

Ethnomathematics
Part 3: Wider Implications
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Some of the implications of the EM project for teaching and learning have been suggested in the previous articles. I will now explore the wider implications of EM. First I re-situate my own perspective with that of those scholars who emphasise that ethnomathematics is not a pedagogic philosophy. It is however a productive lens through which mathematics itself might be viewed.

The EM literature says very little explicitly about instruction. However, four possibilities for an EM influenced curriculum have been identified: 1) as a substitute for formal academic mathematics, 2) as a supplement in order to promote an appreciation of other human cultures, 3) as an entry point to formal mathematical ideas, and 4) as a consideration in the design and preparation of learning situations. These positions are criticised by scholars who see them as an attempt to “take mathematics in its present form as a given,” and ask merely that we be sensitive to cultural difference. They suggest instead that “the cultural aspects of the students’ milieu should be infused in the learning environment in a holistic manner”—a philosophy that underlies curriculum documents today.

With respect to learning, researchers have noted that EM has already contributed to new mathematical knowledge. For example, the study of kolams has contributed knowledge to computer science. This (and other studies) substantiates claims that dialogues between mathematics and the ideas of other cultures which are mathematical in some way are likely to lead both to new areas of application of mathematics and to new mathematics. Thus, what is to be learnt involves not only new knowledge but also includes new ways of looking at, and new perspectives on, knowledge itself.

I believe that EM offers Caribbean educators an important sensitising concept, which offers the promise of greater sensitivity and respect for cultural diversity among our learner populations. Secondly, it offers mathematics educators new perspectives from which to view their discipline. Here in the Caribbean, an aversion to and distancing of oneself from mathematics means that many of our cultural practices, which have been inherited from cultures with rich (ethno) mathematical traditions around the globe, have not yet been viewed through a mathematical lens. Given the unique cultural evolution of these practices in the Caribbean, I want to suggest that there exists a rich potential for ongoing (ethno) mathematical research, much of which might be extremely useful to Caribbean educators struggling to raise the image and achievement of all students in this discipline.

The larger EM project is a socio-political one involving a postmodern critique of both the social construction of science—mathematics in particular—and the consequences of the particular socio-cultural constructions that dominate most of the discourse in the West. The ultimate aim of the EM project, according to D’Ambrosio, is to contribute to a new ethics of “respect, solidarity and responsibility” and, ultimately, to a more peaceful coexistence for all of humanity. At a very fundamental level, EM aims to challenge hegemonic conceptions of what counts, or should count, as mathematical. Another challenge is historiographical. EM attempts to correct a historical neglect in which the mathematics of non-European cultures were ignored or devalued

as part of the ideological mindset of colonization, and used as justification for subjugation and oppression. Ethnomathematics is also an important entry point into understanding the global conversations among mathematics educators around issues of social justice and the political dimensions of mathematics education that have arisen in recent years.

Finally, the most ambitious goal of EM is a contribution to solving what some consider to be the most pressing educational issue, that of figuring out how peoples of diverse and contradictory cultural allegiances are to get along. D'Ambrosio's passionate vision is one where mathematics (education) acknowledges its role and accepts its responsibilities in creating and sustaining civilisations based on equity, justice, and dignity for the entire human species, through understanding the obscured interconnections among mathematics, power, human behaviour, science, technology, institutional structures and policies justified through mathematics; the consequences of these on the vulnerable; and the incumbent responsibilities we have to each Other.

In mathematics, the acknowledgement of human attributes is conspicuously absent. However, it is precisely because discussions of mathematics, ethics, and values are seldom classed together that there is a need to engage in this discussion. It is precisely because our conceptions of mathematics are limited that ethnomathematical projects are necessary. It is precisely because the stakes for all of us everywhere are so high that such re-connections are urgent.

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