Chapter 1
ICT in the Classroom:
New Learning Environment

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ABSTRACT

This chapter presents the research carried out by teachers and students of 6 junior high school classes on the modern ICT use in didactics. They participated in the "Cl@ssi2.0" project and were involved in the PoliCultura&Moodle format contained in Learning4All (www.learningforall.it), a section of a national macro-project financed by FIRB (Fondo per gli Investimenti della Ricerca di Base by the Italian Ministry of Education). A short questionnaire focusing on the students' learning needs and their aptitude for new technologies was administered to students. Some observations were carried out during a normal school day. Some student-centered focus-groups were carried out. A LCMS Moodle environment was planned and implemented to support and expand the educational activities carried out in the classroom. Research has confirmed that technological innovation in school requires a strong support from governance, and teachers who gain the digital competence and a design capacity for innovation in teaching ordinary action.

INTRODUCTION

This research focuses on the modern ICT use in didactics as it was carried out in Umbria in six junior high school classes taking part in the national Cl@ssi2.0 project financed by the MIUR to introduce multiple digital technologies in the classroom, including the LIM, in the daily teaching and learning activities. The innovation consists in transforming the classroom into learning environment to provide students and teachers with tools that are routinely used in the computer lab. This innovation of the teaching action give greater focus to the students' activities.

DOI: 10.4018/978-1-4666-4502-8.ch001

This research started in the 2009-2010 school year (www.scuola-digitale.it/classi2.0) and now (the experimentation's second year) is still experimenting the PoliCultura&Moodle education format within the national project called "Leaning4all."

The research aims to monitor the experience to observe the connection with the objectives defined by the MIUR about school innovation.

The research in hand involves 60 teachers and 143 students. Each classroom was formed by 24 students (on the average); 10% of them were students with "diverse needs."

All schools involved in the project are situated in small towns and in middle-class social/economic contexts. The schools taking part in the Cl@ssi 2.0 project were chosen on the basis of their previous ICT-based projects.

The two-year experience has the following general aims:

1. To present the Cl@ssi 2.0 project to the committee's teachers and the fundamentals of the ICT to be used in the classroom and their innovative character;
2. To construct a shared cultural background in cooperation with teachers;
3. To lead teachers to express their reserves or prejudices about the use of ICT in the classroom, helping them to consider these tools in a positive perspective;
4. To stimulate and support teachers in taking part in the project in order to improve their digital literacy;
5. To investigate the schools' and classrooms' technological resources in order to set them up for the experimentation.

In order to support learning at school within an online environment (Moodle), the following aims were taken into consideration:

1. To promote opportunities of communication, discussion and reflection for teachers, students, families and other concerned subjects;
2. To activate environments suitable to share documents and content;
3. To promote a continuous interaction among teachers, experts (university tutors) and local education superintendency members to realize the necessary scaffolding;
4. To promote an experimentation of blended learning in the classroom to be carried out by students both individually and in teams;
5. To support the PoliCultura&Moodle format promoting the multimedia narration;
6. To promote the realization of learning and practice communities as they represent an innovative character of the teacher training.

The experimentation included: a semi-structured questionnaire on the students' aptitude to use ICT both at school and at home, observation in the classroom, some focus groups for students, an online e-learning environment (Moodle) and a questionnaire for the assessment of PoliCultura&Moodle format to be filled by the students involved in the project.

The classrooms could avail themselves of some technological tools, as notebooks, whiteboards, digital cameras and video-cameras, pen-drives, Internet connections, audio and video computer software and the "1001Storia" research engine suitable for the multimedia narration.

This experimentation was carried out during the course in Teaching/Learning technologies (Faculty of Education, University of Perugia, Italy) by a team formed by Professor Floriana Falcinelli, who coordinated the project and the teacher training and organized the observations and the focus groups, and Chiara Laici Ph.D. who cooperated in processing data coming from the two questionnaires, planned and administrated