Growing up in a digital world: benefits and risks

Digital technologies have profoundly changed childhood and adolescence. The internet and the means to access it, such as tablets and smartphones, along with social media platforms and messaging apps, have become integral to the lives of youth around the world. They have transformed their education and learning, the way they make and maintain friendships, how they spend their leisure time, and their engagement with wider society. UNICEF's *State of the World's Children 2017: Children in a Digital World* report reveals that one in three internet users is younger than 18 years and 71% of 15–24-year-olds are online, making them the most connected age group worldwide. However, the so-called digital divide is substantial: 346 million youth are not online, with African adolescents the most affected (60% are not connected compared with 4% in Europe). Young people who lack digital skills, live in remote regions, or speak a minority language are also being left behind in harnessing the opportunities that digital technologies can provide. These benefits include access to education, training, and jobs, which can help break intergenerational cycles of poverty, and access to news and information sources that can help protect their health, safety, and rights.

Along with the substantial opportunities the digital age brings, come a diverse range of risks and harms. Digital technologies have increased the scale of child sexual abuse and exploitation. Child sex offenders have increased access to children through unprotected social media profiles and online gaming forums. Technological advances have allowed individual offenders and trafficking rings to evade detection through encrypted platforms and the creation of false identities, and have enabled them to pursue multiple victims at the same time.

Young people are not only at risk from adult exploitation; children can also obtain sexual or intimate photos of a peer and share them with or without the individual's consent. Digital advances have meant that bullying is no longer left at the school gates; cyberbullying is a new method for bullies to hurt and humiliate their victims with the click of a button. Words and images posted online that are designed to cause harm are also difficult to delete, increasing the risk of re-victimisation.

Concerns have also been raised about the time children spend using digital technology and its effect on their physical activity and mental health. Evidence suggests moderate use of digital technology can be beneficial to children's mental wellbeing, whereas excessive use can be detrimental. Children's social relationships seem to be enhanced by digital technology, especially since most of their social circle is now online. Evidence on physical activity is mixed, and better research is needed in this area.

The effect of the content children encounter online should be a focus of future studies. Some websites and apps present a risk to the health of vulnerable youth, such as those that promote self-harm, suicide, or anorexia. Others support underage activities, such as gambling. A 2017 survey found that 3% of 11-16-year-olds in the UK have spent some of their own money on online gambling, and 7% have used their parents' accounts, with or without their permission.

Despite these issues, the popularity and use of digital technologies will continue to grow. However, an intergenerational gap exists in digital knowledge and literacy. Teachers and parents need training to teach digital skills and online safety to children. They are also crucial to helping young people assess reliable news and information sources and navigate the pressures social media, as highlighted in a report released on Jan 4 by England's Children's Commissioner. Schools are also an important forum for discussing cyberbullying, and anti-bullying programmes need to include online harassment.

Some children have never been online or have little access and are missing out on the benefits of connectivity. UNICEF recommends that market strategies to foster competition among providers, and tax and other incentives for technology companies could help reduce the cost of access. Digital companies, meanwhile, have a responsibility to protect young users from harm. The WePROTECT Global Alliance to End Child Sexual Exploitation Online, involving technology companies, international organisations, and countries, is one good example of a multi-stakeholder, coordinated approach to tackle this threat that has no borders.

Children and adolescents have the most to gain and are most at risk from digital technologies. They must be at the forefront of national and global digital policies, not only to protect them from online harm but also to allow technology to help them fulfil their full potential.

■ *The Lancet Child & Adolescent Health*