THE MATHEMATICS INQUIRY-BASED CLASSROOM PRACTICE OF CELIA[1]

Ana Paula Canavarro
University of Évora and Research Unity of Institute of Education of University of Lisbon, Portugal

Hélia Oliveira
Institute of Education of University of Lisbon, Portugal

Luís Menezes
Higher School of Education of Viseu and CI&DETS, Portugal

This study has been developed in the context of the research project P3M Professional Practices of Mathematics Teachers. One of its main aims is to propose a framework for mathematics inquiry-based classroom practice, combining theoretical perspectives and the transversal analysis of cases of experienced teachers of different school levels (one per level) that regularly conduct inquiry-based teaching of mathematics at different school levels. Developing an inquiry-based approach is a complex practice for most of the teachers (Stein, Engle, Smith, & Hughes, 2008) and we hope that our intended framework could contribute as a tool for reflection about this practice, namely in the context of teacher education.

We adopt an interpretative approach for the investigation, considering the importance of capturing teachers' perspectives to understand the actions they performed while teaching (Sowder, 2007). Data were collected by observing 2 lessons of each teacher and by pre and post interviews, the latter supported by videoepisodes of the lessons.

Here we focus on the case of the primary teacher, Célia, teaching her 4th grade class. To describe her practices, we adopted a four phases model for the lesson structure: 1) Introduction of the task; 2) Development of the task; 3) Discussion of the task; and 4) Systematization of the mathematical learning. For each phase, we describe the actions that Célia intentionally performs with two main interrelated purposes: to promote the mathematical learning of the students and to manage the students/class.

References

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