

# INVESTIGATING AND LEARNING: A WEB BASED PROJECT

J. P. Ponte, H. Oliveira, H. Fonseca, J. M. Varandas, L. Brunheira

*Centro de Investigação em Educação, Faculdade de Ciências da Universidade de Lisboa*

**Aims and context.** This project aims to promote innovative perspectives for mathematics teaching and learning through the development of a Web site. It emphasizes the idea of investigation as a process of knowledge construction and provides a link for the community interested in this idea in different parts of the country. The project is developed from 2000 to 2002, as one initiative of Research Group DIF with the support of the Ministry of Education (DAPP). The target audience is all those directly interested in curriculum change in mathematics including teachers, prospective teachers, teacher educators, and pupils of different age groups.

## **Main assumptions:**

- (i) Investigations constitute an important form of construction of knowledge. Pupils and teachers may undertake mathematical investigations and, in addition, teachers may undertake professional investigations.
- (ii) The Internet is a powerful medium, promoting cultural change. It enables the search for information. It also allows people to publicize their work. It is a medium that promotes interaction among people, enabling the development of new meanings and new identities.
- (iii) Information and Communication Technologies (TIC) are a significant resource for teacher education. They also provide an important link between research and professional practice.

**Activities carried out in 2000.** These include, for example, the 1) set up of a search engine focused in mathematical investigations; 2) actualization of a data base of publications concerning mathematical investigations; 3) creation of a text bank (with documents to download); 4) update of short texts covering issues involved in carrying out mathematical investigations in the classroom; 5) exchange of teaching experiences; 6) update of a links page for other sites; 7) creation of a Web-based forum; 8) divulgation of the project and interchange; and 9) theoretical discussions.

**Project interim evaluation.** By the end of the first year of the project, we strengthened our perspective about the value of investigative activity as a fundamental strategy for knowledge construction. However, we note some difficulty in getting material, especially descriptions of classroom experiences, to include in the site. We also have some difficulty in promoting interactions with the target audience, as the participation in the forum is below our expectations. These are issues that we want to address in the future development of the project.

**Initiatives for 2001.** New material will be provided in the Web site, such as the analysis of new curriculum documents regarding the place given to investigative ideas. A closer connection to schools will be attempted, through sessions with features such as demonstrations of the site to teachers and students and research about the place of investigations in teachers' professional practice. We are also planning a survey regarding the how teachers use the Internet.

**Graphical form.** The poster will include images from several pages of the Web site as well as a global map of the site. A scheme of the project aims, activities, and evaluation will also be provided.