

## ***Multiculturalism, Migration, Mathematics Education and Language***

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### **Investigation of the field (state of the art) and innovative character**

Maths teachers, especially those working in secondary schools, feel the necessity for training and materials which reflect the needs of their classes in terms of linguistic and cultural differences. Their pupils from minority cultures and/or those with a migrant background encounter even more difficulties than their native classmates in acquiring fundamental maths skills. It is a matter of fact that, in general, the rate of early school leavers among these pupils is significantly higher than that among native ones.

The above mentioned needs have been identified in several research studies carried out by scholars such as: i) Abreu, D'Ambrosio and Skovmose for multicultural and inclusive education; ii) Barton, Barwell and Clarkson for the role of the foreign language in mathematics learning and iii) Bishop, Favilli and Gerdes as to the educational approach and methodologies for mathematics.

The project aims to identify teaching strategies for teachers and activities for pupils who allow both to approach the challenges and facing them satisfactorily. The methodological tools used, to be considered innovative compared with the standard routine of the maths classroom, are the following:

A) Great attention to the language used in order to provide suitable compromise between the simplicity of classroom language and the complexity of maths language, bearing in mind, however, that the language used in class is an element of further complexity for pupils from minority cultures with a different mother tongue;

B) Proposals for didactic units for the maths classroom which facilitate interdisciplinary extensions and which are inspired, above all, by practical problems and situations from everyday life and from different cultures.

These methodological tools should, in general, help to make all pupils more interested and motivated to learn maths; in particular, enable pupils with different cultures and languages to overcome some of the difficulties they encounter in maths due to these very differences: the teaching of maths by using aids to activate different thought processes and skills which otherwise risk remaining latent because of language shortcomings.

Moreover, the above-mentioned methodological tools facilitate the appreciation of the positive aspects of different cultures and create favourable conditions for intercultural dialogue in the classroom, thus creating an inclusive educational setting.

A further innovative aspect is the contribution from language specialists to the communication and intercultural issues of the teacher training activities.