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WHITEPAPER

Digital Distraction

Spotlight on Smartphones in Schools

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Introduction

More than 90% of Millennials own a smartphone, and for 'Generation Z,' the generation of digital natives who have grown up with technology, smartphone ownership is the norm by the time they start High School. Global data collated by the Pew Research Center reports that smartphone ownership is nearly universal among teens of different genders, ethnicities and socioeconomic backgrounds.

This trend enables student mobility with technology, with students able to be online almost constantly. Smartphones are effectively mini computers with messaging, recording and internet connectivity capabilities. The amount of time spent online is increasing. According to the report, 45% of teens report that they use the internet "almost constantly," and another 44% say they go online several times a day.

Digital technologies offers a range of creative and educational opportunities, with many benefits for children. Gamification of educational resources helps engage students online, and the development of digital capabilities and skills essential in a modern learning environment. The challenge for schools is that mobility - the mini-computer in the pocket - provides constant online access, with students more easily distracted.

The term 'digital addiction' is used to describe an excessive dependency on technology, with students absorbed in technology to such an extent that there can be negative impacts on other aspects of their lives. Smartphones enable easy access to social media or gaming platforms, including on school grounds. Phone addiction (compulsively checking smartphones throughout the day), social media addiction (on social media platforms constantly) and internet addiction (with difficulties defining the difference between virtual and physical worlds) all present significant challenges for schools. The World Health Organisation recently included 'gaming disorder' in their classification of diseases.

Why is this an issue for schools?

While schools take their duty of care seriously and generally have secure firewalls with internet filtering on school networks, smartphones provide a loophole allowing students to easily bypass these protections. Students can create their own 'virtual private network' on school wifi by downloading a VPN app to their phone, or they can use 3G/4G data and easily bypass school security altogether.

With no restrictions students can access inappropriate content, upload video content that they've filmed of teachers or fellow students to social media or messaging platforms, or simply go off-task. The addictive nature of many technology platforms, in combination with the temptation of a device in one's pocket, means an increasing number of students are digitally distracted in school time.

Consequences of digital distraction for teachers include dealing with students who are 'half present,' multi-tasking, or context switching, with a deterioration of performance and impaired learning outcomes. Resources are increasingly required to deal with fallout from social media use including cyberbullying and sharing of inappropriate content. Some schools are struggling to ensure they meet their duty of care and keep students safe online, with students going to extreme lengths to get their technology 'fix'.

What are teens doing on their smartphones?

According to a school survey conducted by Family Zone Education Solutions, teachers are reporting that children as young as six are coming to school with smartphones, with virtually all High School students having access to a smartphone by the age of 13.

Primarily, teens are using smartphones in the following ways:

Chatting: the Netsafe Factsheet reports that 81% of girls and 77% of boys say they are chatting online almost every day - both much higher than the OECD averages.

Playing music, videos and games: the Roy Morgan's Young Australians Survey comments:

"Teens aged 14-17 are around twice as likely as other mobile owners to use the device for playing music, videos and games. 82% of teens have done one or more of these activities on their mobile in the last four weeks—almost as many as made an actual phone call with it."

Social Media: 4 in 10 teens are using five or more social media platforms, including YouTube, Instagram, Snapchat, Facebook and Messenger. Social media use is a rapidly changing landscape, and while many platforms have an age restriction (generally 13 years) they are readily accessible to younger children. YouTube account holders should be 18 years of age, and WhatsApp users 16 years. Despite these age restrictions, social media use is popular among younger children.

A UK report by OfCom describes how children and teens are adopting newer social media sites:

"Almost a quarter of 8-11s and three-quarters of 12-15s have a social media profile. Although this is unchanged since 2016, the sites children use are changing. Fewer are using Facebook, and if they do, they are less likely to say it is their main profile. Snapchat has increased in popularity; the number saying it is their main profile has doubled since 2016."
- Children and Parents: Media Use and Attitudes Report

How many students have access to their mobile phones in school?

Schools generally set their own guidelines for mobile phone use other than their mandated responsibility to ensure the 'responsible use' of mobile phones by students on school grounds (i.e. ensure they are not being used to cyberbully). Overseas, debate has ensued since France announced a total ban on the use of mobile phones from school start to finish, including break times, for all children up to the age of 15.

While some schools already have a similar policy to France in place, others are encouraging students to use their devices during lessons as a learning tool, whilst some sit in between with mobile phones permitted during break times. The recent Family Zone Education Solutions survey found that of the respondents, 20% of schools did not allow mobile phone use in school, 27% allowed some use, and at 53% of schools virtually all students were using a mobile phone. When the same teachers were asked if students should be able to use their phones in class, 29% thought 'absolutely not,' 66% thought 'yes, but only if the capacity for digital distraction in the classroom is managed,' and only 4.5% agreed with the statement 'Definitely, they are an essential communications tool, and don't need managing.'

In response to the same survey, one teacher summed up the view expressed by many respondents, that schools are currently torn between banning phones to ensure safety and encourage focus, and seizing the opportunity to educate students on appropriate use:

"We tread a difficult line between education and prohibition. If we take the devices away completely, then we disallow the potential for safe use with guides/teachers around. Conversations are often more productive at the time - "Just in time" - rather than as a pre-emptive measure - "Just in case". We owe it to our young people to help them understand that any tool can be misused, and it is through safe use in a controlled environment that means can be put into action to assist with getting them aware and prepared for a life with technology around."

How are the smartphones used in school? The good, the bad and the ugly.

The Good - Learning

Mobile phones can increase engagement, motivation for learning, creativity and productivity. Popular teaching and learning activities include:

- Classroom Management: software and apps are available that will text homework and assignment reminders to students and export key dates into their phone calendars.

- Material Delivery: more and more curriculum materials can be accessed and interacted with on a small screen.

- Flipping the Classroom: similar to above but with a particular focus on video. Students watch videos created or recommended by teachers outside of the classroom (anywhere, anytime) and reflect on them prior to or during class.

- Accessing Learning Tools: voice recorders, cameras, compasses, calculators, there are apps for everything.

- As Student Response Systems: students text in opinions and answers using a variety of readily available apps and websites, many of which display the results graphically for discussion as a whole class.

- Well-being: using apps to develop relaxation skills, time management and health and fitness.

One respondent to the Survey of Mobile Use in Schools commented:

> *"I use smartphones in my class. Robotics apps, coding, video, photography, speech recording, augmented reality. Also students listen to music whilst they work. Humbly I realise they can be distraction, but I see more positive use than negs."*

The Bad - Often new ways of doing old things

Some schools that choose to limit the use of mobile phones during school hours often cite the following issues:

- Distraction: it used to be passing notes under desks and reading magazines hidden inside textbooks, now it's messaging and social media feeds.

- Reduced face-to-face social interaction among students: students rely on their mobile phones to 'chat.' One survey respondent commented, "Students are 'wedded' to their phones. I would like smart ways of managing this so that they HAVE to talk to each other like real people!! :)"

- The need for down time away from a screen: students relax by browsing social media sites, playing online games or watching videos.

Digital distraction was highlighted in the Family Zone Education Solutions survey as being a major drain on teacher time, with 65% of teachers spending at least 1 to 4 hours a week and another 10% spending five or more hours a week managing digital distraction. Constant classroom monitoring was frequently cited:

> *"They are a useful resource but the teacher needs to be constantly circulating to ensure students are on task and that there are appropriate consequences for those who do not follow the requirements."*

When asked about tackling social media issues, the number of teachers spending in excess of five hours a week dealing with problems rose to 15%. One teacher commented on a recently implemented ban:

> *"We have just recently banned phone use for any reason during class time. I have always operated this way but as a result of social media use during class time creating major issues for senior management we have banned all phone use during class."*

Gaming, often viewed as a minority interest, also consumed teachers' attention with 14% of teachers spending over 5 hours a week resolving issues. One teacher commented:

> *"They all know how to avoid internet filtration. I am constantly monitoring and they know I can see them but they cannot control the urge. It's a drug gaming. Devices are harder to monitor and even if I move or sit near a student on a device, 60% of the time I catch them out gaming on Halo, Fortnite or some other e-game."*

The Ugly

'Ugly' is referring to activities that can be classified as downright questionable, and in some cases illegal. These include:

- Cyberbullying

- Sexting

- Accessing inappropriate content by bypassing default internet filtering systems.
  This is done in one of two ways:

     o By downloading a VPN (Virtual Private Network) from the app store. The student then connects to the school wifi but is able to create a private 'tunnel' to bypass school internet filtering

     o By turning up to school with 3G/4G data, and bypassing school internet filtering.
        This data can also be used to hotspot other devices.

- Cheating – misusing mobile phones under exam conditions

- Copyright infringement – for example, using a torrent site to stream movies

How much 'ugly' is happening in schools?

Cyberbullying and sexting

Smartphones can now record and upload content in real-time, providing opportunities for instant, casual content sharing with little regard for consequences. Many schools have attributed the decision to ban smartphones at school to instances of cyber bullying.

The Harmful Digital Communications Act 2015, which aims to prevent and reduce the impact of online bullying, harassment, 'revenge porn' and other forms of abuse and intimidation, resulted in 50 convictions and sentences within six months of the legislation coming into force in November 2016. It is difficult to find data specifically relating to children and teens, but the legislation is there and prosecution can have a serious impact on a young person's future. A recent case in Denmark resulted in 1000 young people being charged with sharing child pornography after a video of two 15 year olds engaged in sexual activity was circulated on social media.

In response to the survey, teachers frequently raised the issue of bullying. Typical comments focused on the inappropriate use of photos and videos:

> *"We had a bad experience with a child snapchatting a conversation she filmed about someone saying bad things about another student."*

> *"Smartphones have become an essential part of life, we need to manage their use. The biggest issue is cyber bullying, taking video or photos of people while they are unaware."*

> *"Students cannot be trusted with devices that can so easily access the unfiltered world via 4G/LTE. All it takes is one child with a camera and Snapchat/Instagram. It's not worth the risk."*

Accessing inappropriate content by bypassing default internet filtering systems

Statistics have recently been collated on the numbers of students bypassing school filtering systems:

- VPN usage: an estimated one third of secondary school students have downloaded a VPN according to the Digital Technologies in Schools Report.

- VPN and/or 3G/4G usage to bypass filtering: when teachers were asked how many students they believed had bypassed school internet filtering systems, they indicated that students' own mobile phones were being used by a significant number of students to bypass filtering:

How many students ARE believed to have bypassed school internet filtering systems on school devices or mobile phones:

On school devices	On own mobile devices
26% None	13% None
65% Some	54% Some
9% Most	33% Most

Source: A Survey of Mobile Phone Use in Schools, Family Zone Education Solutions

Accidentally or deliberately, a significant amount of inappropriate content is being accessed, even in class time. The survey revealed that teachers believed that 75% of students 'sometimes' and 10% were 'regularly' accessing inappropriate online content during class. One teacher commented:

> *"This week we've had Year 5/6 students googling 'hardcore sex' 'porn' 'naked sex'. Really, really scary. I don't think schools are doing enough and I'm a teacher! Very worrying."*

Cheating

Smartphones have been associated with cheating, and a recent UK report by Ofqual cited the 'the introduction of unauthorised materials' (mainly mobile phones or other electronic devices) as being responsible for the 25% rise in number of penalties issued.

Copyright Infringement

Illegally downloading music, TV shows, films, books and games can also lead to conviction under the Copyright (Infringing File Sharing) Amendment Act 2011. Worryingly for schools and parents, it is the internet account owner who is liable.

How are schools managing the 'ugly'?

1. Fostering Digital Citizenship through Education

Schools are working to ensure that all students know how to keep themselves safe online and be responsible digital citizens. Governments and agencies provide resources to guide schools, and programmes and learning materials for use with children. Among other things, these programmes cover responsible mobile phone use, and address topics such as cyberbullying and sexting. The Family Zone Education Solutions survey showed that significant discussion was taking place between teachers and students on the issue of cybersafety, with the majority of teachers indicating that they frequently (53%) or constantly (42%) discuss the topic with students.

2. Fostering Digital Citizenship through smart Student Internet Management

Historically the solution to managing internet access has been to restrict access to websites that the school has deemed to be learning-related. However, today many schools are moving towards a more constructive approach, allowing students some freedom to make their own choices about what is and is not appropriate to access, whilst still filtering the obviously inappropriate and adult content. This supports student agency and the development of good digital citizenship. Tools give teachers live visibility over student network use and provide detailed reports for IT Managers, teachers and students. This visibility can aid smartphone management in school:

- Teachers can identify what device a student is using to access what content and has data with which to address classroom management issues such as distraction or cheating during tests.

- Student agency can be encouraged by providing students with reports to support reflection on their own smartphone use and time management.

- Where inappropriate or off-task behaviour occurs, the teacher can make an informed decision and choose the best response, appropriate to the individual student and the lesson context.

- This transparency also allows schools to educate students about the reasons behind any internet access policies. Should a student be using a smartphone and a torrent site to stream movies, they can be made aware of the issues around liability for this copyright infringing behaviour.

3. Filtering and Blocking VPNs

Traditional internet filtering systems, efficient at blocking particular websites or IP addresses, are less effective at identifying and blocking VPNs. VPNs are often difficult to detect as they can masquerade as normal traffic (such as PayPal).

With an estimated one-third of secondary students using VPNs in an attempt to bypass school internet filtering, a majority of schools are finding it a challenge to prevent their students accessing inappropriate content in school time. As a result, some schools are moving to smarter solutions that apply machine learning to identify unusual patterns of online behaviour, including VPN use. The system can then block the 'tunnel' to the unfiltered internet content, and students can be spoken to in line with the school's Internet Usage Policy.

4. Engaging with the Community

Both schools and parents have a role to play in boundary setting, providing guidance on appropriate and inappropriate smartphone use, and teaching self-regulation and self-control skills. Parents also need to be aware that data plans, or downloaded VPN apps, mean a child can easily circumvent school internet policies and may put themselves at-risk. Increasingly, schools are working with parents, making recommendations as to smartphone and other technology use at home, and keeping the community up to date on what is happening at school, in compliance with school policy. A collaborative approach is required as technology has eroded the traditional schoolyard boundaries.

5. Using Smartphone Control Apps

When a school has achieved successful community engagement around what is considered appropriate smartphone usage, parents can feel empowered to take action on screen-time, and will have an understanding of age-appropriate boundaries. Smartphone control apps will provide visibility and accountability, but may have limited effectiveness if not tied to school internet policies. The ideal smartphone solution keeps children safe online wherever they are and provides a seamless transition between home and school

Implementing the above five strategies to counter inappropriate online behaviour not only keeps children safe but also allows teachers to focus on teaching. Fostering digital citizenship, filtering and blocking VPNs, engaging with the community and seamless school-home smartphone control apps can save considerable teacher resources wasted in dealing with the fallout from cyberbullying, digital distraction and students behaving inappropriately online.

Summary:

Smartphone use in schools can be a major issue. With the majority of teens having access to a smartphone at an increasingly younger age, our young people are becoming more adept with and dependent on these devices. While digital technologies offer a range of benefits, there is some concern at the ease with which students can bypass school internet filtering protections on these devices.

Smartphones enable students to be online almost constantly. Digital distraction is increasingly a challenge many schools are facing, with some students absorbed in their own virtual worlds to such an extent that there are negative impacts on real-world and learning outcomes.

It is imperative that schools and communities work together to meet their duty of care including on mobile devices. Through smart internet management in school and at home, students can be kept safe and educated on how to be responsible digital citizens, preparing them for such time as when they are outside of the protection offered by the school environment.

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ABOUT US

Family Zone is passionate about making student internet management easy. We help school teachers ensure that student internet use is constructive and education focussed. Our tools work with existing networks to create an online environment that respects student agency whilst highlighting inappropriate use.

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