

# EMOTION AND AFFECT IN MATHEMATICAL EDUCATION

## EXPLORING A THEORETICAL FRAMEWORK OF INTERPRETATION

Inés M. Gómez-Chacón, Didactic of Mathematics, EDIW, Belgium

Lurdes Figueiral, Escola Secundaria Artística de Soares dos Reis, Portugal

The reconceptualización of affective control in the present decade is marked by two essential features. One is the attempt to consolidate a satisfactory theoretical framework for its interpretation, the other to place it within the social context in which learning takes place (Gómez-Chacón, 2000a and 2000b).

In this communication we present a model for the study of the interactions between cognitions and affects in the learning of Mathematics. The model will be used for describing emotional responses, their origin as well as for surveying their evolution in the subjects under consideration.

Certain dimensions related to affects and cognitions are specifically focused, namely, affect itself, meta-affects and belief systems. Attention is drawn to the importance of taking into consideration these dimensions in investigations of this nature, particularly in the case of school-failing students and in multicultural contexts. The study has sought to analyse if it is possible to interpret the emotional responses of the young from a perspective of social identity and of cultural identity

Two groups of study will be presented: One is a group of students in secondary education in Spain and the other is a group of students in secondary education in Belgium. The study in Spain was first accomplished.

The study in Belgium has been carried out with students of Portugese origin living in Brussels, in their 7<sup>th</sup> to 12<sup>th</sup> levels of education, from February to June 2003. The data collected has been attained in various forms: in clases of Portuguese language and Portugese culture which are complementary to the ordinary curriculum; in schools where there is a Portuguese population but there is lack of intercultural focus (during clases in mathematics and in a weekly meeting only with those students of Portugese origin); in schools where there is an intercultural focus in the field of mathematics.

The investigation has been qualitative in character, combining methods proper to ethnology in case-studies.

### References

- GÓMEZ-CHACÓN, I. M. (2000a). *Matemática emocional. Los afectos en el aprendizaje matemático*. (Emotional Mathematics. Affects in Mathematics Learning) Madrid: Narcea, 2000.
- GÓMEZ-CHACÓN, I. M. (2000b). Affective influences in the knowledge of mathematics, *Educational Studies in Mathematics*, 43, 149-168.