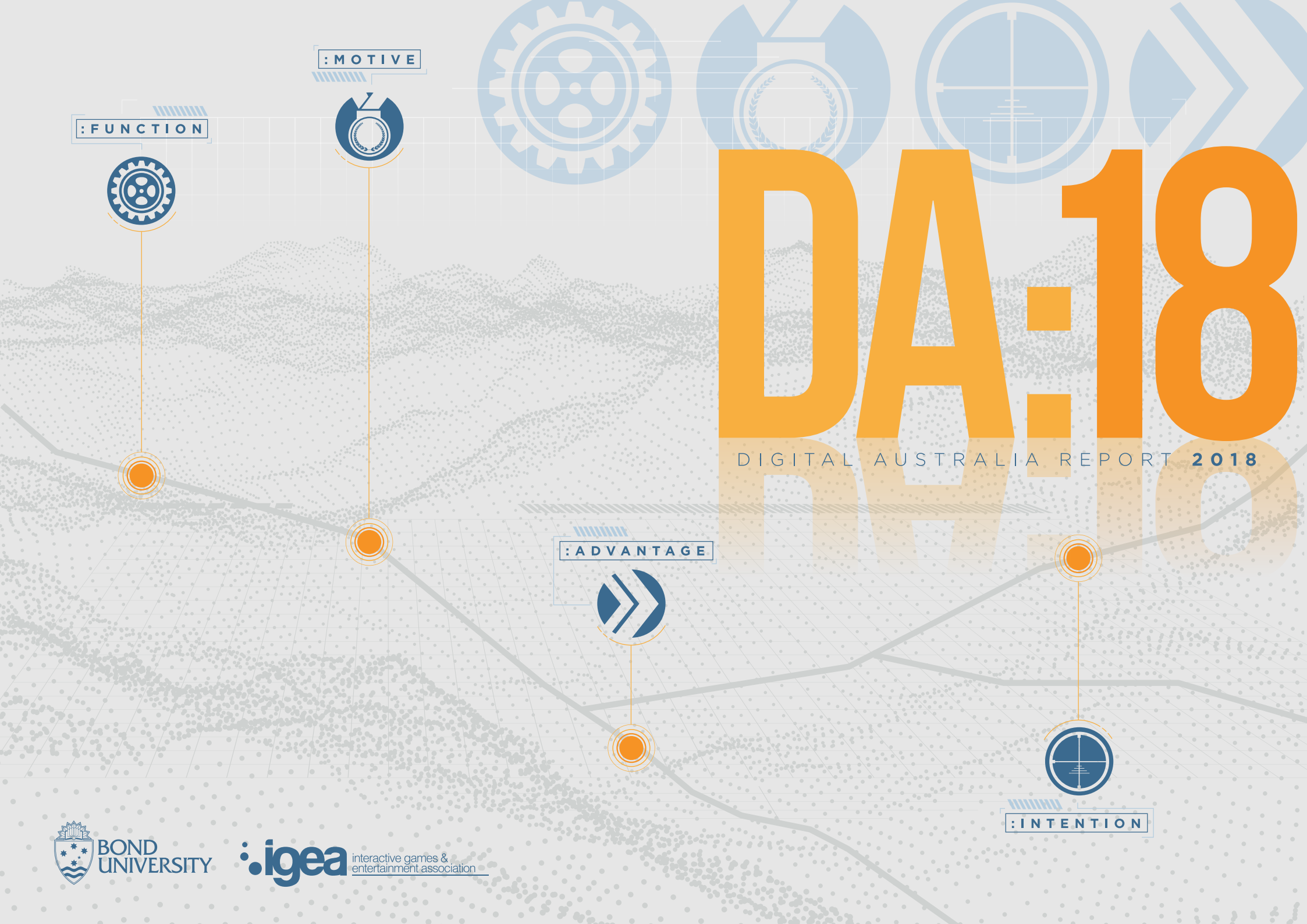

DA:18

DIGITAL AUSTRALIA REPORT 2018

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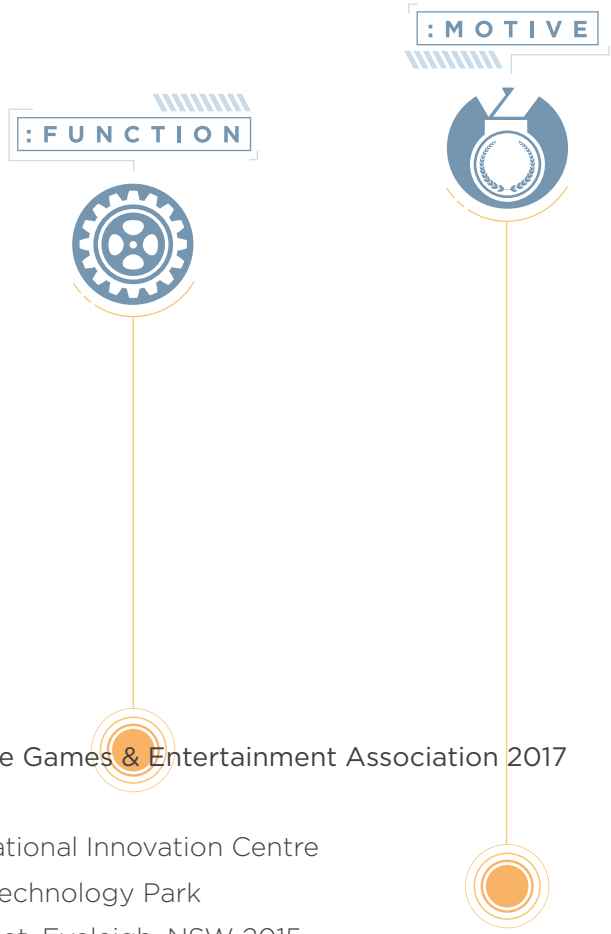

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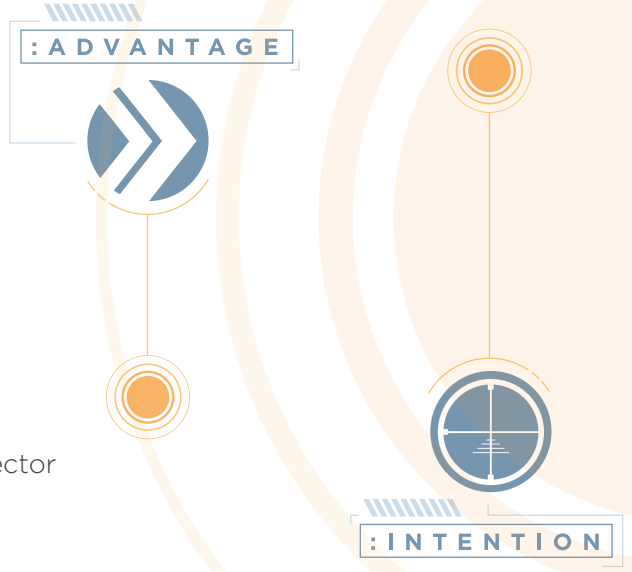

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: FOREWORD

DA:18

From the eighth generation of home consoles, to the latest dedicated handhelds, to ever more powerful personal computers, to mobile phones and tablets, to the rapid spread of virtual reality components, interactive games are woven into the fabric of our culture – a culture more nuanced and capable of enjoying the benefits of the digital economy than ever before. This report extends our knowledge of games and the Australians who play them.

-(Prof. Jeffrey E. Brand)-

In the mid-2000s we began documenting game audiences at a time when an active culture had formed to surround and celebrate interactive games and when the first players had become adults.

Other adults, who hadn't played games before, began to play. So-called family and party games became global successes.

The audience for games, which had been dominated by males, included increasing proportions of female players. The academic field of game studies and the study of gameplay (ludology) emerged during this decade. And game publishers grew large into international businesses.
Not everyone celebrated the growth and establishment of games. Concerns about violence in particular were a common focus in stories about video games in mainstream media. One academic, Janet Murray, explained that all new media are distrusted until the next, newer medium comes along. The moral panic about a medium starts early, centred on the knowledge that it is popular with youth, peaks as more people are entertained by it, and then fades as older and larger audiences adopt and adapt. It happened for books, movies, rock music, television and video games. Online and social media concern us today.

Through the Digital Australia series of audience studies that began in 2005, we've shown the proportion of households with games has grown from around 7 in 10 to 9 in 10. We've shown that the average player age has gone from the mid-20s to the mid-30s. We've shown increasingly equal gender representation among players.

We've also shown growing awareness and acceptance of the positive potential of games for culture and cohesion, for imagination and social interaction.

Today the fun continues through interactive games. Their purpose is mainly to entertain and engage. Their progress is to inform and persuade, to educate and illuminate. They are used in schools and workplaces, in hospitals and parks. They are played by billions and made by millions all over the world. They are a celebration of human imagination, innovation and culture. This report, the seventh of its kind in Australia and one of the longest running research projects about game audiences in the world, presents four simple themes to explore the progress and purpose of games. These themes are:

FUNCTION : How do we play video games over the lifespan? When do we play them, for how long, under what social and environmental conditions and with what devices?

MOTIVE : Why do we play video games in childhood and throughout life?

INTENTION : How do we use games intentionally, with planning and rules to get the most benefit out of them and minimise real or perceived risk?

ADVANTAGE : What social, cultural, educational, vocational or professional uses and benefits arise from games?

The advent of rapidly changing consumer electronics and computers, of new ways to produce software, of mobile devices and app ecologies has propelled games to the mainstream.

: IN PLAYERS' WORDS

Video games help me think strategically. -(Male, 33)-

I have made friends through either playing games together or sharing our interests in gaming. I also believe educational games, such as Dr Seuss books in game form or the Gizmos and Gadgets game taught me verbal, mathematical, logical and scientific skills. -(Female, 23)-

Pokémon go helped me to exercise.-(Male, 37)-

Games have helped me keep my mind active as I suffer from medical conditions that limit my activities outside the home. -(Female, 52)-

Now there are so many different interests, choices of games available. I used to play role play games. Then I got suggestions from medical workers to distract from pain, so I am currently using a medical game to assist with pain issues. -(Female, 36)-

I feel games have helped with my social connections irl [in real life], and my ability to solve problems and work cooperatively with other people. -(Female, 23)-

Being bullied, playing games helps you escape from reality because no one knows who you are. -(Female, 23)-

I think video games have taught me to think logically about how to solve problems and, in the case of two-player games, they've taught me to be patient with other people and how to win and lose gracefully. -(Female, 34)-

By playing games, I hope to keep my mind active and ward off dementia. -(Female, 72)-

It [playing video games] helped me regain coordination and improve fine motor skills after having a stroke. -(Male, 35)-

Games have taught me co-operation in a team of people you know nothing about. It [playing] has also given me an idea of setting my priorities in order to achieve my goals. -(Male, 21)-

Some of the games I play have been educational. I have learned about history and mathematics in some games. It has helped socially too in that I have met new people while playing games that I have become friends with. -(Female, 33)-

I only play intellectual games mainly for relaxation but also to keep my mind stimulated. The benefits I get from this: relaxation and keeping my mind sharp (or at least trying to). -(Male, 57)-

: CONTENTS

Foreword 3

In Players' Words 4
Key Findings 6

Function Game Households 8
- Households With Games Over Time 8
- Devices Used to Play Games (%) 8
- Games In Homes With and Without Children 9
- Screens & Game Devices in Game Households 9

Function Internet abd Other Media Use 10
- Constraints on Play by broadband (%) 10
- Average Ranking of Media choices - Out of 10 11

Function Who Plays 12
- Average Age of Players Over Time (Years) 12
- Female Player Proportion Over Time 12
- Player Proportions by Age Group (%) 12
- % Players Within Age Groups 13
- Age Groups % All Players 13

Function How We Play 14
- Casual Playing Frequency and Duration 14
- In-Depth Frequency and Duration 15
- Average Daily Video Gameplay 16

Motive Why We Play 17
- Reasons Why Australians Play Video Games (%) 17
- Reasons We Play Video Games by Life stage 18
- Social Playing Experiences (%) 19

Motive Gameplay, Sharing and Culture 20
- Reasons to Follow Esports (%) 21

Intention Families and Play 22
- Why Parents Play Video Games With Children (%) 22
- How Parents Use Games (%) 23
- Parents' Rules for Children's Gameplay (%) 23

Intention Regulating Play 24
- Parents' Familiarity With Family Controls 24
- Platforms Used With Family Controls (%) 24
- Parents' Familiarity With App Store Ratings (%) 24
- Parents' Confusion With Classification Markings (%) 25
- Impact of Classification on Parents' Purchases (%) 25

Intention Concerns About Exposure Risks 26
- Concerning Elements in Media Used by Children 26
- Need for More Diversity in Games (%) 27
- Concerning Elements in Media Used by Adults 27

Advantage Games and Wellbeing 28
- Potential of Video Games for Ageing Well (%) 28
- Potential of Video Games for Health (%) 28

Games and Learning 29
- Potential of Games for Learning (%) 29

Advantage Games, Schools and Work 30
- Effect of Using Video Games in Schools (%) 30
- Effectiveness of Games on the Job (%) 30

The Digital Games Business 31
- Australian Video Games Retail Industry Value 31

Case Studies 32
- Orbit : It's Not Just a Game 32
- MindMax : A Game A Day, Keeps the Mind at Bay 34
- Game Software For Military 36
- Sound Scouts : Uses Games to Make Testing Fun 38

Video Links 40
About 42

: KEY FINDINGS

GAMES HOUSEHOLDS

97% of homes with children have computer games.
60% of households have five or more screens.
80% of game households have more than one game device.
16% of game households have a virtual reality headset.
33% choose not to download games due to data limits.

WHO PLAYS

67% of Australians play video games.
46% of video game players are female.
34 years is the average age of video game players.
77% of players are aged 18 years or older.
43% of those aged 65 and over play video games.
13 years - the average length of time adult players have been playing.

HOW WE PLAY

89 Minutes is the average daily total of all gameplay.
98 Minutes is the average daily total play for males.
77 Minutes is the average daily total play for females.
10 Minutes, twice a day is typical for casual gameplay.
1 Hour, daily is typical for in-depth gameplay.

WHY WE PLAY

Pass time, have fun – top reasons younger adults play.
Have fun and de-stress – top reasons working-age adults play.
Passing time, keeping an active mind - top reasons older adults play.

GAMEPLAY SHARING CULTURE

68% have used walkthroughs, videos or wikis to help their gameplay.
28% have posted their own videos of gameplay.
33% have watched esports. Of these players...
- 52% watch to learn strategies for improved gameplay.
- 10% watch to follow an esports team.

FAMILIES AND PLAY

60% of parents play with their children in the same room.
44% of parents play online games with their children.
81% are familiar with family controls on game systems.
84% of parents have talked with a child about playing safely online.

GAMES AND WELLBEING

For better health, participants said video games ...
- 84% can improve thinking skills.
- 78% can improve dexterity.
- 59% can help manage pain.

For positive ageing, participants said video games...
- 90% may increase mental stimulation.
- 80% may fight dementia.
- 54% may increase mobility.

GAMES, LEARNING AND WORK

Using video games for work ...
- 34% have used games at work to improve job knowledge.
- 26% have used games at work to learn health and safety rules.

Using video games in schools parents say video games ...
- 71% can be effective for teaching students.
- 50% have been used by their children in the school curriculum.

GAMES BUSINESS

76% say making video games in Australia benefits the economy.
20% was growth rate of Australian digital game sales 2013-2016.

METHODS

Digital Australia 2018 (DA18) is a study of 1234 Australian households and 3135 individuals of all ages in those households. Participants were drawn randomly from the Nielsen Your Voice Panel in March 2017; research was designed at Bond University. The margin of error is ±2.7%.

DIGITAL AUSTRALIA REPORT 2018

SNAPSHOT DA:18

:FUNCTION

WHO PLAYS?

34 YEARS OLD AVERAGE AGE OF VIDEO GAME PLAYERS

43% OF THOSE AGED 65 AND OVER PLAY VIDEO GAMES

46% OF VIDEO GAME PLAYERS ARE FEMALE

GAME HOUSEHOLDS

1/3 OF GAME HOUSEHOLDS ARE LIMITED BY POOR BROADBAND

80% OF GAME HOUSEHOLDS HAVE MORE THAN ONE GAME DEVICE

16% OF GAME HOUSEHOLDS HAVE A VIRTUAL REALITY HEADSET

HOW WE PLAY

98 MINUTES IS THE AVERAGE DAILY TOTAL PLAY FOR MALES

77 MINUTES IS THE AVERAGE DAILY TOTAL PLAY FOR FEMALES

TOP REASONS WE PLAY

YOUNGER ADULTS	WORKING ADULTS	OLDER ADULTS
PASS TIME	HAVE FUN	PASS TIME
HAVE FUN	DE-STRESS	KEEP MIND ACTIVE

GAMING CULTURE

68% OF PLAYERS USE GAMEPLAY HELPS

33% OF PLAYERS HAVE WATCHED E-SPORTS

SOCIAL GAMING

92% OF PLAYERS PLAY GAMES WITH ANOTHER PERSON.

68% OF PLAYERS USE WALKTHROUGHS AND ADVICE TO FURTHER GAME PLAY

:MOTIVE

:INTENTION

PARENTS & VIDEO GAMES

75% OF PARENTS HAVE RULES ABOUT CHILDREN'S GAME PLAY

PARENTS RULE

89% OF PARENTS TALK WITH CHILDREN ABOUT VIDEO GAMES

81% OF PARENTS FAMILIAR WITH FAMILY CONTROLS

60% OF PARENTS PLAY WITH CHILDREN IN SAME ROOM

44% OF PARENTS PLAY WITH CHILDREN ONLINE

MEDIA CONCERNS

62% FIND M AND MA15+ ARE CONFUSING (MA 15+)

65% THINK MORE AGE DIVERSITY IS NEEDED FOR GAME CHARACTERS

66% THINK MORE GENDER DIVERSITY IS NEEDED FOR GAME CHARACTERS

:ADVANTAGE

WELLBEING

VIDEOGAMES CAN...

84% IMPROVE THINKING SKILLS

59% HELP MANAGE PAIN

80% HELP FIGHT DEMENTIA

54% INCREASE MOBILITY

LEARNING & WORK

34% USED GAMES FOR WORK

50% CHILDREN HAVE USED GAMES IN SCHOOL CURRICULUM

GAMES BUSINESS

76% SAY MAKING VIDEO GAMES BENEFITS AUSTRALIAN ECONOMY

20% CAGR DIGITAL GAME SALES IN AUSTRALIA 2013-2016

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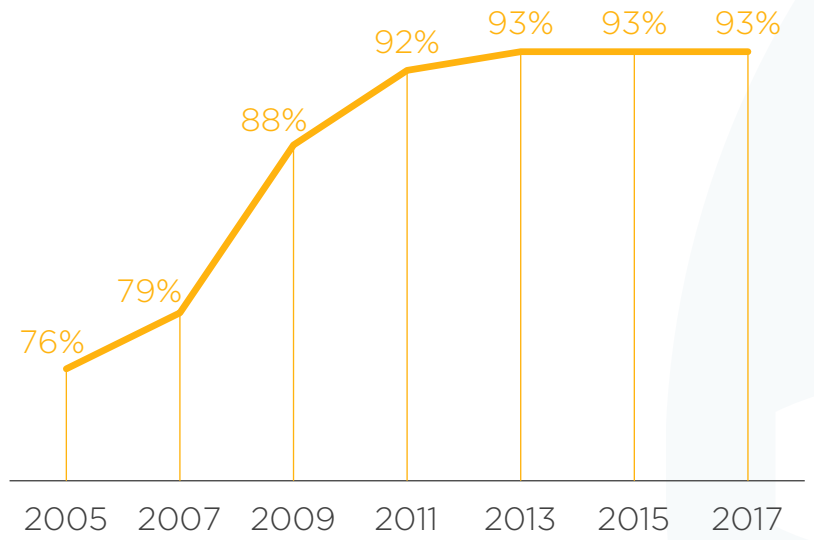
: FUNCTION GAME HOUSEHOLDS

HOUSEHOLDS WITH GAMES OVER TIME



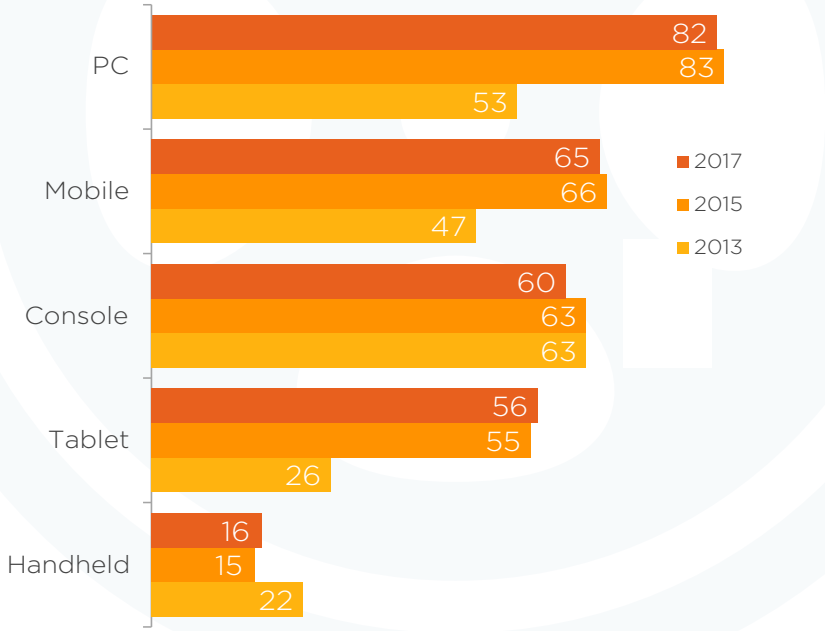
Almost every home in Australia has a device for playing video games. In this sample, as with earlier Digital Australia samples, households with children are slightly more likely than households without children to have them (97% compared with 93%).

> [Video games] help me to bond with people who I love, especially in my family. They also help me to relax and tune out from stresses in my life, and they can recharge my batteries in that sense. It may sound a bit pathetic at my age (48), but games also allow me to dream.
> -(Male, 48)-

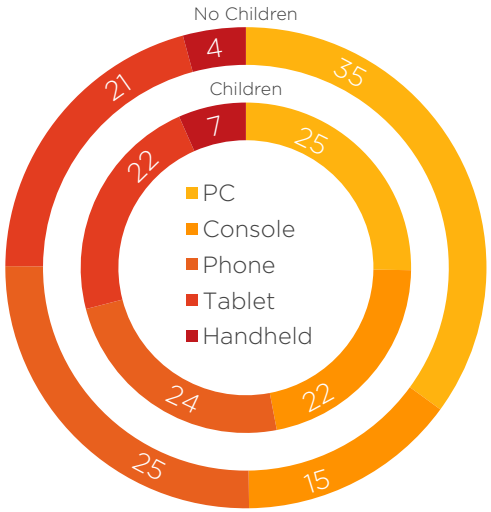
We identify five distinct forms of game devices to reach this conclusion:

(1) PCs or personal computers including laptops,
(2) Consoles such as the Sony PlayStation 4, Microsoft Xbox One, Nintendo Switch,
(3) Mobile Phones such as iOS and Android phones,
(4) Tablet computers running iOS and Android systems and
(5) Handhelds including dedicated devices such as the Sony PS Vita and the Nintendo 3DS.

DEVICES USED TO PLAY GAMES (%)



GAMES IN HOMES WITH AND WITHOUT CHILDREN



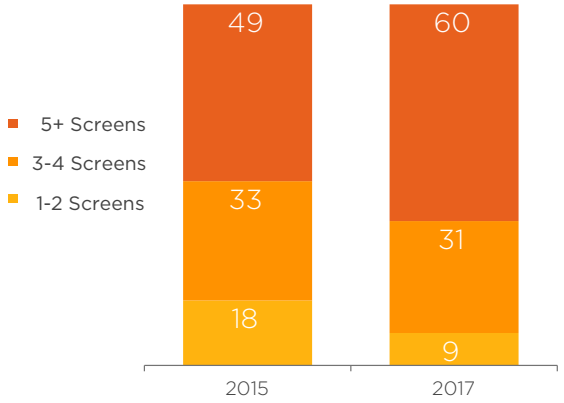
PCs remain the baseline game device with mobiles, consoles and tablets all present in the majority of Australian homes. There are modest differences between adult-only homes and homes where children under the age of 18 live. Playing interactive games on mobile phones and tablet computers is equivalent, but PCs are more dominant game devices in adult-only homes whereas consoles and handhelds are more common in homes with children.

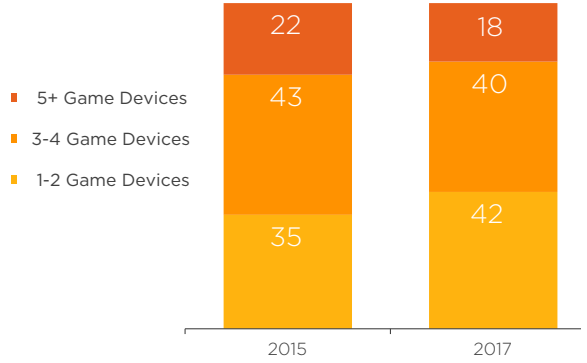
Widespread use of personal computers and mobile phones drove the number of screens in Australian homes up over the past few years. The replacement of older phones, growth of tablets and spread of inexpensive flat-panel TVs has increased the number further. In our 2016 report, we found 49% of homes had five or more screens. Our sample this year returned 60% with five or more. Remarkably, 28% have seven or more screens.

By comparison, we demonstrated steady growth in the number and diversity of game devices over the past decade; in the sample this year we have documented consolidation in the number of game devices used to play games in Australian homes.

We found that 80% of game households have more than one game device, and 65% have three or more.

SCREENS & GAME DEVICES IN GAME HOUSEHOLDS (%)





We asked about the new peripheral or add-on device making headlines, the virtual reality headset, and found that 16% of game households have a virtual reality headset. We believe multiple older consoles are being scrapped as players favour an eighth generation console and all-in-one devices such as mobile phones and tablet computers. After years of growth, this consolidation is unsurprising and we might expect a similar slow-down in screen numbers over the next few years.

: FUNCTION INTERNET AND OTHER MEDIA USE

Bottlenecks for downloading game content to devices and screens continue to concern Australians. In our 2016 report, we found roughly a third said their game downloads were constrained either by data limits or slow download speeds. The sample this year gave similar proportions of responses, although constraints declined across the board. Downloading games through mobile broadband is the greatest bottleneck with half saying they had chosen not to download a game to avoid going over their mobile data limit.

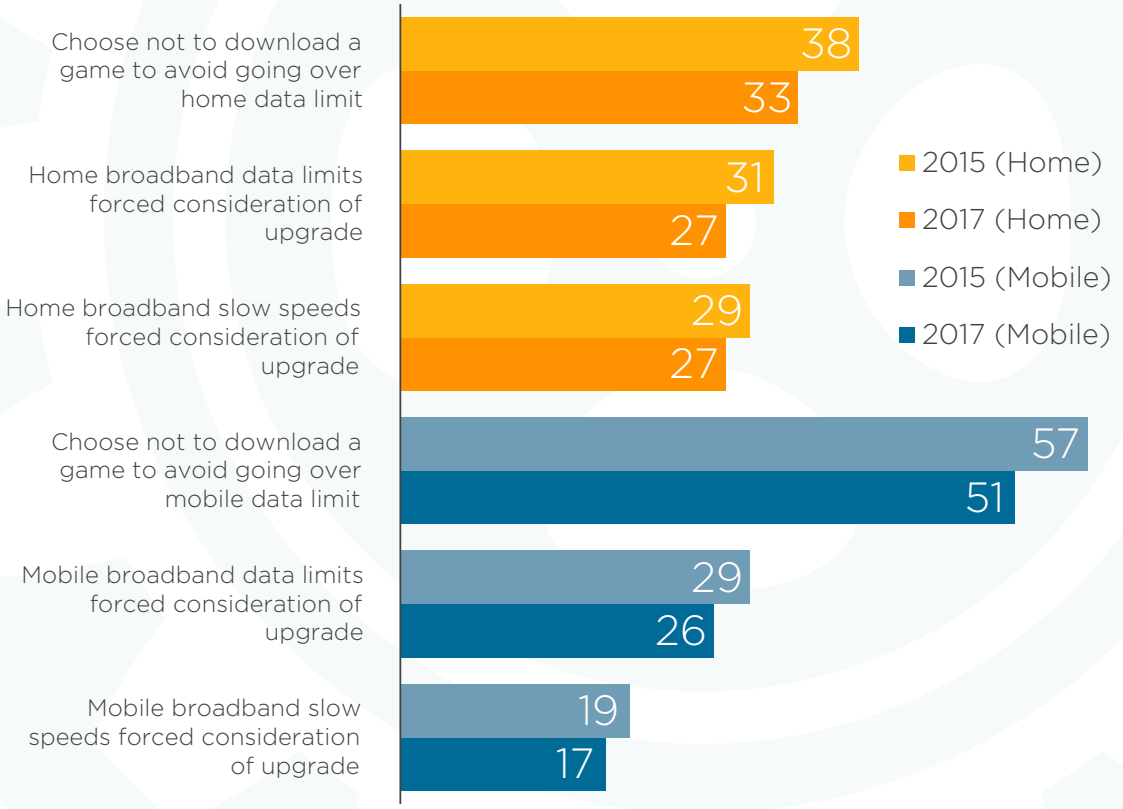
> Games are the best way for some people to connect and get along short and long distance. Now with online gaming you can also keep in contact with family or friends. -(Female, 29)-

The *Australian Bureau of Statistics* issued an update to its report in December 2016 on Internet Activity in Australia showing there are 6 million mobile wireless connections out of the 13.5 million connections overall. In other words, for a very large proportion of Australians, mobile downloads constrain access to online and downloadable media content – including games.

> Video games help me develop creativity, explore virtual life ... meet new people online and share the same interest. -(Male, 37)-

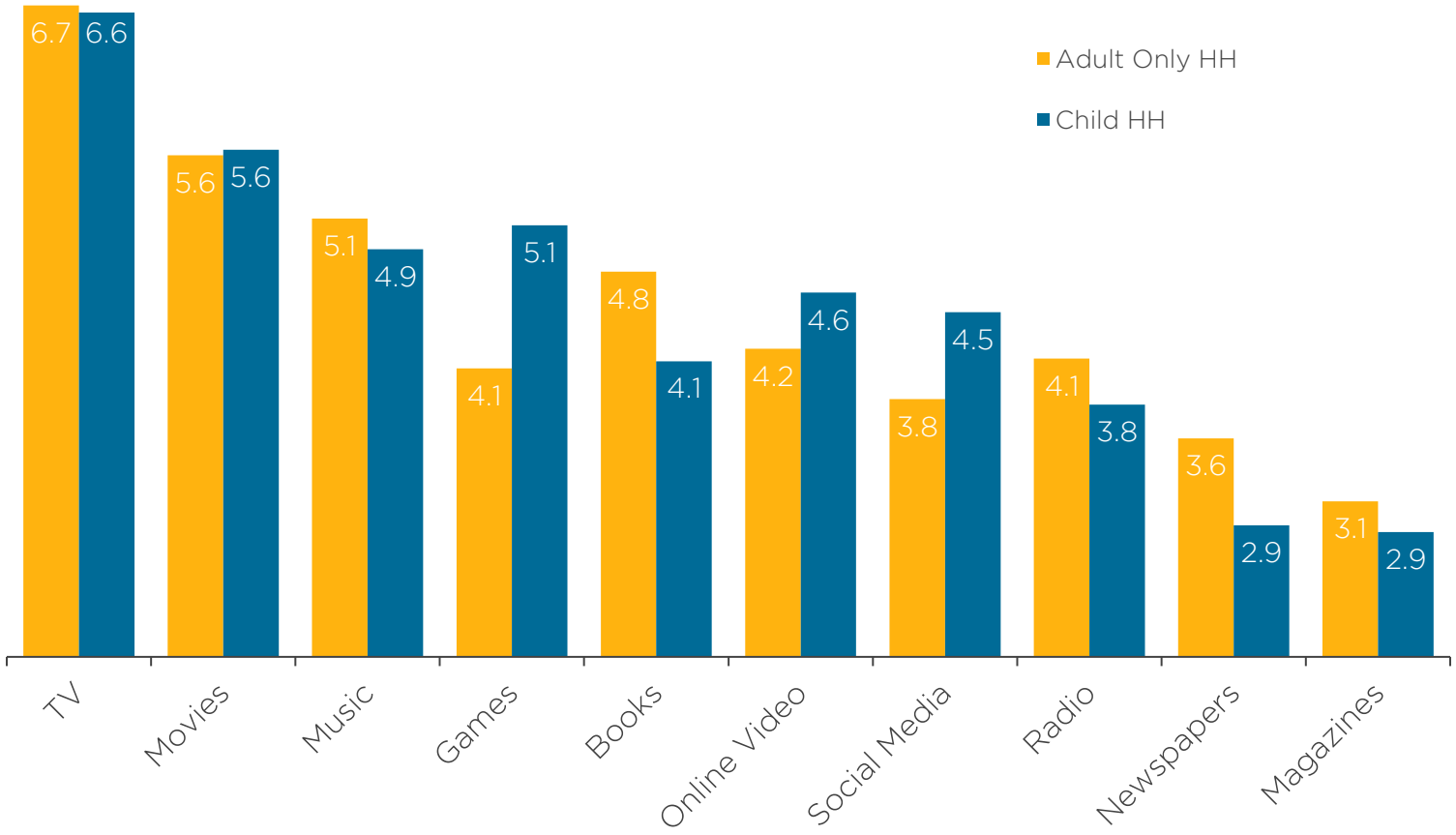
> Games keep my brain active in my senior years (and hopefully delay any dementia). They also provide some satisfaction when completed successfully and fill the time in my stay-at-home days. -(Male, 79)-

CONSTRAINTS ON PLAY BY BROADBAND (%)



Media use and preferences in households demonstrates the ongoing popularity of television. We asked participants to rank their media preferences from 1 to 10. Television ranks first and movies rank second. Interactive games rank third in households with children and equal sixth with radio in adult only households. In those adult-only homes with adults under 50, games rank fourth whereas they rank seventh in over-50s adult-only homes. Social media rank fifth overall with newspapers and magazines ranking lowest.

AVERAGE RANKING OF MEDIA CHOICES - OUT OF 10

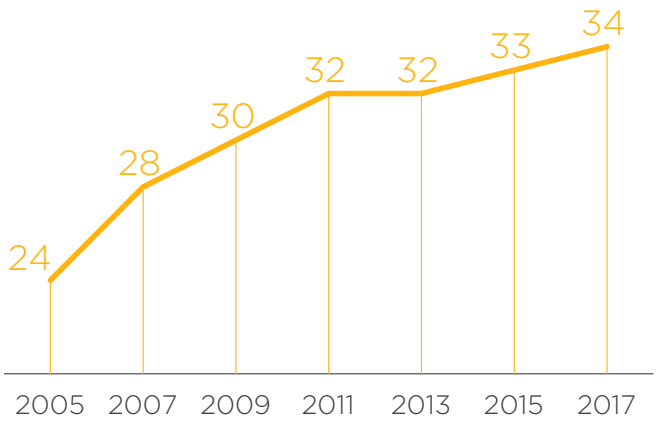


: FUNCTION WHO PLAYS

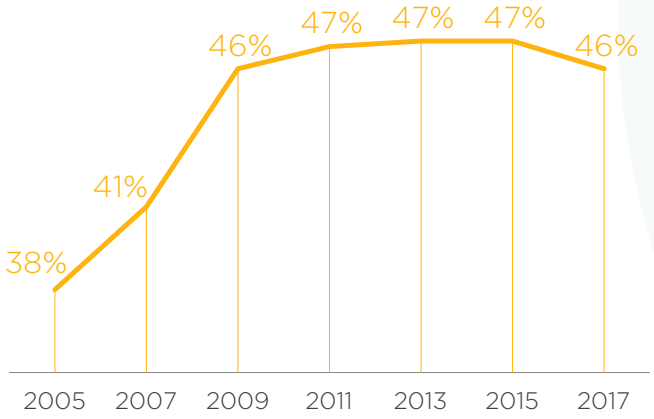
34 The average age of all video game players in our sample this year is 34, up from 33 in our 2016 report and an increase of 10 years over our first report in 2005. The Australian Bureau of Statistics released data of the 2016 census on 27 June, 2017 in which the ABS reported the median age of Australians is now 38, up nearly 2 years since 2005. The mean age of all Australians is 39. The mean age is sensitive to the long tail of ages above the median – the point at which half the population is below and half the population is above.

46% Nearly half of the those in our sample who said they play video games are female. Significant growth in the representation of females among those who identify as players occurred between our first study in 2005 and our third study in 2009 when it reached 46%. Little has changed since then. Within gender, 70% of males play and 61% of females play. Within age bands, males are a majority of players in every case except between the ages of 35 and 44 where women are 54% of all players.

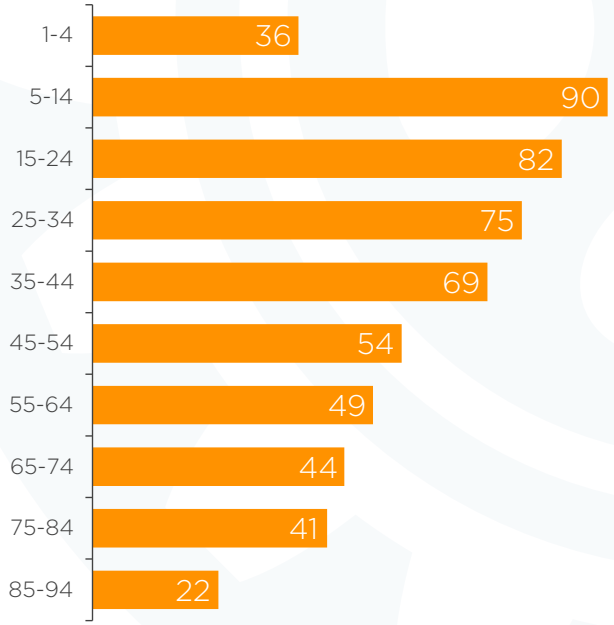
AVERAGE AGE OF PLAYERS OVER TIME (YEARS)



FEMALE PLAYER PROPORTION OVER TIME



PLAYER PROPORTIONS BY AGE GROUP (%)

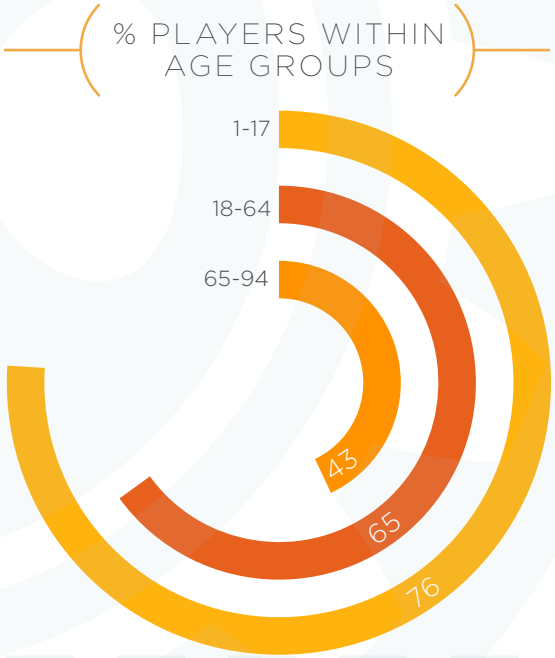


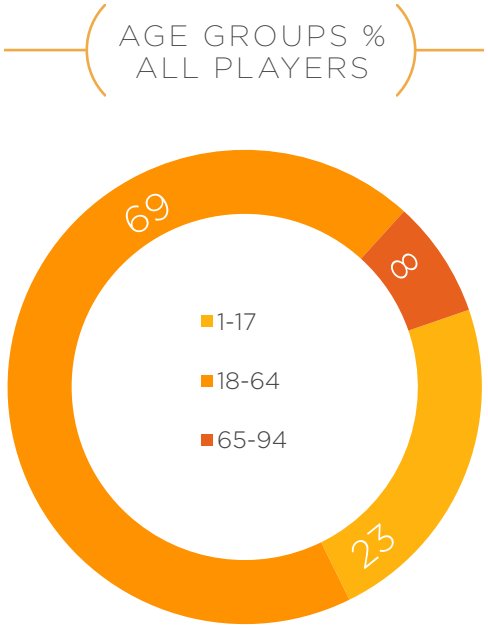
Video games help me develop creativity, explore virtual life ... meet new people online and share the same interest. -(Male, 37)-

PLAYERS and AGE GROUPS

Video games are played by 67% of all Australians – up from 65% four years ago. The fastest growing segment of the population new to games is those over the age of 65. If we then divide ages into three major life stages (childhood, working age, and retirement age), we find that 76% of children under the age of 18 play video games, 65% of working age adults play and 43% of people aged 65 and over play video games (up from 39% in our last study).

As a proportion of all players, children under the age of 18 constitute 23%, working age adults 69% and retirement age adults 8%, values affected primarily by proportional representation in the population. As the proportion of those over the age of 65 continues to increase and as generations of players age, we expect the proportion of over 65s among all interactive game players to increase significantly. In 2016, 15% of the Australian population was over 65, by 2036 the proportion will have increased to 20%.





43% of those aged 65 and over play video games and this age group makes up 8% of all people who play video games.

Ageing among those who began playing video games many years ago has also contributed to an uplift in player age.

The average Australian adult player has been playing for more than 13 years - up by a year since our last report, and up two years since the 2014 report. Men report having played longer (16 years) than women (11 years), both up by a year over the past two years.

> Virtual social games help me to learn social skills and teach my child about different personalities and how to respond to them, in a safe environment. Online role playing group games help me to connect with people when I feel lonely. -(Female, 33)-

: FUNCTION HOW WE PLAY

CASUAL and IN-DEPTH

Over the years we have asked participants to report how often and for how long they play games. The original measure was overall gameplay. For the 2016 report, we asked participants for the first time to separate their gameplay into both casual games and in-depth games.

Casual games are also referred to as *snack games* representing play in short bursts of up to 20 minutes each time and many times a day. These are often played on mobile devices such as dedicated handheld devices, mobile phones and tablets. However, casual games may also be played on PCs and Consoles.

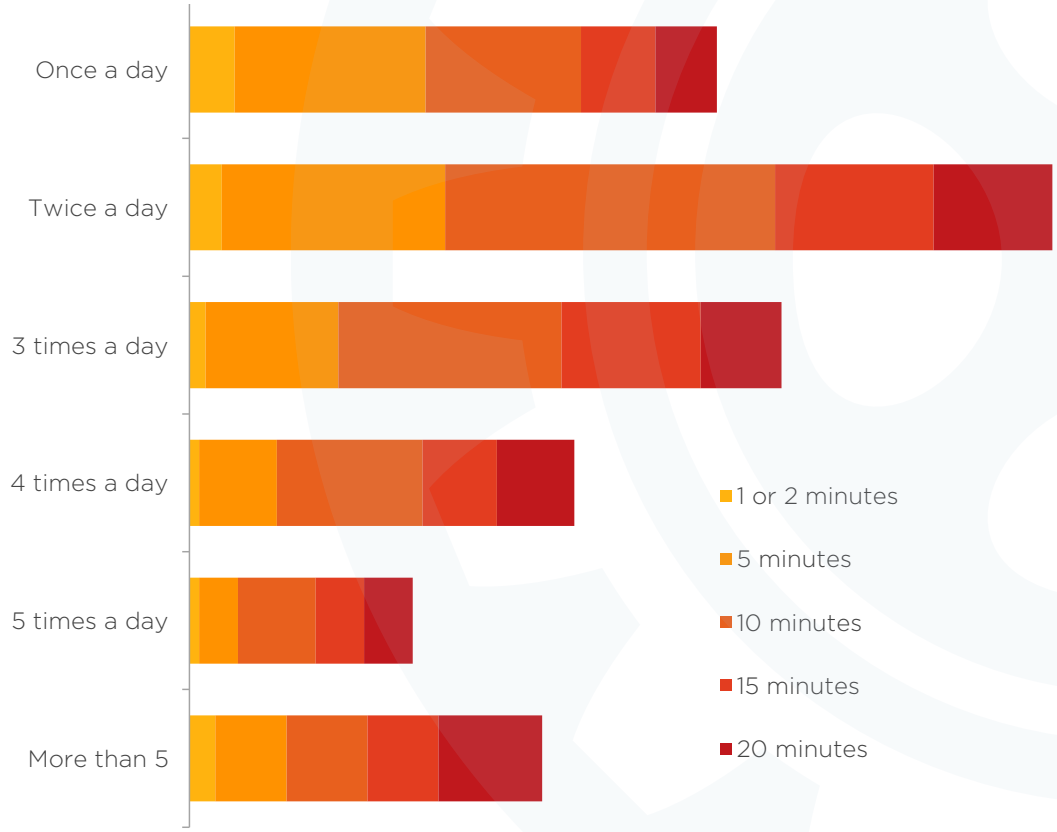
In-depth gameplay represents longer play periods in one play session; these play experiences are often defined as being more involving and requiring more time to resolve a problem, puzzle, mission or objective in the game. In-depth games may feature an in-depth narrative that sets play sessions as ongoing series rather than separate events

CASUAL GAMEPLAY

The most common frequency of playing casual games estimated by our sample of players is twice a day. The most commonly estimated duration for playing is 10 minutes per session. The total estimated daily investment in casual games is between 20 and 30 minutes and only varies greatly from this pattern among the youngest and oldest players. There is little gender difference until middle adulthood when women overtake men in overall casual gameplay in the mid 40s.

I only started playing games when I got my iPhone.
-(Male, 48)-

CASUAL PLAYING FREQUENCY AND DURATION

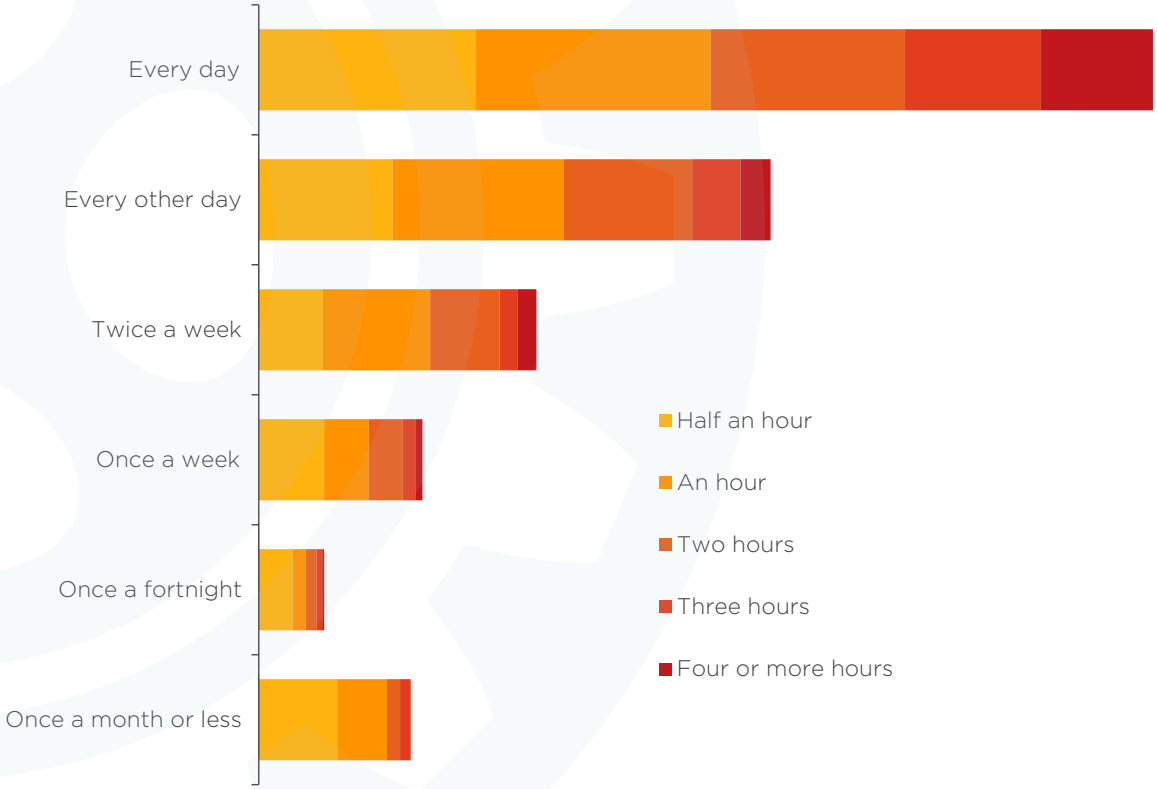


IN-DEPTH GAMEPLAY

The most common reported frequency for playing in-depth games in our sample is daily. The most common duration is an hour. We have observed this pattern now in the past four studies.

The total estimated in-depth play ranges greatly by both age and gender. Younger players as a whole play more frequently than older players and they play for longer durations, peaking in late adolescence and early adulthood.

IN-DEPTH FREQUENCY AND DURATION



> Games have helped me with patience and persistence. I enjoy playing them with the kids. They're good entertainment on a rainy day for kids. They've helped keep in contact with old friends I don't see much but play with online. -(Male, 39)-

> I simply like to indulge in a fantasy game where I can be what I want to be without reference to other people's opinions or constraints. I want to be a hero in so far as I am concerned. -(Male, 63)-

> When I was younger and had less commitments I had more time for gaming. Now I have a child and a full time job and I study. I don't have time for serious computer gaming anymore so I tend to snack game on my phone. -(Female, 38)-

89 MINUTES

Australians who play video games spend an average of 89 minutes a day playing, including casual gameplay and in-depth gameplay. Women and girls play for 77 minutes a day on average while men and boys play for 98 minutes a day on average.

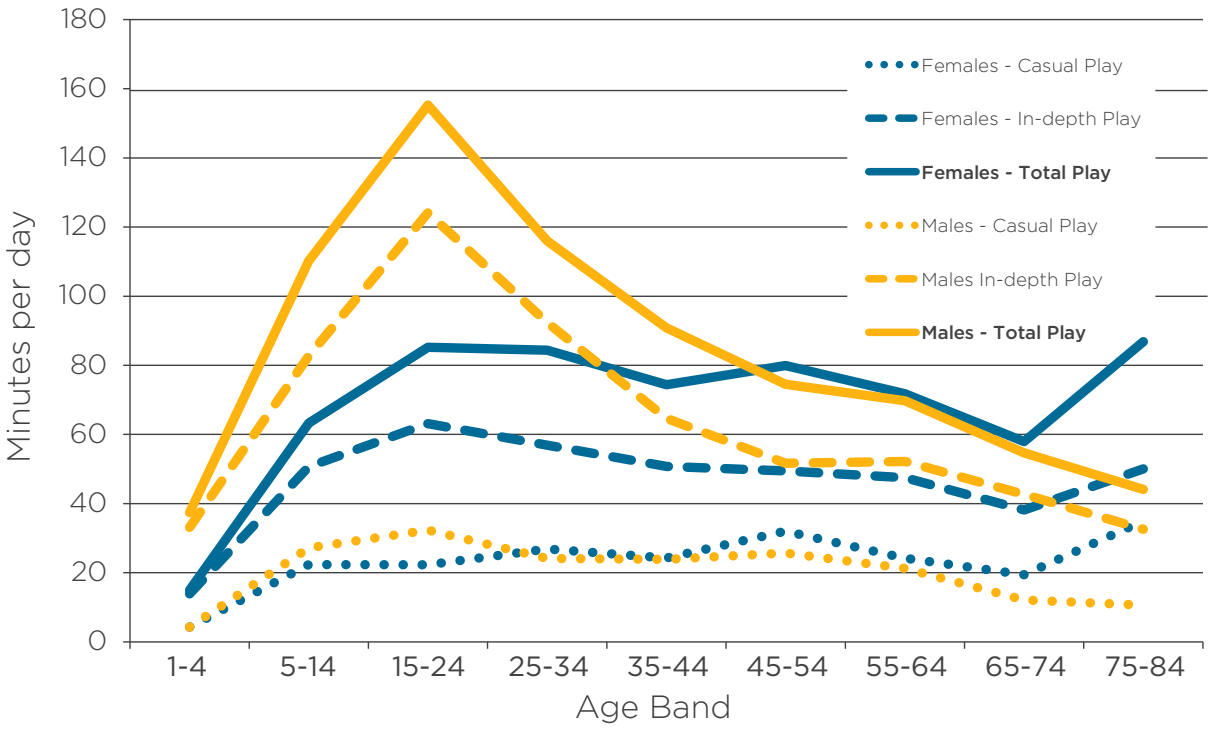
Compared with our sample in the 2016 report, women and girls in this sample reported playing slightly more each day (approximately 2 minutes more) while men and boys reported playing slightly less each day (approximately 2 minutes less). Casual play is nearly identical for females and males at 25 and 24 minutes a day respectively. However, males spend considerably more time on in-depth play than females, 77 minutes a day compared with 53 minutes on average.

As we reported in our 2016 report, time spent playing video games each day varies by age and gender and most of this variation is explained by time spent playing games in-depth. The most surprising observation has been that from ages 45 to 54 onward, women play for longer each day overall than do men who play much more than women until middle adulthood.

> I used to play a lot as a child. Then it eased off as I attended high school. Then it increased again in the later years. My gameplay goes through stages of interest. -(Female, 21)-

The biggest overall play time gaps are in the 15 to 24 age band with males playing almost twice as much as females (155 minutes daily compared with 85 minutes daily) and in the oldest age band when older women play for much longer than older men (87 minutes compared with 44 minutes). Males show greater overall age variation than females across the life span.

AVERAGE DAILY VIDEO GAMEPLAY



: MOTIVE WHY WE PLAY

Like all entertainment and media, video games serve many uses for their diverse audiences. Reasons players give for playing interactive games range from entertainment to more "serious" motivations.

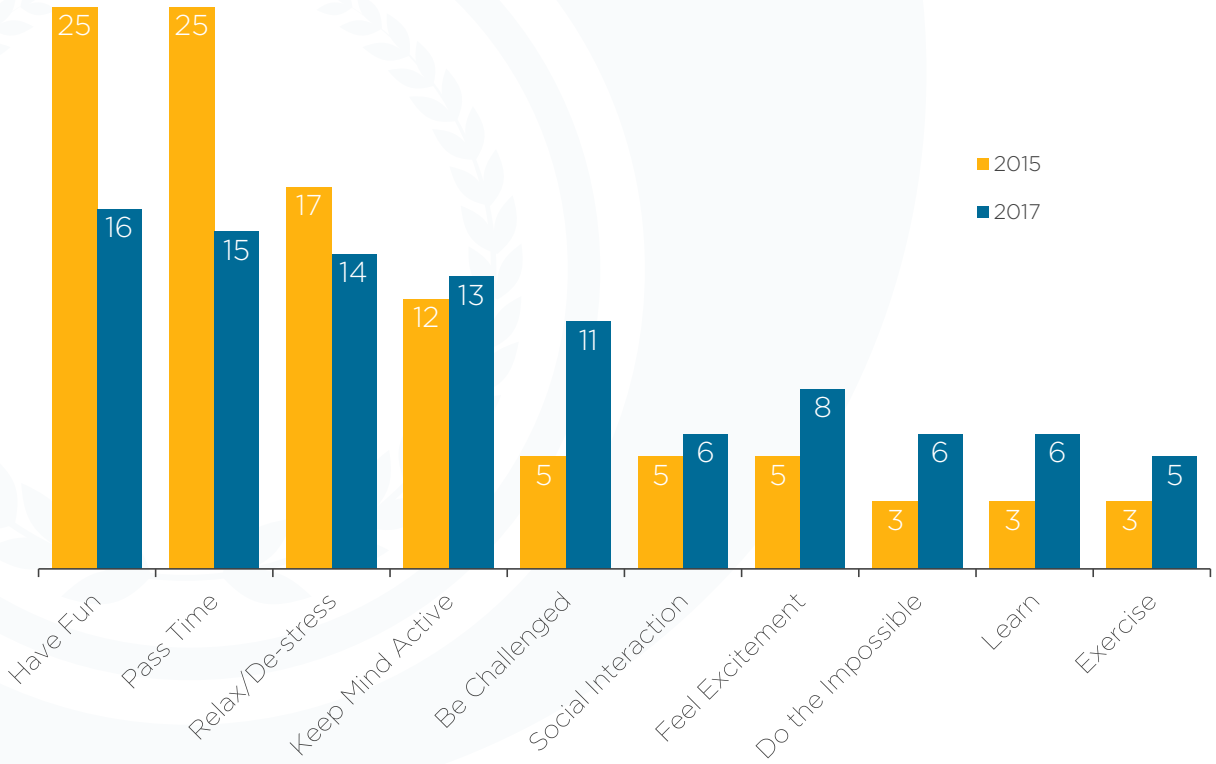
Most people play games to have fun and pass the time. For many players, however, games readily satisfy other needs such as reducing stress levels, feeling excitement, being challenged, doing things that are otherwise impossible in real life and engaging with others socially. For others, games help them keep an active mind, learn and exercise. Compared with our samples in previous reports, participants this year indicated that while entertainment gratifications remain the dominant reason for playing, games increasingly serve other uses.

Of the ten motivations we list for playing video games, the top three reasons given in DA16 and earlier iterations of this research (to pass time, have fun and relax) have dropped in the frequency with which participants select them and all other reasons such as being challenged, learning and exercising have increased in frequency of selection.

Whether this signals a profound shift in the way players think about interactive games is open to more research. However, we register a shift in thinking about games unlike any shift in previous iterations of this research.

> [Games] have helped my puzzle-solving abilities. Have helped me become closer to some people. My fiancé and I first became friends through video games as a conversation topic. -(Male, 25)-

REASONS WHY AUSTRALIANS PLAY VIDEO GAMES (%)



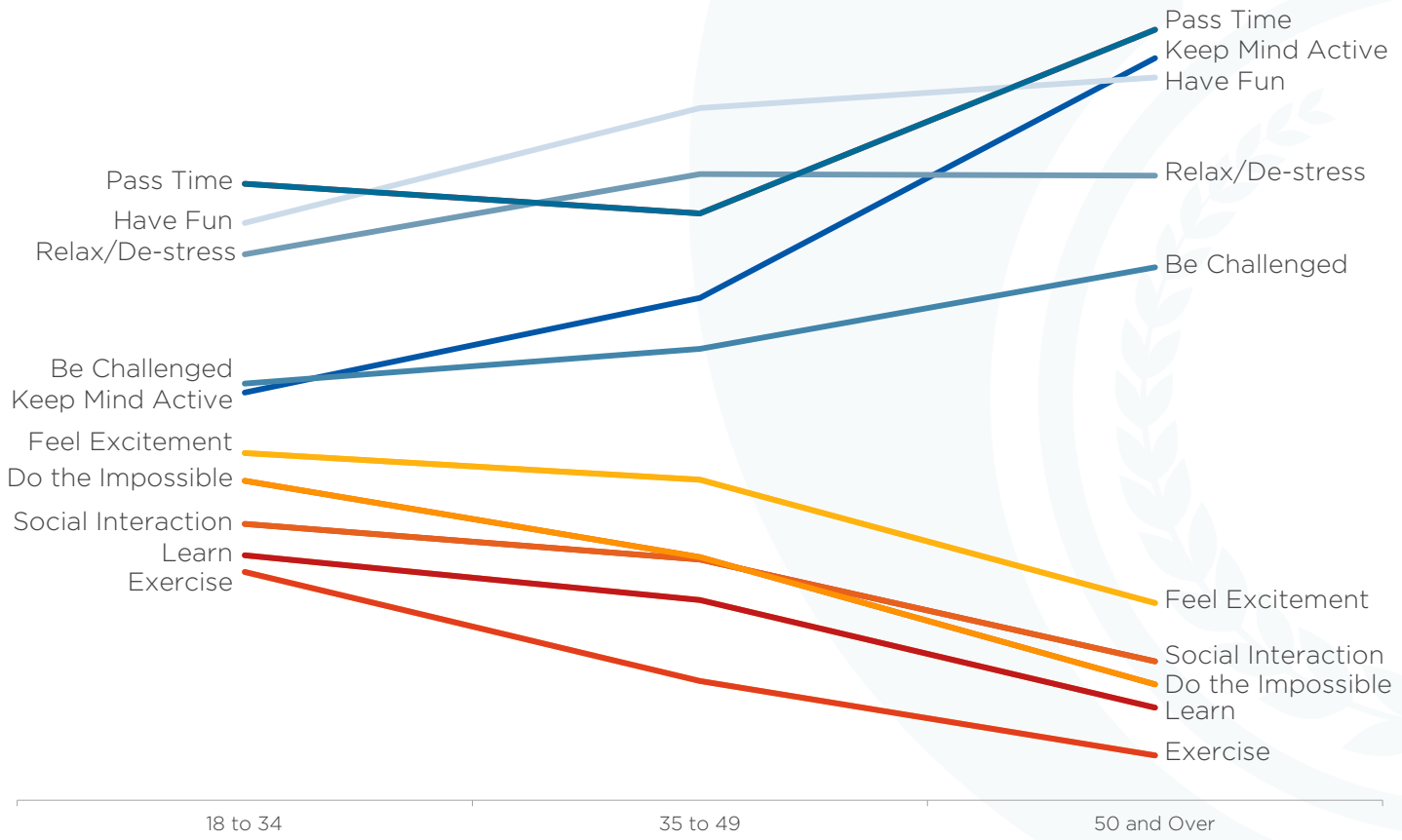
YOUNGER and OLDER MOTIVATIONS...

When assessed by gender, motivations for play do not vary. Women and men give the same reasons in similar proportions. However, when assessed by adult life stages (early adulthood, middle adulthood and later adulthood) motivations for gameplay vary greatly. Overall, the frequency with which different motivations are chosen is more similar among younger players and most diverse among the oldest players. Nevertheless, there is a clear and consistent bottom half and top half of motivations for gameplay across the three life stages. However, the most pronounced difference among motivations in different adult life stages is keeping the mind active. It ranks fifth among younger adults, rises to fourth place in mid-adulthood and second among older adults.

Another clear difference is the use of games to de-stress. Those of our sample in middle adulthood rank de-stressing the number two reason for playing interactive games, it ranks third among younger adults and fourth among the oldest in these life stage groupings. Among the youngest adults, games clearly serve to help pass time, generate fun and help players to de-stress.

> Video games help me pass the time and keep my brain working. The old "if you don't use it you lose it" saying comes to mind. -(Female, 66)-

REASONS WE PLAY VIDEO GAMES BY LIFE STAGE



Gameplay is inherently social and most games offer players the ability to play with one or more additional competitors or collaborators in the game. While 75% of our sample indicate they have played games alone at some point, 8% say they *only* ever play alone. In other words, 92% play video games with another person from time to time.

Participants indicated whether they played with others either in person in the same room or online. The most common social play is with a child followed by play with a partner, friend and then stranger (online only, of course).

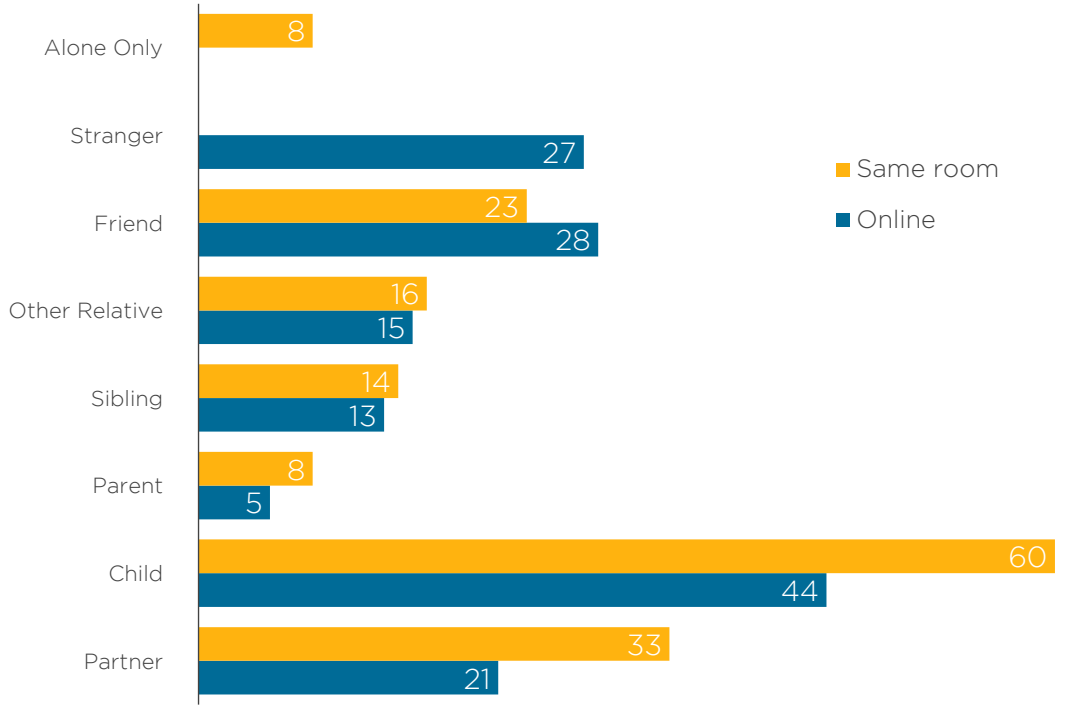
> It [gameplay] brings me to the whole new world, where I entirely have power to control my life! -(Female, 29)-

> Thanks to games, I have the reflexes of a cat and my mind is very active. -(Male, 45)-

> Games deliver messages that would otherwise be ignored or taught biasedly in school and media. In games, the weird and wonderful are OK and good. You get to see from the perspective of someone different and experience something you wouldn't otherwise. -(Female, 19)-

> I've moved more to thinking games rather than ones relying on reactions. -(Male, 66)-

SOCIAL PLAYING EXPERIENCES (%)



> They've [video games have] helped me to connect with other people around the world, and also helped to create the bond between my partner and I when we first met. -(Female, 27)-

: MOTIVE GAMEPLAY, SHARING AND CULTURE

CREATIVE COMMUNITY

Most players celebrate their enjoyment of games through others in the community by reading or watching the strategies of others through wikis, videos and walkthroughs (68%), watching YouTube videos of gameplay (47%), watching Let's Plays videos of gameplay (32%), watching gameplay streaming live online (28%) or attending a games culture event in person (30%).

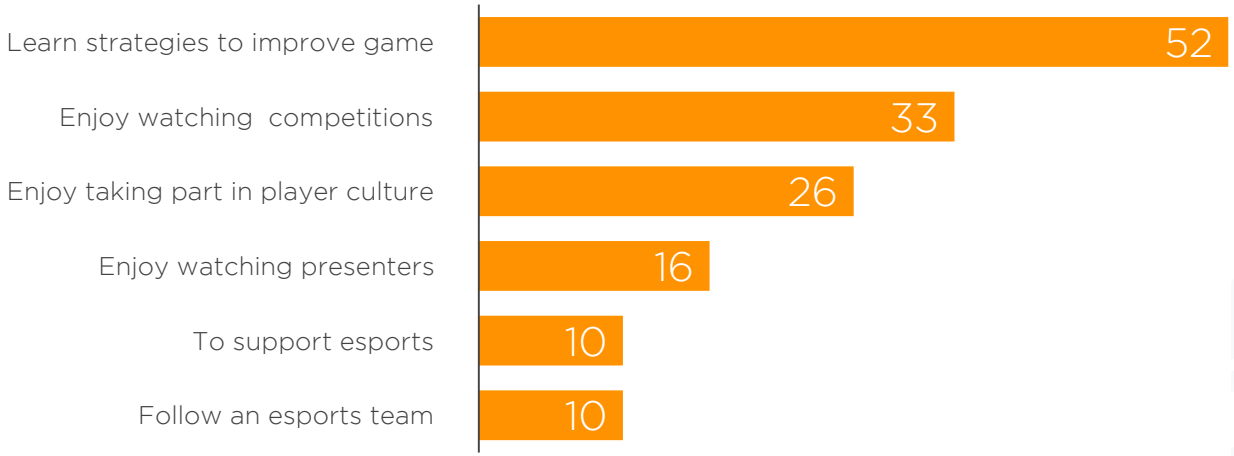
Others extend their gameplay further by creating content for the enjoyment of those who want to read and watch; 34% report creating walkthroughs, videos or wikis to share their knowledge, 28% have posted their own videos of gameplay and 25% have made machinima, 30% have attended a games-culture event and 26% have dressed up or cosplayed.

Players explore new game experiences and ways to create with games.

They [games] are keeping my mind active. By reviewing games and doing walkthroughs, I get my games for free and I like helping others if they struggle. -(Male, 67)-

Esports, in which players compete or watch others compete, have become a popular extension of interactive entertainment. Many cyberathletes compete as members of a team or individually for prize pools worth millions of dollars while others play in competitions simply for fun. In our sample, 31% say they or another member of their household have competed at some stage in an esports competition whether in person or online, including informal and formal online competitions.

REASONS TO FOLLOW ESPORTS (%)



Spectatorship is also popular with 33% of player respondents reporting they or another a member of their household have watched an esports competition whether in person or online. Attending an esports event in person whether to compete or spectate is also becoming popular with 26% of player respondents in the sample saying they had done so.

Given the popularity of esports, we asked players why they might chose to follow esports either online or in person; 52% indicated they watch to learn strategies that will help them improve their own gameplay, 33% said they are spectators of esports because the competitions are enjoyable. Other reasons include the taking part in player culture, watching presenters, supporting esports and following an esports team.

I've improved my skills playing games. But also I've made friends and have become part of a community online. -(Male, 20)-

It's become a culture. Instead of a pinball game, we now have immense sociocultural influences arising from more in depth video games. -(Female, 19)-

: INTENTION FAMILIES AND PLAY

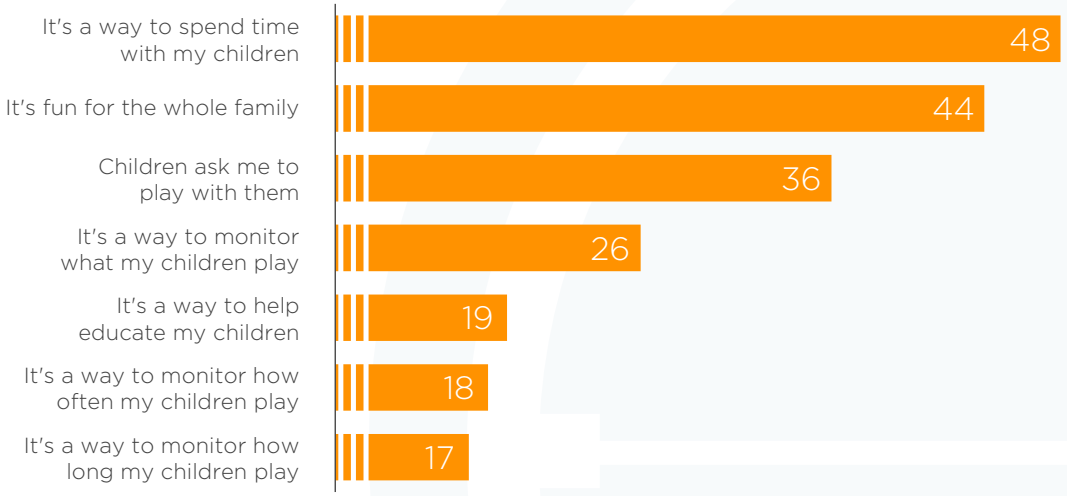
In every study in this series we have reported on the extent to which parents think about and use video games in the family. The extent to which parents say they use games and the degree to which they report engagement with classifications and ratings in order to moderate their children's gameplay behaviours provides insights about the importance of video games in family dynamics.

86% In this sample, 86% of parents (adults who have a child under the age of 18 living with them) said they themeselves play video games. This compares with 71% of non-parents. We demonstrated above that gameplay is an inherently social experience: 60% of parents report playing video games with their children in the same room and 44% said they play online games with their children.

I have developed a closer relationship with my grandchildren playing video games with them. -(Male, 67)-

I play to connect with my Dad because he enjoys playing video games, and I want to do something with him. -(Female, 23)-

WHY PARENTS PLAY VIDEO GAMES WITH CHILDREN (%)

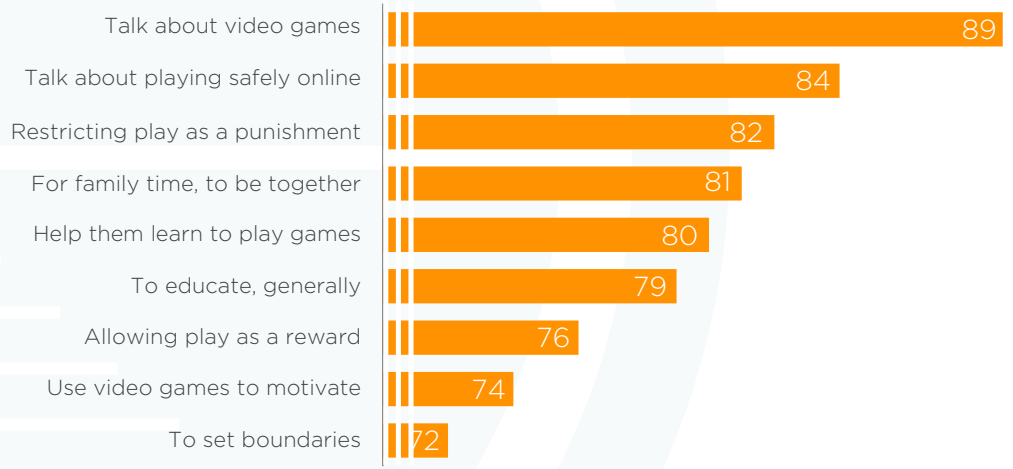


We asked parents to identify up to two reasons why they play games with their children and we found similar patterns to those reported in previous studies. Almost half said they play games with children simply as a way to spend time with them. A similar number said they play together because video games offer enjoyment for the family.

Over a third reported they play with children because their children ask them to. A quarter said playing games with children is a way to monitor what children play. Other reasons parents give for playing games with their children include to educate them, to regulate how often they play and to regulate how long they play.

In addition to moderating gameplay, parents report intentionally using games to socialise and educate their children. Unsurprisingly, almost all parents and children engage in conversations about games, with the topic of playing online safely high on the conversation agenda. Most parents use access to games as both reward and punishment, and they use them to create shared family experiences, to educate, to motivate and to set boundaries.

HOW PARENTS USE GAMES (%)

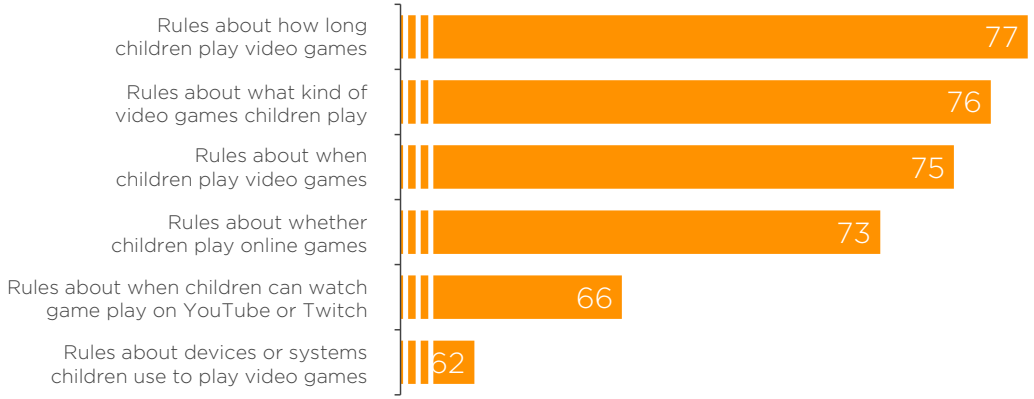


Online games have made it easier to socialise with my brother-in-law and family. -(Male, 46)-

When I was younger the one condition my dad had for me to be able to game was that I had to do some mind and eye training games and that has definitely helped me. Social games have also helped with confidence in talking with strangers. -(Female, 18)-

Regulating play is something parents report doing more often than not with three-quarters saying they have rules for how long, when and what kind of games their children play. Rules for whether their children play online are almost as common. A majority of parents also report setting rules for watching gameplay on YouTube or Twitch – an increasingly popular form of game culture and consumption – and rules for devices or systems on which children play.

PARENTS' RULES FOR CHILDREN'S GAMEPLAY (%)



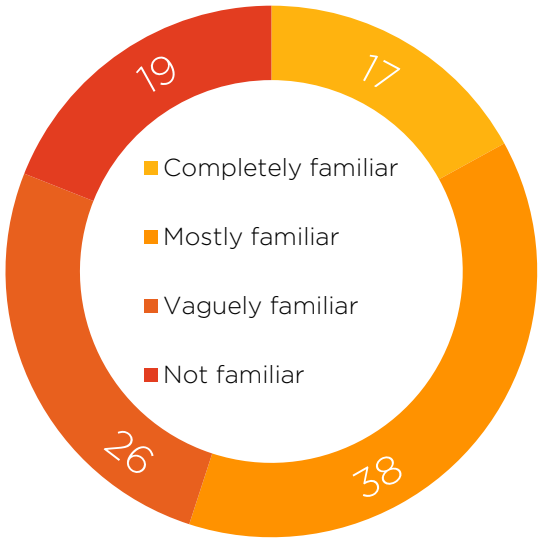
: INTENTION REGULATING PLAY

Classification and ratings systems for games were formalised in an Australian national scheme in the early 1990s. The main purpose of the classification scheme was to provide information to parents and players about the nature of video game content and the levels of maturity deemed necessary in relation to the nature of that content. In this way, the system sought to assist adults with choosing and playing games in an intentional, informed process.

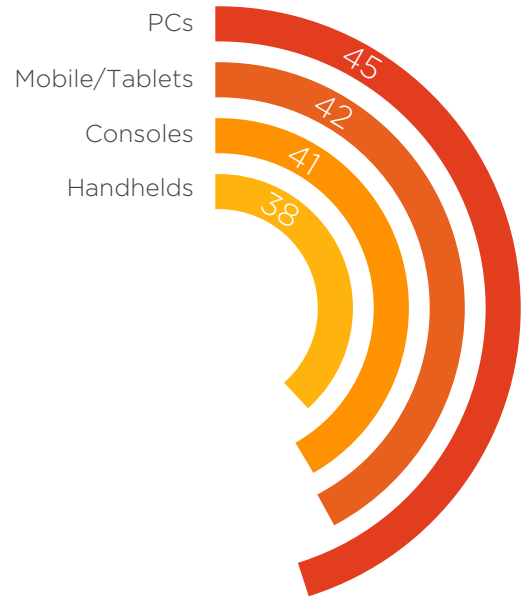
Over the past two decades, personal computer operating systems and video game consoles have featured in-built parental and family control tools that allow parents and players to select levels of maturity and specific ceilings for classifications permitted on a system, giving users more opportunities to exercise choice their gameplay environment.

Most parents are aware of family controls with 26% saying they are at least vaguely familiar and 55% saying they are mostly or completely familiar with these tools. Use of family controls is similar across platforms ranging from

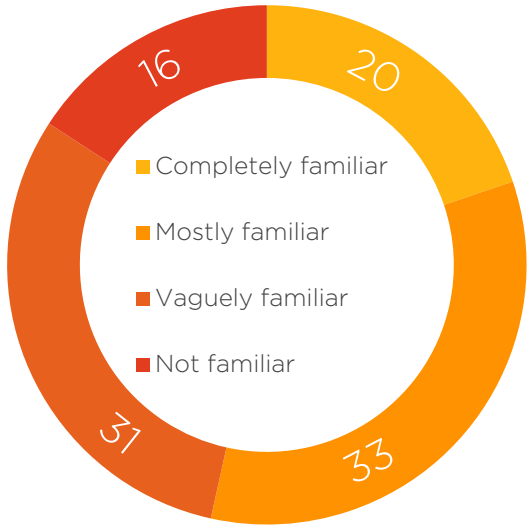
PARENTS' FAMILIARITY WITH FAMILY CONTROLS (%)



PLATFORMS USED WITH FAMILY CONTROLS (%)



PARENTS' FAMILIARITY WITH APP STORE RATINGS (%)



over a third to under a half of parents using them with handhelds, consoles, mobile devices and PCs. Parents are similarly aware of age ratings in app stores with over half saying they are completely or mostly familiar and nearly a third saying they are vaguely familiar with them.

Over the years we have demonstrated that parents are well aware of the classification markings and consumer advice provided by National Classification Scheme operated by the Classification Branch of the Commonwealth's Department of Communication and the Arts.

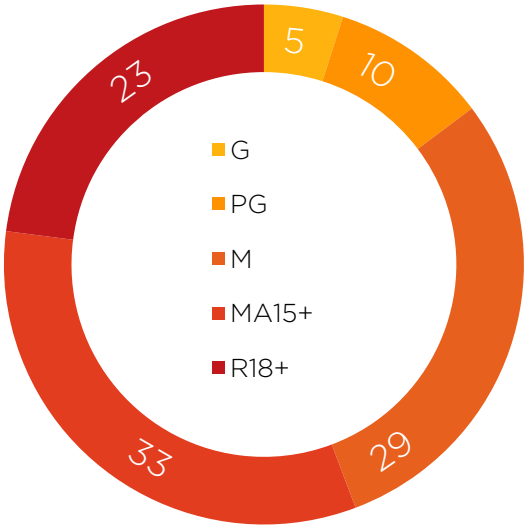
This system uses the markings G, PG, M, MA15+ and R18+ in relation to video games. G, PG and M are advisory classifications while MA15+ and R18+ are legally restricted classifications, meaning that it is illegal to play or to sell, distribute, or show to children under those age designations.

We asked parents to indicate whether any of these classifications are unclear or confusing to them and most 62% say they are confused by M and MA15+.

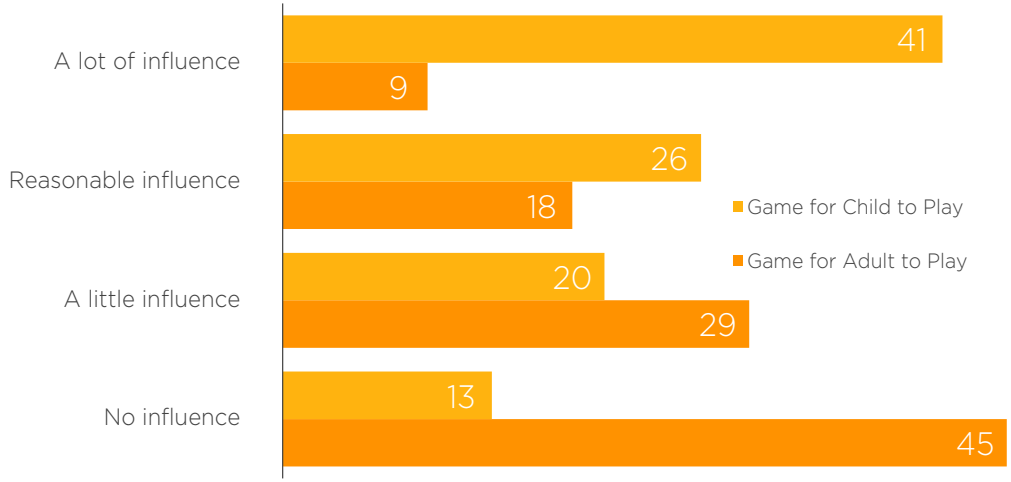
We have observed similar results in past versions of this our research.

Parents say classifications have more influence on them when choosing games for their children to play and less when choosing games for themselves. Two-thirds said classifications had a lot of influence or reasonable influence on their choices for games they choose for their children. By comparison, just over a quarter said classifications had the same influence on them for the games they chose to play themselves. This finding has been consistently similar throughout the series of Digital Australia studies.

PARENTS' CONFUSION WITH CLASSIFICATION MARKINGS (%)



IMPACT OF CLASSIFICATION ON PARENTS' PURCHASES (%)



: INTENTION CONCERNS ABOUT EXPOSURE

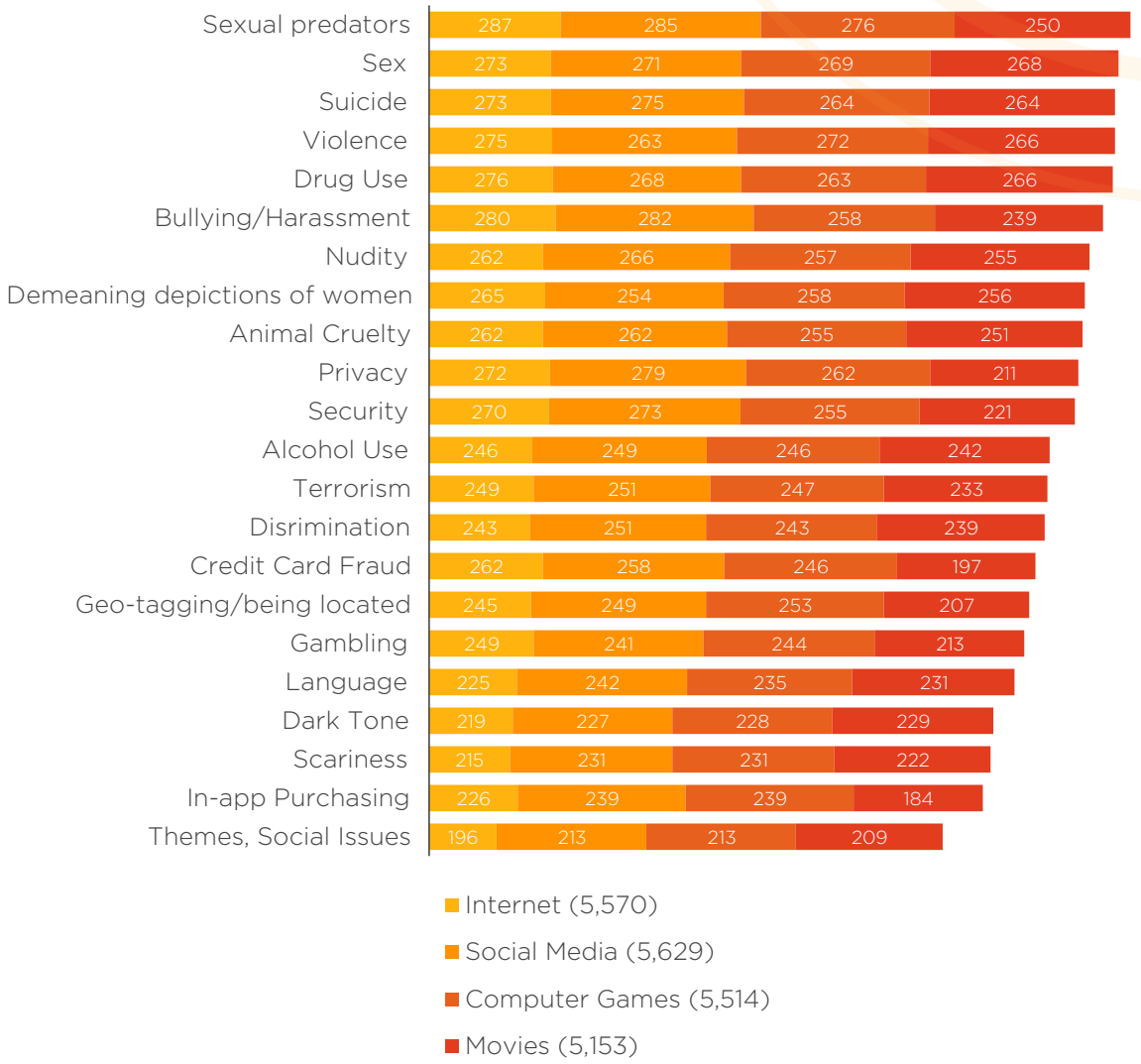
Most debates about video games over the years have focused on content violence. We have documented in the past two studies that parents are understandably more uniformly concerned about content in media for their children than they are about that media content for themselves.

This year, we presented participants with a list of 22 potential concerning elements they might have about four sources of content: Video games, movies, social media specifically and all other content on the Internet. We asked all participants whether each element caused concern for their own use of each medium and we also asked parents whether each element caused concern for their children's use of each medium.

At the top of the list for adults are animal cruelty, credit card fraud and demeaning depictions of women. At the bottom of the list are themes, scariness and language. At the top of the list for parents are sexual predators, sex and suicide. At the bottom of the list are themes, in-app purchasing and scariness.

Parents are more uniformly concerned about elements and the four media channels for their children with very little differentiating them. By comparison, among adults, concerns about elements and media vary more. Leading the concerns for adults is animal cruelty; of least concern is themes.

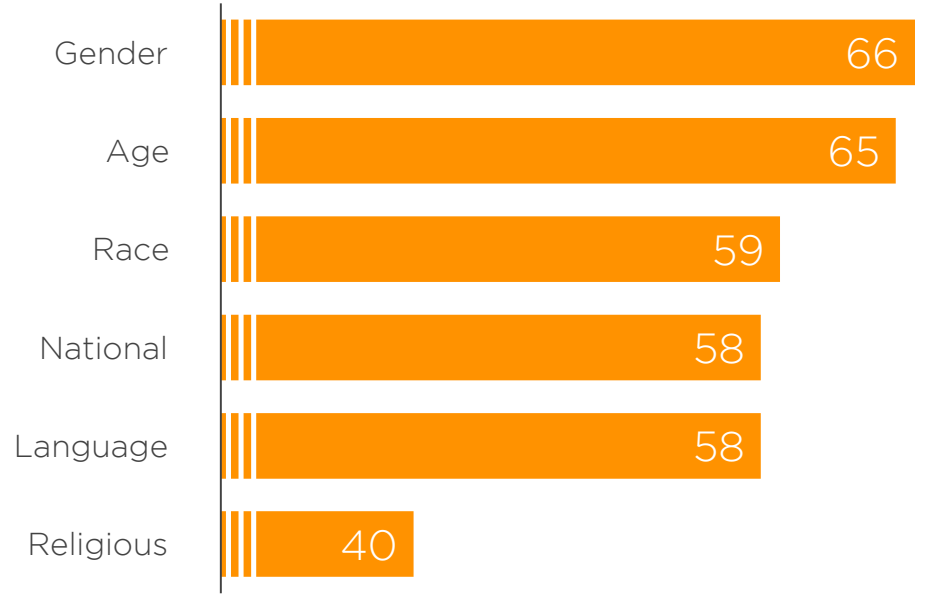
CONCERNING ELEMENTS IN MEDIA USED BY CHILDREN



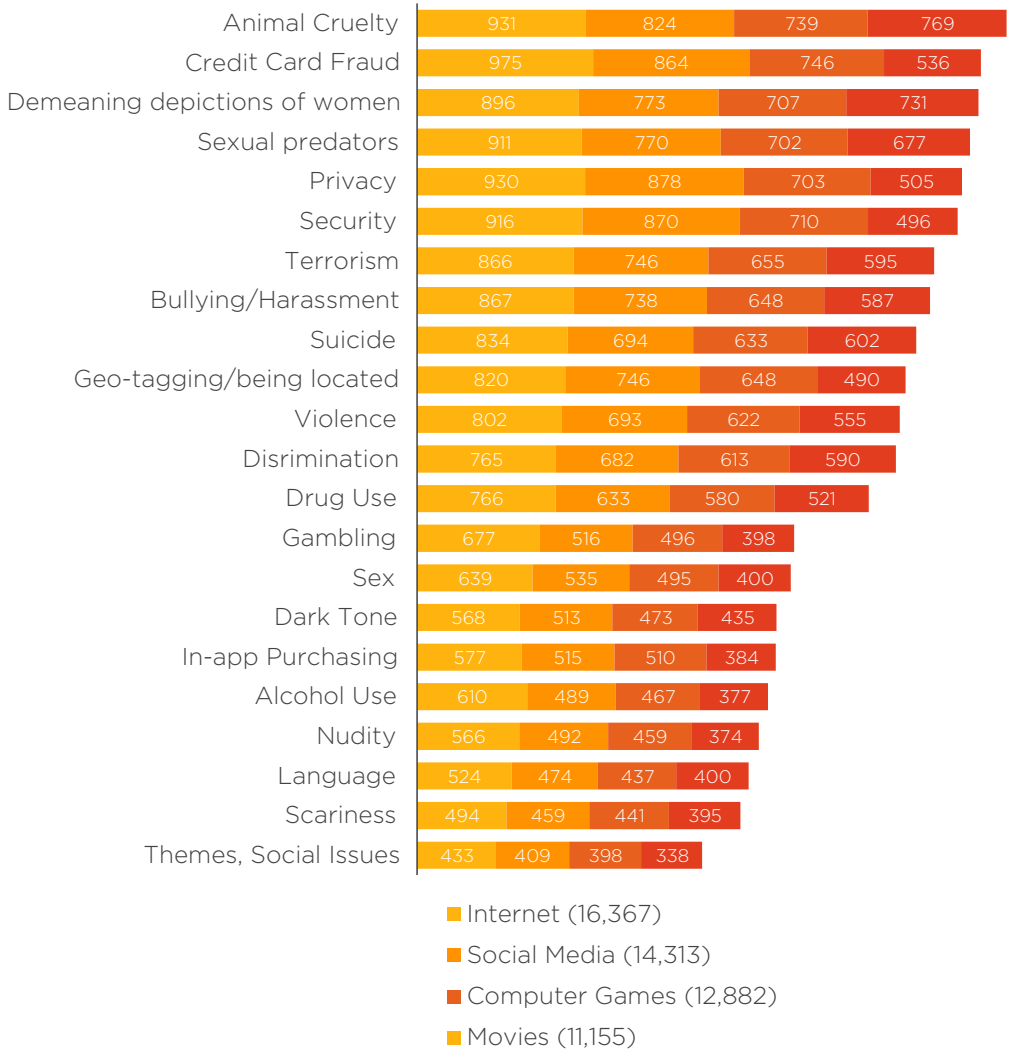
There is also a distinctive break between the top 13 concerns and the bottom nine. There are also larger gaps in concerns about the four media channels: Internet is cause for more concern than social media, social media is more of a concern than games, and games is more of a concern than movies.

Concern about content extends beyond elements to portrayals. For the first time in the series we asked those adults who play video games whether there is a need for more diversity in the characters featured in games. Greater gender and age diversity top the list, mentioned by almost two-thirds of the player sample. Greater race, national and language diversity are needed in games according to over half of players. Religious diversity in games ranks as the lowest area of need, mentioned by over a third of players.

NEED FOR MORE DIVERSITY IN GAMES (%)

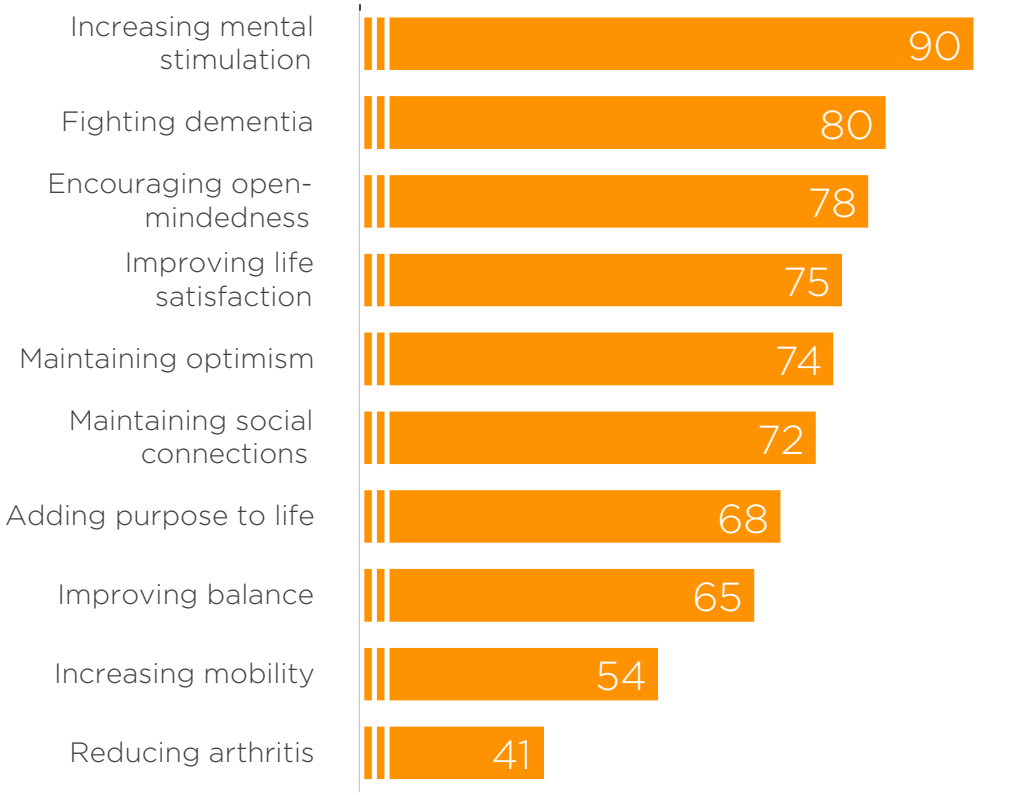


CONCERNING ELEMENTS IN MEDIA USED BY ADULTS



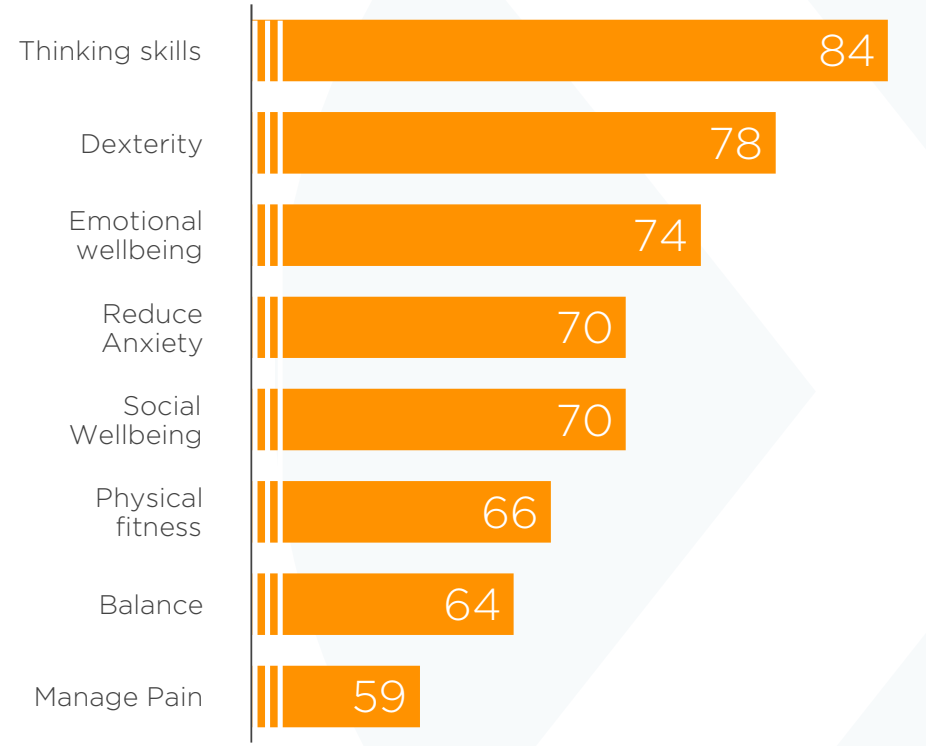
: ADVANTAGE GAMES AND WELLBEING

POTENTIAL OF VIDEO GAMES FOR AGEING WELL (%)



We asked all adult participants to estimate the degree to which video games might reasonably deliver advantages in ageing and wellbeing. The significant ageing of the Australian population is well documented and solutions offered to improve quality of life throughout longer lifespans have included technologies such as video games.

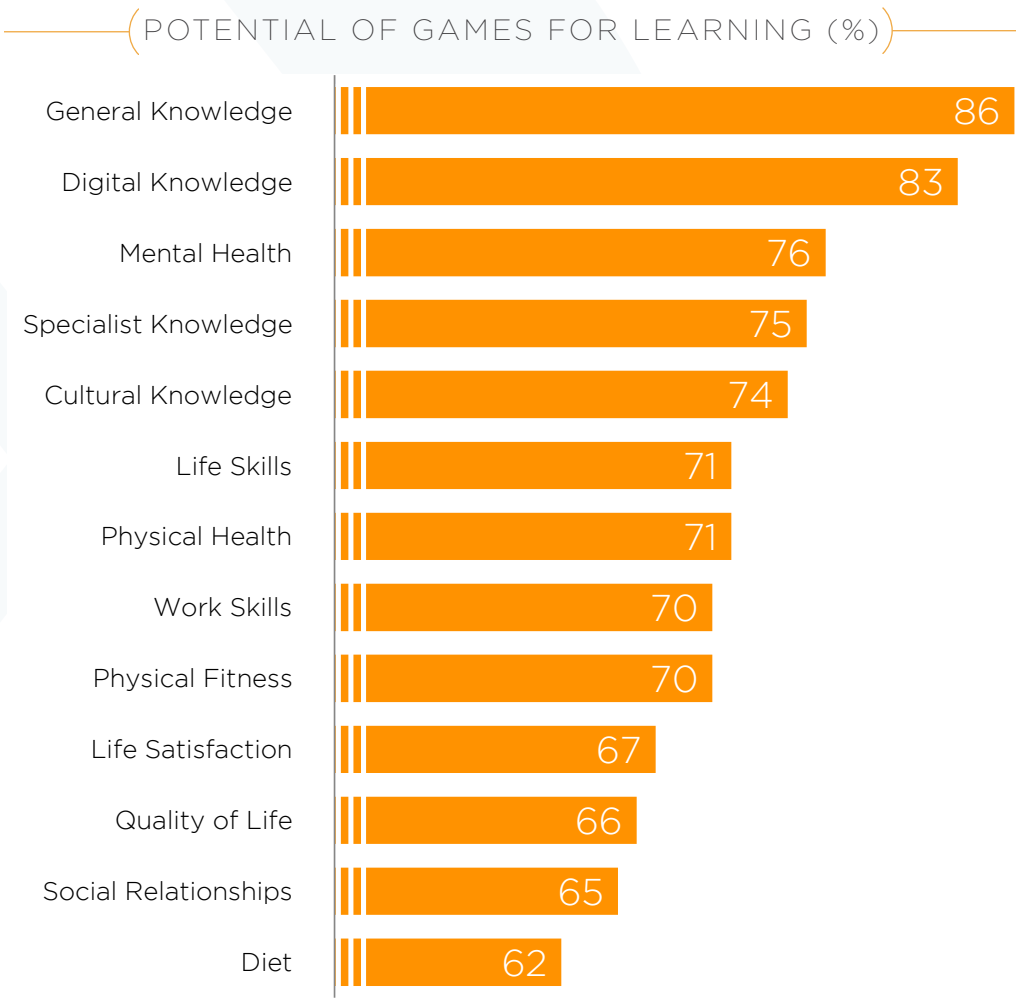
POTENTIAL OF VIDEO GAMES FOR HEALTH (%)



Overall, with the exception of reducing arthritis, more than half of participants agree that games offer potential contributions to ageing well such as increasing mental stimulation and mobility.

Participants also agreed that video games can provide advantages in health outcomes such as improving emotional well-being, improving physical fitness and managing pain.

: GAMES AND LEARNING



Mainstream entertainment games, as well as special purpose games designed to inform and entertain, increasingly enjoy the attention and command the interest of news and current affairs. We asked all adult participants to indicate whether or not they agreed that video games had the potential to facilitate learning about a wide range of issues, problems or experiences including general and digital knowledge, life skills, learning about physical fitness, social relationships and diet.

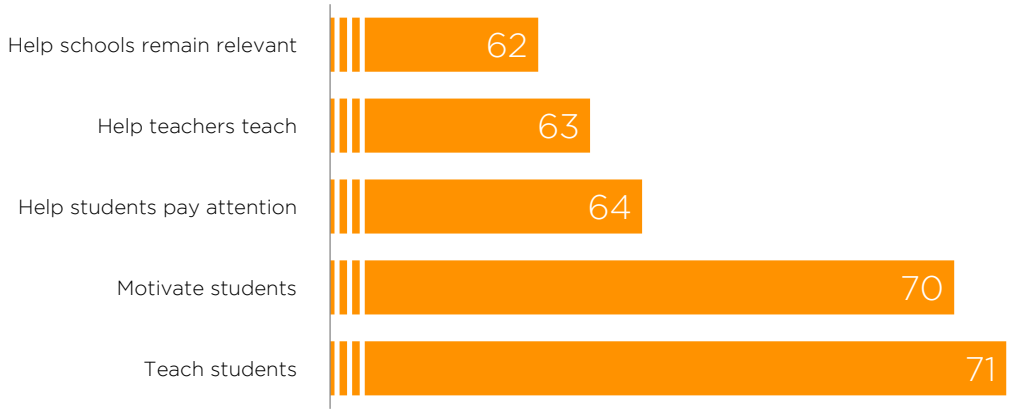
We presented 13 areas in total and all were potential beneficiaries of games for learning for over half of the sample. The most likely potential of games for learning according to our participants is general knowledge and digital knowledge. The lowest potential contribution to learning is assigned to life satisfaction, quality of life, social relationships and diet.

I am 80 years old and have a medical condition that restricts my movements. To keep my mind working I play games where I have to find objects to keep the story going. I think I will have to do more of this activity in the future. -(Male, 80)-

Some games, like cooking mama, have taught me different skills I needed to grow as an adult. -(Female, 19)-

: ADVANTAGE GAMES, SCHOOLS AND WORK

EFFECT OF USING VIDEO GAMES IN SCHOOLS (%)



I have played games which have helped me to learn a new language, learn maths skills, and work on my memory. -(Female, 23)-

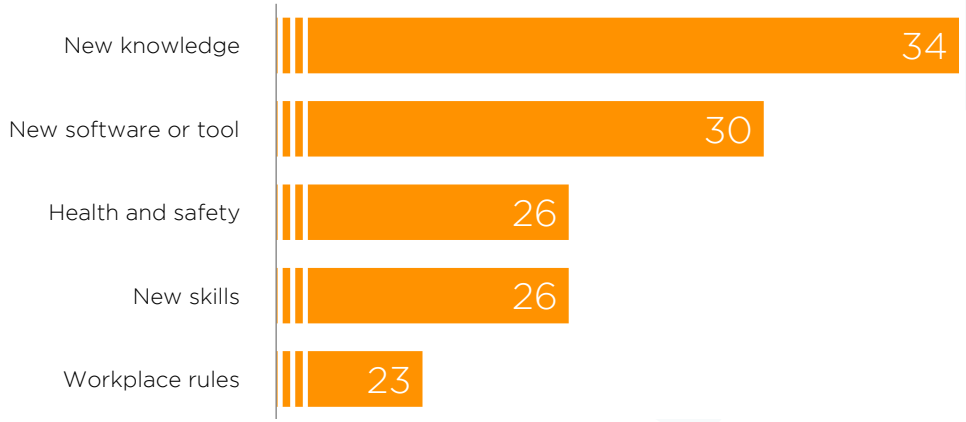
As a result of playing games I found a desire to learn more about computers generally and after much study at TAFE became a web site designer and code writer. -(Male, 49)-

Games provide me to take on challenge and not give up in life. -(Male, 21)-

We asked parents to indicate how much they felt using certain video games in schools might help with teaching students knowledge or skills, help teachers impart knowledge, motivate students, command attention, and help schools remain relevant in the 21st Century. There was more agreement than disagreement across the board that games can help with these things, however motivating students attracted the most agreement and helping schools remain relevant the least.

We asked all adult participants whether they had used games in the work-place and on the job to learn new knowledge, new skills, use of new tools, health and safety matters, and workplace rules. A third said they had played games to gain workplace knowledge. This was the most common use of games on the job. Under a quarter played games to learn workplace rules. This was the least common use of games at work.

EFFECTIVENESS OF GAMES ON THE JOB (%)



: THE DIGITAL GAMES BUSINESS

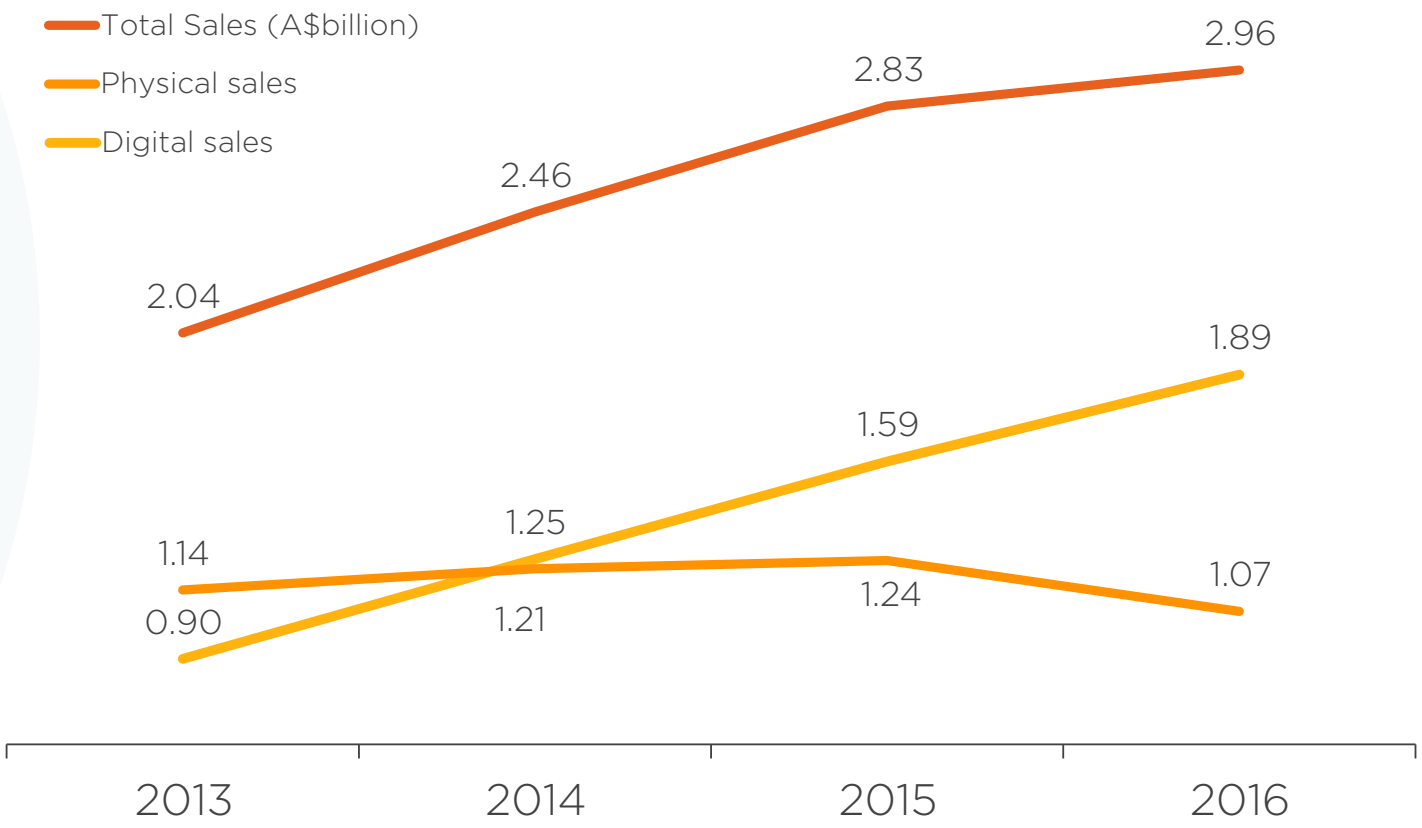
As the market for video games has grown, so too has the breadth and depth of the industry.

Overall, digital video game sales in Australia grew at a compound annual growth rate (CAGR) of 20% between 2013 and 2016 when digital sales neared $2billion; nearly two-thirds of total game sales of $3billion.

We asked all adults responding to the survey how much benefit making games in Australia could bring to the economy; 76% believe making games in Australia would create either a lot or some benefit.

Similarly we asked whether they or any member of their household had learnt computer programming or coding on their own, at a club, at school or on the job; 22% said yes. Only 9% said they or any member of their family worked or planned to work at a business associated with video games and 9% said they or another member of their family had discussed plans to study for a career in video games.

AUSTRALIAN VIDEO GAMES RETAIL INDUSTRY VALUE



SOURCE: NPD Group and Telsyte

: CASE STUDIES

ORBIT : IT'S NOT JUST A GAME

Orbit is a game-based child sexual abuse prevention program developed at the University of the Sunshine Coast in Queensland. It is designed to be played alongside classroom activities that extend and reinforce key learnings from the game.

Dr Colleen Stieler-Hunt is an Associate Lecturer in Serious Games at the University. She has worked as a secondary school teacher and a teacher advisor for the Queensland Education Department. Her doctoral research was based on advancing the use of digital gameplay in primary and secondary school classrooms to establish supportive and engaging classroom learning environments.

"I especially love serious games, because you're using the technology to intentionally make a difference in the lives of people," she says.

"Games are like any other art form, such as literature or movies or music. You can communicate many things. That's a really important thing for game designers to realise."

Orbit presents more than 50 scenarios of child sexual abuse, based on data provided by the Queensland Police Service and on experiences identified by counsellors of children who have been abused. The program is informed by evidence-based research, and was built in collaboration with counsellors, psychologists, social workers and educators.

When it comes to communicating sensitive information, as with Orbit, we can provide starting points for conversations. It provides a level of distraction from the issue."

"We've tackled the sexual abuse issue from a number of different points. In the game we create likenesses of five different adults from their life, from family and school and elsewhere. By the end of the game children have identified five people they already know in their real life. It's about building a support network around the child."

"We also supply information for parents and teachers on our website. We have mini games that talk about different scenarios of abuse. We ask children to identify whether each scenario is something they should tell someone about, or not. Some aspects of the game present the message that it may be difficult to talk about something, but safety is more important than any other aspect."

Orbit had its origins in a game called Being Safety Smart, developed by the University as a personal safety game for five to six year olds.

"We found that children who have played the game have more knowledge of how to respond to an abusive situation, and the children who have done the lesson plans have more knowledge again.

But it's something that's difficult to test, because you don't want to put a child in that situation to see how they respond."

"Then we had the idea of a game to teach children about how to guard against sexual abuse," explains Colleen.

The development of the program was funded through support from the Daniel Morcombe Foundation, the Queensland Police Service, and the Telstra Foundation. We did a lot of research around what should be in a child sexual abuse game, including brainstorming sessions. We had students play from a local school play through the whole game, and we did interviews with them.

"One of the key things we learnt was that many children hadn't realised that if they had any problems they could turn to a trusted adult such as their teacher or their parents for help. They didn't have to solve it all by themselves.

"That was an awesome lesson for any child to learn, especially when the research on sexual abuse says that children who are quite often perpetrators will often isolate the children from people who might protect them.

Sexual abuse affects far more children than we realise, because so much goes unreported. It's important for teachers and parents to feel confident talking about the subject with kids. Colleen says that the University also conducted a more formal evaluation. Colleen says that in her work at the University she is helping games development students create games that have a positive impact on the world.

"Serious games technology and concepts are something that have many applications. They can be used by any industry that wants to train people from all range of skills.

"That's why we decided to make a degree program about more than just games, and add that serious component. All the games our students are making have a broader purpose beyond entertainment, but we're also skilling them so they can work on all types of games."

Games have become an important creative and communication medium, says Colleen. "Almost all young people play games, and many older people. We want to help students think deeply about games technology and what they're doing."

DA:18 Video Link : ORBIT
https://youtu.be/PXa9wIdHgLg

MINDMAX :

A GAME A DAY, KEEPS THE MIND AT BAY

Wellbeing and resilience smartphone app MindMax launched in June 2017 and is already kicking goals. Aimed at Australians aged 18-30, MindMax combines the personal experience of AFL footballers with games, training sessions and social interaction to help users build, strengthen and maintain healthy minds.

Research shows the emotional, psychological and physical wellbeing benefits of games," said Professor Daniel Johnson, director of the Games Research and Interaction Design Lab at the Queensland University of Technology.

"We realised we had two things that really attract young Australians – football and video games – and that there was an opportunity to build a program around those things."

"Alone, games are one way to improve wellbeing and mental health. But they're also a terrific way to attract people to a particular space."

MindMax was funded by the Movember Foundation and developed by the AFL Players' Association in partnership with Queensland University of Technology. A number of AFL players were involved in the development, including Ed Curnow, Majak Daw, Daniel Menzel, Michael Walters, Jasper Pittard, Tom Nicholls, Sam Reid and Michael Barlow. A key component of MindMax is an AFL football kicking game. Professor Daniel Johnson explained how it works. "We chose to include a football kicking game primarily because games are so wonderful for engagement. What game designers have learnt to do so well is to tap into intrinsic motivation. If I go to a game, it's because I want to play. It's immersive.

"Our vision is that young Australians will come to the MindMax app and have a certain number of footballs for free. They'll play the game – hopefully love it – and will want to play it more. To get more footballs, they can complete a wellbeing training module or share what they learned with a friend."

Geelong Cats player Daniel Menzel, who courageously overcame career-threatening injuries, has been involved with the MindMax app throughout its development. "My football career hasn't exactly been smooth sailing and one thing I've learnt through spending a lot of time in physical rehabilitation, is that our minds, just like our bodies, require regular training and can always be improved," he said. "Through my ongoing commitment to training my mind, my mental wellbeing and resilience has reached levels I never thought were capable and I'm very proud to be involved with MindMax to help members of the community strengthen their mental fitness."

MindMax clinical psychologist Dr Jo Mitchell explained that while physical health sciences have been excellent at getting people to understand what it means to be fit and look after your body, the mental health field lags behind in communicating the same messages.

"It's not all about mental illness and how you 'fix things'. There are things you can do proactively to build your wellbeing and resilience."

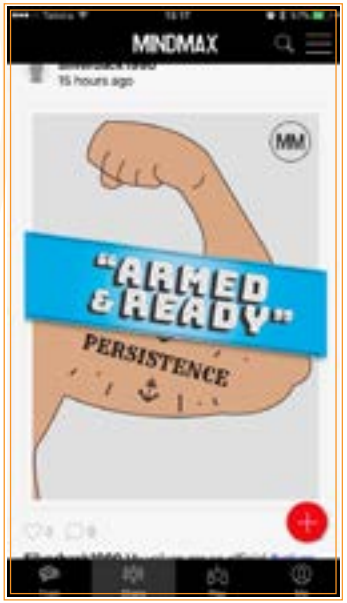
"With MindMax, we hope to change conversations. By drawing people to the app through games and the AFL, our goal is that people will start to talk about what they can actively do to build and maintain a fit mind."

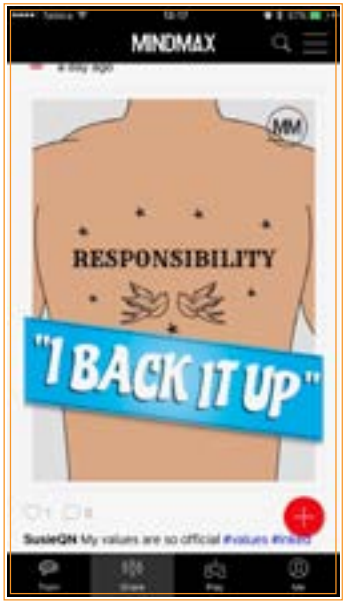
Games are popping up in fields such as health, education, and wellbeing as a result of their ability to build engagement with different causes.

Dr Jo Mitchell said: "Games tell a story, and we are so drawn to stories. In the same way that a novel does, games take you on a journey."
While it's early days for the MindMax team, the feedback so far has been extremely positive.

"Players enjoy the combination of AFL and video games. The AFL's involvement has also been a massive drawcard. Players have loved seeing their heroes engage with the cause."

MindMax is available for free from the app store now.





DA:18 VIDEO LINK : MINDMAX

https://youtu.be/JiFdOmS0XbI

GAME SOFTWARE FOR MILITARY

Founded in Port Stephens, Bohemia Interactive Simulations (BISim) makes gaming software that has become the standard for military simulation training in western countries.

Its simulation engine Virtual Battlespace (VBS) started as a moderation of the game Operation Flashpoint. It is now the flagship product of the US Army's Games for Training program and is used by many NATO countries. VBS leverages game-based technology to simulate the modern battlespace to help trainees learn techniques, procedures and develop communication and decision-making skills.

"We're essentially a game company focused on military simulations. We were the first in the world to do this, and now we're one of the major players," says BISim's co-CEO Pete Morrison, who was formerly with the Signals Corps in the Australian Army

BISim was founded in Anna Bay, New South Wales, in 2004. It now has 250 staff, up from just 75 four years ago. The company has an Australian office near the RAAF base at Williamstown, north of Newcastle. It also has development teams in Prague, Pittsburgh, Orlando in Florida, Warsaw, and at Farnborough in England.

Peter says there is a lot of misunderstanding about games software in the military. "It's not shoot-em-up stuff. Games software doesn't teach soldiers how to shoot, it teaches them how to think. We want them to react as they would in a real battlefield situation. Our big challenge is to constantly improve the fidelity of the process."

A big step forward was the acquisition of terrain simulation company TerraSim in 2014. "In military simulations, terrain representation is critical, so we needed TerraSim to ensure that we could build geo-specific terrain for our military customers."

The latest version of BISim's software, Virtual Battlespace 3, enables military organisations and defence contractors to train users in virtual environments with very large terrains.

Might that someday mean that warfare itself will be virtualised and that we can live in peace in the real world? “That would be a very good thing,” says Peter.

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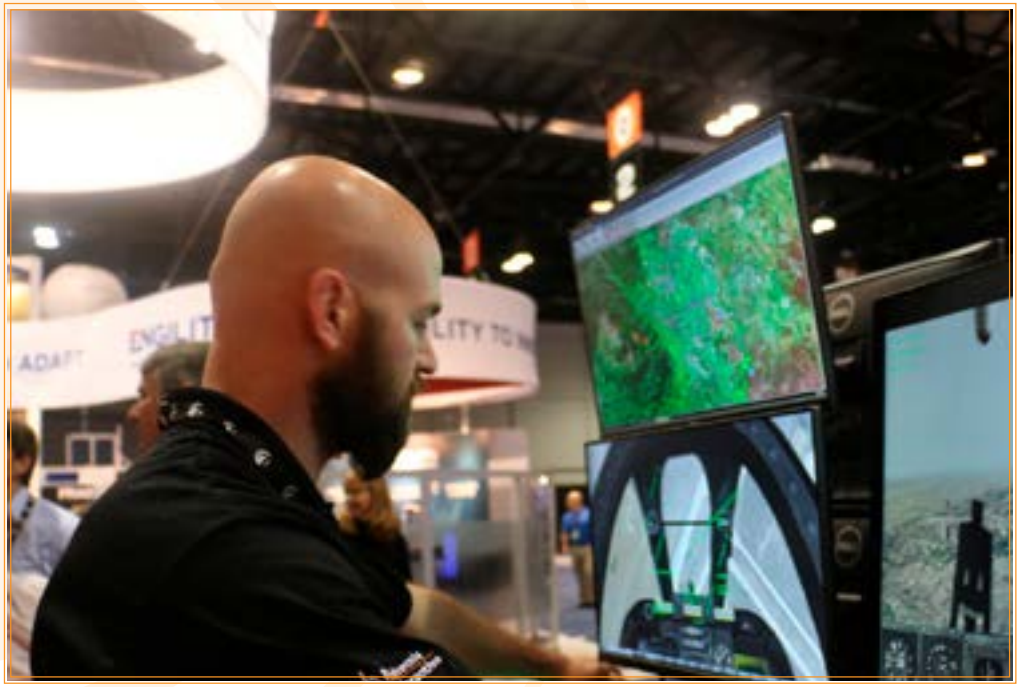

The latest version of BISim’s software, Virtual Battlespace 3, enables military organisations and defence contractors to train users in virtual environments with very large terrains. It includes thousands of vehicle, weapons and avatar models, and interoperates with a wide range of simulators.

It is used by the defence forces of Australia, the United Kingdom, the US, Canada, New Zealand, Sweden, Finland, and the Netherlands, and by many defence contractors around the world.

“VBS3 enhances live training by providing a safe and cost-effective place to learn how to communicate and make decisions before entering the battlefield,” says Peter.

What does the future hold? “We are building a new technology to simulate the entire planet,” says Peter. “Military simulations are typically very localised. If we can build a virtual earth, our simulations can take place anywhere on the planet.”

SOUND SCOUTS :
USES GAMES TO MAKE HEARING TEST

Sound Scouts is a game designed to test the hearing of children, especially around the time they start school.

"There are barriers to checking many children's hearing," says Sounds Scouts' founder Carolyn Mee. "Hearing tests require numerous checkpoints and can take a long time. Conventional tests are often boring for children, who disengage from the testing process. This can undermine the outcome of the test."

Sound Scouts combats this by turning a hearing test into a fun game. "The game format ensures the children stay focused. Gaming technology is ideal for an application like this. The testing is seamlessly incorporated into a narrative-driven game. The children are captivated by the story and focus on the interactive elements as the story progresses.

They don't even know they are being tested.

"The Sound Scouts app then sends a report directly to your email, and healthcare professionals can view results via the Sound Scouts Clinical Portal."

Carolyn explains how the idea came about.
"I was introduced to the concept of serious games while undertaking an Advanced Diploma in New Media. I was fascinated by the potential use of an entertaining game interface to capture data that could be applied in a health context.

"At the end of my course I needed to complete a major project. I remembered that my two sons had both needed hearing tests at the start of school and that it had taken a lot of time and effort to get them tested. I felt there was plenty of room for improvement. I saw it as a problem that needed solving, and the idea for Sound Scouts was born."

Carolyn developed the Sound Scouts app in collaboration with the National Acoustic Laboratories in Sydney, a world leader in hearing assessment and rehabilitation. It was officially released in February 2016, and is now recommended by Australian Hearing and is supported by NSW Health.

"As a games-based test, Sound Scouts enables children's hearing to be checked in any quiet place at a time that's suitable for the whole family. It can be done at home, it is affordable, and it is easy to set up and supervise.

"From a clinical perspective each player interaction is data that we can track and analyse. Through years of research and development, and testing on more than a thousand children, we know what is normal and how it looks in terms of our data."

"The feedback from those using it has been incredibly positive. The game can deliver immediate results, so parents and teachers aren't left wondering about their child's hearing." In 2010, an Australian Senate inquiry into hearing recommended all children should have their hearing tested at the start of school.

"Poor hearing is a common cause of speech and learning problems in children. It's important for all children to have their hearing checked to ensure they're able to learn and socialise."

"If children struggle to hear, they'll also struggle to learn. It's especially important to test children's hearing around the time they start school."

Sound Scouts is now being adopted by more and more schools and individuals, as both teachers and parents realise the importance of ensuring children have their hearing tested at the start of school.

DA:18 VIDEO LINK: SOUND SCOUTS
https://youtu.be/SR5LCsnxwzI

: VIDEO LINKS

ADVANTAGE EDUCATION

FUNCTION

ADVANTAGE HEALTH

PROGRESS

DA18 HIGHLIGHTS

FIT MINDS

SHARED CULTURE

SOUND SCOUTS

INTENTION

MOTIVE

ORBIT

ADVANTAGE WORK

: ABOUT

DA:18

Digital Australia 2018 is an empirical study about digital games in Australian households with a focus on demographics, behaviours and attitudes.

The words computer games, video games and digital games are used inter-changeably to refer to the broad class of interactive, digital entertainment. A game household was one that had in it any device for playing a computer game, including consoles, personal computers, handheld game devices, smart phones and tablet computers. A player was a person who indicated they play computer or video games, simply "yes" or "no" on any device including a PC, console, handheld, social network, mobile phone or tablet computer.

Questions in the survey were grouped according to theme including:

- Household demographics,
- Household media environment,
- Media purchasing and downloading,
- Video gameplay preferences and routines,
- Social gameplay,
- Parental engagement with video games,
- Engagement with game culture,
- Games and education, work, health and ageing,
- Classification and ratings, and
- Attitudes and issues surrounding video games.

The Nielsen Company provided Bond University with raw data from the survey for statistical analysis at the University. The data were analysed by the study author using the SPSS Version 24.

The quality and size of the sample was high and no statistical weighting was applied. Statistical procedures included simple descriptive statistics such as frequencies, cross-tabulations, means, correlations, and tests of significance such as Chi-square and One- way ANOVA.

The margin of error is ±2.7% for the national sample comparing all households and ±2.3% for all players.

For the purposes of including results for all members of a given household, the Vars-to- Cases procedure was used to create individual records for all persons in a household identified by the participants in the study. Data reduction procedures included reducing the range for some questions to simplify presentation of responses. Some measures were combined into indices where obtaining a frequency or mean across a combination of measures simplified the presentation of findings. Missing values were eliminated from analysis on a per- question basis unless multiple measures were examined conjointly. For these, the case-wise deletion method was applied.

FUNCTION : MOTIVE : ADVANTAGE : INTENTION

DA:18

DIGITAL AUSTRALIA REPORT **2018**

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igea interactive games & entertainment association