

EVALUATION OF THE PROFESSIONAL COMPETENCES OF THE MATHEMATICS TEACHER¹

Alvaro Poblete & Verónica Díaz², *Universidad de Los Lagos - Chile*

This investigation refers to the evaluation of the competences of the mathematics teacher, in a qualitative as well as a quantitative study. For this purpose, a set of qualitative dimensions and professional competences concerning the mathematics teacher were classified. Then the evaluating instruments were validated by associating specific dimensions to subject contents, didactic and evaluation forms being applied by the mathematics teacher.

The professional competences of the mathematics teacher were characterized within the competence context framework by considering the knowledge / content of mathematics and on mathematics; the knowing-performing / didactic of pedagogy; of the teaching-learning and evaluation; to being / transversal of values and to the knowing-being / evolutive of adaptation. The interaction of the contexts are associated with the structure of the didactic knowledge of the math teacher and they are shown as the teacher performs in the classroom (Poblete & Díaz, FONDECYT, 2001).

The questionnaires referring to the competence context framework the general and specialized abilities and the dimensions concerning quality were applied to a group of 2882 pupils, 82 peers or board of directors and 84 teacher in the X Lakes Region, South of Chile. On the other hand, the qualitative study considered the collecting of data through the observations carried out in the classroom and individual interviews with the teachers and students.

From the quantitative study of the context framework competences and dimensions between the answers provided by teachers, students and peers or board of directors we can see that there are differences which are directly related to the knowing – mathematics contents framework , knowing – performing didactic of teaching – learning and knowing – being evolutive; with the general competence capacity to achieve an adaptation, up – dating and a projection as a mathematics teacher and with the specific competencies of ability to support learning by solving of problem in mathematics and the ability to following up, developing and showing a mathematics reasoning. Furthermore, the average score of teachers is significantly smaller in relation to the students, peers or board of directors in questions related to the understanding of a problem in mathematics, the genesis of a mathematics contents and with the relations between the concepts and their constructions.

The results obtained in the qualitative study show that the majority of the students do not recognize the teaching of mathematics related to values, moral and social aspects, as well as there are differences provided by the students and the teachers in relation to their participation in the forms of evaluation. These proposals are related to the being – transversal values content and to the knowing – didactic performing of evaluation frameworks respectively.

¹ This article shows the results of National Project Fondecyt N°1010980.

² Alvaro Poblete, Ph.D. & Dr. Verónica Díaz, lecturers and researchers specialized in Didactics of Mathematics. Depto. Ciencias Exactas. Universidad de Los Lagos. Osorno. Chile.
apoblete@ulagos.cl ; mvdiaz@ulagos.cl