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Cooperation and innovation for good practices: Teachers and researchers understanding mathematics in PISA (TRUMP)

Sebastian Bauer¹, José M. Diego², Claudia Lazaro³, Sue Pope⁴, Tomas Recio², Ornella Robutti⁵, Jaime Carvalho e Silva⁶ and Ana M. Vieira⁷

1 University of Duisburg-Essen, Essen, Germany, sebastian.bauer.seuberlich@uni-due.de

2 University of Cantabria, Santander, Spain, diegojm@unican.es, reciot@unican.es

3 Spanish Federation of Mathematics Teachers' Societies, Spain, international@fespm.es

4 Association of Teachers of Mathematics, UK, suepope@atm.org.uk

5 University of Turin, Turin, Italy, ornella.robutti@unito.it

6 University of Coimbra, Coimbra, Portugal, jaimecs@mat.uc.pt

7 Portuguese Association of Mathematics Teachers, Portugal, anavieiralopes@gmail.com

We are briefly describing the proposal of an international project for enhancing mathematical literacy in different European countries (Italy, Germany, Portugal, Spain and UK), through the cooperation of teacher societies of mathematics and university researchers.

Keywords: Teacher education, comparative curriculum, international assessment.

INTRODUCTION

Our goal is to announce the proposal of the Teachers and Researchers Understanding Mathematics in PISA (TRUMP) project, submitted to Erasmus + EU programme in 2014 (Key Action 2: Cooperation for innovation and the exchange of good practices).

The TRUMP project seeks to enhance adolescent's mathematical literacy at a European level. PISA 2012 (as others international projects) suggests that European mathematics education is often less successful in developing mathematical literacy than other OECD members (PISA, 2012).

Mathematical literacy is essential, in modern society, for effective citizenship. In this way, the TRUMP project aims to create a network of European teachers and researchers in partner countries that, informed by the PISA framework and its assessment, helps teachers' professional development.

Although the proposal presented in 2014 to Erasmus+ was declined, the potential of the project has been recognised and the current team is searching for new European members to collaborate with and to further develop the original proposal.

CURRENT TEAM MEMBERS

The current working team is led by the Spanish Federation of Mathematics Teachers' Societies (FESPM). This 25-year-old non-profit organisation comprises 21 Spanish mathematics teachers' societies, with about 6000 members who are mainly secondary education teachers. The group team includes also universities from England, Germany, Italy, Spain and Portugal, as well as professional associations of teachers of mathematics from Portugal and England.

The project is unique in the sense that it involves both universities and professional associations of mathematics teachers. We believe that universities will provide research and development expertise and teachers' associations will ensure wide participation and dissemination to practicing teachers, and long-term sustainability. Digital technologies will be used to support collaboration among different partners.

MAIN PROJECT ACTIVITIES TO BE UNDERTAKEN

The participant members will work within the PISA theoretical framework to devise and evaluate strategies for teacher professional development, drawing on existing materials and resources. Some examples are provided below:

- 1) Teachers and researchers from all the member groups will undertake bilateral visits to learn from teaching practices in the different countries.
- 2) Researchers from the member groups will develop an evaluative framework to assess materials, classrooms teaching practices and learner outcomes.
- 3) A network of teachers will be created and guided to trial and evaluate the programmes and educational resources emerging from the project.
- 4) Teachers in each participant country will adopt and adapt shared resources to their cultural and educational context.
- 5) Transnational meetings of group leaders will be held to share resources, review progress to date, and to agree on priorities for the subsequent stages of the project.

EXPECTED RESULTS

Within the results expected are the following:

- 1) Establishing a community of researchers to design the training programmes materials and evaluative framework for teachers' professional development and enhanced mathematical learning.
- 2) Establishing a community of teachers and researchers working together internationally and locally to enhance professional competences.
- 3) Enhancing and developing student mathematical literacy.
- 4) As a resulting outcome, the TRUMP project intends to contribute to reducing the number of low-skilled adults.

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