

Principles to Actions, theory and experiences (a joint session NCTM, IACME and the Math Education Reform Project in Costa Rica)

13th International Congress on Mathematical Education (Hamburg, 24-31 July, 2016)

Time: Saturday, 30/Jul/2016, 16:30 - 18:00

Location: C: turquoise, Main Building, lecture hall B

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Inter-American Committee on Mathematics Education (IACME)

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How can we effectively build the student learning presented in national curricular principles? What strategies and perspectives should guide teacher actions to ensure student learning? What sort of teacher professional development can support needed actions? These concerns which are so central to Mathematics Education are addressed by many theoretical results and experiences. The National Council of Teachers of Mathematics (NCTM, 2014) recently published “Principles to Actions: Ensuring Mathematical Success for All” which presents guidelines for guaranteeing mathematical success for all students. Similar strategies and perspectives support the implementation of curricular reform in Mathematics Education for elementary and secondary schools in Costa Rica. Begun in 2012, it is the most innovative and successful reform in all of Latin America (Ruiz, 2013, 2015).

The program of this session will include the following segments:

1. Introduction

By Angel Ruiz and Patrick Scott, President and Vice President of IACME

2. General ideas of *Principles to Actions*

By Diane Briars and Matt Larson, Past President and President of NCTM

3. Some experiences in the USA

By Diane Briars and Matt Larson, Past President and President of NCTM

4. Experiences in Costa Rica: the curriculum for Math Reform and its implementation

By Angel Ruiz, President of IACME and Director of the Math Education Reform Project in Costa Rica

5. Translation into Spanish of the NCTM publications: *Principles to actions: Ensuring mathematical success for all* and *5 Practices for orchestrating productive mathematics discussions* (Smith & Stein, 2011)

By Patrick Scott, Vice President of IACME

6. Closing words

By Angel Ruiz, President of IACME

References

National Council of Teachers of Mathematics (2014). *Principles to action: Ensuring Mathematical Success for All*. Reston, VA: Author (translated into Spanish as *De los principios a la acción: para garantizar el éxito matemático para todos*).

Ruiz, A. (2013, July). Reforma de la Educación Matemática en Costa Rica. Perspectiva de la praxis. *Cuadernos de Investigación y Formación en Educación Matemática*, Special number. ISSN 1659-2573. Costa Rica. <http://revistas.ucr.ac.cr/index.php/cifem/issue/view/1186/showToc>

Ruiz, A. (2015, April). Balance y perspectivas de la Reforma de la Educación Matemática en Costa Rica. *Cuadernos de Investigación y Formación en Educación Matemática*. Number 13. ISSN 1659-2573. Costa Rica. <http://revistas.ucr.ac.cr/index.php/cifem/article/view/19168/19224>

Smith, M. S. & Stein, M. K. (2011). *5 practices for orchestrating productive mathematics discussions*. Reston, VA: The National Council of Teachers of Mathematics (translated into Spanish as *5 prácticas para orquestar discusiones productivas en matemáticas*).