

FAMILIES & TECHNOLOGY

LIVING WELL IN THE DIGITAL AGE



PREPARED BY DARON PRATT



INTRODUCTION

Children today are growing up surrounded by digital devices. Technology has brought upon us the greatest revolution of our age. Children learn to tap, pinch and swipe before they can tie their own shoe laces.

The changes in technology in the last decade have been breathtaking. The use of technology in the advent of social media such as Facebook, the emergence of smart phones and consequently text messaging, is impacting family life in whole new ways. Many parents are asking questions about the impact this is having on their kids and on family life.

The Technological Age is here to stay and whilst it has endowed us with many benefits, the screen saturation in our homes and schools has created a wide range of cognitive and social deficits. What is best for our children, our homes and our communities is a question that urgently needs to be addressed. How do we bring control to the technological age that has crept upon us and taken over our 24/7 lives?

First lets look at the research and stats and then we will discuss ways to parent in this digitised world.



RESEARCH AND STATISTICS

TECH CAN BE POSITIVE

According to the Raising Children Network, technology can be positive when:

- You get involved while your child is using them and help your child make good choices about what games to play or things to watch.
- You get involved and talk with your child about what's going on in the game or program so she understands it.
- Your child uses good-quality content on screens – for example, playing a video game that involves solving creative puzzles to progress to higher levels.
- Using screens gives your child new ideas for traditional play – for example, playing minecraft might get your child interested in designing buildings on paper.
- Using screens helps your child learn new skills – for example, doing a video about a school excursion might help your child learn video-editing skills.

WE ARE THE MOST CONNECTED SOCIETY THAT'S EVER LIVED YET THE LONELIEST

More than 2 billion people have active social media accounts, yet we are lonelier than ever before. Recent studies back up the theory that as social media and technology have made us more connected, we've become increasingly depressed. (Twenge, Jean M. 2014)

Whilst our children are connected to technology, video gaming, phones, tweets and snapchats, this same technology works to distance them from the adults in their lives. Developing adolescents need strong adult role models and mentors in their lives to help shape them and guide them into adulthood. Teens from lower income families already have a higher likelihood of an absentee parent, in particular, a father. This leaves a void in their real-world network of relationships.





Children are spending more time on screens than they spend on any other activity in their lives. This includes time spent at school and sleeping. By the time children reach Grade 6 they spend less time with parents and teachers than they do with technology.

Teens are averaging almost nine hours a day on entertainment media. This includes self-amusement activities such as engaging with social media, watching television shows and movies, listening to music and playing games. Tweens (8-12) aren't too far behind, averaging almost six hours a day. This time does not include time spent on screens during school, for homework or even time spent talking on the phone or texting. (commonsensemedia.org)

78% of the time teens spend on their devices is devoted to "passive" and "interactive" consumption – watching, listening, reading and playing with media content created by someone else. Young people only spend 3% of their digital time in content creation. This would include things like real writing, taking a creative photograph, composing a song, coding,



or any of the other mentally stimulating activities technology has to offer (commonsensemedia.org).

THERE'S A GENDER DIVIDE IN CHILDREN'S DIGITAL HABITS

In the United States, the amount of time spent gaming averages eight times higher for boys than girls. Video games are digital cocaine for boys whilst social media and texting are the electronic equivalent for girls. Boys who spend more time playing video games have more attention problems and are more aggressive. (Jillian Winn & Carrie Heeter, *Gaming, Gender, and Time: Who Makes Time to Play?* 2009)

Social media amplifies already existing female dynamics. Insecurities are magnified, cyberbullying attacks are tweeted and retweeted in a virtual echo chamber as social media decreases the quality of socialisation and increases isolation. So-called Facebook depression and epidemic levels of teenage suicides linked to social media are all by-products of this (American Academy of Paediatrics).

TECHNOLOGY PROVIDES A SENSE OF PURPOSE AND ESCAPE FOR OUR CHILDREN

Children are searching for some sort of deeper connection and a sense of purpose. Aimless and adrift in soulless and institutional high schools, meaning starved children find purpose in a digital fantasy realm of adventure where there are monsters to slay, competitors to vanquish and prizes to obtain.

Teenagers feel awkward, lonely and depressed and often don't feel like they fit in. Many don't like the way they look or have a dysfunctional family. Technology provides a fantasy world for children to lose and reinvent themselves in; worlds where they can create strong and powerful avatars and personas that get to shoot everyone into oblivion while pursuing some noble common goal. (Kardaras, Nicholas, 2016)

THE RISE OF DECEPTION AND DECOY APPS

Anecdotal reports suggest that children and adolescents are increasingly using deception and decoy apps. These apps, disguised for example as a calculator app can be used as a regular calculator but once a pin or pattern is input, the app unlocks to reveal a private vault of photos, videos and texts. Users can also set up guest vaults in these apps, specifically designed to be used if a parent or a teacher requests to see what is in the vault. Such apps are highly desirable for children and teens who want to keep their online activity a secret from authority figures. (Kristy Goodwin in Nurturing Young Minds, 2017)

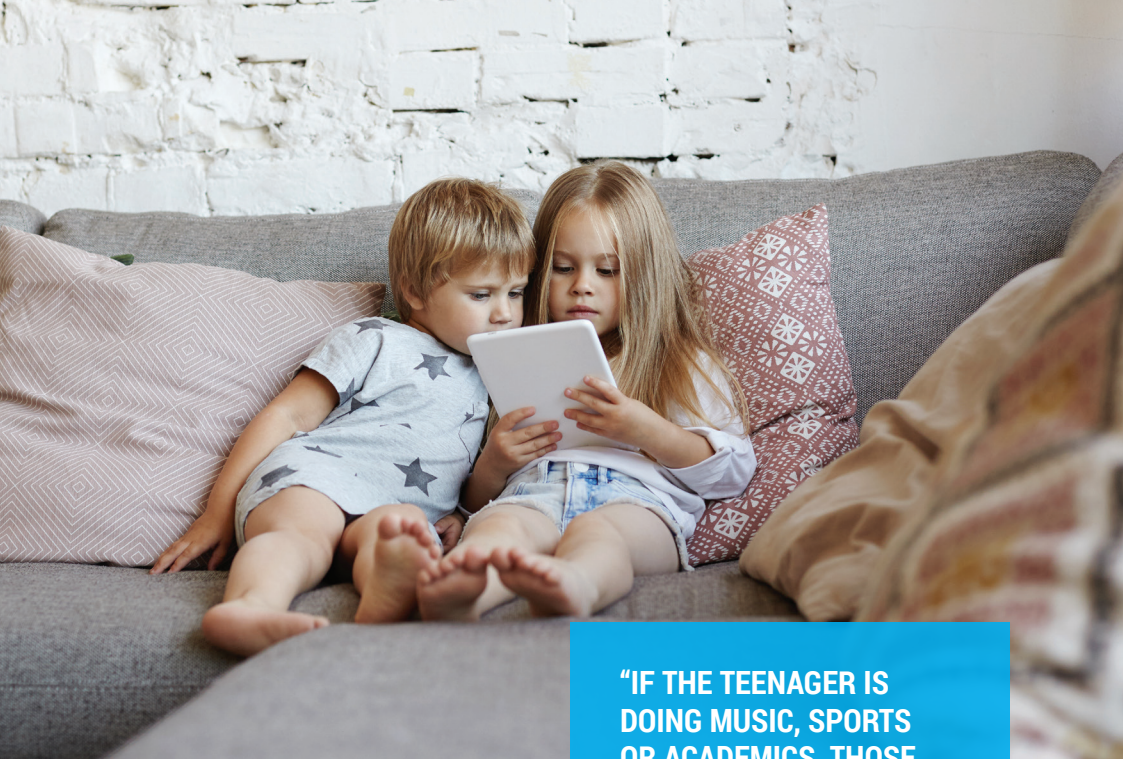
ONLINE GAMES ARE DESIGNED TO BE ADDICTIVE

97% of all American children aged 2-17 play video games. (Amanda Lenhart, Teens, video games and civics, 2008)

Dr John Hopson did PhD work in 2001 and in his piece "Behavioural Game Design" he outlined for the gaming industry how to keep online gamers playing longer. He used the same methodology for the video game industry as what had been demonstrated in lab rats. These elements of addictive gaming include intensifying playing through some type of reward, receiving tokens, obtaining a coveted object, variable-ratio rewards and punishment for avoidance (taking away rewards for not playing everyday www.gamasutra.com).

There are many side effects associated with technology addiction such as increased depression, anxiety, withdrawal, diminished focus, and diminished cognitive function. (Screen Schooled, 2018)

According to Whybow, our brains are wired for finding immediate reward. With technology, novelty is the reward. You essentially become addicted to novelty. Dopamine tickling texts and social media updates feed straight into our pleasure pathways and the results are leaving us addicted and attached to our devices. (Manic Nation, 2012)



DISRUPTED BRAIN DEVELOPMENT

Several studies have shown atrophy in adolescents with an overdependence on technology. Beginning in infancy the brain begins to hardwire itself. Synapses and pathways that are not being stimulated get pruned. As the brain prunes away rarely used synaptic connections it loses the potential to realise that particular cognitive ability later in life.

Another growth spurt and corresponding pruning occurs again during the teenage years. This late stage pruning is vital to the brains higher-level cognitive skills. Neuroscientist Dr Jay Giedd says, "If the teenager is doing music, sports or academics, those are the cells and connections that will be hardwired. If they are lying on the couch or playing video

"IF THE TEENAGER IS DOING MUSIC, SPORTS OR ACADEMICS, THOSE ARE THE CELLS AND CONNECTIONS THAT WILL BE HARDWIRED. IF THEY ARE LYING ON THE COUCH OR PLAYING VIDEO GAMES THOSE ARE THE CELLS AND CONNECTIONS THAT ARE GOING TO SURVIVE"

- DR JAY GIEDD

games those are the cells and connections that are going to survive" (<https://www.forbes.com/sites/alicegwalton/2012/01/17/internet-addiction-shows-up-in-the-brain/#69ee3b5610b7>).

<https://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/interviews/giedd.html>

10 APPS TEENS ARE USING THAT PARENTS NEED TO KNOW



CALCULATOR

This app looks like a calculator but functions like a secret photo vault.



HOT OR NOT

Strangers rate your profile. Goal is to lead to a hook up.



OMEGLE

A free online chat website that promotes chatting anonymously to strangers.



BURN BOOK

Post anonymous rumours about people through audio messages, texts and photos.



WHISPER

An anonymous app where the creators promote sharing secrets and meeting new people.



WISHBONE

An app that allows users to compare kids against each other and rate them on a scale.



ASK.FM

Ask an anonymous question and get an answer. This app has been linked to the most severe forms of cyberbullying.



KIK

Messaging app. Kik has built in apps and web content that would be filtered on a home computer.



SNAPCHAT

This is the way most teens communicate with each other. Sending messages and snaps that disappear within seconds and stores go away after 24 hours. Teens live for a 'streak' of communication.



INSTAGRAM

Many kids are now creating fake accounts 'flinsta' to hide content from parents. Kids also like to text using Instagram because most kids know parents won't check messages.

MENTAL HEALTH ISSUES

Dozens of studies are now proving a strong correlation between excessive technology use and a decline in mental health.

A recent Australian study found that young people who spent time on screens had a much higher rate of feelings of depression, loneliness, withdrawal, anxiety, attention problems and aggression. (www.natureplaywa.org.au)

Another study found that young people started experiencing many of these symptoms of psychological distress after just one to two hours of screen time a day.

INTERRUPTED SLEEP PATTERNS

Research by neuroscientists such as Lila Davachi has found that when teens neglect rest and sleep by taking their gaming sessions into the wee hours of the morning, they never give their brains the chance to file away the day's memories. Dopamine releases triggered by video games trigger the brain to remember the events that created the release in the first place. These memories take priority over the more mundane things learnt. Everything they learnt that day in school literally goes out the window. (<http://content.time.com/time/health/article/0,8599,1957114,00.html>)

THERE ARE MANY WAYS THAT TECHNOLOGY IMPACTS SLEEP

1. The light from the devices suppresses melatonin, a sleep-inducing hormone.
2. The devices are mentally and physically stimulating.
3. When we use our devices in bed, we create a learned association as the bed being a place of study or work or socialising – NOT a place for sleeping.
4. Using a screen for 1.5 hours or more seems to be when problems start, although not everyone is affected the same way.
5. The impacts on sleep are related to both the stimulating effects of interacting with a device and the effects of light from the screen.
6. Passive activities like reading an e-book or watching a movie are thought to be less disruptive than interactive ones like playing a video game, making posts, or messaging.



UNHEALTHY LIFESTYLE CHOICES

High levels of media use have been linked with obesity, poor cardiorespiratory fitness and raised cholesterol. These issues have long-term detrimental consequences for later adult health.

FEAR, ANXIETY AND PHOBIAS

Children's exposure to frightening media can have significant short and long-term effects on children. Between 25% to 35% of adults have significant fear that originated from childhood exposure to frightening media.

SUSCEPTIBILITY TO PERSUASION BY ADVERTISING

Children and adolescents are highly vulnerable to the influences of advertising and are not able to distinguish between advertisements and other media content. Children also learn more quickly from media content and are able to recognise brands even if they don't understand the content of the advertisement. Children are firmly in the sights of producers and marketers. George Gerbner states that "For the first time in human history, children are born into homes where mass mediated story tellers reach them on average more than seven hours a day... These stories do not come from families, schools, churches, neighbourhoods, and often not even from their native countries. They come from a small group of distant conglomerates with something to sell." (Harvesting Minds: How TV Commercials Control Kids".

TOO MUCH SCREEN TIME DISPLACES OPPORTUNITIES FOR DEVELOPMENTAL NEEDS

Too much screen time displaces opportunities for the seven developmental needs to be met. Time spent with technology is linked with poorer attachment to parents. Given that the core of attachment relationships involves beliefs about one's self worth and the trustworthiness of others, variety, balance and moderation is essential to ensure that secure relationships and attachments occur (Kristy Goodwin, Nurturing Young minds, 2017). Furthermore, according to Joondalup Health Campus paediatrics head, Desiree Silva, babies are missing key developmental milestones because their parents are glued to digital devices at times when they should be interacting with their infants.

The \$26 million Origins Project has investigated the impact of electronics on a child's health as part of a decade-long study of how a child's environment influenced their risk of chronic health problems. "Social interaction from an early age is changing and we are finding that some babies at six weeks of age are not smiling ... and smiling at six weeks old is a key milestone," Professor Silva said. "What we've noticed is a lot of parents are holding their phone or iPad and not actually looking at their child. What worries us, as paediatricians, is that the platform of the child's brain might be affected.

DETRIMENT TO FAMILY RELATIONSHIPS AND DEVELOPMENT

Neuroscience and Developmental Science research have identified that kids have seven basic unchanging developmental needs.

1. Forming relationships and attachments
2. Hearing and using language
3. Sleeping
4. Engaging in play
5. Being physically active
6. Developing executive function skills (impulse control, working memory and mental skills)
7. Consuming good quality nutrition

Donna Cross, director of CoLab at Telethon Kids Institute, said vital foundational neural development occurred in the first 1000 days of a child's life from conception, and inappropriate use of devices was interfering with parent-child interactions.

(<https://thewest.com.au/news/wa/parents-are-snubbing-their-infants-in-favour-of-digital-devices-according-to-leading-wa-paediatrician-ng-b88790516z>)

COMMON MYTHS AND MISCONCEPTIONS

IT'S A PASSING PHASE THAT MY CHILD WILL GROW OUT OF

Whilst this may have been true in the past, parents must be aware that the world of the internet and video gaming is essentially limitless. Website and social networking sites along with computer games are intentionally designed to keep users entertained with new information, updates and challenges.

MY CHILD WILL GET LEFT OUT IF THEY DON'T KEEP UP WITH TECHNOLOGY

Parents must resist the urge to keep up with the 'iphoneses' and set limits for sensible, balanced use at an early stage.

VIOLENT VIDEO GAMES WON'T AFFECT MY CHILD NEGATIVELY

The science is in and violent videos do affect a person in their real life. Increased anxiety, anger

problems and aggression have all been clearly linked to these games.

GIVING THEM MY DEVICE IS A GREAT WAY TO CALM THEM DOWN

Using devices as a pacifier, especially with toddlers and young children should be discouraged. Support, encouragement and boundaries by engaged parents are the best strategies. Our children need to learn over time how to calm themselves rather than relying on technology.

I CAN TRUST MY CHILD TO BE SENSIBLE AND RESPONSIBLE IN THEIR USAGE

Whilst teaching children responsible tech habits is the goal, parents must be aware that children largely lack the self-restraint and reflection strategies that adults take for granted. Children find it very hard to resist the vast temptations that devices have to offer.

Source: Dr Philip Tam



WHAT TO DO

1

BALANCE, VARIETY AND MODERATION

As parents we need to both model and teach our children what healthy tech usage looks like.



AVOID THE JUNK FOOD

- Video gaming – Keep to a minimum, be aware of what is actually in the video game, do the research.
- Mindless YouTube surfing – Limit time and be aware of what they are watching online.
- Internet porn watching – Most teenagers have viewed porn either intentionally or accidentally. It is happening and this is why devices in children's bedrooms should be minimised, including mobile phones.
- Hyper Texting/Social media – Be aware of incessant texting, snap chatting and social media in general. The child needs to know that you are monitoring them. Set appropriate boundaries and restraints. Talk to your children regularly about what is happening in the social media world.

DIGITAL FRUITS AND VEGETABLES

- Internet surfing to research a topic
- Emailing
- Educational YouTube videos
- Skyping a friend
- Creating music or following a sports team/hobby
- Vlogging/blogging

2

KEEPING IT SAFE

Buy the best computer system that money can buy with all the bells and whistles on it. Children always gravitate to the best and latest technology. Place this computer in the lounge room or a prominent place in the house. Research suggests that when children accidentally Google unsafe sites, having a parent nearby to talk over what has happened, ameliorates the damage that such sites can do to the child's disposition and thinking.

3

REMEMBER YOU ARE THE PARENT

You are the parent and you pay the bills. Ask the question, 'Does my child really need a smart phone and at what age?' Both our children did not get their first smart phone until they were in their later teen years.

4

SET BOUNDARIES & LIMITS

Discuss with your family what is an appropriate length of time for technology usage and stick to it. Less appropriate junk tech during the week and maybe a little more on weekends or during holidays if appropriate. Balance time outside in nature/sports/hobbies and chores alongside tech usage. Set appropriate punishment for abuse of family tech rules. The key is to set these rules while the child is young and then be prepared to enforce the consequences.

You can tailor a technology agreement online for your family here at healthychildren.org. The agreement is excellent and allows you to email them and place them up around the house for the family to read and abide by.



5

MODEL APPROPRIATE TECHNOLOGY USE

Modelling appropriate technology use is key. Parents need to model what a balanced tech life and tech free life looks like. We need to demonstrate to our children what it looks like to balance our natural lives, the sacred and surroundings with technology so that we are using these tools to enhance life, others, ourselves and not the other way around.

6

TECHNOLOGY FREE MEALS

Meals provide a natural technology free rhythm each day. Make family meals technology free. Stack the phones on the table and declare that whoever picks up their device first does the dishes. Encourage slow eating, story and conversation. These are the times your children will remember and love the most. When families laugh, bicker, story and eat together – this is the spice of life.



7

TEACH/MODEL HOW TO FILTER, SCREEN AND ANALYSE WHAT THE CHILDREN SEE AND READ ONLINE

- Be sceptical of everything, never accept any claim, story or news article as being 100% correct
- Consider the source – who is behind the website and what are their biases
- Google is not God – it's a search engine, sort out the wheat from the chaff
- Slow down – wait and gather all intel before coming to a conclusion
- If no one else is reporting the story, ask yourself why
- Understand what news pieces are opinion and what is fact
- Check the URL carefully
- Don't spread garbage – don't share until you have analysed all material you read
- Slow the flow of information – restrict the volume of your news feeds, be selective
- Diversify your sources, read both online and offline sources. Take regular weekly breaks from the internet
- Take time to mull, pause and reflect to give yourself the best chance of making the right decisions.

8

INTERNET SABBATH

The Sabbath is a day of rest observed by Jews and Seventh-day Adventists. The Sabbath is a day when we take a break from mainstream market culture.

The concept of a tech free Sabbath is beginning to catch on. The idea is to abstain from all digital media and technology as a family for the 24 hour period known as the Sabbath. Some families are actually turning off their devices on a Friday evening and not turning them on again until Monday morning (Hamlet's Blackberry by William Powers).

Families can buy a box where all of the tech gadgets go on Friday evening.

The modem is unplugged or turned off. Families then organise special meals, board games, outdoor activities, hobbies and other events that the family can do together. Families are finding that this is one of the best ways to teach balance, variety and moderation to their children. It allows families and individuals to detox, reset and learn intentional mindfulness and truly live in the moment together before tuning back in to digital life on a Monday morning.



9

FUEL YOUR CHILD'S IMAGINATION

The more we allow our children to gorge on technology, the less their brains have to work, and imagination and creativity is dulled.

Help your child to switch off so they can switch on free-range play, imagination and creativity. In his book, *The Narnian: the life and imagination of C.S Lewis*, Alan Jacob tells us that in most children (but relatively few adults) at least in our time, is the willingness to be delighted to the point of self-abandonment. This free and full gift of oneself to a story is what produces the state of enchantment.

But why do we lose the desire — or the ability to give up ourselves in this way. He states, “Those who will never be fooled can never be delighted because without self-forgetfulness there can be no delight.” Help your child and model for them the delight of stepping out of the digitised space and letting them sink into the joyful moments of self-abandonment, story and connection, creativity and imagination.

TECHNOLOGY CHEAT SHEET

for babies & toddlers



TELEVISION

DAILY DOSAGE

None if you can help it; at least hold out until 6 months to 1 year and then only a half hour to an hour.

KEY CONCERN

Potentially stunting the development of the ability to focus.

REMEDY

Low consumption; "real-time" paced programming; interactive programming and interactive parenting.

COPING STRATEGY

Don't wait for it to happen: Pre-plan other distractions.



MUSIC

DAILY DOSAGE

As much as you'd like.

KEY CONCERN

Promoting development.



MOBILE PHONES

USAGE WARNINGS

Be on the safe side: Don't let young children use them.

TECHNOLOGY CHEAT SHEET

for preschoolers



TELEVISION

DAILY DOSAGE

Fewer than two hours, preferably one or less.

REMEDY

Become an expert on your children's programming; show only educational television; interact with your child watching television to maximize learning.

KEY CONCERNS

Educational television.



COMPUTERS

KEY CONCERN

Many, though currently with little research to support the large amounts of criticism.

KEY ADVANTAGE

Promoting development.



ADVERTISING

KEY CONCERN

Pre-schoolers are capable of watching ads, but not capable of understanding what their purpose is and certainly not capable of critically interacting with advertising.

REMEDY

Use your recording devices and "on-demand" services; interact and skip ads for them.

TECHNOLOGY CHEAT SHEET

for early primary



TELEVISION

DAILY DOSAGE

Fewer than two hours, preferably one or less.

REMEDY

Become an expert on your children's programming; show only educational television; interact with your child watching television to maximize learning.

KEY CONCERN

Educational television.



COMPUTERS

KEY CONCERN

Many, though currently with little research to support the large amounts of criticism.

KEY ADVANTAGE

Promoting development. Initially requires parental interaction; most early primary software is educational.



ADVERTISING

KEY CONCERN

Early primary children are capable of watching ads, but not capable of understanding what their purpose is and certainly not capable of critically interacting with advertising.

REMEDY

Use your recording devices and "on-demand" services; interact and skip ads for them.

TECHNOLOGY CHEAT SHEET

for pre-teens



TELEVISION

KEY CONCERN

Negative messages about body image.

REMEDY

Inoculate pre-teens from messages and images through regular discussion and one-on-one time with parents.



VIDEO GAMES

KEY CONCERN

Overuse and violence.

REMEDY

Choose games wisely, moderate and mediate use.



COMPUTERS & INTERNET

KEY CONCERN

Predators and bullying.

REMEDY

Learn what is necessary to help your children avoid these concerns.



ADVERTISING & MEDIA LITERACY

KEY CONCERN

Advertising influence.

REMEDY

Regular parental conversations about advertising, its aims, myths and reality.

TECHNOLOGY CHEAT SHEET

for high school & beyond



TELEVISION & MOVIES

KEY CONCERN

Sexual content and violence.

REMEDY

Inoculation, open discussion with your children.



INTERNET

KEY CONCERN

Sex / pornography

REMEDY

Inoculation; open discussion with your children; better filtering and oversight.



MUSIC

KEY CONCERN

Violence and music degrading women.

REMEDY

Oversight, open discussion.



SOURCES

Barna Group: State of the Church & Family, The Family & Technology, 2011 www.Barna.org

Carr-Gregg, Michael, Real Wired Child: What parents need to know about kids online, Penguin Books, 2007

Joe Clement and Matt Miles, Screen Schooled: How technology overuse is making our kids dumber, 2018

Crook, Christina, The Joy of Missing out: Finding Balance in the Real World, New Society Publishers, 2015

Disalvo, David. What makes your brain happy and why you should do the opposite. Prometheus books, 2018

Dutwin, David: Unplug your kids, Adams Media, 2009,

Harrison, Guy P. Think Before You Like, Prometheus Books, 2017.

Kardaras, Nicholas: Glow Kids, St Martin's Griffin, 2016

Levy, David: Mindful Tech: How to bring balance to our digital lives. Yale University Press, 2016

Manocha Ramesh: Nurturing Young Minds, Mental Wellbeing in the Digital Age, Hatchette Australia, 2017

Powers, William: Hamlets Blackberry, A practical philosophy for building the good life in a digital age, Harper Collins, 2010.

Warburton, Wayne and Braunstein, Danya: "Growing up Fast and Furious", Federation Press Australia 2012



SEVENTH-DAY ADVENTIST® CHURCH

About the author: Pastor Daron Pratt is the Children, Family and Junior Youth Ministries Director for the North New South Wales Conference of the Seventh-day Adventist Church in Australia. He is married to Lisa and has two children; Andrew and Maddison. Daron is passionate about the importance of bringing churches and homes together with a strategic focus and with intentionality to raise our children to know and love the Lord.

Views expressed in this booklet are the author's alone and do not necessarily represent those of the Seventh-day Adventist Church.

