Australian Government | Office of the eSafety Commissioner

MARCH 5, 2018

STATE OF PLAY — YOUTH AND ONLINE GAMING IN AUSTRALIA

Research@eSafety

Under Section 15 of the *Enhancing Online Safety for Australians Act 2015*, the Office of the eSafety Commissioner (Office) has the following research functions. This is to:

- support, encourage, conduct and evaluate research about online safety for Australians
- collect, analyse, interpret and disseminate information relating to online safety
- publish reports and papers relating to online safety for Australians.

The Office's research program is underpinned by four key themes including:

1. tracking trends
2. supporting the development of Office resources and programs
3. inter-agency and international co-operation
4. program and resource evaluation.

This research fits under themes 1 and 2. Other research undertaken by the Office is available online at https://www.esafety.gov.au/about-the-office/research-library

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Key findings

- Online gaming environments are seeing rapid innovation and change. From esports to mobile gaming, it has grown to become a multi-billion dollar industry.
- Eight in 10 young people aged 8–17 played games online in the 12 months to June 2017.
- Online multiplayer gaming is a very popular activity for young Australians, with 6 in 10 young people aged 8–17 having played these games.
- Anonymity is an important aspect of online gaming: 1 in 2 young people have played multiplayer games online with people they have not met in person.
- Nearly 1 in 2 young people have played esport game titles like *League of Legends and Counter Strike: Global Offensive*. However, the proportion of young people participating in esport tournaments (both amateur and professional) was only 4%.
- Around 34% of young people aged 8–17 made an in-game purchase in the 12 months to June 2017.
- An estimated 17% of multiplayer gamers experienced in-game bullying—equating to roughly more than 200,000 young Australians.
- Young people who experienced bullying while gaming online responded in a variety of ways. Forty two percent, for example, turned off the in-game chat function; 41% ignored the bullying; and 38% stopped playing a game with the bully/bullies.
- Young people also used more formal channels to deal with bullying. Nearly 30% of multiplayer gamers who experienced bullying reported it to game moderators.

Introduction

The multiplayer functions in online games have shifted solo play into a social activity. Increasingly, online games have become the (virtual) place where people can connect, make and meet friends and compete with others. In bringing together players of all levels to pit their skills against each other, some online games have given rise to and popularised the idea of professional esports competitions. Game titles such as League of Legends, Counter Strike: Global Offensive and Defense of the Ancients 2 (DOTA 2) have become central to a scene that mirrors that of established sports such as Australian Rules football or basketball. Teams, leagues and ladders, betting, prize money and dedicated online broadcasting platforms and pay TV channels are all features of an esports industry that in 2017 generated global revenues of US $1.5 Billion and is expected to grow to US $1.9Billion in 2020 (SuperData Research, 2017a).

As well as creating a new industry, online games have also been the spark for and scene of antisocial behaviour within an increasingly growing and diverse community of players. The in-game chat functions that are an essential part of online game play have also become well-known tools for bullying (Maher, 2016). Companies behind leading games have understood this for some time and actively attempt to limit toxic online behaviour in order to attract and retain players. Moderators, player tribunals, reform cards and bans are some of the ways in which popular games have attempted to better players' experiences in what have otherwise been consequence-free online environments (Maher, 2016).

In the digital sphere content is said to be king. Online gaming is one of many ways in which young Australians express and assert their engagement with the digital world. As Australia's leader in online safety, the Office has undertaken research to improve its understanding of the size and nature of this trend amongst Australian youth. This report presents results from the Office's 2017 Youth Digital Participation survey which fielded a number of questions relating to online gaming. The survey comprised a nationally representative random sample of 3,017 young people aged 8–17 (Office of the eSafety Commissioner, 2017).

Participation in online gaming

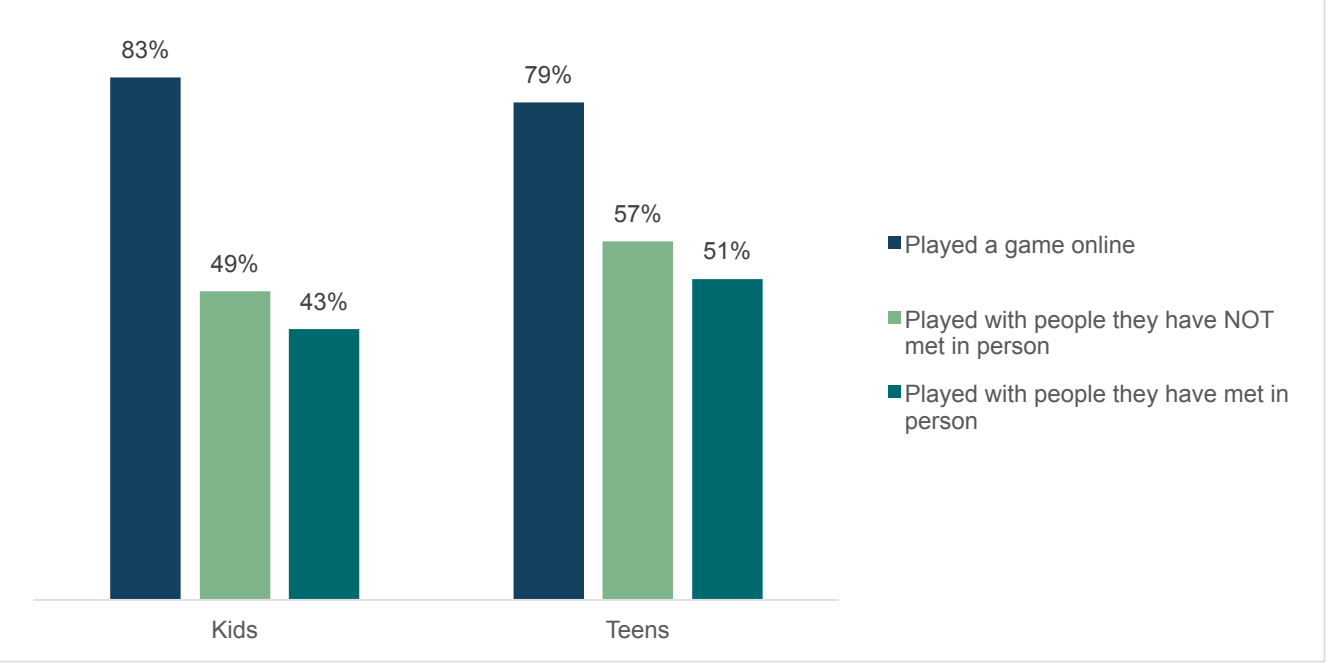
Multiplayer online games can be played either partially or primarily through the internet or on other computer networks. They include games played on popular game consoles such as PlayStation or Xbox, personal computers, or through mobile phones and other digital devices. The types of online games are legion and constantly changing in terms of their popularity. Some of the more commonly played games in 2017 included *League of legends* (PC), *FIFA 2017* (Console) and *Honour of Kings* (Mobile) (SuperData Research, 2017b).

The Office's research findings show that in Australia, an estimated 81% of Australian young people aged 8–17 have played an online game and 64% played with others[1] in the 12 months to June 2017. Playing online games with others was a pastime significantly more popular with teens (14 to 17 year olds) (67%) than kids (8 to 13 year olds) (62%), boys (71% vs 51% for girls), and those with a disability[2] (72% vs 63% for youth without a disability). Part of playing with others includes playing anonymously with people that you

[1] This includes those that they have met in person and those that they have not.
[2] N=228 Youth with a disability

have not met in person. Overall, around 5 in 10 young people played in this way, with boys (64%) more likely than girls (40%) to do so. As Figure 1 also shows, while kids were more likely to play online games overall, playing with strangers was something that was more popular with teens than kids.

Figure 1: Online game playing among teens and kids



While direct international comparisons are difficult given variations in methodologies between studies, online gaming participation levels in Australia appear to be generally comparable to levels recorded in the United States and New Zealand. Lenhart (2015) for example, reported that around 75% of teenagers between the ages of 13–17 were found to play games online. In New Zealand, without distinguishing between online or offline video game playing, Brand, Todhunter & Jervis (2017b) found that 74% of all children under the age of 18 in New Zealand were players.

In-game purchasing

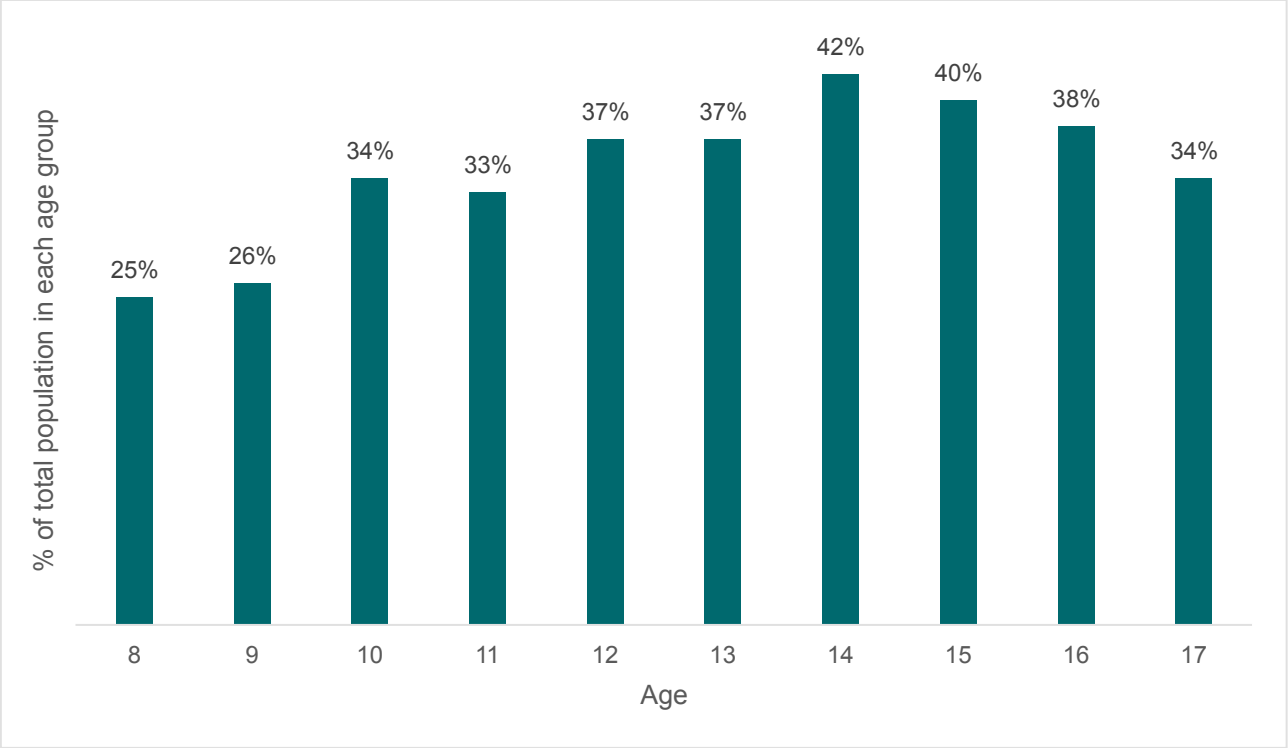
Playing video and computer games is not a pastime restricted to the young. Industry reports point to the fact that the average gamer in Australia is 34 years old and this age is increasing[3] (Brand, Todhunter, & Jervis, 2017a). Reflecting the higher spending power of this group, the market for the video and interactive media industry is also quite substantial. In Australia, industry estimates suggest that games and related hardware generated A$3.23 billion in sales in 2017 (IGEA, 2018). Globally, some estimates suggest that it is a US$100 billion industry which is set to grow to around US$168 billion by 2020. Around 20% of this growth is expected to come from esports, gaming videos (i.e. watching others play) and immersive technology, also known as virtual reality (SuperData Research, 2017b).

Revenues are not only generated from the sale of game consoles, associated accessories and the games themselves. Gaming revenues are also derived from in-game purchases and upgrades (SuperData Research, 2017b). Office research shows that around 34% of

[3] In 2004 the average age of gamers was 24 years old (Brand, Todhunter, & Jervis, 2017)

all Australian young people made in-game purchases while playing online games with teens being more likely to than kids (38% vs 32%). As Figure 2 shows, around 34% of 17 year olds made in-game purchases compared with around 25% of 8 year olds. The highest instance of in-game purchases by age occurs within the 14–16 year age group with around 40% of them making a purchase. Like playing online games in general, making in-game purchases and upgrades was a particularly male activity—51% for boys playing games online compared to 34% for girls.

Figure 2: Australian youth making in-game purchases



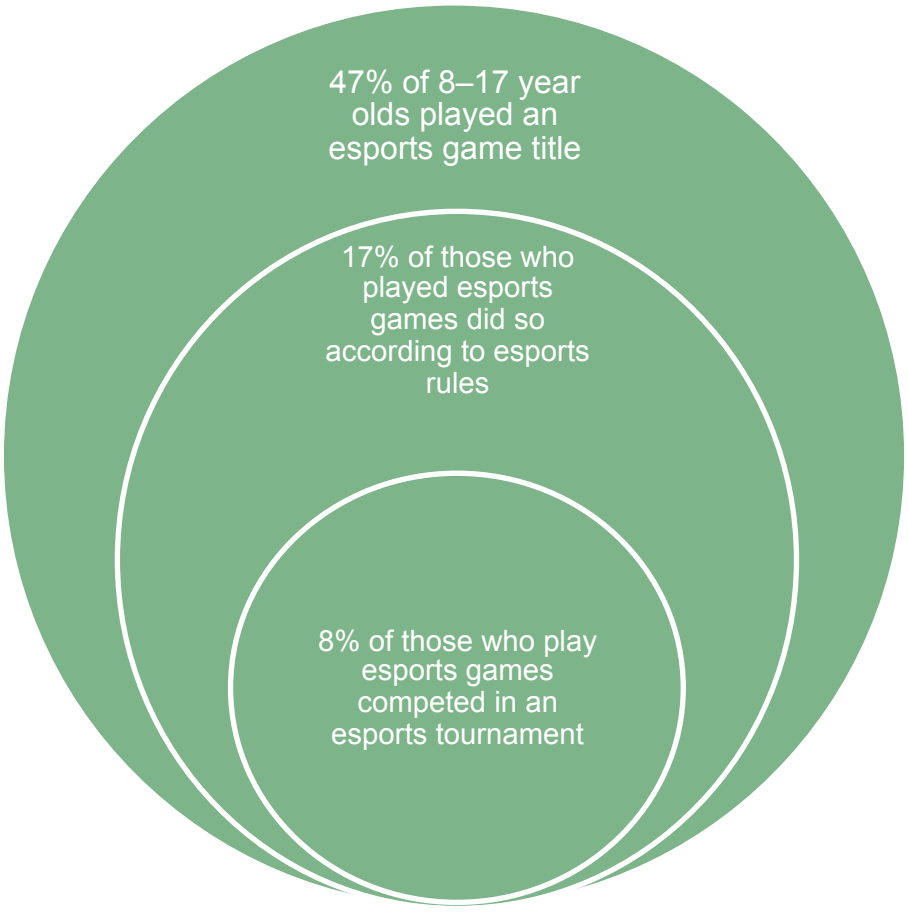
New frontiers: the rise of esports

Esports has been defined as a form of sports where its primary aspect is facilitated by electronic systems. The input of players and teams, as well as the output of the esports system, is mediated by human computer interfaces (Hamari & Sjöblom, 2017). In more practical terms, esports transforms the otherwise leisure, escapist and virtual activity of video game playing into something that is professionally focused and more competitive (Taylor, 2012). Esports games feature competitive gameplay according to accepted rules of leagues and tournaments. The games include first person shooter games such as Counterstrike: Global Offensive or Call of Duty, sports games (FIFA), collectible card games like Hearthstone, or action games and real time strategy games such as StarCraft 2 (Hamari & Sjöblom, 2017). These games can be played either as solo players or in teams but are considered esports once they are included in an esports tournament or competition. Aside from distinct forms of competitive gameplay, esports is also characterised by its community of fans and supporters—people who watch games on dedicated websites and TV channels, make and read comments in topical online forums and regularly meet other likeminded people at real life tournaments (Taylor, 2012) (Hamari & Sjöblom, 2017).

On its own, the esport market is quite sizeable and includes sponsorship and ads, prize pools, merchandising and ticket sales as well as betting and amateur tournaments (SuperData Research, 2017a). The sale of additional in game content in flagship esports game titles also forms part of the way in which video game companies make direct investments in this market (SuperData Research, 2017). For example, the publishers of games such as *DOTA 2* awarded their professional athletes prize pools of US$25 million for its 2017 international championships—The International—by selling extra game content and quests to players as part of their games (SuperData Research, 2017b).

Among Australian youth aged 8–17, esports enjoys a relatively sizeable interest. The Office survey findings show that as of June 2017, 16% of young people were estimated to be esport fans[4] and 15% had watched an esport event[5]. Moreover, 47% of young people reported playing an esports game title—see Figure 3. Of these, 17% played these games in accordance to esport rules and 8% reported that they had competed in an esports tournament (4% of the total youth population aged 8–17). Survey findings also demonstrate the fluid nature between esport gamers and fans. Around 1 in 3 of those that play an esport game in the 12 months to June 2017 were also esport fans (29%).

Figure 3: Participation in the esports phenomena



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This includes those who have gone to an esports tournament or convention, visited esport websites, watched tournaments on online streaming platforms and TV channels and commented in related online forums and platforms.

5 This includes those that have gone to an esports tournament or convention or watched tournaments on online streaming platforms and TV channels.

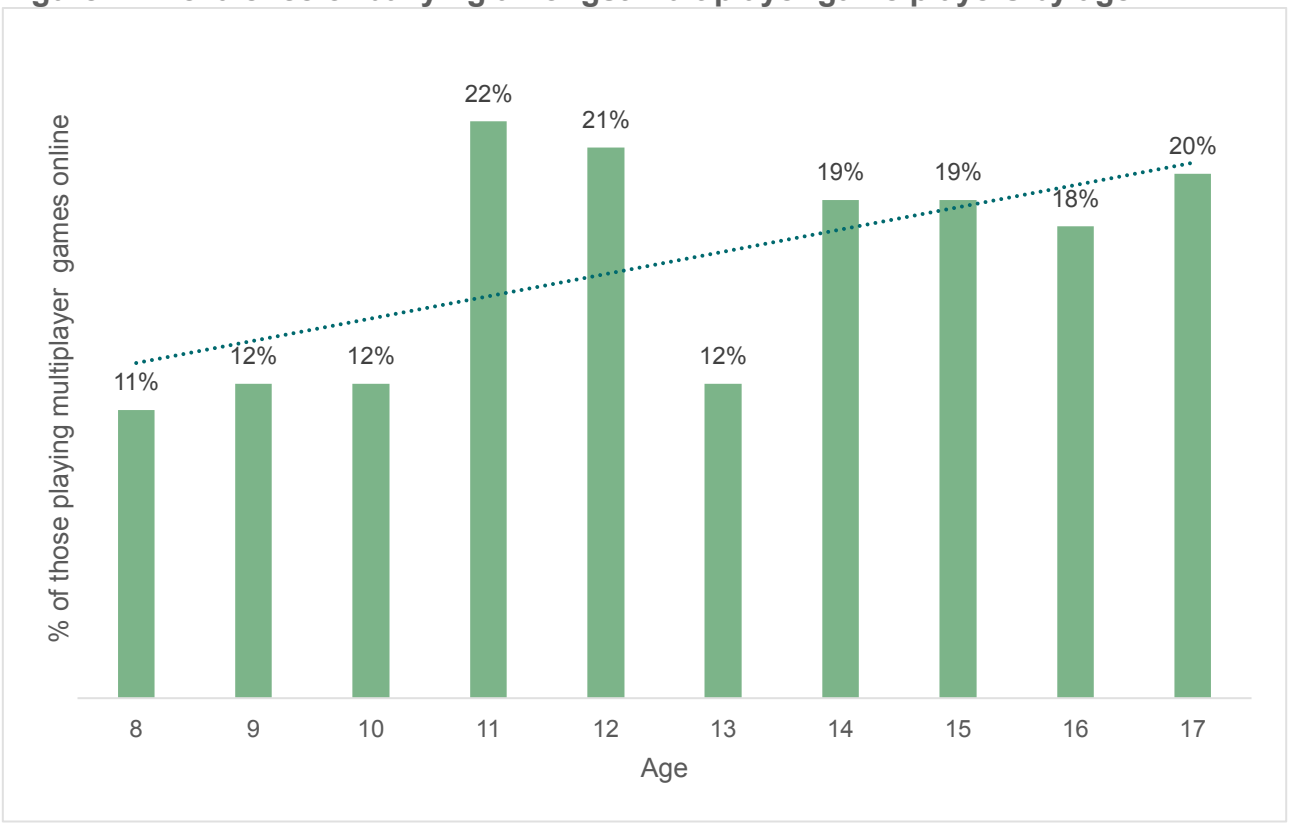
Bullying and network gamers

International studies have identified the potentially positive role that video games can play in learning, promoting positive social behaviour, and in people's experiences with their peers (Garris et al., 2002) (Connolly et al., 2012) (Lenhart, 2015). Lenhart (2015), for example, noted that 52% of American teenagers participated in gaming with friends online and 89% played with them offline. For teenagers and teenage boys in particular, this formed a critical means of developing and maintaining friendships, enabling daily recreational connections and engaging with peers (Lenhart, 2015). Similarly, our Australian research has shown that around 46% of young people play online games with people that they have met in person and that this is significantly more common among boys than girls, at 58% and 34% respectively.

However, the increasing popularity of online gaming has also given rise to some negative experiences for young people such as in-game bullying. For Australia, our research shows that 17% of those aged 8–17, who play multiplayer games, were bullied or abused when playing these games in the 12 months to June 2017. For those experiencing this type of bullying, age seemed to be a relevant factor associated with prevalence. Whereas around 20% of 17 year olds who played multiplayer games online were bullied while playing a game, only 11% of 8 year old gamers had had a similarly negative experience.

In reflecting this, Figure 4 shows that for youth playing online multiplayer games, the highest instances of bullying occurred between the ages of 11 and 12 with around 22% of 11–12 year old multiplayer gamers being bullied in this way in the 12 months to June 2017.

Figure 4: Prevalence of bullying amongst multiplayer game players by age



When looking at gender, it was also striking to note that a similar number of boys (18%) and girls (15%) were bullied while playing a multiplayer game online. While these findings seem to run counterintuitively to a lot of the commentary around the online video game community (see Maher 2016; Powell & Henry 2017), the Office's survey did not ask whether players identified their gender when playing a video game or whether female game players withheld information regarding their gender from other players to avoid being bullied. On this point, other research has shown a link between gender and sexist behavior, which may include bullying, in online gaming. Kasumovic & Kuznekoff (2015) for example, found that lower performing male players in the game *Halo 3* were more likely to behave in a sexist manner when listening to in game comments from a female voice than higher performing male players. The authors inferred that the threat to and need to maintain established hierarchies in a competitive, and predominantly male, game environment drove poorly performing players to act in a sexist way towards women (Kasumovic & Kuznekoff 2015).

International research

A limited number of international studies have explored how video games can be virtual spaces in which young people can be the victims, as well as the perpetrators, of online bullying. However, this research shows discrepancies in the reported incidence of in-game bullying—a possible reflection of the differing research methodologies adopted and the use of convenience sampling and small sample sizes in some cases. Available international research found that:

- In South Korea, a country with a strong gaming culture, an early small scale quantitative study administered to 416 students aged 12–15 years attending two secondary schools in Seoul observed that online games were by far the most prevalent form of bullying experienced. Around 43% of respondents reported that they had been bullied in the last two months and that around 30% had also bullied others using this medium. Moreover, there was no difference in rates of bullying based on gender (Tippett & Kwak, 2012).

- In the United States, a survey of 1,033 respondents (ages 12–70) hosted in an online gaming community forum found that 78% of respondents that had played a variety of online games had been a victim of cyberbullying (79% of females and 73% of males) (Fryling & Cotler, 2015). In addition, they found that younger females with higher gaming experience were the most likely victims of cyberbullying in online gaming environments.

- In the UK, a survey hosted within the *Habbo* game surveyed 2,515 young people aged 12–25 about their experiences of being subjected to, witnessing and perpetrating bullying in online gaming environments. They found that 57% of people had been bullied in an online game with 20% having bullied others (Ditch the Label, 2017).

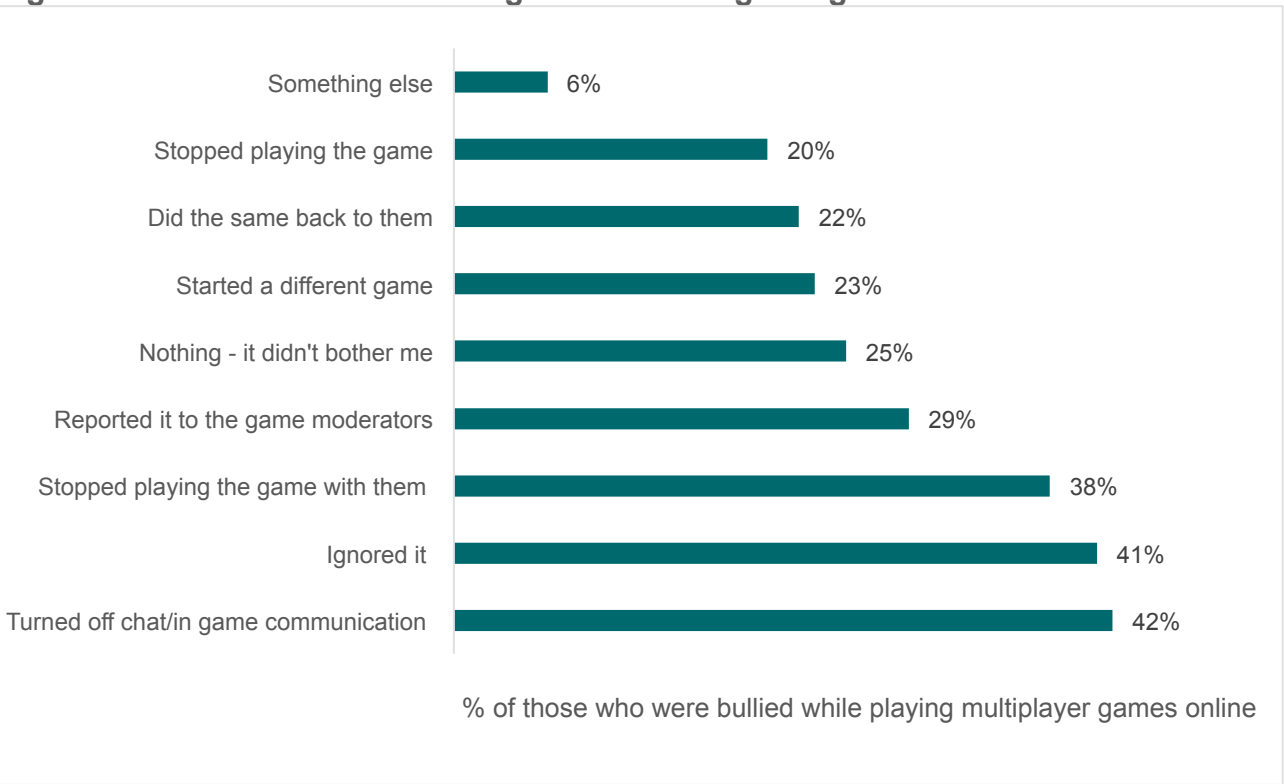
- In Canada, a further study analysed data drawn from a mixed methods study of cyberbullying to investigate the prevalence and experience of gaming among a survey sample of 670 fourth, seventh, and tenth grade students. It also looked at the experience and impact of gaming on 57 students. The study found that only 1% of participants had experienced cyberbullying victimisation once or twice in virtual-world games (Mclnroy & Mishna, 2017). The survey also found that swearing insults and other forms of verbal aggression were common experiences in online gaming

and that arguing and fighting through the voice and chat functions was pervasive. The implication of these findings were that these behaviours were not thought to be cyberbullying by respondents but expected components of participation in online gaming environments (McInroy & Mishna, 2017).

Reactions to bullying when gaming online

Players who were bullied while playing an online game employed a variety of strategies in response to the bullying. These findings are shown in Figure 5.

Figure 5: Actions taken after being bullied while gaming online



Overall, the most common response to being bullied while playing a game online was turning off the in-game chat function[6], ignoring the harassment or removing themselves and no longer playing with those who had bullied them.

Ignoring the problem was more commonly seen in teens (49% vs 34% of kids) and boys (46% vs 32% of girls). Teens were also significantly less likely to be bothered by being bullied while playing a game online (38% vs 13% of kids). As McInroy & Mishna (2017) suggest, this could be the result of teenagers having spent more time in the online gaming community and having been socialised into its complex patterns of language, interaction, norms and community (McInroy & Mishna, 2017).

On the other hand, as well as being less likely to ignore being bullied when compared with boys, girls were also significantly more likely to report these instances to in-game moderators (36% vs 24% of boys). They—along with those from a CALD background—

[6] A similar percentage of young people— 46%—blocked (including 'unfriending') people when using social media in order to keep themselves safe online (Office of the eSafety Commissioner, 2017).

were most proactive in involving third parties to try and resolve their concerns when gaming online.

The findings also show that around 1 in 5 people who were bullied online also retaliated in kind. This was something that was more common in teens—25% vs 19% of kids, boys—24% vs 16% of girls and CALD youth[7]—26% vs 19% non CALD youth.

Conclusion

This report has examined the size and interest in gaming and esports among young people in Australia. Whether played with friends or strangers, it is a significant and popular leisure activity.

There is a sizeable industry both globally and within Australia that is able to monetise the interest shown by players in a number of ways. Despite its relatively recent development, young people in Australia have demonstrated a significant interest in esports, providing a solid basis for continued growth in its participation.

Where the opportunity arises for interactions with others online, along with associated benefits, there is also the likelihood that young people will encounter negative experiences. In the gaming environment, young people are not passive and are responding to negative experiences, such as in-game bullying, in a range of ways.

In an Australian context, it would useful to explore further research relating to the following:

- how young people learn and develop response strategies to deal with bullying; and
- the intensity with which they play video games and the impact that this can have on themselves and their relationships with others.

[7] N = 357 CALD youth that played multiplayer games online.

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Further resources

The Office provides a range of resources and services in order to support the online safety and security of all Australians. In light of the issues raised in this paper, the following links are of particular relevance:

- Online gaming for young people and their parents
  - https://esafety.gov.au/education-resources/iparent/staying-safe/online-gaming/what-are-the-risks

- Cyberbullying—information and reporting tool
  - https://www.esafety.gov.au/complaints-and-reporting/cyberbullying-complaints/i-want-to-report-cyberbullying

- Young & eSAFE: helping young people be resilient and empowered online
  - https://esafety.gov.au/youngandesafe

Appendix 1

Methodology

Data in this report is drawn from the Office of the Children's eSafety Commissioner's 2017 eSafety Youth Digital Participation survey. The survey sample, sourced from online panels, comprised a random stratified sample of just over 3,000 young people aged 8-17 including:

- 1,424 aged 14–17 years
- 1,593 aged 8–13 years.

The survey focused on the online activities and experiences of respondents occurring in the 12 months to June 2017.

Table 1: Sample sizes for select estimates

Respondents playing multiplayer games online	1,940
Respondents experiencing bullying while playing multiplayer games online	325
Respondents participating in esports tournaments	135