Mobile Phone Use by Middle School Students

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INTRODUCTION

A majority of children in grades five through eight, ages 10–14, use mobile phones. Many children receive their first mobile phone during middle school. In 2009, just under a third (31%) of children ages 8-10 owned mobile phones, while more than two thirds (69%) of children ages 11-14 were mobile phone owners (Rideout, Foehr, & Roberts, 2010). Middle school students typically own traditional cell phones. In 2011, only 8% of 12-13 year-olds owned smartphones (Lenhart, 2012). Yet, many more middle school students have *access* to smartphones. A majority (65%) of students in grades 6-8 used smartphones in 2012 (Project Tomorrow, 2013). The widespread usage of mobile phones has changed the way middle school students communicate with peers and the information technologies they use. Middle school students use mobile phones for an average of 2 hours and 40 minutes during a typical day for a variety of activities: talking on the phone (36 minutes), texting (73 minutes), listening to music (18 minutes), playing games (18 minutes), and watching television (15 minutes) (Rideout, Foehr, & Roberts, 2010). Mobile phones, and smartphones in particular, are supplementing or even replacing some of the devices adolescents use for media consumption. For instance, texting with a mobile phone may be replacing the practice of sending email over the Internet (Madell & Muncer, 2004).

This entry highlights the ways that middle school students use mobile phones and the resulting impact on their academics, social relations, safety, and health. Mobile phone use in the middle school classroom helps to create student-centered, project-based learning environments. Mobile phone applications can help middle school students learn new material and academic skills. Texting with a mobile phone is an informal literacy activity associated with middle school students' traditional literacy achievement. Middle school students use their mobile phones to maintain friendships and explore romantic relationships. Cyberbullying is a problem associated with middle school students' mobile phone use. Carrying a mobile phone can help young adolescents feel safe, but using it in public can be a hazard. Finally, using mobile phones, particularly after a designated bedtime or "lights out," may have negative effects on middle school students' sleep and mental health.

OVERVIEW

Over a decade of research about mobile phone use by middle school students has demonstrated that while middle school students value their mobile phones, their use can have positive and negative effects on children's academics, social relations, safety, and health.

Dr. Kiyoko Kamibeppu (Kamibeppu & Sugiura, 2005) at The University of Tokyo is one of the

earliest researchers examining mobile phone use by middle school students. Dr. Kamibeppu explored how eighth graders in Japan use mobile phones to communicate with their friends and discovered that mobile phone use can impact children's mental states. Almost half the eighth graders in the study reported feeling insecure or anxious when friends did not respond immediately to their text messages (Kamibeppu & Sugiura, 2005).

Dr. Robin Kowalski (Kowalski & Limber, 2007) at Clemson University is another early researcher who explored mobile phone use by middle school students. Dr. Kowalski investigated cyberbullying by middle school students. Cyberbullying is an extension of traditional bullying, which permeates the home and school environments (Smith et al., 2008), impacting children's self esteem (Patchin & Hinduja, 2010).

A third early researcher who explored mobile phone use by middle school students is Dr. Jan Van den Bulck (2007) at the Katholieke Universiteit Leuven in Belgium. Dr. Van den Bulck investigated the impact of mobile phone use after "lights out" by adolescents in Belgium and found that any amount of phone use after "lights out" was associated with daytime tiredness a year later (Van den Bulck, 2007).

CURRENT SCIENTIFIC KNOWLEDGE

Mobile phone usage has become nearly ubiquitous in adolescents. In recent years, there has been an explosion in ownership, usage, and a radical shift in how the devices are used (Rideout, Foehr, & Roberts, 2010). While mobile phones may have originated as a means for facilitating conversations out of the home, they are now platforms for complex social interactions, multimedia consumption, a variety of types of communication, academic learning, and entertainment.

Amanda Lenhart (Lenhart, 2009; Lenhart, Ling, Campbell, & Purcell, 2010; Lenhart, 2012; Madden et al., 2013) at the Pew Research Center's Internet & American Life Project is among the leading experts in mobile phone use by youth. Ms. Lenhart examines how children and adolescents use and think about technologies, including mobile phones.

Dr. Clare Wood (Wood, Jackson, Hart, Plester, & Wilde, 2011; Wood, Kemp, Waldron, & Hart, 2014) of Coventry University is also among the leading experts in mobile phone use by middle school students. Specifically, Dr. Wood has investigated texting and its relationship to middle school students' traditional literacy skills.

Finally, Dr. Justin Patchin of the University of Wisconsin-Eau Claire and Dr. Sameer Hinduja at Florida Atlantic University (Patchin & Hinduja, 2010) are also among the leading experts in the field of mobile phone use by middle school students. Dr. Patchin and Dr. Hinduja examine the occurrence and effects of cyberbullying.

Academics

Adolescents tend to use mobile phones informally to support their learning. Nearly three quarters (72%) of middle school students in the United States use their mobile phones to look up information on the Internet (Project Tomorrow, 2010) and 39% report that they use their smartphone to complete homework (Teenage Research Unlimited, 2012). In contrast, only 6% report that they are allowed to use the smartphone in classroom for school work (Teenage Research Unlimited, 2012).

However, mobile phones can also interfere with adolescents' school work and learning. In general, middle school students spend between eight and twelve hours per day multi-tasking media (television, music, computer, phone, and video games) on screen-based devices with much of it delivered via a mobile phone (Rideout, Foehr, & Roberts, 2010). Social media and texting are distractions while studying, causing students to switch away from their school work after an average of less than 6 minutes (Rosen, Carrier, & Cheever, 2013).

In formal academic settings, mobile phones can alter the learning environment and student experience. Mobile phones enable students to

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