

# “una empresa docente:” A Teaching Enterprise

Pedro Gómez

“una empresa docente” is a research center for Mathematics Education at the University of Los Andes, in Bogotá, Colombia. It was created eleven years ago, and is now part of the Faculty of Sciences of the University. Its mission is to support the process of improving the teaching and learning of school mathematics through the empowerment of the Colombian Mathematics Education system. This process of empowerment is envisaged as a process of change for the different actors involved—teachers, administrators and institutions—through the implementation of innovations at the curriculum level. In order to attain this mission, “una empresa docente” has four main strategic work areas: curriculum innovation, research, teacher training, and infrastructure development.

“una empresa docente” developed, during its first five years of existence, a curriculum innovation project in the area of college mathematics for the social sciences. As a result of this project, we published several textbooks and a set of computer programs that was awarded the first prize in research in technology for teaching by the Colombian node of the Iberoamerican Net of Computer Aided Instruction.

The use of technology in the classroom and in teacher training, and the institutional factors affecting school mathematics, are the center's two main lines of research. We have been doing research on the use of graphing calculators for the teaching and learning of precalculus and statistics, and the use of Cabri in the teaching and learning of geometry. This research has been conducted with college level students.

Four years ago, we introduced long-term (1-2 years) teacher-training programs, substantially different from those currently in existence in the country (short-term—two to four weeks—with strong emphasis in factual information). The programs recognize the importance of the institutional aspect of mathematics teacher education, and the need for teachers and administrators to broaden their visions of mathematics, its teaching and learning. Questioning is the basis for enabling teachers, administrators and students to enter into reflexive curriculum innovations—thus empowering a process of change. We have developed several such teacher-training programs with public middle and high schools in Bogotá.

The empowerment of the Colombian Mathematics Education System is not possible unless teachers, administrators, and researchers have the means to access

the information and resources necessary for deepening their knowledge, then evaluating and even producing innovations. For these reasons, “una empresa docente” has also been active in publishing literature on Mathematics Education. We have produced one of the most important Spanish series of Mathematics Education books in Latin America, and three years ago began publishing the first Mathematics Education Journal in Colombia, *Revista EMA*, which today is being recognized as an important communication medium both for teachers and researchers. “una empresa docente” launched the first complete Spanish Internet server in Mathematics Education (<http://ued.uniandes.edu.co/>). This project, supported by UNESCO and Texas Instruments, offers mathematics education literature, links, and contacts. The server received second place in the annual recognition for research in technology given by the Iberoamerican Net of Computer Aided Instruction. “una empresa docente” created the first Mathematics Teachers Association in the country in order to give support to mathematics teachers' work, to foster communication and discussion, and to begin the consolidation of the research community in our country. Some months ago, “una empresa docente” received an honorary mention from UNESCO as part of its Comenius Medal. This distinction recognizes the innovative contribution to education that the center has been doing since it was created.

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