



*Axis 1- Society and the curriculum problem: enquiring and questioning works*

**Session 1 (Tuesday morning)**

***Working group 1 (auditorium) – chaired by Pedro Nicolas and Carl Winslow***

Preschool mathematics education in Sweden and Japan from the perspective of protomathematics: A comparative case study.

*Yukiko Asami-Johansson, Nanae Matsuo*

Exploring the cognitive dimension in the Anthropological Theory of the Didactic and its methodological consequences.

*Marianna Bosch, Reinhard Hochmuth*

Reinterpretation of research results in statistics education from the perspective of the Anthropological Theory of the Didactic as a form of dialogue between theories.

*Francisco Martínez, Francisco Javier Garcia*

Heuristic pattern of a didactic research methodology.

*José Ginés Espín, Josep Gascón, Pedro Nicolas*

***Working group 2 (A1) – chaired by Julia Pilet and Takeshi Miyakawa***

Study and Research Path and Algebraic Modelling in Secondary School.

*Estefania Laplace, Maria Rita Otero, Viviana Llanos*

Putting into perspective two research projects aimed at characterizing a praxeological model of the pre-algebraic.

*Julia PILET, Hamid Chaachoua, Brigitte Grugeon-Allys*

Accessing the dominant praxeological model of an institution: the case of adding fractions at the primary-lower secondary school transition in France.

*Stéphanie Wachtel, Hamid Chaachoua*

Why Imaginary Numbers are Difficult to Learn: From an Epistemological Perspective on Numbers.

*Yu Saito, Takeshi Miyakawa*

***Working group 3 (C1028) – chaired by Annie Bessot and Berta Barquero***

Apports de la TAD pour la conception d'un test de connaissances sur les fractions.

*Pierre ESCLAFIT*

Análisis de una organización matemática propuesta para la enseñanza de la integral definida en un libro de texto para estudiantes de ingeniería.

*Maritza Luna Valenzuela, Oswaldo Valentin Requejo Cotrina, Ignasi Florensa, Elvis Bustamante Ramos*



Analysis of a Study and Research Pathway in Lifelong Learning for Young People with Intellectual Disability.

*Mercedes Hidalgo-Herrero, Ana Lerma-Fernández, Elena Bañuelos, Tomás A. Sierra*

An empirical approach to thematic confinement in school statistics: what do teachers' teaching plans reveal?

*Silvia Carvajal, Berta Barquero, Victor Martínez de Albéniz*

### Session 2 (Tuesday afternoon)

#### ***Working group 1 (auditorium) – chaired by Pedro Nicolas and Carl Winsløw***

Exploring the Change of Paradigm Across Disciplines: The Case of Linear Algebra.

*Jelena Pleština, Matija Bašić, Nathan Lombard*

Mathematical models for biology students: the challenges of biocalculus at the school-university transition.

*Thomas Hausberger*

The curriculum problem in service courses on statistics: from paramathematical to parastatistical notions.

*Carl Winsløw*

#### ***Working group 2 (C5/020 - UAB) – chaired by Julia Pilet and Takeshi Miyakawa***

The parallel postulate in Indonesian junior high school mathematics textbook: a praxeological analysis of didactic structure.

*Herizal Herizal, Nanang Priatna*

An Investigation and Questioning of Coordinate Systems and Grid Systems in a Norwegian Third Grade Primary School Mathematics Textbook.

*Vegard Toppol, Anders Wiik*

The conceptual gap in mathematical induction: an analysis of discrete mathematics textbooks.

*Louise Meier Carlsen*

#### ***Working group 3 (C5/028 - UAB) – chaired by Annie Bessot and Berta Barquero***

A model of covariation from the anthropological theory of the didactic: a theoretical proposal and its application in the case of the baker's mould.

*Marcos Marcos, Marianna Bosch, Berta Barquero*

Towards a Praxeological Reference Model for Programming: Construction and Presentation.

*Sébastien Jolivet*

Research problematics and the clinical methodology approach to questioning works: an example.

*Yves Matheron*



### Session 3 (Wednesday, morning)

**Chaired by Annie Bessot and Carl Winslow (C1028)**

A praxeological analysis of preservice mathematics teachers' instructional design: The marginality of the logos block.

*Heidi Strømskag, Ismael Cabero*

The introduction of the Modern Mathematics movement in teacher training in Spain: a paradigm shift in the learning of geometry.

*Sergio Colmena, Encarnacion Sanchez-Jiménez*

Observations on students' use of ATD notions in bachelor's theses.

*Reinhard Hochmuth, Jana Peters*

### Posters

Curriculum Development as an Object of Study: A Step Towards an Ecological Approach in the Japanese Case.

*Hanasaki Seitaro, Shinno Yusuke*

Interrelation between praxeology and language related to Fractions: A comparative analysis of French and Japanese textbooks.

*Mayu Aoki, Takeshi Miyakawa*

The derivative and its connection to linear mappings in first year university mathematics: origin of crisis and possibility for learning.

*Jana Peters, Ulrike Burhorst, Nina Ebert, Lukas Günther, Reinhard Hochmuth*

Use of a Reference Praxeological Model as a pivotal element in a research project on feedback decision-making in a digital learning environment.

*Sébastien Jolivet*