

# Digital Thumbprint Impact report

April 2020





"The workshop was really fun and educational at the same time. It really educated me, so I can protect myself online!"

- Student, Immediate post-workshop survey

### **Foreword**

Optus is committed to building a society of digitally educated young people who are safe, responsible and positive online. To support this, we launched our Digital Thumbprint program in 2013. The program aims to give young Australians the knowledge, attitudes, confidence and behaviours to safely navigate and thrive in the digital world.

The Digital Thumbprint program addresses a growing need. 21% of teenagers are spending over 12 hours a day on screens,<sup>1</sup> and 83% of teens access the internet three or more times every day.2

While the digital world provides opportunities for young people to increase their productivity, interact and connect, expand their impact and access resources and information, it is not without risk. 1 in 3 young people report unwanted contact or content online, while more than 1 in 5 report social exclusion and threats and abuse.3 Moreover, research suggests that young people are struggling to find balance between time spent onand offline, with 68% of parents of teens thinking that their children spend too much time online. 4 Throughout this report we draw on Australian and international research to add context to our evaluation findings with students and teachers.

While the prevalence of these challenges may vary depending on age, we recognise the importance of supporting young people throughout their formative

In primary schools, Digital Thumbprint with Kids Helpline is an early intervention and education program. In secondary schools, the Digital Thumbprint program consists of four interactive face-to-face workshops, delivered to secondary school students across Australia. Since the program's inception, we have delivered workshops to 277,689 students; and this year alone, the program reached 48,842 students.

This year we have engaged with over 1000 students and 315 teachers to hear directly from young people about their experiences online and with the program. This is the latest evaluation of our program, designed to measure what impact our program is having, and identify areas for program evolution and improvement that is informed directly by the youth voice. It builds on our previous Digital Thumbprint evaluation report (published in February 2018), which was a robust deep dive into the impact the secondary program created.

This year we will be extending our blended delivery model to include digital versions of our Digital Thumbprint topics. They will complement our face-to-face delivery and support us reaching even more students.

Our program delivery is supported by a suite of additional resources - including student, parent and teacher guides, and stakeholder-driven research pieces. This evaluation report marks our latest contribution to the digital citizenship ecosystem.

We are pleased that this evaluation confirms that our program is having a positive impact on young people's knowledge, attitudes, confidence and behaviour in online spaces. One in every two students who participate the program report applying something they learned within five weeks of program delivery.

Consistently, we are seeing students and teachers rate the program as valuable, engaging and relevant to their lives.

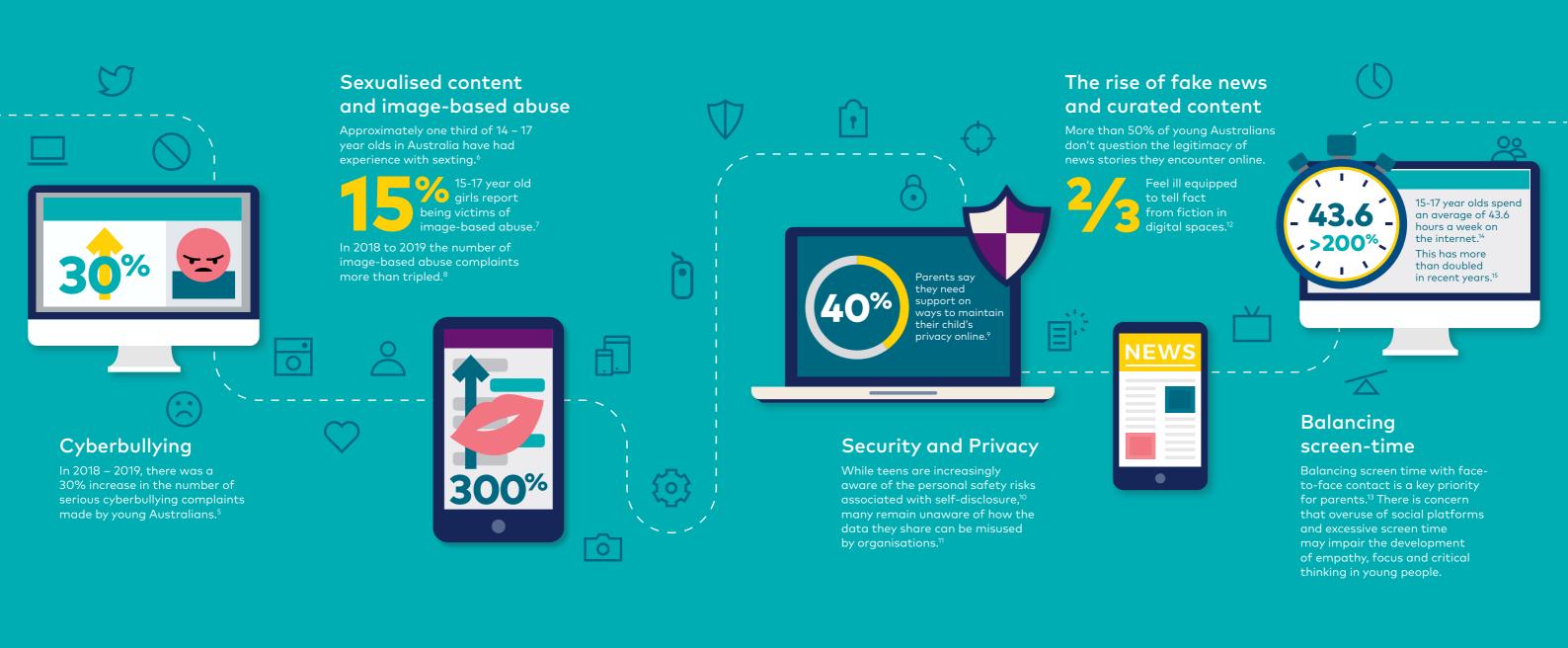
We would like to extend a big thank you to all those who were involved in this report and in the ongoing delivery of the program. To the teachers and students who took the time to share their feedback, the 161 schools who participated in the program this year, our professional facilitators who deliver the program in schools, teams and colleagues at Optus, and most importantly to all our student participants who engage with us every day on this important issue.



Helen Maisano

Director - Group Sustainability

# Key challenges in the digital world



For full discussion of these issues and data, please see FOUR SHIFTS to future-proof digital citizenship education. 2020, Optus.

# The digital citizenship ecosystem

There is no one person, organization or sector responsible for creating the digital future. The digital world is shaped by tech developers, policy makers and digital users themselves. Referred to as the 'digital citizenship ecosystem', we all play a vital role in influencing and shaping safe and positive experiences for young people online.

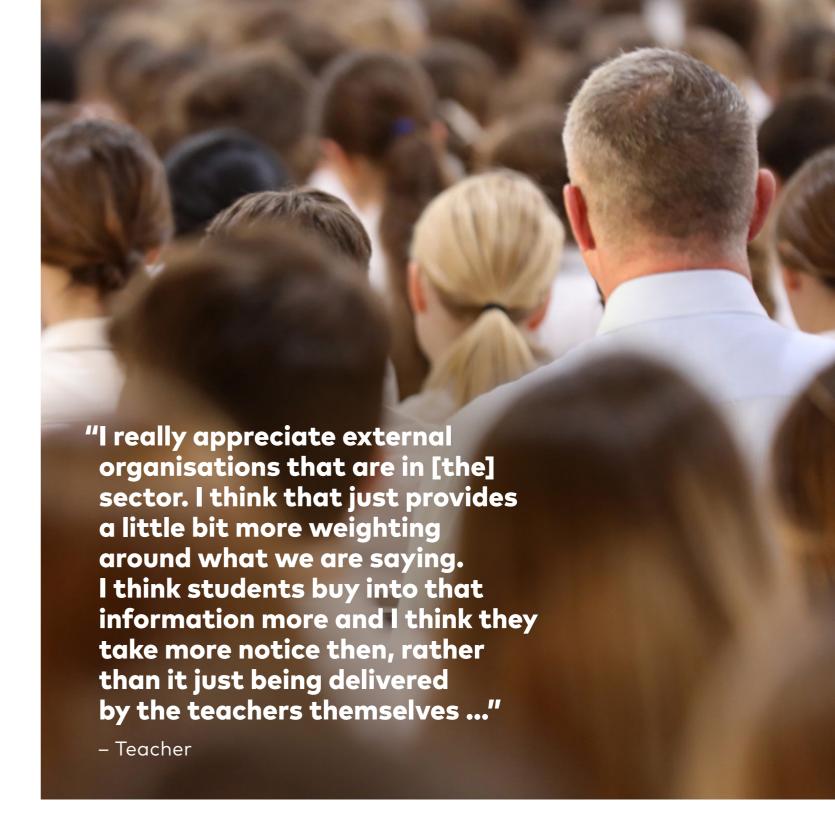


For example Schools Organisations Faith-based groups

For example eSafety Commissioner **Human Rights Commissioner Education Departments** Children's Commissioner

Each stakeholder in the ecosystem has unique insights and views on how to protect and empower young people with digital technology. With this comes complementary strengths, strategies and approaches to addressing our collective challenges.

As a key influencer in the digital landscape, at Optus we continue to focus on digital citizenship as one of our key community investment areas. This extends to our work on the Digital Thumbprint program and our Digital Citizenship Roundtables with key policy makers such as the eSafety Commissioner, the Human Rights Commissioner, the Department of Education NSW, the Children's Commissioner, and representatives from the charity and global tech sector.



#### The important role of educators

We recognise that schools remain an important place for young people to build and develop digital citizenship skills. In particular, teachers play a critical role in helping students build the skills to safely navigate the online world. Through conversations with teachers, during this evaluation and others, we heard many discuss the increasing requirement for digital citizenship education for their students.

Despite this increasing requirement, we have heard that many teachers feel that lack the necessary support or expertise to appropriately help their students in this domain. To this end, we continue to make more tools available to support teachers in delivering digital citizenship education.

# Digital Thumbprint program at a glance

Digital Thumbprint is designed to do more than impart knowledge, it is designed to change behaviour.



#### Cyber Security

The ability to act safely and proactively in protecting personal data while interacting with online websites and apps; and to exercise judgement and discretion in the protection and sharing of one's own and others' information and images.



#### Cyberbullying and Respectful Relationships

The ability to identify and manage situations involving cyberbullying; to understand how to seek help for oneself or others experiencing cyberbullying; to be able to form healthy and respectful relationships online.



#### **Digital Identity**

The ability to be as authentic online as one is offline; and to understand and manage the impact of online interactions on the emotional wellbeing of oneself and others.



#### **Digital Discernment**

The ability to critically evaluate the intention, accuracy, bias and impact of online information and contacts; and to engage in proactive discernment in the management of one's own online presence to support one's goal.



#### Digital Balance

The ability to exercise judgement and self-control in order to maintain a healthy balance between online and offline time.

#### The design of our program

Digital Thumbprint addresses five key topic areas, which are aligned across the primary and secondary school programs. The secondary program covers these topics across four interactive and engaging workshops.

These topics have been defined in line with leading research into digital citizenship and the issues that young people are facing when they are in the digital world.

Our program recognises that it is not enough to simply teach students about the digital world. We must give them the skills, confidence and motivation to change the way they behave, interact and connect in the digital world.



# 93% Students found the workshop enjoyable.

88%

Students gave Digital Thumbprint a trust score of 7 out of 10 or higher.

94%

Students learned something they could use; 60% learned something they could use right away.



Teachers feel more confident teaching digital citizenship topics as a result of the workshop.

# 1 in 2

Teachers agreed that:

in the workshop

• The facilitator presented

• My students were engaged

The workshop was pitched at an

appropriate level for my students

the workshop in an interesting way



For every 2 students who saw the program, 1 had applied something they learnt in their lives within 5 weeks of seeing the program. This is consistent with our 2017 data.

# Program outcomes and impact

#### Metro and regional secondary schools

Program reach 2019 school year







48,842

Students

1,231

Sessions

**161**\*

**Schools** 

Life of program (since July 2013)







277,689

**Students** 

8,480

Sessions

416 Schools

\* School breakdown by sector

116 - Government Schoo

23 - Independent Schoo

22 - Catholic Schools

\* School breakdown by ICSEA

75 - Low ICSEA schools (<1000)

2 - Medium ICSEA schools (1000

84 - High ICSEA schools (>1000)



# Evaluation of our program

The information in this report presents highlights from a year-long evaluation project, conducted to understand the impact that our program is having on the lives of secondary students and teachers. This in-depth evaluation (which we conduct at regular intervals) supplements the evaluation that is embedded in the program in an ongoing basis.

A key design principle of this evaluation was to create a space to hear from youth, to allow us to ensure that their needs and experiences are captured and used to improve the program. To this end, we designed a holistic evaluation methodology that allowed us to capture robust and deep data across multiple time points.

Teachers and students were surveyed at three points to generate a snapshot of program participants before and after the program was delivered. We constructed survey instruments to measure the impact of our program across the four domains of:

- Attitudes
- Knowledge
- Self-efficacy (the belief we have in our ability to achieve a specific outcome)
- Behavioural intent

We complemented this dataset with Focus groups and interviews on a smaller student and teacher sample to allow for deeper consultation and investigation of the impact our program was having.

Through this evaluation we have heard from over 1000 students and 315 teachers across over 60 schools.

For a more detailed breakdown of our evaluation methodology, participant numbers, and data analysis procedures, please see Appendix A. For our full program logic model, please see Appendix B.

#### Evaluation approach timeline:



#### **Checkpoint 1**

#### Establishing a baseline

Evaluation conducted up to 6 weeks before delivery of the Digital Thumbprint program

- Pre-workshop student surveys
- Pre-workshop teacher surveys



#### Checkpoint 2

#### Delivery of the program

Students and teachers attended a Digital Thumbprint workshop

- Cyber Security
- Cyberbullying
- Digital Discernment
- Digital Identity



#### Checkpoint 3

#### Immediate follow up

Evaluation conducted immediately after attending a Digital Thumbprint workshop

- Immediate post-workshop student surveys
- Immediate post-workshop teacher surveys



#### Checkpoint 4

#### **Assessing longer-term change**

Evaluation conducted 1-5 weeks\* after delivery of the Digital Thumbprint program

- Post-workshop student surveys
- Post workshop teacher surveys
- Student Focus groups
- Teacher interviews

<sup>\*</sup> For logistical reasons a small number of teacher post surveys were conducted up to 9 weeks after delivery of the Digital Thumbprint program

# Embedding the youth voice in program improvement

A key design principle of this evaluation was ensuring that we captured insights, feedback and suggestions for improvement directly from students that had participated in our program. Through surveys and focus groups we engaged with over 1,000 students to hear directly about their experiences online and with the program. This has allowed us to identify areas for ongoing program development and improvement that we will be implementing throughout the coming year.

What students value	
Content that's relevant, practical and timely	<b>✓</b>
Engaging and fun workshops	<b>✓</b>
High facilitator quality	<b>✓</b>
What to think about and what questions to ask yourself before posting	<b>✓</b>
What students want more of	
More topics and workshops	<b>✓</b>
Making some of the topics available to younger years	<b>✓</b>
More group-based and team challenges	



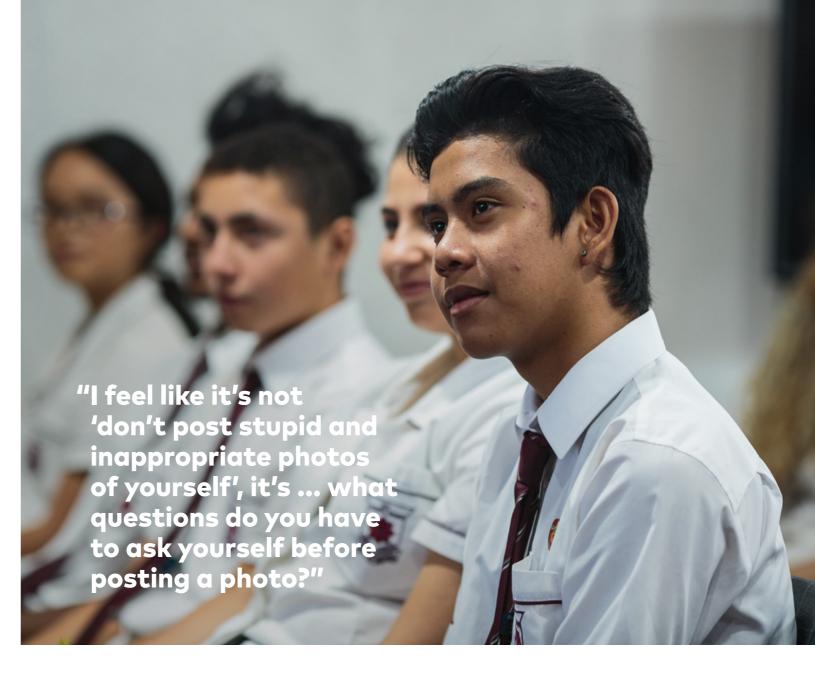
Students indicated that they would change nothing when asked "is there anything that should be added or changed in the workshop?".



Students agreed that the workshop was delivered in an interesting way.



Students agreed that the facilitator answered questions well.



"It ... gave many of my peers (myself included) a good idea of how to be safe online and the correct way to go about my day to day life when it comes to the internet. So I am definitely glad of the program and think everyone should find it useful for now and in the future ...I am grateful for everything I have learnt and I think that it will have a great influence on my life in the future."

"The internet and social media is so much of our lives now, so we need to know how to use it properly, instead of just sending inappropriate or not useful pictures, or using it as a way of hiding what we actually are."

"I feel like it's not 'don't post stupid and inappropriate photos of yourself', it's how to .... How to limit what you post, how to know - what questions do you have to ask yourself before posting a photo? ... If you're posting a photo, you're like, oh, I look cute in this photo, let's do it. You don't think, oh, am I half naked? Or what's in the background?"

#### "I wish it had been longer, I was so interested in it."

"[The workshop is] more focused on employees, but it could be for anything, like, it doesn't just have to be because of employers. Yeah, it could represent you when you're making new friends or something."

# **Cyber Security**

#### **Workshop impact**



"A lot of the social media things [in the workshop] were really important, especially for a lot of people that have their accounts on public and things like that, and they're sharing personal things, like where they are - like putting out their location and things like that."

- Student, Focus group

The Cyber Security workshop is designed to give students the knowledge, skills, attitudes and self-efficacy needed to protect their personal data while interacting with websites and apps, while helping them to understand the power and danger of what is shared online.

Research supports the clear need for content of this nature: 17% of young people report sharing their passwords to their emails and social media accounts; and 14% report sharing personal information with people that they only know online.<sup>16</sup>

#### Students are increasingly recognising the relevance of cyber security content to their lives

Students agreed the workshop was relevant to them:

66%

This high relevance rating is supported by research that has found that 68% of young social media users in Australia take steps to mitigate cyber risks on social media, including blocking people (46%), increasing privacy settings (43%) and deselecting location trackers on their posts (36%).17

## Keeping students' personal data secure

The Cyber Security workshop gives students the skills, knowledge and intent to keep their personal information secure.

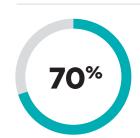
Immediately following our workshop, we took measures of students' intent to engage in behaviours that would keep their personal information secure. Our data revealed that over 84% of students agreed that, as a result of the workshop:

- They were more likely to check the strength of their passwords for accounts
- They were more likely to check the security of their online data

This behavioural intent was supported by changes in students' self-efficacy. Studies have revealed that it is one of the most important predictors of an individual's intention to enact online security measures.<sup>18</sup>

In immediate post-workshop surveys, 90% of students agreed that, as a result of the workshop:

- 'I believe I can keep my personal data secure'
- 'I believe I can stay safe online'



Students reported that they had applied something they learned in the workshop to their lives.

When we followed up with students 1-5 weeks after the workshop, we found strong evidence of behaviour change. More than 2 in 3 students (70%) of students reported that they had applied something they learned in the workshop. 61% of students reported that they had taken action to control their privacy settings.

"Before I did this I had the same password for everything because I'm very forgetful ... my family we have a password with the Wi-Fi and the same password for everything in our house ... So we need to change that."

- Student, Focus group

"Information on passwords and safety was age appropriate and useful. Most students were not really aware how weak their current passwords were and so it encouraged them to make a change which was done almost immediately by many of the students"

- Voulla Kalogeropoulos - Burwood Girls High School

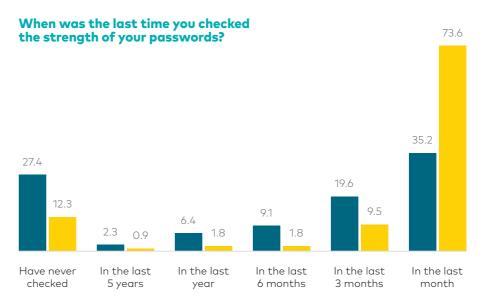
To assess specific behavioural change, we asked students how recently they had checked the strength of their passwords – a specific behaviour promoted in the Cyber Security workshop. We found a significant shift in reported behaviour between the pre-workshop and post-workshop survey responses. After the workshop students were two times as likely to have checked the strength of their passwords in the last month; and two times less likely to report that they had "never checked" the strength of their passwords.

Interestingly, both before and after the workshop, students from high ICSEA (Index of Community Socio-Educational Advantage) schools were significantly more likely to have checked the strength of their passwords recently. This finding suggests that this content may be particularly important for students from less educationally advantaged backgrounds.

In Focus groups, students described specific gains in their understanding of what made a secure password:

"Two factor authentication is basically where if someone tries to log into your account then it'll send a message to your [phone]."

"Because I made my password when I was in year 1 and so I needed something easy and I never bothered changing it and then I used a different one, that's why I only have two passwords and they're both so easy. So, I have to change it ..."



Student responses to this question before and after participating in the Cyber Security workshop.

#### After the workshop:

#### Privacy and passwords



Students were two times more likely to have checked the strength of their passwords in the last month. **27%**↑

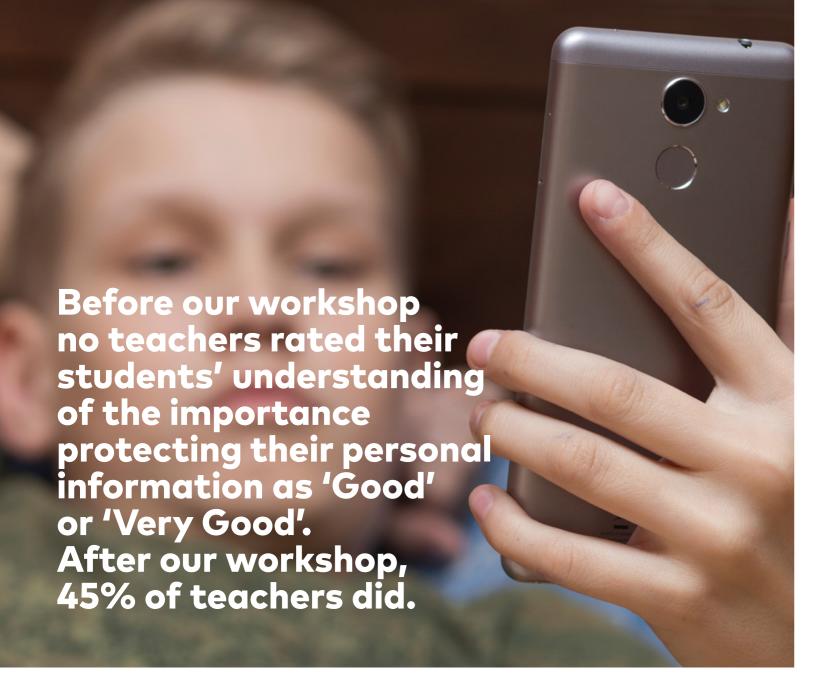
Students were 27% more likely to report that their social media privacy settings were set to private.



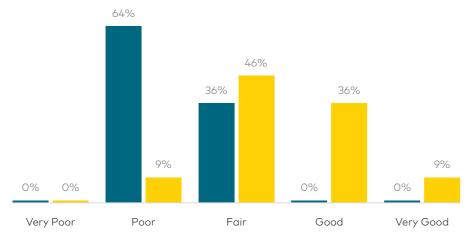
Students were two times less likely to report that they had "never checked" the strength of their passwords.







#### How would you rate your students' awareness of the importance of protecting their personal information?



Teacher responses to this question before and after participating in the Cyber Security workshop.

## Keeping students safe online

The Cyber Security workshop gives students the tools and motivation to be careful with sharing information that may make them less safe.



Students agreed that as a result of the workshop they were more likely to be more careful about what they post online.



Students reported that as a result of the workshop they believed they could manage their social media privacy settings.

Following the workshops we found a statistically significant increase in students from low ICSEA schools agreeing that "I know what information is valuable to share online." The number of students from low ICSEA schools who agreed with this statement jumped from 83% prior to the workshop, to 88% following the workshop. We did not see an equivalent jump with students from high ICSEA schools. This may be because almost all (96%) students already agreed with this statement prior to the workshop, potentially creating a ceiling effect. The difference in student responses from low and high ICSEA schools may reflect differences in experience, and highlights the value that the Digital Thumbprint program may be having for students from disadvantaged backgrounds.

Teacher data also indicated that the workshop was having an impact on students. Prior to the workshop we asked teachers to rate their students' awareness of the importance of protecting their personal information.

Notably, all teachers surveyed rated their students' understanding as only 'Poor' or 'Fair'. When we asked the same question of teachers after their students had participated in a Cyber Security workshop, 45% rated their students' understanding as 'Good' or 'Very Good'.

"There are some students that will go home and go, 'Yep, because I'm aware of this, I now need to make these changes to remain safe."

- Teacher, Interview

"If something of yours gets shown on social media you can be in danger and that's something, I don't want be in. I don't want someone to find out where I live or stuff."

- Student, Focus group

Our post-workshop data demonstrated that these shifts in understanding drove behavioural change. In the weeks following the workshop, students were 27% more likely to report that their social media privacy settings were set to private compared to before the workshop. This shift in responses was statistically significant.

In Focus groups, students also mentioned encouraging siblings, cousins and parents to update their security settings as well, suggesting that the program may be having positive effects beyond its immediate participants.

"I also talked to my sister about it too, she's in Grade 6, so she's a couple of years younger than me, and she'll probably get social media next year, so I made her aware of some of the things that could affect her, and just, I guess, informed her about the pro's and con's to social media, and how to use it in the right way."

"Well, he's ten [my little brother], and he used to play a lot of ... Fortnite ... he's obviously too young to understand the world properly, and how people can be. And he, being the age that he is, friended people that he didn't know ... So, I sat him down and said, "I have been – we have recently had this workshop," and saying that it's not safe for you to be randomly friending people that you don't know."



#### **Gender snapshot**

A consistent theme that emerged from our data was that female students are more risk averse and take more steps to mitigate risks online than male students. These differences were apparent both before and after students participated in the Cyber Security workshop.

For instance, female students were significantly more likely than male students to disagree with the statement "it's safe to have my social media profile/s set to 'public'" and significantly more likely to agree that "I take care to control who sees my social media content".

This finding is consistent with other research into gender differences online. For instance, while 42% of boys aged 8-17 report talking to strangers online, only 34% of girls of the same age do.<sup>19</sup> Research from the Office of the eSafety Commissioner has found that "girls are significantly more vigilant than boys in managing their online presence."<sup>20</sup>

Interestingly, our data also suggest that the Cyber Security workshop may be reducing the differences between males and female students – primarily by making male students more cautious. For instance, prior to our workshop male students were almost twice as likely to agree that it was safe to have their social media profile/s set to 'public' than female students; after the workshop the difference between male and female responses had more than halved. This change was driven by a 36% decrease in male students agreeing with the statement after the workshop, suggesting that they had become more cautious overall.

Similarly, prior to our workshop, male students were 25% less likely than females to agree that they "take care to control who sees my social media content"; after our workshop, they were only 13% less likely to agree. Again, this difference appeared driven by changes in male student responses; male students were 11% more likely to agree with this statement after participating in the Cyber Security workshop.

This may indicate a 'confidence correction' as a result of the workshop, helping male students to be more aware and intentional about protecting themselves online.

#### Supporting teachers

The Cyber Security workshop gives teachers support and confidence to teach their students how to be safer online.

"I actually run the Year Seven group, and every single one of my mentors said they couldn't teach their kids this stuff, they don't know it well enough. And often our students know the technology better than the teachers do."

- Teacher, Interview

Although not a primary goal of the program, our data suggest that the Cyber Security workshop is having a positive impact on teacher outcomes. Teachers indicate that the Cyber Security workshop is building their confidence in protecting their students, with 98% of teachers agreeing that "As a result of the workshop I feel more confident to teach my students to stay safe online".

In addition to supporting teachers' ability to protect their students, teachers also highlighted the important role of having an external facilitator discuss safety topics with their students. Over 95% of teachers agreed that it was useful to have an external person cover:

- Setting strong passwords
- Social media privacy settings
- Identifying the risks of sharing information and images online



Teachers agree that "As a result of the workshop I feel more confident to teach my students to stay safe online".

# Cyberbullying

**Workshop impact** 



"I learnt more about how if someone that you know is getting bullied, how you can help, and how if it's a dangerous situation for you, tell someone."

- Student, Focus group

The Cyberbullying workshop explores online relationships and cyberbullying, giving students tools, strategies and insight to manage the potentially negative impact of social media. Students learn how be authentic and genuine online.

The reported incidences of cyberbullying have increased over recent years.<sup>21</sup> While research has found that cyberbullying mirrors traditional bullying, the digital world also makes it possible for bullies to follow their victims around 24/7, and torment them publicly.<sup>22</sup> 15% of young women report being victims of image-based abuse.<sup>23</sup>

Consistent with this, students who are participating in our workshops are reporting that these topics are relevant to them. In both this evaluation and our 2017 evaluation, roughly three in four students reported that the content in our cyberbullying workshops was relevant to them (77% in 2017 and 73% in 2019). In both evaluations, more than one in two students indicated that the workshops covered topics that would be relevant right away. It should be noted that due to differences in sample composition and changes in program design, a direct comparison between 2017 and 2019 data cannot be performed.



# Protecting students from negative online interactions

The Cyberbullying workshop increases student understanding of cyberbullying, and their likelihood of taking action to reduce it.

Our data also suggest that students who participated in the Cyberbullying workshop were more confident and committed to taking action that would reduce the incidence of negative online interactions, and to protect others.



Students agreed that as a result of the workshop they can give better support to their friends if they think they need help. "Respect your peers by having permission to post a picture of them"

- Student, response to "What was the most important thing you learnt today?"

Teacher data suggests that students were given tools to positively act on some of the more serious forms of cyberbullying. Following the workshop, 89% of teachers agreed that the workshop better helped their students understand what image-based abuse is; and 79% agreed that as a result of the workshop their students are more likely to report image-based abuse. These findings are very important, given recent research has found that only one in four victims of image-based abuse took action in response to the abuse, and of those only 35% reported the abuse, and that one of the most common reasons that individuals reported not doing anything was that they lacked knowledge on what to do.<sup>24</sup>

#### Image-based abuse

Image-based abuse is a serious form of online abuse. It occurs when a nude, intimate or sexualised image or video of someone is taken or shared without their consent. It can also involve doctoring of images to make them appear intimate in nature or the threat of sharing intimate content.

76% of victims of image-based abuse do not take action to address it. $^{25}$ 

Bystanders of image-based abuse (that is, individuals who receive sensitive images shared without a person's consent) are also unlikely to take action, with only 3% indicating that they reported it to a relevant authority, and only 7% telling the person in the photo or video.<sup>26</sup>

Promoting help seeking and increasing awareness are important to helping students mitigate the impacts of image-based abuse. Our workshop aims to give students the knowledge and confidence to recognise and report image-based abuse and seek help when needed. Using a de-sensitised scenario, students discuss how they would respond to image-based abuse (as both a victim and a bystander).

Seeking help is normalized and students are walked through avenues for help and support including:

- Reaching out to parents, teachers, school wellbeing support staff
- Contacting Kids Helpline
- Taking screenshots to use as evidence for reporting to:
  - the website or social media platform
  - police
  - Office of the eSafety Commissioner



Teachers agreed that the workshop better helped their students understand what image-based abuse is.



Teachers agreed that as a result of the workshop their students are more likely to report image-based abuse.



#### Helping students be more positive online

The Cyberbullying workshop inspires students to commit to being more positive online and gives them the confidence to do so.

"I've never been bullied, but in the workshop they were talking about 'Have you been bullying, without yourself knowing it?'. So, after the workshop I had a good little think to myself, like, 'Can I be nicer to some people? Have I been manipulative to some people?' I had a good little think about that, and it turns out yes, I probably should be a little bit better to some of my friends."

- Student, Focus group

Research reveals that approximately 20% of young Australians have admitted to behaving negatively towards a peer online, with examples of bullying behaviour including name calling (9%), social exclusion (8%) and pretending to be someone else (4%).<sup>27</sup>

One of the core themes of the Cyberbullying workshop is an exploration of the potential for interactions online to negatively impact oneself and others. Students who participated in the workshop indicated that the workshop had prompted them to be more considered about the impact of their own behaviour in online spaces. Immediately following the workshops 85% of students agreed that they would try to use social media in a more positive way, while 82% agreed that they would try to be more considerate of others.

Students also indicated that the workshops had increased their confidence in their ability to interact positively. Immediately following the workshop, 77% agreed that they could better manage the impact that they have online. This increase in confidence persisted; in post-workshop surveys collected in the weeks following a workshop, 57% of students agreed that "as a result of the workshop I feel I can better deal with difficult online situations.

There is evidence that the workshop may be particularly effective at increasing the confidence of students from high ICSEA schools.



Students from high ICSEA schools were more likely to agree with the statement "I have the power to create a positive influence through my online posts" after the workshop.

This difference was not apparent for students from low ICSEA schools and may reflect higher perceived opportunities to act positively online from high ICSEA students.

Teacher data also suggested that the workshops were building student confidence (across students from all schools). Following the workshop 94% of teachers agreed that their students better understand the positive and negative impacts of socialising online. Similarly, 92% of teachers gareed that the workshop helped their students improve their online impact. The same number (92%) believed their students would take actions to be more responsible online as a result of the workshop.

#### Helping students be more authentic and genuine online

The Cyberbullying workshop creates the intent for students to be their authentic selves online.

Research suggests that teens may follow different 'rules' when it comes to online and offline behaviour, increasing their likelihood of acting in unethical ways online. One explanation for this disconnect is that young people's online personas or identities are curated (or crafted) by nature. This may make it easier for kids to act in ways that that are 'out of character'.28

We found strong evidence that the Cyberbullying workshop changed students' attitudes towards being their genuine selves online. Immediately following our workshop, 78% of students agreed that it is important to be authentic online. Similarly, when we compared students' attitudes before and after the workshop, we found that students were significantly (33%) more likely to agree with the statement that "it is important to present my authentic self online" after participating in the Cyberbullying workshop.

This change in attitudes appears to be accompanied with changes in behaviour. Immediately following the workshop, 73% of students indicated that they would try to be more authentic online.



Following the workshop, there was an increase in students who responded 10/10 for "how realistic would you say your recent online posts are of your true self", compared to pre-workshop responses.

#### Supporting teachers

The Cyberbullying workshop supports the work that teachers are already doing to protect their students by increasing their confidence and providing external resources.

After participating in the Cyberbullying workshop, 100% of teachers agreed that they felt more confident having discussions with their students about the way they behave online.

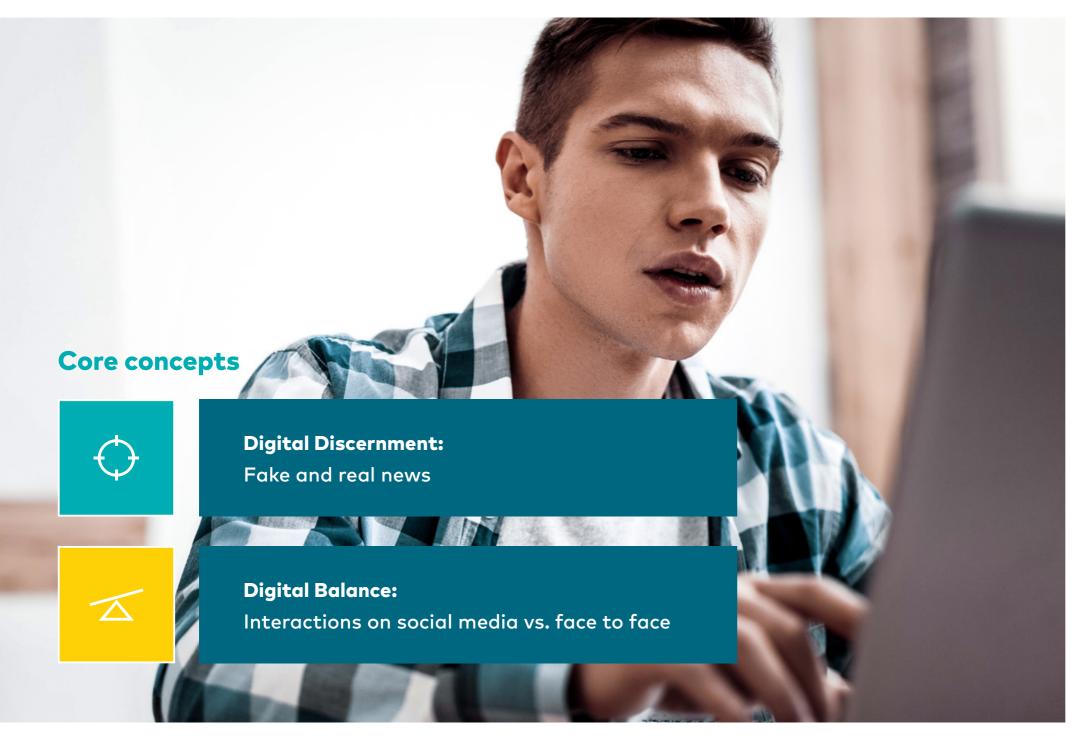
Despite this, almost all teachers recognised that it was valuable to have an external third party covering the topics in the workshop. 100% of teachers agreed it was useful to have an external person cover the concept that social media is not always representative of real life. Similarly, over 96% of teachers agreed that it was useful to have an external person cover:

- Treating others the way you want to be treated online and offline
- How to give support to friends if they need help
- Using social media to have a positive influence

These data highlight the important role that the Cyberbullying workshop plays in introducing important topics, and giving teachers the ability to reinforce and sustain key messages over time.

# **Digital Discernment**

**Workshop impact** 



"I learnt about reliable and exaggerated news and how to tell if news is reliable or not"

- Student

The Digital Discernment workshop is designed to give students the ability to exercise judgement and critical thinking when interacting and consuming media online. This discernment extends to spotting fake news, understanding the influence that media can have on opinions, and reflecting on the impact of online peer interactions.

Helping young people distinguish between 'real' vs. 'fake' content is a continued priority for Digital Citizenship initiatives around Australia. With the advent of Al and other data analysis tools, the ability for misleading content to be ever more accurately targeted at individuals is growing. However, developing critical thinking skills in teenagers takes time, and there remains debate as to how these attributes are best taught in schools.<sup>29</sup>

# Helping students identify fake news and manipulative content

Participation in the Digital Discernment workshop increases student knowledge, self-efficacy and intent to be discerning when consuming media online.

Students and teachers indicated that the workshop had increased student understanding in this domain. 80% of students agreed that in the workshop they had learned something new about "how the media can influence how I think, feel and behave".

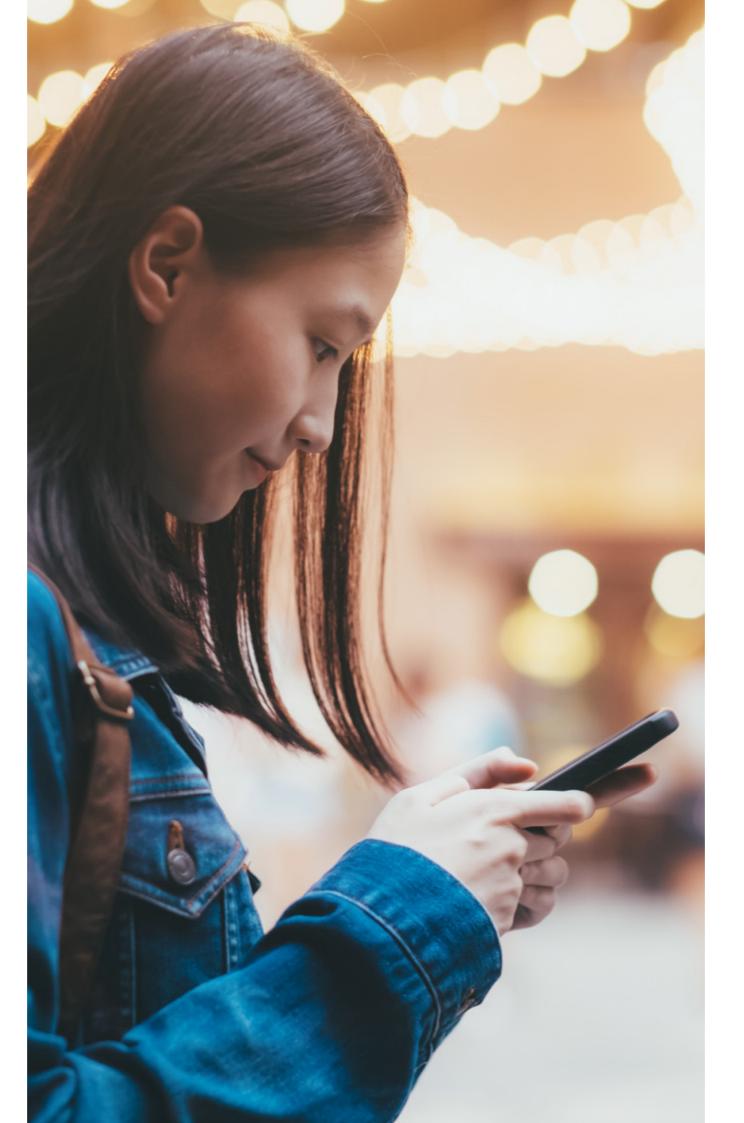


Teachers agreed that as a result of the workshop their students are aware of the way that the media tries to influence people.

Our data also indicate that the workshop increased confidence in students' ability to discern fake news. 72% of students agree that, as a result of the workshop, they believe that they spot what's fake online. 73% of teachers agreed that "I believe my students will be more discerning as a result of the workshop".

"Just double-checking authors of news articles. Definitely good to Google an author after you read an article, just to see if they're credible."

- Student, Focus group



## Encouraging students to have a more positive impact online

The Digital Discernment workshop gives students the knowledge, attitudes and confidence to change their behaviour and be more positive online.

"The most important thing I learnt today was how much doing bad things out of anger can impact your life.

I was inspired by the topic as I didn't realise how much power we have as social media users have."

- Student, Immediate post-workshop survey

We found evidence that the Digital Discernment workshop improved student knowledge and understanding about positive online interactions. Immediately following the workshop, 73% of students agreed that they had learned something new about "how my actions online impact myself and other people"; and 82% agreed that the workshop helped them to better understand the difference between appropriate and inappropriate online interactions. This is supported by teacher ratings of student understanding, with 84% of teachers agreeing that as a result of the workshop their students are aware of the impact their online actions have on themselves and others.

This increase in knowledge appeared to be complemented by a positive attitudinal shift. An analysis of student responses before and after participating in the workshop revealed two statistically significant shifts in student attitude. Specifically, after engaging in a Digital Discernment workshop:



Students were more likely to agree that their social media posts have an impact on others.



Students were more likely to agree that their actions online can affect others, even when they don't mean them to.

We also found evidence that students intended to change their behaviour as a result of the Digital Discernment workshop. Over 72% of students agreed that, because of what they learned in the workshop: they were more likely to think before they share online; and, they will take actions (such as having conversations offline and thinking before they share something) to increase their positive influence online.



#### **Supporting teachers**

The Digital Discernment workshop gives teachers confidence and a resource to teach students about discernment online.

"I say things like that, they don't listen to me. They hear their teachers' voices all the time, but the gentleman ... who came in ... was super cool, he engaged with the boys and they really trusted him, and to hear something like that from somebody that they felt really understood them, made a big difference."

- Teacher, Interview

As with our other workshops, our data revealed that the Digital Discernment workshop increased teacher confidence, as well as being a useful resource for teachers to use.

97% of teachers reported that the workshop made them more confident discussing online impact with their students.

A majority of teachers also agreed that it was useful to have someone external covering:

- That the media can influence how people think, feel and behave (87%)
- Strategies to positively manage online social interactions (91%)
- How to have a positive influence online (89%)

# Building teenage girls' confidence

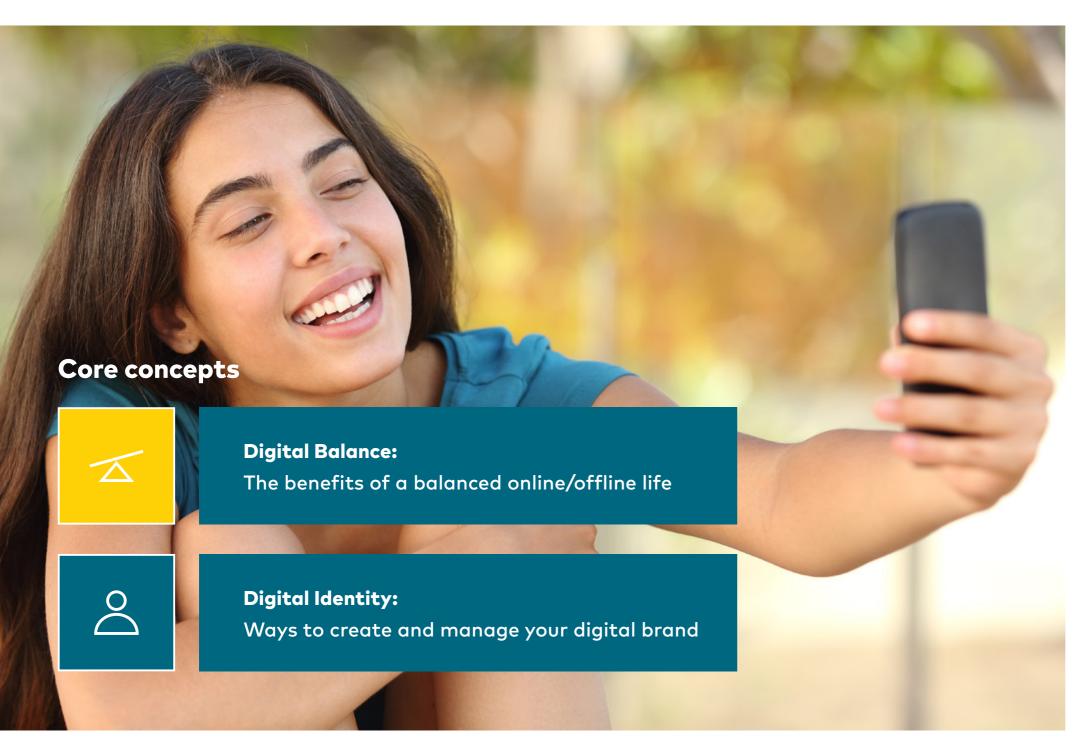
Our pre- and post-workshop surveys indicated that before participating in the Digital Discernment workshop, when compared to male students, female students appeared to be significantly less confident that they knew how to spot fake news online. However, after participating in the workshop this difference effectively disappeared.

Prior to the workshop, male students were 47% more likely than females to agree that they knew how to spot fake news online. After the workshop, male students were only 5% more likely to agree.

Deeper analysis of what was driving this effect revealed that male student belief in their ability did not change after the workshop. Female students on the other hand were significantly more likely to be confident in their abilities after the workshop. It may be that female students arrive at the workshop with lower ability to discern fake news than male students, and that the workshop addresses this imbalance. It is also possible that female students are simply less confident before the workshop, and that through participating in hands-on workshop activities, they recognise their own capability and increase their confidence levels. On the other hand, the higher self-belief that male students exhibit before the workshop may be indicative of over-confidence. This finding is worthy of further study, to better understand the different experience of male and female students online.

# **Digital Identity**

**Workshop impact** 



"I learnt to not spend so much time on devices. It affects our sleeping patterns and I have first-hand experience with being negatively affected by excessive technology use, so this workshop kind of validated that. Now I strive to use technology less each day."

- Student, Immediate post-workshop

In the Digital Identity workshop, students explore ways to achieve a balanced and productive use of technology; are given tools and strategies to increase their effectiveness online; and discuss the impact of their social media profiles on how they are perceived by employers.

Student survey responses revealed that they felt that this topic was highly applicable to their lives; 68% agreed that they would be able to use what they had learned.

#### Students are increasingly recognising the relevance of Digital Identity content

Students agreed the workshop was relevant to them:

2017

83%

2019

89%

Notably, between 2017 and 2019, content on managing students' digital brand was added to the workshop. This increase in workshop relevance may indicate that students are increasingly recognising the importance of managing the impact of their social media profiles.

## Making students more balanced and effective users of technology

The Digital Identity workshop helps students to both create a balance between their time on- and offline and to better keep themselves on task while online.

"I have been trying to put my phone away 1 hour before bed."

- Student, Immediate post-workshop survey

Helping students maintain digital balance is important. Research into children and teen behaviour has found that:

- 43% regularly use screens before bedtime; one in four report sleep problems related to screen use.<sup>30</sup>
- The number of teens who access the internet between midnight and 6am has doubled in recent years.<sup>31</sup>

Balancing screen time is also of concern for parents and caregivers, with research indicating:

- 13% reporting that they speak to their children about this all the time or daily.<sup>32</sup>
- 68% of parents of teens think their children spend too much time online.<sup>32</sup>
- 31% of parents report that their children spend "excessive amounts of time playing on screenbased devices.<sup>33</sup>
- 43% of parents of teens report that their children experience a lack of physical activity due to screen use.<sup>33</sup>

The Australian government recently released guidelines that recommended that children and young people (aged 5-17 years) limit their sedentary recreational screen time to no more than 2 hours per day.<sup>34</sup>

Our data suggest that, following the workshop, students were more motivated and had better skills to manage their time on and offline. 86% of teachers agreed that as a result of the workshop, their students were aware of the importance of online and offline balance. Similarly, 77% of students agreed that as a result of the workshop they would take actions to improve their online and offline balance.

Students also indicated that the workshop gave them strategies and increased their desire to spend their time effectively online. 72% agreed that they had learned strategies in the workshop that could keep them on task online; 71% agreed that they had learned something new about how to make the most of their time online. 78% of students agreed that as a result of the workshop they use strategies to keep themselves on task.

When we followed up with students in the weeks following the workshop, almost one in two students (47%) indicated that they had applied something that they learned in the workshop in their life. Of the students that responded 'yes' to this statement, 28% indicated that they had taken action to manage their online and offline balance better. Together with checking their privacy settings and passwords, this was the most common thematic response.

"I set a timer on apps when I tend to spend a long time on (e.g. Instagram) reminding me to take breaks and manage my time."

# Supporting students from low socio-educational backgrounds

Analysis of workshop indicators of student selfefficacy and behavioural intent revealed that much of the content in the workshop appeared to be resonating more strongly with students from schools with low and average ICSEA ratings than schools with high ICSEA ratings.

Specifically, we found that students from low and average ICSEA schools were significantly more likely to agree that the workshop had improved their behavioural intentions and increased their confidence across several topics.

It is unclear what is driving these differences, though it may be that students from low ICSEA schools have less exposure to topics on productivity or the impact of social media profiles on their digital brands.

These data suggest that the Digital Identity workshop may be playing a particularly important role in giving students from less advantaged backgrounds the confidence and desire they need to be productive and effective online.

# Students from low and average ICSEA schools are:



**47%** more likely to agree that "because of what I learnt in the workshop I will use strategies to help keep me on task".

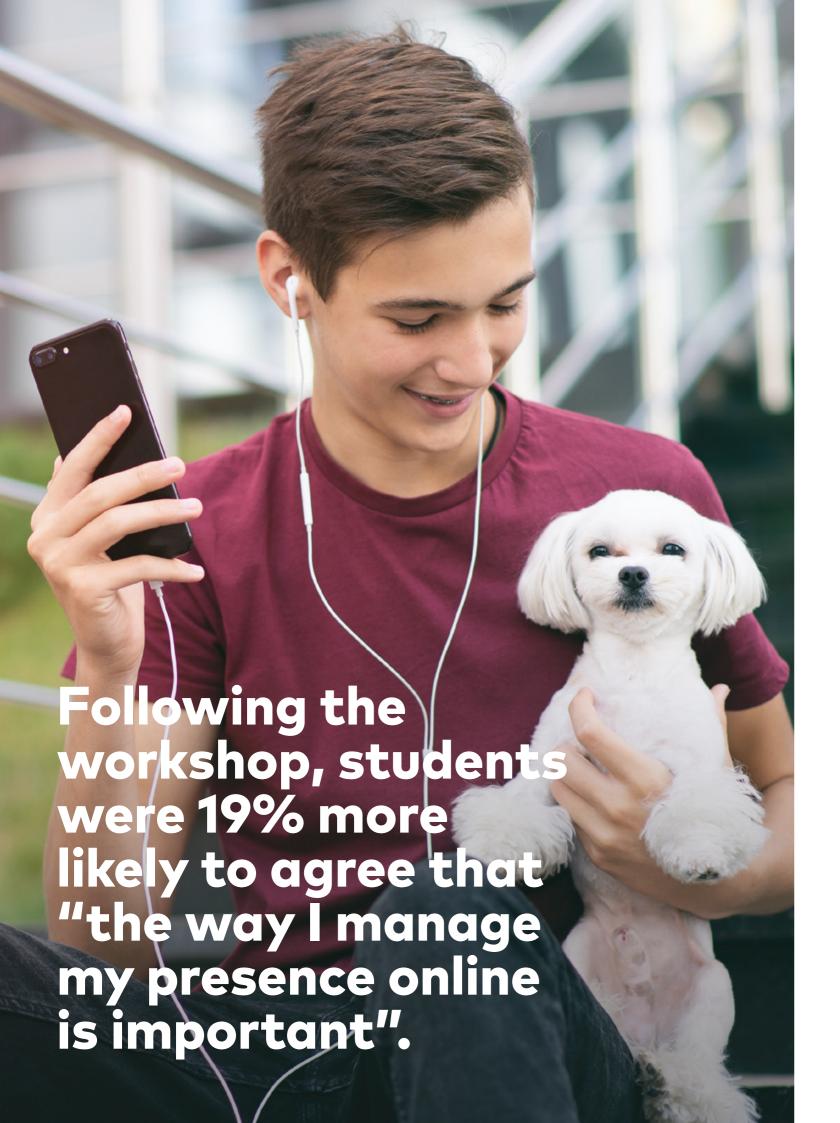


**36%** more likely to agree that "because of what I learnt in the workshop I will check that my social media accounts are presentable for when I apply for jobs".



**43%** more likely to agree that "as a result of the workshop, I believe I can improve my social media profile for future employment".

High ICSEA Low and average ICSEA



# Improving students' personal brand

The Digital Identity workshop helped students to appreciate the impact their social media presence could have on their employability, while giving them strategies to manage this better.

"Most of us don't have jobs, and [when you] post something you wouldn't think 'in the future my employers can see this!"

- Student, Focus group

The Digital Identity workshop helped students understand the importance of a strong digital brand. After participating in a Digital Thumbprint workshop, students were significantly more likely to agree that they know what impression their social media profile might give to future employers. This change appears to be driven by more intense student agreement in this domain, with a 53% increase in students strongly agreeing with this statement following the workshop.

The workshop also improved student attitudes around managing their personal brands. Our data revealed a statistically significant increase in agreement that "the way I manage my presence online is important", with students 19% more likely to agree with this statement after the workshop when compared with their responses before the workshop. Teachers also reported an improvement in student attitudes, with 92% agreeing that "as a result of the workshop my students think it's important to manage how they present themselves online."

Students also indicated that the workshop had increased their self-efficacy and skills, specifically in their ability to manage their personal brands.



Students agreed that as a result of the workshop they believed they could "improve my social media profile for future employment".

Analysis of student responses to pre- and postworkshop surveys found a highly significant shift in student's agreement that they know how to prepare their social media profiles for future employment following the workshop.



Students were more likely to agree that they know how to prepare their social media profiles for future employment following the workshop.

Immediately following the workshop, there were high levels of agreement that they had learned something new about how they could improve their digital image (81%) and how they could manage their digital presence (79%).

Our data also suggest that the workshop caused students to intend to be more proactive in managing their digital brands. Following the workshop, 79% of students agreed that, as a result of the workshop, they would check their social media accounts are presentable for applying for jobs.

#### Supporting teachers

The Digital Identity workshop helped teachers by providing an 'outside voice' to cover topics.

As with other workshops, teachers highlighted the value of having someone external covering the workshop topics, with over 90% of teachers agreeing this was useful for covering:

- The influence of digital on future employment
- The importance of finding a balance of time offline and online
- How to discern what content is appropriate to share online

# **Appendix A:**

#### Methodology

#### **Evaluation instruments**

This evaluation utilised a mixed-methods evaluation approach including both quantitative and qualitative methods of data collection.

The table below describes the evaluation tools deployed in the evaluation.

Instrument	Audience	Delivery time
Pre-workshop Survey	• Student	0-6 weeks prior to participation in a Digital Thumbprint workshop
	• Teacher	1 day prior to participation in a Digital Thumbprint workshop
Immediate Post-workshop Survey	• Student	Immediately after participation
	• Teacher	in a Digital Thumbprint workshop
Post-workshop Survey	• Student	1-5 weeks after participation in a Digital Thumbprint workshop
	• Teacher	2-9 weeks after participation in a Digital Thumbprint workshop
Focus groups	• Student	2-6 weeks after participation in a Digital Thumbprint workshop
Interviews	• Teacher	At least 2 weeks after participation in a Digital Thumbprint workshop

Description of the evaluation tools used in the Digital Thumbprint program evaluation.

#### Sample composition

Where it was appropriate, demographic data on evaluation participants was captured. Sample sizes for all evaluation instruments is described below. For the immediate post-workshop surveys, convenience sampling was used to ensure evaluation did not reduce the reach or impact of the program. We stratified the sample across program delivery states where possible and tracked participants anonymously using unique identifiers. For the pre- and post-workshop surveys, pre- and post-workshop responses were matched.

Instrument	Total n
Student pre- and post-workshop surveys	726
Teacher pre- and post-workshop surveys	20
Student immediate post-workshop surveys	1009
Teacher immediate post-workshop surveys	315
Student Focus groups	51
Teacher interviews	10

#### Statistical analysis

For each dataset, where relevant quantitative responses were analysed for differences from pre to post overall, and for differences in response according to workshop, gender and ICSEA. For analysis by gender, only male and female were included, as the numbers of responses for 'other' were too small for statistically valid comparisons. ICSEA for each school was categorised as low, average or high.

Pre-post comparisons for ordinal outcomes, including binary outcomes, were performed using analysis of variance (ANOVA) with pre-post as a within-subjects variable and gender and ICSEA as between-subject variables. If a statistically significant interaction effect between pre-post and either gender or ICSEA was found, subsequent tests were performed to identify differences between sub-groups: McNemar's test for binary outcomes, Wilcoxon signed-rank test for ordinal outcomes, Student's t-test for integer outcomes, Tukey's Honest Significant Difference test for all Immediate Post-Workshop survey data.

Pre-post comparisons for nominal outcomes were performed using chi-squared tests of homogeneity.

For post-only questions, comparisons by gender and ICSEA were performed using Mann-Whitney-Wilcoxon tests for ordinal outcomes and chi-squared tests of homogeneity for binary outcomes.

For this data set, a p-value below 0.05 was taken as indicating a statistically significant result.

#### Qualitative analysis

Student Focus groups and teacher interviews were recorded and transcribed using a transcription service. Transcribed data from Focus groups and interviews was sorted and coded into themes with the assistance of a proprietary mixed-methods assessment and qualitative data coding software tool called Dedoose. This tool allows identification of strong and/or recurring themes.

# **Appendix B:**

#### Digital Thumbprint logic model

**Activity** Outputs **Outcomes** Impact Inputs Cyber Security Workshop Session reach • Students understand the importance • Students personal information is more **Human Resources:** of, and are able to keep their information secure online • Cyberbullying Workshop • Session satisfaction Facilitators safe online • Students experience reduced incidence of • Digital Discernment Workshop • Session engagement Program Manager • Students are able to discern online online victimization and harassment • Digital Identity Workshop • Session feedback Project Coordinator dangers; and are careful in sharing information • Students use technology more effectively Teacher evaluation and images online **Shared Services** and sparingly • Student evaluation (content developers) • Students know where to go for help if they • Students are able to use technology to improve Administration • Data and feedback analysis are experiencing issues online their personal brand for continuous improvement **Knowledge Resources:** • Students are discerning of media and social • Students are more discerning consumers of media Data and feedback analysis media content and understand that not • Data on subject area for outcomes evaluation everything they see online is true Data on subject area awareness • Students commit to treating others with respect Reporting Marketing & communications and empathy online Curriculum and frameworks • Students understand the impact their digital **Organisational resources:** brand can have on future employment, and are able to take steps to improve their digital profile Venues • Students believe that a balance between online Workshop IP and offline time is important, and have the skills Workshop equipment and tools to achieve better balance CRM system • Data collection tools

# **Appendix C:**

#### **Curriculum alignment**

Cyber Security	
English	<ul> <li>Understand how accents, styles and idioms express and create personal and social identities (ACELA1529)</li> </ul>
	<ul> <li>Compare the ways that language and images are used to create character, and to influence emotions and opinions in different types of texts (ACELT1621)</li> </ul>
	<ul> <li>Analyse and explain the effect of technological innovations on texts, particularly media texts (ACELY1765)</li> </ul>
Digital Technologies	<ul> <li>Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIPO25)</li> </ul>
	<ul> <li>Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)</li> </ul>
Health and Physical Education	<ul> <li>Practise and apply strategies to seek help for themselves or others (ACPPS072)</li> </ul>
	<ul> <li>Investigate and select strategies to promote health, safety and wellbeing (ACPP073)</li> </ul>
	<ul> <li>Investigate the benefits of relationships and examine their impact on their own and others' health and wellbeing (ACPP074)</li> </ul>
Information and Communication Technology (ICT) capabilities	Applying social and ethical protocols and practices when using IT
	Communicating with ICT

Cyberbullying	
English •	Analyse how the text structures and language features of persuasive texts, including media texts, vary according to the medium and mode of communication (ACELA1543)
•	Analyse and explain how language has evolved over time and how technology and the media have influenced language use and forms of communication (ACELY1729)
•	Explore and explain the ways authors combine different modes and media in creating texts, and the impact of these choices on the viewer/listener (ACELY1735)
Digital Technologies •	Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIPO25)
•	Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)
Health and Physical Education	Practise and apply strategies to seek help for themselves or others (ACPPS072)
•	Investigate and select strategies to promote health, safety and wellbeing (ACPPS073)
•	Investigate the benefits of relationships and examine their impact on their own and others' health and wellbeing (ACPPS074)

Digital Discernment	
English	<ul> <li>Analyse and explain the use of symbols, icons and myth in still and moving images and how these augment meaning (ACELA1560)</li> </ul>
	<ul> <li>Listen to spoken texts constructed for different purposes, for example to entertain and to persuade, and analyse how language features of these texts position listeners to respond in particular ways (ACELY1740)</li> </ul>
	<ul> <li>Interpret, analyse and evaluate how different perspectives of issue, event, situation, individuals or groups are constructed to serve specific purposes in texts (ACELY1742)</li> </ul>
	<ul> <li>Explore and explain the combinations of language and visual choices that authors make to present information, opinions and perspectives in different texts (ACELY1745)</li> </ul>
Digital Technologies	<ul> <li>Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043)</li> </ul>
Health and Physical Education	<ul> <li>Evaluate factors that shape identities and critically analyse how individuals impact the identities of others (ACPPS089)</li> </ul>
	<ul> <li>Examine the impact of changes and transitions on relationships (ACPPS090)</li> </ul>
	<ul> <li>Investigate how empathy and ethical decision making contribute to respectful relationships (ACPPS093)</li> </ul>
	<ul> <li>Evaluate situations and propose appropriate emotional responses and then reflect on possible outcomes of different responses (ACPPS094)</li> </ul>

Digital Identity	
English	<ul> <li>Understand how language use can have inclusive and exclusive social effects, and can empower or disempower people (ACELA1564)</li> </ul>
	<ul> <li>Understand that people's evaluations of texts are influenced by their value systems, the context and the purpose and mode of communication (ACELA1565)</li> </ul>
	<ul> <li>Refine vocabulary choices to discriminate between shades of meaning, with deliberate attention to the effect on audiences (ACELA1571)</li> </ul>
	<ul> <li>Analyse and explain how text structures, language features and visual features of texts and the context in which texts are experienced may influence audience response (ACELT1641)</li> </ul>
	<ul> <li>Evaluate the social, moral and ethical positions represented in texts (ACELT1812)</li> </ul>
Digital Technologies	<ul> <li>Evaluate critically how student solutions and existing information systems and policies, take account of future risks and sustainability and provide opportunities for innovation and enterprise (ACTDIPO42)</li> </ul>
	<ul> <li>Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043)</li> </ul>
Health and Physical Education	<ul> <li>Evaluate factors that shape identities and critically analyse how individuals impact the identities of others (ACPPS089)</li> </ul>
	<ul> <li>Examine the impact of changes and transitions on relationships (ACPPS090)</li> </ul>
	<ul> <li>Investigate how empathy and ethical decision making contribute to respectful relationships (ACPPS093)</li> </ul>
	<ul> <li>Evaluate situations and propose appropriate emotional responses and then reflect on possible outcomes of different responses (ACPPS094)</li> </ul>
	<ul> <li>Critically analyse and apply health information from a range of sources to health decisions and situations (ACPPS095)</li> </ul>
	<ul> <li>Critique behaviours and contextual factors that influence health and wellbeing of diverse communities (ACPPS098)</li> </ul>

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# **Appendix D:**

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