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# Full length article

# Teenagers' perception of risk behaviors regarding digital technologies



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## ABSTRACT

This article analyses young people's perception of risk behaviors in relation to the use of technology. To do this a study was conducted, in which 1486 young people aged from 9 to 16 took part. After grouping risk behaviors into five areas, the results indicate that young people have a greater perception of the risk related to the publication of data and photographs. It should be stressed that significant differences were found with respect to age and sex. Cluster analysis shows the existence of a group with a low perception of risk, made up largely of older boys. Finally, the data suggests the need to encourage ethical and technical training for young people regarding the use of technology, specially focused on the aforementioned group.

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# 1. Introduction

The use of Information and Communication Technologies (ICT) is a reality increasingly more widespread in the different parts of the world. In fact, in 2015 it was estimated that the number of mobile phone lines was more than 7,000 million and that the number of Internet users had for the first time passed the 3000 million barrier to stand at 3174 million (ITU, 2015). On the other hand, in 2014 it was estimated that Internet Protocol (IP) traffic in 2015 would be 72.42 exabytes a month, representing a rise of 21% in comparison to the previous year (Cisco, 2014). While it is true that the big economies lead the way in its use, developing countries are gradually joining the digital world.

The access to and massive use of information and communication technologies has driven society to generate new forms of relating with technology as the intermediary. The appearance of social networks such as Facebook, Instagram, Twitter and Google+ among many others has generated new spaces for exchanging opinions and life experiences. In the last decade, the appearance of instant messaging apps such as WhatsApp, Telegram and others designed for mobile devices have risen exponentially, intensifying technology use to the point that a US citizen now checks their mobile phones an average 46 times daily (Deloitte, 2015a). Furthermore, eighty-five percent of US consumers are currently on social media and 58 percent check their social networks daily (Deloitte, 2015b).

This penetration of technology into social life has brought with it countless advantages such as the possibility of accessing cultural contents, staying permanently informed, being able to easily contact people far from us, or benefitting from ubiquitous learning, among others. But with it, it has also brought new risks that represent new challenges for citizens, such as computer security and the management of private data, aspects we will look at in more detail a little later.

## 1.1. Technology and teenagers

Ever since digital technologies made their appearance, figures have shown that it is the youngest among us who make the greatest use of technological media, leading Prenksy (2001) to establish the division between digital natives – people who were born and have





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grown up with digital technologies – and digital immigrants – people who have had to incorporate new technologies to their lives and learn to live with them. Although said classification has been analyzed from critical points of view (Bennett, Maton, & Kervin, 2008; Waycott, Bennett, Kennedy, Dalgarno, & Gray, 2010), the fact is that young people are the age groups that make the greatest use of information and communication technologies. In Europe, for example, according to Eurostat data (2015a), if 78% of individuals aged between 16 and 74 in the 28 EU member states are Internet users, a high proportion of young people (four out of every five) uses the computer and accesses the Internet daily, compared to 63% of the remainder of the population. Furthermore, according to the same sources (Eurostat, 2015b) the group of young people aged between 16 and 19 represent more than 90% of daily Internet users. It is also this, the youngest sector of the population which makes the greatest use of mobile devices to connect with one another.

These tendencies repeat themselves or occur with greater frequency in other regions of the world with similar socioeconomic situations. Thus, for example, 92% of young people aged between 13 and 17 years of age in the United States affirm that they connect daily to the Internet, 88% have access to mobile phones permitting text exchanges and 73% have access to phones equipped with instant messaging apps such as WhatsApp (Lenhart et al., 2015). This revealing study also sheds light on details regarding access, such as the fact that the use of social media platforms is very widespread among this sector of the population, with Facebook (71%), Instagram (52%) and Snapchat (41%) being those the most used. Almost three out of every four young people participate in more than one social network where gender too is a decisive factor of their use. Thus, while the girls are more likely than boys to participate in visually-Oriented Social Media such as Instagram, Snapchat, Pinterest or Tumblr, boys show a greater tendency to play at video games (84% of boys compared to 59% of girls).

There is therefore not only a digital divide between those who access the Internet and those who don't (Norris, 2001), but confirmation of the existence of an intergenerational divide in as much as young people make more use of communication technologies than their parents (Altuna & Lareki, 2010), with the suggestion of a gender divide in the use made of technologies by young people (Antonio & Tuffley, 2014; Drabowicz, 2014).

It is precisely young people, due to their evolutionary characteristics, who form one of the most vulnerable groups to Internet risks. There is no closed, single list of the risks of using digital technologies, but among organizations such as Family Online Safety Institute (FOSI), Children's Online Privacy Protection Act (COPPA), Childnet International, Safekids or Staysafeonline, and different authors (Livingstone & Helsper, 2013; Vanderhoven, 2014) there is widespread agreement in establishing that the most significant dangers to which young people are exposed are, at least, the following: Cyberbullying (bullying between peers at school using technology), Grooming (the fact of establishing an emotional connection with a child to lower the child's inhibitions for child sexual abuse), Sexting (sending and receiving sexually explicit messages by mobile phone), addiction to technology and to the virtual world withdrawing from social life (Hikikomories), access to inappropriate content, identity theft, inappropriate handling of personal data and failure to respect basic safety regulations.

#### 1.2. Risk behaviors and digital technologies

In recent years, numerous educational studies have been carried out with a view to taking a closer look at the impact of these risks on young people. Thus, Notar, Padget, and Roden (2013), Chapin (2014) and Garaigordobil (2015) have studied the problem of Cyberbullying. In turn, Whittle, Hamilton-Giachritsis, Beech, and Collings (2013) have researched Grooming in children. Also Strassberg, McKinnon, Sustaíta, and Rullo (2013) analyzed the subject of Sexting in young people, and Kuss, Griffiths, and Binder (2013) focused on the addictions of young people to technology, to the Internet and to social media.

All of the above point towards inappropriate behaviors (publishing inappropriate photographs, making harmful comments, ignoring friends on social media, etc.) by young people which increase their exposure to risk, defined as the probability of harm (Coleman & Hagell, 2007; Renn, 2008; Reyna & Farley, 2006). From this perspective numerous factors determine the level of risk, some relative to the subject, such as their resilience, and others external, such as safety of the environment. The latest tendencies have led to the generation of a new model that groups the different risk factors around three axes: individual level, social level and country level (Livingstone, Mascheroni, & Staksrud, 2015).

According to studies carried out in recent years on the potential risks associated to the use made by teenagers of new technologies, we find among the issues addressed with greatest frequency: inappropriate content, contacts with strangers, threats to privacy and risks related with e-commerce (Staksrud, Livingstone, & Haddon, 2007). Also considered were subjects related to social isolation and dependence and addiction, associated to technology use (Gil, Feliu, Rivero, & Gil, 2003).

Other studies reveal that high-risk behaviors associated to digital technologies are: giving out personal information, using the Internet to harass or embarrass another person, chatting with strangers and starting relationships (Dowell, Cavanaugh, & Burgess, 2009). We also find online actions related to parent concerns: child might be approached by a stranger online, followed by their child being cyber-bullied and their child sharing their contact information (Jones, Mitchell, & Finkelhor, 2011).

### 1.3. Risk perception

Teenagers form a collective with a high command of technology and a perception that contacting people online is not something that they consider as being dangerous. They are aware of the risks and of how to avoid them (by not answering messages, switching off the computer, leaving the website, etc.). They believe that the Internet helps them to strengthen their social relations, not perceiving a risk in online communication with their peers (Espinar & López, 2009).

However, security awareness in digital technology users is very low in relation to mechanisms of psychological persuasion. Happ, Melzer, and Steffgen (2016) corroborated the lack of awareness of the risk involved in revealing their personal passwords online, with a greater number of subjects prepared to do so when they received a small incentive. Teenagers are more predictable in their behavior, due to more positively rating the benefits obtained from their actions than the risks they perceive (Parsons, Siegel, & Cousins, 1997).

The perception of risk related to digital technologies differs depending on the behavior type, something that doesn't stop users from continuing to use them, particularly those considered as gratifying and which are inversely proportional to the risk they perceive (Alhakami & Slovic, 1994). According to Byrne et al. (2016), actions perceived to be low risk by teenagers would be: browse for info, read news articles, browse photos, travel sites and medical sites. Actions perceived to represent average risk would be: open attachments, e-mails with links, sell on craigslist and download games. Those considered to have the highest risks would be: buy from unknown site, share passwords, online gambling, share entertainment and download texts. However, teenagers find it difficult to precisely estimate the level of risk involved in certain online actions. Download English Version:

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