

ETHNOMATHEMATICS: A WAY TO ACHIEVE GOALS IN MATHEMATICS EDUCATION?

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In the Swedish curriculum for the upper secondary social science programs mathematical education is a paragraph stating 'the students shall deepen their insight into how mathematics has been influenced by people from many different cultures, and how mathematics has developed and still continues to develop' (Skolverket, 2000). How do we achieve this goal in mathematics education? I asked myself if ethnomathematics, defined by D'Ambrosio (1985) as the mathematics you find in different identified culture groups e.g. aboriginal peoples mathematics, and Bishop's (1991) and Barton's (1996) definitions of the ethnomathematic phenomena could be a way to achieve the described goal. The study reported (Andersson, in p.) is placed in the field of action research. The 16 participating students were in year two in an international social science program. The teaching sequence reported contains two parts. The first part was an introduction to ethnomathematics and discussions about indigenous people and global issues. The second part took place at the exhibition 'Dreamtime, Aboriginal Art from the Ebes Collection'. The students got the opportunity to analyse the Australian aboriginal maps as art. It was my intention to show the students examples of ethnomathematics and thereby other expressions of mathematics than they were used to. The students reflected over the question: What kind of mathematics do you think lay behind the different works of art? The students counted for geometry, functions and arithmetical progressions. Some students chose to discuss what mathematics and mathematical post constructions in art is. None of the students accounted for answers similar to the problems in their textbooks (e.g. How much did it cost to make the picture?) After the teaching sequence I came to the conclusion that ethnomathematics can be a way to achieve the above described goal and maybe also a way to bring global issues into the mathematical classroom. My personal experience of the teaching sequence was students more interested in mathematics education and more engaged in the classroom than usual. It would be a challenge in the future to investigate if and how students' motivation and results in mathematics education can be affected by using ethnomathematics as a discourse.

REFERENCES

- Andersson, Annica (in press). *A Cultural Visit in Mathematics Education*. In proceedings from MACAS 2006 The Second International Symposium of Mathematics and its Connections to the Arts and Sciences. Odense, Denmark
- Barton, Bill (1996). Anthropological Perspectives on Mathematics and Mathematics Education. In A.J. Bishop, *International Handbook of Mathematics Education* (pp.1035-1054). Dordrecht: Kluwer Academic Publishers.
- Bishop, Alan J (1991). *Mathematical Enculturation. A cultural perspective on Mathematics education*. Dordrecht: Kluwer Academic Publishers.
- D'Ambrosio, Ubiratan (1985). *Socio-cultural bases for Mathematics Education*. Unicamp, Campinas, Brazil.



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