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Young school children's use of digital devices and parental rules

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ABSTRACT

This paper looks at the usage of digital devices and parental rules among Singaporean children who are in their first two years of school. It examines the young children's usage of personal computers, mobile phones and tablet PCs. One hundred and sixteen children participated in the interviews. The children were asked about their access to the digital devices, whether they sought permission from parents as well as parental rules with regard to the usage. There is high home computer access of 96%. Children reported using personal computers mainly for playing games and for e-learning. All children interviewed reported having access to mobile phones. However, only 57% reported having access to tablet devices. Most of the children reported that they sought parental permission for use of these devices. There seems to be more parental rules for computer use than for mobile and tablet devices, the most common rules being not to play games until completion of homework, and health concerns such as having enough rest and not to strain the eyes. The children were also asked about their offline leisure activities, which are mostly spent on watching television and playing outdoor games. The paper also discusses gender differences and implications for parenting.

1. Introduction

The increasing amount of time children are spending on technological devices at home and in school has raised concerns on the impact of these activities on their development. Surveys conducted on parents suggest that many buy home computers and subscribe to internet access to provide their children with educational resources (Lexmark International, 1996; Turow, 1999). However, most of the recent research on children's use of technology and their online activities focus mainly on older children and teenagers (DeBell and Chapman, 2003; Greenfield and Yan, 2006; Henderson, 2011; Livingstone et al., 2005; Yan, 2005). Livingstone and Haddon (2008) argued that since use amongst younger children is growing fast and considering that they are more vulnerable to the inherent risk due to their lack of maturity and coping strategies, it is imperative for researchers to study children younger than 12 years old.

2. Usage and perceptions towards digital devices

2.1. General uses of devices by young children

Several research studies on children and computing have shown that children use home computers for various purposes, including leisure activities (e.g. game playing and web surfing) and school work (Pew Internet and American Life Project,

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2002; Shields and Berman, 2000; Subrahmanyam et al., 2000). Only a handful of studies on internet use have included children younger than 9 years old. For example, in a research conducted by DeBell and Chapman (2003) for the National Center for Education Statistics, they found that 23% of children in nursery school use the internet. By third grade, 50% of children reported using the internet. The most popular uses of the internet for 5–9 year olds were playing games (20.5%), homework (11.7%) and email (11.1%). A study by Roberts et al. (2005) highlighted that 8–10 years old are the most likely of all age group to have a video gaming device in the bedroom spending about 1 h/day playing games. On the other hand, young children under the age of 3 or 4 years old are more likely to use the internet to watch video clips (Childwise, 2012; Findahl, 2012; Teuwen et al., 2012).

2.2. Young children's perceived effects of using digital devices

Another comprehensive study by Yan (2005) on children age between 5 and 12 years old, revealed that 5–8 years old had only minimal or partial technical and social understanding of the internet as compared to older children. In terms of understanding the social complexity of the internet, 5–8 years old in Yan's (2005) study thought that the internet helped them in learning and did not have negative influence. In contrast, older children in the 9–11 age group knew that the internet can help in school work but can also give bad ideas. According to the Australian Bureau of Statistics (2012), 79% of Australian children aged between 5 and 8 years old go online daily. Young children make up a substantially large user group for mobile technologies, using the internet from a variety of devices such as touchscreen computer tablets, e-readers, laptops and smart toys (Ofcom, 2012).

2.3. Parental attitudes towards young children's usage

A more recent research conducted by Dodge et al. (2011), found that increasing numbers of young children were using the internet without adult supervision at least some of the time. Dodge et al. (2011) also commented that these young children also had limited understandings of the potential dangers. In many cases, parents did not have an accurate understanding of their child's internet competency. However, there is some evidence indicating that Dutch parents reported being actively involved in supervising their young children's internet use with children from higher socioeconomic backgrounds receiving slightly more supervision than those from poorer families (Nikken and Janz, 2011). Concurrently, Davies and Gentle (2012) noted that changes in media choices of school age children seem to indicate a greater autonomy in decision-making granted by parents.

2.4. Perceived gender differences

There are limited studies on young children's gender differences in terms of technological and internet usage. A few studies that looked at the effects of gender, focused on boys and girls interactions with computers. Some studies indicated that gender has little impact on these interactions. Bergin (1993) found almost no gender differences amongst kindergartners in computer use. According to Bergin (1993) when children start learning how to use a computer, they are all starting from the same level. Perceived differences may come from gender stereotypes and not on actual intellectual differences. On the other hand, Yelland (1994) concluded that although initially, boys were able to work faster and more efficiently than the girls, after a period of time, the girls did appear to perform better than boys. There was also another study that showed that girls were behind in every category academically when using computers (Sutton, 1989). A more recent study by Heft and Swaminathan (2002) found that there were gender variations among 4–5 year olds in terms of the frequency of computer use, with boys using the computer more often than girls. Given the different results from these studies, it is imperative that any study on computer and technology usage examine gender variations.

2.5. Age differences on the effects of digital device usage

According to Holloway et al. (2013), the large number of increase in internet and technology usage by very young children has not yet been matched by sufficient studies exploring the risks and benefits of their online interactions and use of devices. Cranmer et al. (2009) drew similar conclusions as Dodge et al. (2011) in that internet safety in the minds of their sample of children aged between 7 and 11 years old, was an abstract and poorly understood concept. According to Cranmer et al. (2009), the issue of age needs to be recognized as a critical influence on the technological needs, uses and interests of children and young people. They argued that the social, cultural and cognitive experiences of a 7 year-old child is vastly different from an older child who is 11 years old, or compared to a 15 year old teenager.

In Singapore, while there were studies of children's internet use, these studies focused on children between the ages of 12 and 18 years of age (Lim et al., 2002; Liau et al., 2005; Mythily et al., 2008), there is a lack of studies of internet use among younger school children. In 2011, a national survey by the InfoComm Development Authority of Singapore (2010) found that 85% of households in Singapore had Internet access. Ninety-nine per cent of school-going children between the ages of 7 and 14 had Internet access. This paper addresses a need in the research to study internet use among younger school children at the beginning of their education, that is, in Primary 1 and 2 (ages 7 and 8), and to examine the extent of parental monitoring