Chapter II

TEL Practices in Preschool and Kindergarten Education:
Integrating Computer Use and Computer Programming in Off-Computer Activities

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Inside Chapter

The explosion in the use of computing in learning holds great potential for preschool education, and yet information on common educational practices with computers at the level of preschool education is scarce. This chapter shares two distinct goals: first, to provide context for the practitioner by providing a panorama of the information available on actual field practices and recommendations by official bodies from several countries regarding the inclusion of computing technology in the educational practice at the preschool and kindergarten levels; and second, to

present a hands-on technical perspective on the matter of immersion of the computer in the daily practice of preschools in the form of a four-way guide, including the use of computer programming in this manner. At the end, a list of readings and activity suggestions is provided to help the reader put these ideas into practice.

Introduction

Young children are immersed in human society and that immersion is reflected upon the daily activities, themes, and events taking place inside their classrooms, or—in the case of preschools and kindergartens—activity rooms. Technology in general, and computers specifically, being nowadays so prevalent in society, has similarly entered these educational spaces, even with all expected constraints of budget allocation, time allocation, and lack of methodological information.

One might therefore expect a deluge of information stemming from field know-how and research on the use of computer technology, and easy-to-find sets of common educational practices. However, such is not the case, and scarcity is the norm, with field surveys tending to focus on formal levels of education for children aged 6 or older (UNESCO, 2003).

This chapter provides the practitioner with the background details that inform and support the practice, and thus the first part of it contains a perspective on the sources of actual information and their content. That information falls short of providing adequate guidance for planning and managing practices, so this chapter also presents a summary of recommendations provided by those sources regarding the inclusion of information and communications technologies (ICT) in the educational practice at the preschool and kindergarten levels. Useful as those recommendations and its sources are, they are either too specific or too generic as guidance for the practitioner that wishes to plan and conduct computer-rich activities. The final section of this chapter thus provides a model to guide the practitioner using a four-way approach to the development of activities.

By means of this four-way approach, this chapter aims to prove itself helpful as a resource for designing and conducting TEL practice at the preliterate levels of education (preschool and kindergarten).

Background

What we as early childhood educators are presently doing most often with computers is what research and NAEYC guidelines say we should be doing least often (Cle-