Mitigating Online Threats While Promoting Scholarship Through Awareness-Raising Interventions: A Study of Young People’s Technology Use, Risky Online Behavior, and Literacy of Cyber Awareness Practices

Soonhwa Seok, Korea University, Seoul, South Korea
Boaventura DaCosta, Solers Research Group, Orlando, FL, USA

ABSTRACT

Enthusiasm about the educational benefits offered by the World Wide Web has been tempered in recent years by apprehension regarding the prospects of mitigating associated online threats. Numerous safety measures exist, from legislation to technical controls. Though no doubt helpful, they are not substitutes for education and training. The current study (N = 1,092) aimed at identifying technologies young people have access to, the degree to which they engage in risky online behavior, and their literacy of cyber security practices. Recommendations for tailoring and refining awareness-raising training and interventions are also presented. Overall, findings are discouraging, with participants showing poor judgment with regard to safeguarding their wellbeing in the contexts of preventing malware, handling passwords, dealing with data encryption and storage, and surfing the Internet. The study is predicated on the premise that effective awareness-raising education can be implemented through a better understanding of today’s youth and their online practices.

Keywords: Cyber Awareness, Cyber Security, Education and Training, Internet, Online Threats, World Wide Web

1. INTRODUCTION

Anxiety about young people’s online exposure has become a familiar part of public discourse in many technology-rich societies (Staksrud & Livingstone, 2009). Thus, the educational benefits made possible by the Internet are creating a dilemma for many—in that there is a strong movement behind encouraging online use, but at the same time, this enthusiasm is tempered by...
apprehension regarding the prospects for mitigating associated online threats (Liau, Khoo, & Ang, 2005; Staksrud & Livingstone, 2009). For instance, parents tend to be supportive of the educational potential of the World Wide Web (WWW), but at the same time have serious concerns about their children’s online safety (Staksrud & Livingstone, 2009). Regrettably, such apprehensions are not unfounded.

Social media websites, massively multiplayer online games (MMOGs), and other online forums have been used to facilitate disclosure of young people’s personal information with damaging and illegal effects in online and offline contexts. For example, while examining 66 personal blogs published by adolescents, aged 13 to 17, Huffaker and Calvert (2005) found that the disclosure of personal information included first name (70%, n = 49; compared to 20%, n = 14, who shared their full name); age (67%, n = 47); birth date (39%, n = 27); location (59%, n = 41); and contact information (61%, n = 43), to include email (44%, n = 31) and personal website URL (30%, n = 21). Similarly, Hinduja and Patchin (2008), while examining 1,475 publically accessible MySpace profiles created by young people under 18 years of age, found that 57% posted a personal picture, 40% disclosed their first name, 8.8% revealed their full name, 81% disclosed their location, and 27.8% included the name of their school.

The WWW makes available unwanted exposure to inappropriate material. For example, Wolak, Mitchell, and Finkelhor (2007), in surveying a nationally representative sample of 1,500 U.S. adolescents aged 10 to 17, reported that 42% had been exposed to online pornography within the year, and of these, 66% reported that such exposure was unsolicited. Further, Sabina, Wolak, and Finkelhor (2008), while examining the online experiences of 563 postsecondary students, found that 72.8% reported having been exposed to pornography before age 18, with females reporting the largest percentage (42.3%; males: 6.8%) of unwanted exposure.

Many youth are subject to being bullied by peers, being stalked, and other predatory behaviors. While studying 177 seventh-grade students in an urban part of Canada, Li (2007) found that although almost 54% of the participants were victims of traditional bullying, over 25% had also been cyberbullied. Almost 60% of those bullied online were female, and the majority of the online victims (and bystanders) did not report the incident to adults. Similarly, examining the relationships between cyber- and traditional bullying in the context of gender among 276 Turkish adolescents, aged 14 to 18, Erdur-Baker (2010) found that 32% of the students were victims of both types of bullying.

Perhaps the most worrisome of online threats, however, are those that lead to face-to-face encounters. Staksrud (2003), reporting on data from the SAFT (Safety, Awareness, Facts and Tools) project, which examined data from 10,000 adolescents, aged 9 to 16, from Denmark, Iceland, Ireland, Norway, and Sweden, found that 14% of the adolescents indicated that they had experienced a face-to-face encounter with someone they had first met online. Berson and Berson (2005), in conducting a comparative analysis with data gathered from online surveys, focused on adolescent females, aged 12 to 18, in the United States and New Zealand, found that a significant number of females had adopted unsafe online contact behavior, to include engaging in face-to-face meetings (United States: 12.5%; New Zealand: 23.6%).

### 1.1. Mitigating Threats While Promoting Scholarship

There are numerous safety measures to help thwart online threats, ranging from government regulation to parental supervision. For example, legislation has been passed in the United States to protect the privacy of adolescents. Thus, the Children’s Online Privacy Protection Act was enacted in 1998 to address the online commercial practices of collecting information about children under 13 without parent notice (Jamtgaard, 2000). Many school districts have imposed policies that define acceptable online usage for administrative staff, faculty, and students. There is also a wealth of technical
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