



Chapter VII

Children and Computers: What They Know, What They Do

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Abstract

This chapter describes the design, the methodology, and the preliminary results of the research Children and Computer: Experience and Conceptual Frameworks (3-6). The research, started in 2004, is supported by IBM Foundation Italy and University of Milan-Bicocca—Dipartimento di Scienze Umane per la Formazione “Riccardo Massa.” The research team, led by Professor Susanna Mantovani, includes: Chiara Bove, Paolo Ferri, Valentina Garzia, Susanna Mantovani, Anna Poli, Donata Ripamonti, and Angelo Failla (IBM Foundation Italy), Morgana Stell (IBM Foundation Italy).

Introduction

Engagement, effort, pleasure, concentration, happiness in exploring, trying and producing ideas, experience and performance, and cooperative action, all these aspects are very conspicuous when we observe young children using computers in educational settings. They seem to love technology, computers, and digital networks. How can we observe the way they approach, explore, discover, and use these very special cultural artifacts (computers and digital networks)? How can we investigate the ways in which they interact with them? We probably need a “phenomenology of motivation” (Lumbelli, 2000, 2001; Lumbelli & Zidari, 2001) aimed to develop educational eyes capable of seeing children, who are experimenting and learning with ICT. This would provide a basis to develop and organize learning paths and tools which may make the most of children’s energy while avoiding wasting their happiness to connect. Today, observing and studying the way children gain interest, explore, and use computers, whether individually, with other children, or with an adult, is a key issue in early childhood education, as it is connected with adults’ educational ideas, and their influence on relations and teaching practices, as well as with the roles children can play as mediators of shared experiences (Bove, 2004; Ferri, 2004, 2005; Ferri & Mantovani, 2006; Mantovani, 1998, 1996). The research project presented in this chapter studies how children and adults explore the potential of new technologies in family and preschool settings. We took as our starting point some shots videotaped and discussed through focus groups with teachers and parents, following the approach outlined by Joseph Tobin in the study “Preschool in Three Cultures: Japan, China, United States” (Mantovani, 1998; Mantovani & Musatti, 1996; Tobin, Wu, & Davidson, 1989).

What We Mean: The Key Words of Our Chapter

Child

An active, curious, and competent person who constructs his/her knowledge by interacting with peers and close adults. This conception challenges the idea that children are passive receptors of notions, empty boxes to be filled, “tabula rasa” on which adults imprint their knowledge.

Interobservation

When we find something, we instinctively feel the need for interobservation (...) because looking together with people who know enough and are used to observing and discussing with them enables us at the same time to observe the fact in a richer

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