

ASSESSMENT FOR TEACHING-LEARNING IMPROVEMENT: AVIMES PROJECT – CASE STUDY IN MATHEMATICS EDUCATION (6–14 YEARS)

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Educational Assessment is included in the framework of effective schools and self-evaluation. At class level what we consider effective is a constructive approach to teaching, work in small groups, discussions in class and interaction in peer groups, problem solving and multimodal teaching. These approaches are also important in the assessment, when teachers want to explore “how” students learn and not only „how much” they learn. The main purpose of the assessment is to help students learn better, to identify obstacles or misconceptions, gaps and also the strengths already present. The theoretical framework considers error an opportunity to learn. Teaching should promote activities starting from the Zone of Proximal Development (*Vygotskij*, 1934 and 1960). We examine the case of evaluation and learning of the skills of argumentation in mathematics (see NCTM, Standard 7 and 8, 2000).

The case study illustrates the structure of the AVIMES School Network Project (School Self-Evaluation for the Improvement of School Effectiveness). It describes some examples of assessment aimed at improving the quality of mathematics education in schools (6–14 years). 30 primary schools (1200 students) are involved; they belong to different socio-economic and cultural areas. 60 teachers are involved in Action Research. The network was born in 2000. We consider internal evaluation at schools dynamically interacting with external evaluation carried out in Italy now by the new INVALSI (National Institute for Evaluation). Teachers observe students during the learning tasks and tests following a check list. They analyze the thinking strategies through short interviews and by examining the protocols. Sometimes it is the information written in the margin of the sheet that allows us „to enter in the answers of the students”. They are also encouraged to compare their answers with each other and to discuss their works together in order to compare different solutions. Finally, in order to analyze the argumentative skills we compared the responses of students from schools with different methods of teaching.

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