

ANALYSIS OF TEACHERS' ACTIVITY FOR CONTINUED DESIGN OF COMPUTER-BASED TEACHING SUPPORT. THE CASE OF DIAGNOSING STUDENTS' ALGEBRA COMPETENCES

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We propose to present the main lines of a study about teachers' assessment practices and an analysis of their interacting with a software —PEPITE— designed for helping to assess competences in elementary algebra. Previous observations of teachers using PEPITE (Delozanne, Grugeon & Jacobini, 2002) indicated that they were interested in the type of questions asked in the test (Pepitest) but they were not prone to use the students' profiles proposed from an automated analysis of students' answers to the test (Pepiprofile).

Two hypotheses are proposed for explaining such observations and were tested in an exploratory study: firstly, the didactic analysis of algebra competences which underlied the elaboration of the profiles departs from the general approach proposed in textbooks and generally followed by teachers; secondly, Pepiprofil is designed for individual student's assessment, while the French context of teaching is mainly oriented toward assessing classroom progression in algebra, while individual evaluation is a global assessment of the student's level in mathematics.

Two methods were used: 1) analysis of assessment practices from "open" interviews about their algebra teaching, before and after a continued training session about algebra teaching, involving Pepite; 2) observation of the same teachers working for the first time with Pepite during the training session. The main features of the analyses will be illustrated, and results concerning teachers with contrasted professional experience will be presented. They confirm and precise our two hypotheses. Consequences are derived concerning, on the one hand, the continued design for the software Pepite, and, from the other hand, the training requirements (Artigue, 1998) for teachers being able to use Pepite as an assessment support system.

References

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