Virtual Learning Environment and others Technologies used in Continuous Formation of Mathematics Teachers

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This work presents the results achieved in continuous training of mathematics teachers in the Post-Graduate Program Studies in Mathematic Education, with the use of a virtual learning environment (VLE) Moodle and others technologies. It is difficult to conceive a teacher, nowadays, developing his work at school without any technological apparatus to support his activities. Thus teacher's training must be continuous and it has to progress according to technologic developments. It is essential to know not only the strategies of teaching and learning with the use of specific programs that allows the development of mathematical content, but also the theoretical basis which gives support to such strategies as a structure for teacher's training. The use of the environment Moodle allowed us to break barriers of time and distance; it was an interactive and collaborative work with very positive results. It is gratifying to notice these results, because even those teachers reluctant in using computers become enchanted with their own abilities' progress. The participants get involved in the learning's context; they propose problems and its resolutions, formulate hypotheses, observe and review their previous designs, make decisions, in a dialogue with the reality of their practice teaching. The specific objective of the continuous formation of these students-teachers meets the following goal: develop a training supported by the knowledge's appropriation of research in Information and Communication Technologies (ICT) and their interface with Mathematics Education. Thus it is expected to lead student-teacher to recognize the possibilities of technologies to their professional practice and identify procedures, concepts, descriptions and representations which may be useful. To this end, specific modules are scheduled in which the student must act individually and collectively to achieve the objectives proposed. The programmatic content has been structured having in view the analysis and proposals to use softwares as support to teaching and learning of mathematics and the discussion of texts and theoretical research mathematical content developed suppose an practical training. Activities with content on functions, geometry and algebra were proposed with the use of WIRIS Cas and Geogebra. In the studies of Dynamic Geometry the programs Cabri Géomètre and Geogebra were chosen because they're used in most schools and also because Geogebra permit free access and a practical use. It´s important to take into account in the designing of the course, the pedagogic proposal of the discipline and the analysis of the possibilities of interaction that allow the teacher to monitor the development of students individually and in groups, their expectations and their reflections on the construction of their knowledge. The guiding principle is to allow the collaborative learning and the knowledge's sharing, because we believe that learning is not a solitary process. All the subjects proposed had as support texts and theoretical research on the use of ICT in teaching and learning of mathematical content to subsidize the development of the training.

Keywords Technologies and Mathematics Education; Continuous Formation; Virtual Learning Environments (VLE); Cabri Geómètre; Geogebra; WIRIS CAS.