SOUTH AUSTRALIAN DIGITAL YOUTH SURVEY

RESEARCH REPORT: YEAR 1 RESULTS

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INTRODUCTION

The South Australian Digital Youth Survey (DYS) is a world-first longitudinal project exploring how adolescents use digital technology and how this changes over the course of adolescence. The project examines the links between how adolescents use technology and pathways into cyber risk-taking. In studying these links, this project seeks to identify the *technical*, *social*, and *individual* circumstances by which adolescents get drawn into cyber risk-taking. Understanding more about these circumstances will inform the development of prevention measures to mitigate such risk.

To accomplish this task, the DYS involves a longitudinal survey of a cohort of South Australian Year 8 students commencing in 2018. A total of 18 government schools from the Adelaide Metropolitan Region (i.e. located within 100 kilometres of the CBD) participated in the project with 1,887 participants[1] completing Wave 1 of a paper-based survey. This research report presents results from the first wave of data collection. We will provide longitudinal findings from the DYS at conclusion of Wave 2 of the survey (Q1 2020) and at subsequent waves.

[1] Note: Sample sizes per analysis vary due to missing responses.

Snapshot of DYS Wave 1 findings:

- Participants demonstrate considerable variation in terms of the types of devices they use, as well as the time spent using them.

- The majority of participants demonstrate either basic or intermediate technical skills.

- When using their devices, students frequently engage in various routine tasks, and spend far less time engaging in specialised tasks such as coding.

- Over 80% of participants have engaged in at least one type of cyber risk-taking. Viewing violent and hateful content online, and digital piracy (such as downloading copyrighted material without permission), were the most common types of behaviour.

- For most adolescents surveyed, cyber risk-taking was episodic and reflected less serious forms of risk taking.

- There is significant overlap between cyber risk-taking and physical risk-taking.

- The key variables associated with cyber risk-taking were: engaging in physical risk-taking, being male, the frequency of engaging in specialised and routine tasks while online, technical skill level, low self-control, and hours spent online.
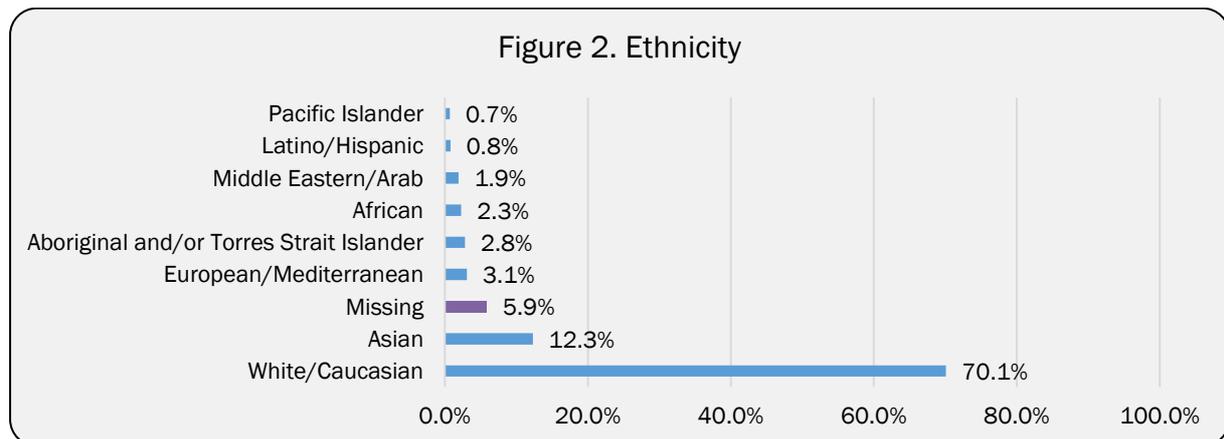
PROJECT SAMPLE CHARACTERISTICS

Gender

Figure 1 shows that the sample was split evenly, with males making up 50.1% of the sample and females representing 48.8% of the sample. 1.2% of the entire sample left the gender question blank.
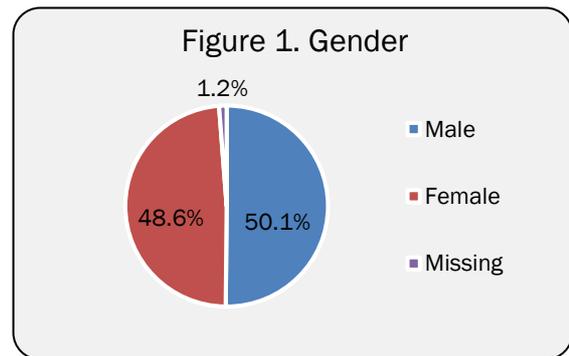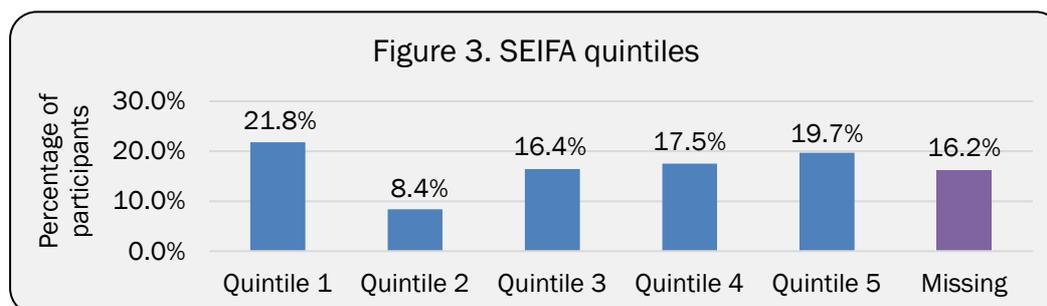
Ethnicity

Figure 2 shows that over two-thirds of the participants reported Caucasian ethnicity (70.1%). Just over 10% of the sample reported coming from an Asian background (12.3%), and the remainder of the sample reported a European or

Figure 1. Gender

Male — 50.1%
Female — 48.6%
Missing — 1.2%

Mediterranean (3.1%), African (2.3%), Middle-Eastern/Arab (1.9%), or Pacific Islander (0.7%) background. About three percent of the sample reported an Aboriginal and/or Torres Strait Islander background (2.8%) and in 5.9% of cases data were missing.

Figure 2. Ethnicity

Ethnicity	Percentage
Pacific Islander	0.7%
Latino/Hispanic	0.8%
Middle Eastern/Arab	1.9%
African	2.3%
Aboriginal and/or Torres Strait Islander	2.8%
European/Mediterranean	3.1%
Missing	5.9%
Asian	12.3%
White/Caucasian	70.1%

Socioeconomic Status

Figure 3 presents information about participants' socioeconomic status – using the Australian Bureau of Statistics' *Socioeconomic Indexes for Areas (SEIFA)*. SEIFA indexes the average income and employment status of individuals living within geographical areas defined by postcode. SEIFA quintiles were derived from the 2015 Australian census, and range from most disadvantaged (quintile 1) to least disadvantaged (quintile 5). This graph shows the distribution across SEIFA quintiles for the overall sample.

Figure 3. SEIFA quintiles

Percentage of participants

Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Missing
21.8%	8.4%	16.4%	17.5%	19.7%	16.2%

KEY RESULTS FROM THE YEAR 1 SURVEY

Understanding how adolescents use digital technologies

Participants reported using digital technologies virtually all the time. For example, the average number of hours reported spent using any device was 12.2 per day (albeit with considerable variation, standard deviation = 8.7)! This of course has much to do with how participants interpreted the question and whether some interpreted this to include passive time connected to the internet (e.g. having a smart phone, receiving texts, downloading content in the background).
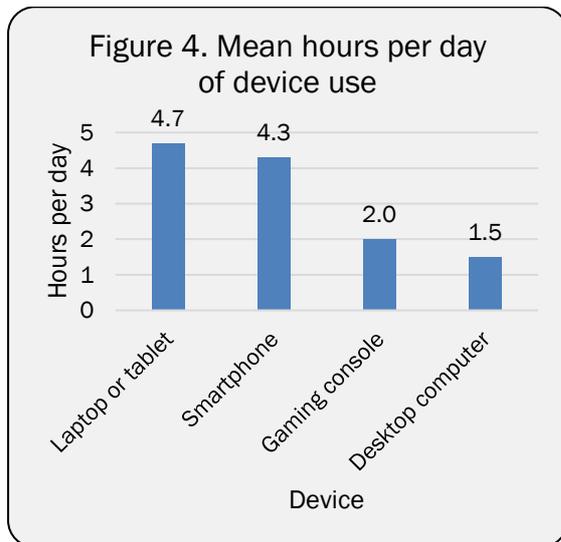
Figure 4. Mean hours per day of device use

Figure 4 shows the average hours per day participants reported spending on different digital devices. The results show that on average, participants spent equivalent amounts of time on laptops or tablets (4.7 hours per day) and smartphones (4.3 hours per day), and considerably less time using desktop computers and gaming consoles (1.5 and 2.0 hours respectively).

Figure 5 depicts the technical skills of participants, who were asked to rank their level of comfort performing various technical functions with software and hardware. Participant responses were categorised in four ways. A participant was listed as a 'Beginner' if they indicated they do not use computers/mobile devices unless they absolutely must. 'Basic' meant that participants indicated they can use the internet and common software but would not feel comfortable fixing their own computer/device. 'Intermediate' meant that participants indicated that they can use a variety of software and can also fix some computer/device problems they run into. Finally, 'Advanced' meant that participants can undertake particularly complex tasks such as using operating systems such as Linux as well as most software they come across in addition to fixing most computer/device issues they run into. The below graph shows that the majority of participants reported beginner to intermediate technical skills, with similar proportions reporting in each of these two categories.

Figure 5. Skill level with computer/technology

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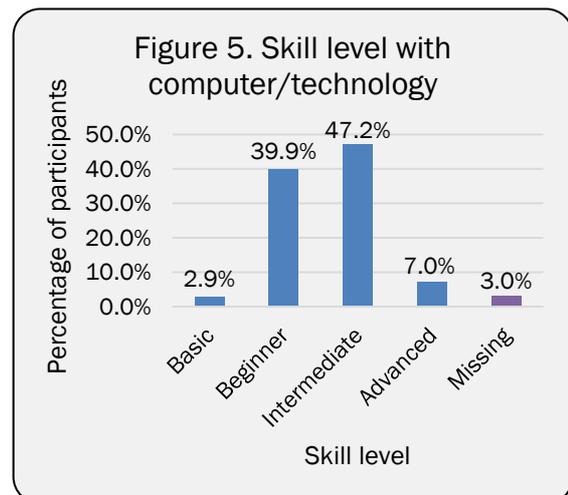
Understanding adolescent online engagements

Figure 6 shows the average amount of time spent engaging in two broad types of online activities. These activities were categorised into: (1) routine tasks (e.g. sending and receiving emails, instant messaging, browsing social media such as Facebook, watching videos and movies, viewing images outside of social media, using cameras to take photos or record videos, sharing photos and videos on social media websites and listening to music); and, (2) specialised tasks (e.g. creating websites, file

Figure 6. Average frequency of routine vs specialised tasks

sharing, coding, posting on online forums, banking, using anonymisation software). Frequency of engagement was measured on a five-point Likert scale ranging from 0 = Never to 5 = Several times a day. The results show that participants reported spending a greater proportion of time engaging in routine tasks compared to specialised tasks.
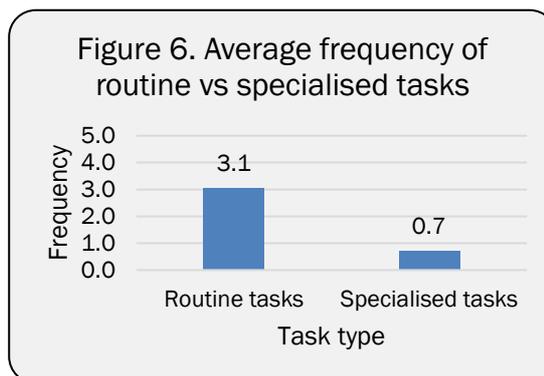
Understanding adolescent cyber risk-taking

Figure 7 shows proportions of participants who reported engaging in different types of cyber risk-taking. The labels on the x-axis represent a broad range of risky online activities.

Figure 7. Engagement in cyber risk-taking
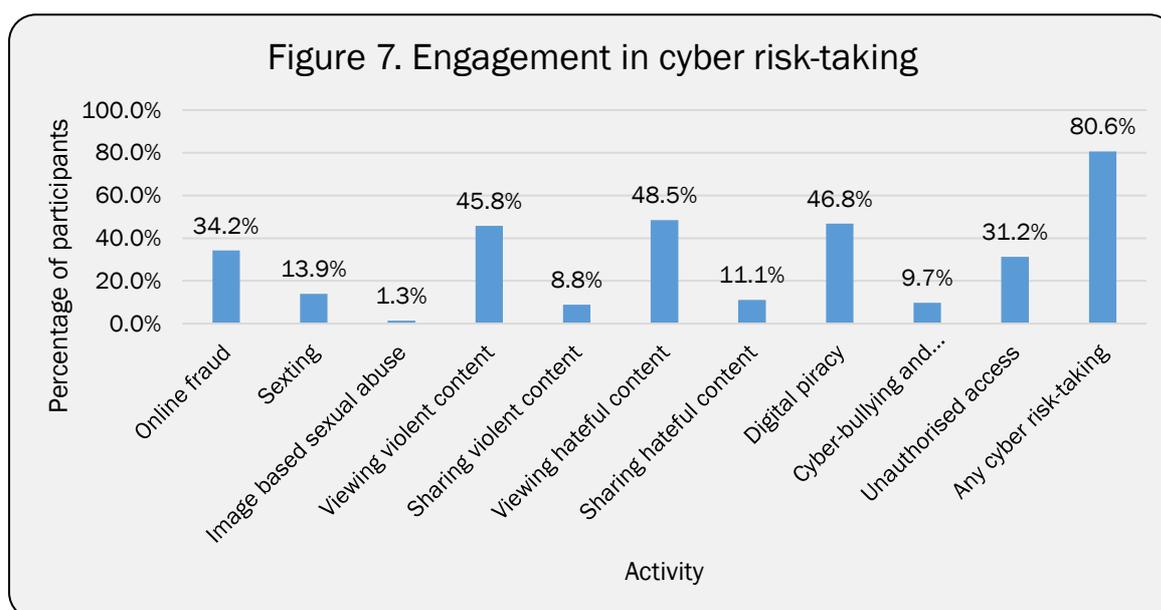
Online fraud refers to behaviours such as lying about one's identity, buying and selling items illegally, and tricking another person or business into providing money, goods or services. *Sexting* refers to participants' experiences with seeing sexual content of someone they know, as well as sharing sexual content of themselves. *Image based sexual abuse* refers to sharing sexual content of someone else without their consent. *Viewing violent content* refers to viewing content involving violence against individuals, as well as groups of people. *Sharing violent content* refers to the sharing of violent content online. *Viewing hateful content* refers to viewing content making fun of or discriminating against an individual or group of people because they are

different. *Sharing hateful content* refers to the sharing of discriminatory content online. *Digital piracy* refers to the downloading and sharing of copyrighted materials such as music, videos and software. *Cyber-bullying and harassment* refers to searching for and/or sharing harmful content to make others feel bad or scared. *Unauthorised access* refers to accessing other people's devices or accounts without their permission. Over three quarters (80.6%) of participants reported ever engaging in at least one type of risky cyber behaviour. Nearly half of participants reported engaging in viewing hateful content (48.5%), digital piracy (46.8%), and viewing violent content (45.8%). Approximately one-third of participants reported engaging in online fraud (34.2%) and unauthorised access (31.2%). About one in ten participants participated in sexting (13.9%), sharing hateful content (11.1%), cyber-bullying and harassment (9.7%), and sharing violent content (8.8%). Only a small proportion engaged in image based sexual abuse (1.3%). Just under one-fifth (19.4%) reported abstaining from any such cyber risk-taking.

Understanding cyber versus physical risk-taking

While over three quarters of participants reported engaging in cyber risk-taking, Figure 8 shows that, overall, these experiences were extremely infrequent; measured on a scale of 0 to 5 (0 = Never; 1 = Less than weekly; 2 = About once a week; 3 = Several times a week; 4 = About once a day; 5 = Several times a day). The average frequency of cyber risk-taking was 0.5 or below across all categories — meaning that participants, on average, reported engaging in these activities somewhere between never and less than weekly. Similar low frequencies were reported for risky physical activities such as theft, consuming alcohol, using illicit drugs or fighting. Though both physical and cyber risk-taking behaviours were rare, they were also related. Figure 9 shows that for those who reported engaging in cyber risk-taking, just over half reported engaging in physical risk taking as well, while just under half reported cyber risk-taking only. A very small proportion reported engaging in only physical risk-taking.
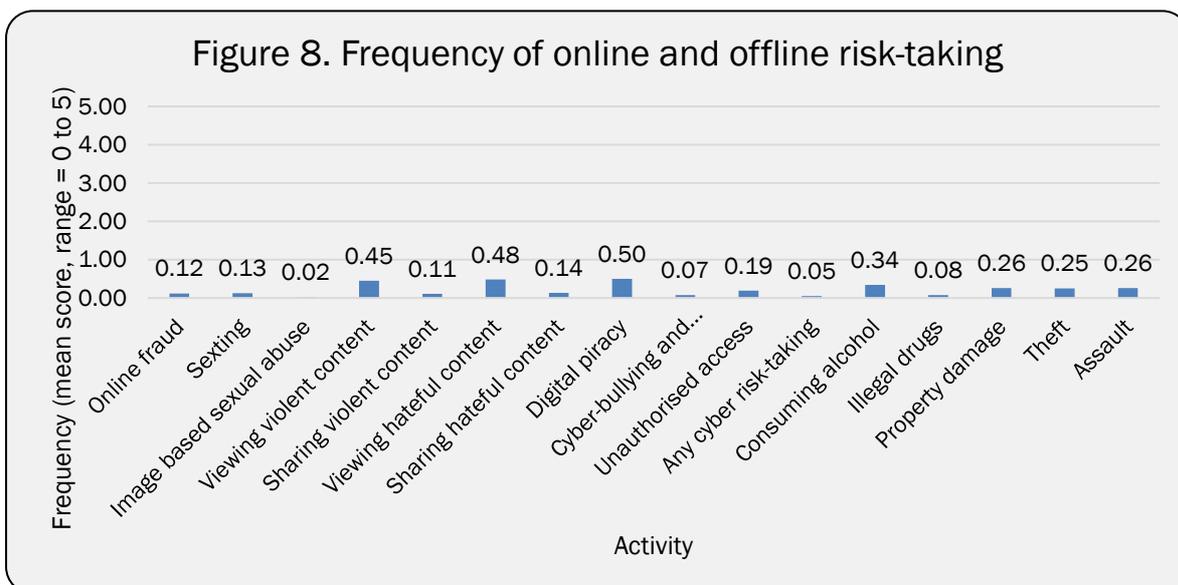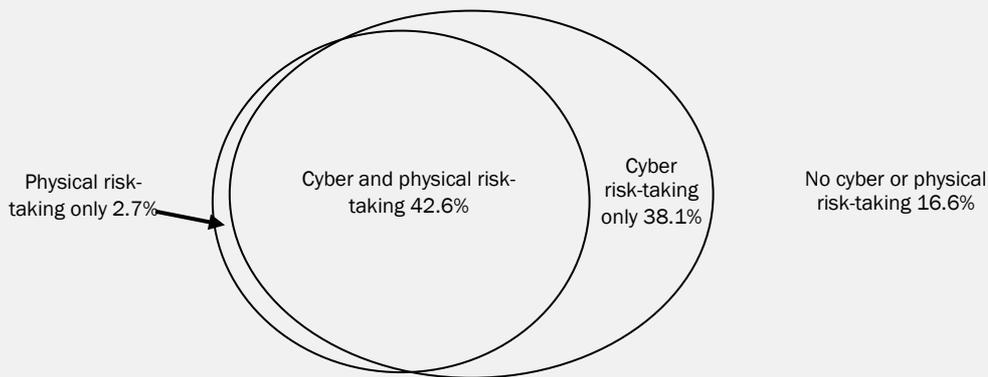

Figure 8. Frequency of online and offline risk-taking

Figure 9. Overlap of risky cyber and physical behaviour (N=1807)

Physical risk-taking only 2.7%

Cyber and physical risk-taking 42.6%

Cyber risk-taking only 38.1%

No cyber or physical risk-taking 16.6%

Identifying factors associated with cyber risk-taking

Figure 10 shows that there are seven key factors significantly associated with cyber risk-taking: being male, engaging in specialised and routine tasks while online, hours spent online, technical skill level, low self-control and physical risk-taking. The most significant factor for cyber risk-taking was engaging in physical risk-taking. Males were 65% more likely than females to engage in cyber risk-taking. Participants who frequently engaged in routine tasks were 2 times as likely to engage in cyber risk-taking, and participants who reported engaging in specialised tasks were 3.4 times more likely than those who did not to engage in cyber risk-taking. Participants who had lower self-control, a higher technical skill level and were online more frequently were up to 1.3 times more likely to also engage in cyber risk-taking. On the other hand, participants who frequently participated in physical risk taking were 6.8 times more likely to engage in cyber risk-taking. These results suggest there is an important overlap in physical and cyber risk-taking, and that how adolescents engage with technology helps us to understand cyber risk-taking, particularly among adolescent males.

Figure 10. Key factors associated with cyber risk-taking
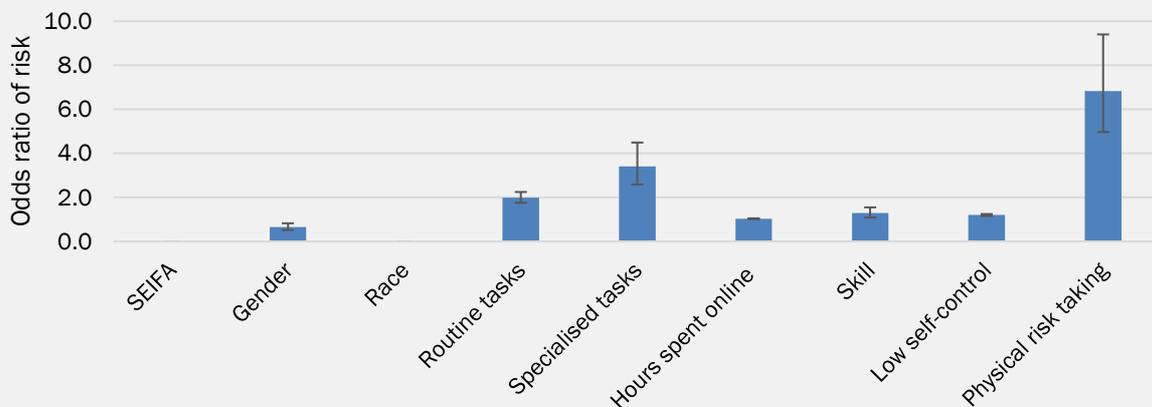
FUTURE DIRECTIONS FOR THIS PROJECT

The DYS provides a useful snapshot of self-reported digital uptake and risk-taking by Year 8 adolescents in 2018. We hope that this information will provide schools and parents with a better understanding of the different ways that adolescents use digital technology and the implications for risk-taking (both on- and offline). Furthermore, we hope that this information will help schools plan their activities and programs to support their students. Follow-up surveys in 2019 and beyond will permit longitudinal analysis and provide further understanding of how such risk-taking changes over time.