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# Attitudes of teachers towards the external evaluation system for the assessment of mathematical learning

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*The external evaluation systems for the assessment of mathematical learning are increasingly widespread in the educational context, nationally and internationally. They actually affect the teachers and their teaching practices with different effects. The poster shows a qualitative research in order to explore teachers' attitudes toward the external evaluation in Italy, with particular attention to their emotions.*

**Keywords:** Teachers' practices, assessment, affective factors.

## INTRODUCTION AND THEORETICAL PERSPECTIVE

Research in mathematics education has focused its attention on teacher education rather recently: mathematics teacher education is considered "an emerging field" (Adler et al., 2005). In this emerging but growing field there has been little space for study about the teachers' attitudes towards the external evaluation systems for the assessment of mathematical learning.

In the present age, the issue of evaluation system has become central in the discussions on education and external evaluations are increasingly present in many school systems. Therefore we believe that it is crucial to give voice on this important educational issue to one of the main actors of the educational process, the teachers, collecting their beliefs, emotions and attitudes. As a matter of fact, these affective reactions seem deeply to affect the emotions of teachers, also influencing their educational choices. In this perspective we believe that understanding teachers' attitudes towards the external evaluation of students' mathematical competencies can be the first step in order to exploit at the best from a didactical point of view the

important feedback that an external evaluation can return to teachers and students.

In our theoretical framework, we assume a multi-dimensional definition of attitude where attitude is characterized by emotions and beliefs towards the object and their mutual interactions (Di Martino & Zan, 2010).

## FOCUS OF THE POSTER

Our research focuses on the Italian teachers' attitudes towards the evaluation system for the assessment of mathematical learning promoted by INVALSI (National Institute for the Assessment of the Educational and Instructional System). In the Italian context, the impression is that many teachers suffer this kind of evaluations also because they feel the external evaluations as something "ready-made", far from "real school" and imposed from above without listening to teachers' opinions. This impression is largely perceived in many unofficial occasions but not scientifically analysed in Italy until now.

To understand the range, but above all the causes of the sometimes strongly negative reactions by the Italian teachers to this external evaluation, we have planned a research in two stages. A first stage based on the elaboration of an on-line questionnaire addressed to all teachers of every school level and a second stage that foresees the development of personalized interviews to the teachers who voluntarily share their e-mail for that in the online questionnaire.

The focus of the poster will be the first stage. We will introduce the methodological choice at the basis of the development of the questionnaire and discuss the first analysis of the data collected.

Concerning the methodological choices, they are in line with recent studies about teachers' attitude (Coppola et al., 2013): the survey was voluntary and anonymous, formed mostly by open questions in order to allow everyone to choose what he feels is the most important to say, with the words he feels as the best. Regarding the analysis of the data, the research is now in its first stage but we are developing what Demazière and Dubar (2000) call *analytical* approach: the text is analyzed in order to systematically produce sense starting from people's words. The final outcome of this process is the construction of a set of categories, properties, relationships: what Glaser and Strauss (1967) call *grounded theory*. A first result is surely the participation of Italian teachers beyond any expectations: in less than 2 months, about 2 thousands of teachers have filled our open questionnaire, confirming the teachers' desire to express their view about the current external evaluation of mathematical competencies. Among the first results of the data analysis, we have seen the differences between teachers' attitudes according to the school level, but also some different motives that origin a negative attitude toward the external evaluation.

Glaser, B.G., & Strauss, A.L. (1967). *The discovery of grounded theory. Strategies for qualitative research*. Chicago, IL: Aldine.

## CONTENT OF THE POSTER

The poster was divided in two sections: in the first we illustrated the argument, the conceptual framework and the methodological choices at the basis of the development of the used questionnaire; the second section was focused on the conducted analysis, providing the first results of the data analysis.

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