies but their transmission, science teaching, is done only through European languages (French, English and Portuguese) from the very first day at school, when children do not even understand the European language used as a medium for instruction, to university levels.

It is then no surprise that those African countries not only produce few science and technologies researchers but, most important, very few endogenous technological innovations (at any level and in any field) which could led to endogenous development, incorporating vernacular knowledge along with external knowledge.

The aim of my presentation is to give basis to such an endogenous scientific development by establishing, in each language, first at the level of primary school, the prerequisite ethno-linguistic studies necessary to develop such an endogenous curriculum in local languages

Most of my examples will be taken from mathematical knowledge as it has been my field of studies for thirty years in Bambara (Mali), Kinyarwanda (Rwanda) and Ewé (Ghana-Togo-Bénin). They will concern numeration systems, measurement, geometrical patterns and, most important, all the linguistic apparatus used by each language to convey logical argumentations.