

Chapter 4

In Guise of Conclusion

Milton Rosa and Lawrence Shirley

With the growth of ethnic and linguistically diverse student populations in schools, curricula should reflect the intrinsic, social, and cultural learning of students and teachers should be supported in their preparation to address such differences. Ethnomathematics draws from the sociocultural experiences and practices of learners, their communities, and society at large, using them not only as vehicles to make mathematics learning more meaningful and useful, but, more importantly, to provide students with insights of mathematical knowledge as embedded in diverse environments.

An important change in mathematics instruction needs to take place in order to accommodate changes in student populations. Concerns about equity in mathematics education must be at the forefront in many countries in the world. Therefore, the main goal of educators should be to accomplish equality among students, thus incorporating ethnomathematics into lessons. In this regard, mathematics has to be made equal for all students.

It is necessary that teachers emphasize connections between mathematics and other curricular disciplines and consider students' cultural backgrounds in designing and selecting mathematical activities. Students learn in ways characterized by social and affective approaches, harmony with the community, holistic perspectives, field dependence, expressive creativity, and non-verbal communication. This context enables the evolution of ethnomathematics as a research field in which one of the main goals is to link local knowledge to the mathematics curriculum by applying innovative approaches to mathematics.

In order to perceive the connection between culture and mathematics, it is crucial to underscore the importance of doing the ethnomathematical work first. This approach leads to a good understanding of the mathematical aspects of culture and a clear purpose of pedagogical activity by illustrating how mathematical ideas, procedures, and practices play a vital role in the development of human endeavors.

Ethnomathematics forms the basis for significant contributions in rethinking the nature of mathematics. This pedagogical practice is essential in developing the curricular praxis of ethnomathematics by investigating local knowledge. Thus, it is

necessary to broaden the discussion of the possibilities for the inclusion of ethnomathematics and modelling perspectives which respect and give voice to the social and cultural diversity of the members of distinct cultural groups and, by so doing, develop an understanding of their differences through dialogue and respect.

In the first two decades of the 21st century, through the growth of the fields of ethnology, culture, history, anthropology, linguistics, and ethnomathematics, a greater and more sensitive understanding of mathematical ideas, procedures, and practices developed by the members of diverse cultural groups has become increasingly available. The insight from many ongoing theoretical and empirical investigations such as monographs, theses, and dissertations submitted to universities in many countries demonstrate the possibility for marked internationalization of mathematical ideas, procedures, and practices expressed in distinct cultural contexts.

The increasing publication of articles, chapters, books, and news in newsletters, journals, magazines, and newspapers in many languages is an indicator of the vitality of ethnomathematics. In this context, it is necessary to highlight that the current agenda of this program is to continue its progressive trajectory to contribute to the achievement of social justice and peace with dignity for all.

In closing, this book debates few key ideas that provide for a clearer understanding of the field of ethnomathematics and its current state of the art by discussing its pedagogical actions, its contributions for teacher education, and its role in mathematics education.

Open Access This chapter is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, duplication, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, a link is provided to the Creative Commons license and any changes made are indicated.

The images or other third party material in this chapter are included in the work's Creative Commons license, unless indicated otherwise in the credit line; if such material is not included in the work's Creative Commons license and the respective action is not permitted by statutory regulation, users will need to obtain permission from the license holder to duplicate, adapt or reproduce the material.