

Chapter 31

Mobile Generation, Digital Devices and Preschool Education

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ABSTRACT

Contemporary children live in the digital environment and develop very quickly the natural ability in using technologies. At an international level, scientific research confirms the widespread use of mobile devices in the family and the increasing children exposure to these. This study mainly focuses on the following aspects: the benefits of touch devices for games and creativity and the risks related to possible delays in social and linguistic development and to addictions. In Italy, statistical surveys reveal a contradictory scenario: on the one hand, the digitization of citizens complies with international trends, especially regarding the use of the smartphone; on the other hand, there is a strong technological backwardness in the institutional area. The survey has analyzed the relationship between digitods and touch media, paying attention to usage profiles, usage behaviors, interaction, app selection and fruition processes. It has also been observed the parent-child interaction during the use of touch media, in order to figure out media educational guidelines in kindergarten.

1. INTRODUCTION

Young generations have started interacting with digital technologies earlier and earlier. Scientific research shows that, thanks to the remarkable plasticity of the brain, activities carried out during the first years of life affect the future development, so it is necessary to question risks and benefits of technologies exposure, to evaluate the role of adults/parents and also about the related educational responsibilities. From Shonkoff's theories (2010) to the latest research by The Lancet - the most prestigious international journal in the medical field, it has been investigated about the importance of promoting appropriate mediation practices in the family and in kindergarten, in order to prevent socio-education poverty (Alivernini, Manganelli & Lucidi, 2017). In fact, contemporary children are "anthropologically different" compared to previous generations. They have developed a "natural ability" of appropriation and control that adults can never reach, enough to make us think of a new evolutionary species: *homo sapiens digitalis* (Ferri, 2014).

To underline the radical nature of techno-cultural innovation of contemporary society, Marc Prensky (2001) coined the "digital natives" neologism - in contrast with "immigrants" - to indicate the multi-screen generation. Specifically, Prensky examined how people born after 1985 in the United States is able to live in the digital habitat with mastery and immediacy.

Over the next few years, the digital natives definition has been further supported by studies that showed the peculiarities of cognitive and experiential practices related to technological dynamism. The smartphone, in particular, is perceived by younger users as an indispensable extension of the Self, such as to affect psycho-physical abilities too (Prensky, 2015).

Ghosh, researcher and head of the Institute of Neuro-Informatics at the University of Zurich, has analyzed the activation of the sensory-motor cortex during the use of touch devices and has detected how digital technology influences the processing of tactile information. According to the researcher, the use of touch screens increases the area of the brain designed to sensory impulses, transforming – in an evolutionary perspective – the somato-sensory cortex (Ghosh et al., 2015). In this regard, Paul Holland refers to contemporary children as the mobile born because they have a natural ability in using technologies, they access the cloud at early age and expect that every daily activity can be managed through an app (Holland, 2013).

The ease of access to touch devices has led to the diffusion of the neologism digitods, which indicates - in scientific literature - those children born after the introduction of the cell phone with capacitive screen in 2007 (Leathers et al., 2013). If the computer implies eye-hand coordination and a minimum level of literacy, the touch screens can also be used by very young children just with the touch of their fingers.

In the essay "Generation app", Gardner and Davis argue that the latest generations tend to delegate even the most basic tasks to a software, with the risk of living passively the "technologies experiences" (Davis & Gardner, 2014). This trend is confirmed by the widespread marketing of apps and media content for children. For example, in the Google Play Store and Apple App Store it is possible to download about 80,000 apps dedicated to children and advertised as "educational apps". Gardner and Davis write: "Apps are perfect tools if they take care of everyday things, making us free to explore new directions, weave deeper relationships, reflect on the mysteries of life and build a unique and meaningful identity. If instead they turn us into incapable to think with their own head and ask new questions, develop meaningful relationships or construct an appropriate, elaborate and constantly evolving sense of Self, then app open the path of slavery in the psychological sense" (Davis & Gardner, 2014, pp. 31-32).

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