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**Using drama techniques for facilitating democratic access to mathematical ideas for all learners.**

Gellert, Uwe (ed.) et al., Educational paths to mathematics. A C.I.E.A.E.M. sourcebook. Collected papers based on the presentations at the 63rd and 64th conference, Barcelona, Spain, summer 2011 and Rhodes, Greece, summer 2012. Cham: Springer (ISBN 978-3-319-15409-1/hbk; 978-3-319-15410-7/ebook). *Advances in Mathematics Education*, 323-340 (2015).

Summary: This chapter explores the dynamics of Geometry teaching in a classroom which uses “Drama in Education” techniques as a process that contributes to democratic access to mathematical ideas by all pupils. We describe a teaching experiment which aimed to motivate and actively engage through drama all 26 pupils of an 11th grade class and to encourage them to develop a critical attitude towards mathematical knowledge as being absolute, objective and irrefutable. The teaching experiment entitled “Is our world Euclidean?” was a drama-based teaching of the process of axiomatic definition of Euclidean and Non-Euclidean Geometries interrelated to the history of Euclid’s 5th postulate. Our research reveals considerable evidence for the effectiveness of drama techniques as an alternative approach to creating appropriate learning conditions, activating all students as evidenced by their participation, and contributing to their development as critical citizens.

*Classification:* D40 G40 G90 A30

*Keywords:* drama in education; critical mathematics education; axiomatic definition of Euclidean and non-Euclidean geometries; critical thinking

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