

Screen Stories and Community Connections

Final Report



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EXECUTIVE SUMMARY

This study investigates how children and their families use information communication technologies (ICTs) in their everyday lives, and how one's relationship with and through technology can impact and influence an individual's experience of social inclusion and exclusion. The study takes place in the new outer-urban growth corridor of Cardinia, Victoria, which has been identified as one of the State's fastest growing areas, and a community facing particular changes resulting from rapid development (Robson and Wiseman 2009). Particularly the area has seen significant private development of new commercial, residential and social spaces.

Technology access, use and skills are essential to communicate in an increasingly technologically connected world. Conversely, limited access, use and technological literacy may contribute to an individual's experience of social exclusion. Our study findings have been drawn from four months of ethnographic data collection conducted in the home of participants. The participants in this study include four families with children under the age of 12 living in Pakenham and Officer in the Cardinia Shire, one inner city family and one young person living on her own in Pakenham. Using a variety of interactive qualitative methods we mapped children and their family's everyday interactions with ICTs. The technologies identified in this research have been drawn from participants' use, and are namely the computer (and the tools that facilitate communication on the computer including the internet, instant messenger, social networking sites); mobile phones; and land line phones.

The study reveals that children and families in outer urban Pakenham and Officer have varied experiences of social inclusion and exclusion, and that technology plays an important role in facilitating inclusion, especially for adults but increasingly for children too. Existing and emerging areas of social exclusion and social inclusion in relation to technology that became apparent from this study include:

- The potential for social networking sites to support social connectedness on new Estates and surrounding neighbourhoods;
- Limited access to ICTs for children outside of school especially amongst families from low SES;
- Gaps in parental knowledge, support and capacity to provide guidance to their children on safe and positive ICT use;
- Risks to younger children more commonly relate to the uses of the internet within existing interpersonal relationships, and to the kinds of commercial content they regularly come into contact with online.

The study increased understanding of how ICT access and regulation impact upon children's digital inclusion. Our study identified gaps in parental mediation strategies, and opportunities for promoting children's digital inclusion. Parental safety concerns overwhelmingly focus on risk protection. Yet, there is potential for mediation strategies to equip children with knowledge, competence and skills to be active, ethical and critical participants online. The findings of this study support existing evidence of the potential for divide between the older areas of town and the newer developments and the role of community initiatives such as social

networking sites (like Facebook) and mobile connected youth services to promote social inclusion for residents.

This study has been a partnership study between the Brockhoff Child Health and Wellbeing Program at The McCaughey Centre University of Melbourne, The Alannah and Madeline Foundation, VicUrban, and

Department of Information Systems at the University of Melbourne. The VicHealth funding made it possible to secure some additional seed funding at the University of Melbourne to support the translation of the research findings into strategies for the project partners. The seed funding will also support development of a research proposal to support further research.

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BACKGROUND

This study aimed to develop an understanding of the relationship between social connection and technology for children and their families in different settings and socioeconomic circumstances, and how technology can impact and influence an individual's experience of social inclusion and exclusion. The research was predominantly conducted in the Cardinia Shire, a growing area of outer-urban Melbourne that is experiencing rapid change. Our research explored the ways children and their families in this area accessed, used and experienced technologies to pursue community connections and support social inclusion. The research used qualitative research methods to develop an in-depth understanding of the ways information and communication technologies (ICTs) were experienced in daily life.

This study has been conducted in partnership by: the Jack Brockhoff Child Health and Wellbeing Program at The McCaughey Centre, the University of Melbourne; The Alannah and Madeline Foundation; VicUrban; and Department of Information Systems at the University of Melbourne. The Jack Brockhoff Child Health and Wellbeing Program at the McCaughey Centre and Flinders University provide research expertise in child and family public health and community based interventions. The Alannah and Madeline Foundation (AMF) leads a national Cybersafety and Wellbeing initiative supported by government, corporate and philanthropic sectors, with schools as the current focus of the initiative. VicUrban, the Victorian Government's sustainable urban development agency, is introducing high-speed broadband to master planned communities in Cardinia with the aim of creating a connected and welcoming

community that supports a range of lifestyle choices. The Department of Information Systems contributes expertise in information technology research and associated user issues, while VicHealth is the Victorian public health promotion organisation.

Our research findings aim to:

- contribute to the evidence base on social inclusion and technology for children and their families by studying the environmental and behavioural factors that influence technology access and use, and develop an understanding of the tools and resources a community needs for positive, safe and effective use of technology;
- inform the development of a set of principles and desired outcomes to guide implementation of a technologically connected and socially inclusive community in a growing community in Cardinia developed by VicUrban and other partners;
- inform the development of the AMF Cybersafety and Wellbeing Initiative as it moves beyond the school environment and into the wider community in helping to enable children to interact positively and safely online.

Technology is increasingly becoming a necessary means of communication, social connection and inclusion, information access, and economic participation. Limited access to technology can contribute to social exclusion, particularly for vulnerable communities such as low socioeconomic or geographically isolated groups. Social inclusion refers to the 'extent that individuals, families, and communities are able to fully participate in society and control their own destinies, taking

into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture and civic engagement' (Warschauer 2003: 8). Until recently, discussions of social inclusion/exclusion have placed a great deal of emphasis on *economic* exclusion however

such exclusion does not take into account the many non-economic factors that allow people to feel disconnected and excluded in their society, and specifically to this study, the role of ICTs and the possibilities of ICTs to facilitate social inclusion and connection.

LITERATURE REVIEW

This research investigates how children and their families use technology in their everyday lives, and how one's relationship with technology can impact and influence an individual's experience of social inclusion and/or exclusion in outer urban Melbourne.

Social Exclusion/Inclusion

The study of 'social inclusion' developed out of academic and policy discourses around social exclusion in predominantly Western societies (Warschauer 2003; Silver 1994; Daly 2006a; 2006b; Peace 2001). Academic study on social exclusion has been significantly 'influenced by the EU (European Union) which is now the locus or sponsor of most development of the concept'. (Daly 2006a: 3) The concept resides, then, in a borderland between academia and policy. Peace (2001) describes that as a policy concept, social exclusion has predominantly encompassed issues of poverty, and its study and policies initially focused heavily on the monetary aspects of poverty.

Burchardt, LeGrand and Piachaud (1999) and Haddon (2000) note that although the history of the topic is rooted in poverty and un/employment discourses, the policies in the UK specifically began in the 90's to identify other dimensions of exclusion including issues of polarisation, differentiation and inequality. For example, mobility is a key dimension to one's experience of social exclusion, and Kenyon et al. (2002) make a strong correlation between a lack of access to adequate mobility, and a lack of access to opportunities, social networks, goods and services (2002: 207). Particular to our study is one's relationship between ICT and social exclusion

and both Selwyn (2004) and Warschauer (2003) argue that ICT access, education and skills are a requirement for social participation in a globalised world.

As discourses around exclusion developed, the gap in knowledge around *social inclusion* became apparent. Goodin (1996: 343) argues that the initial coherency of inclusionary logic was flawed as 'every inclusion implies an exclusion (there can be no 'inside' without an 'outside'); so inclusionist appeals are implicitly consenting to a closed community, albeit one with a rather broader catchment'. The initial discourse of social inclusion was broadened by scholars like Warschauer (2003: 8) who argues that social inclusion is not only a matter of an adequate share of resources, community boundaries and community participation, but also of one's ability to control and fulfil one's goals and destiny:

[The concept of social inclusion] overlaps with the concept of socioeconomic equality, but is not equivalent to it. There are many ways the poor can have fuller participation and inclusion even if they lack an equal share of resources. At the same time even well-to-do may face problems of social exclusion because of political persecution, or discrimination based on age, gender, sexual preference or disability. The concept of social inclusion does not ignore the role of class, but recognizes that a broad array of other variables help shape how class forces interact (Warschauer 2003: 8).

After the European Union Lisbon summit on social cohesion in 2000 we see a shift away from traditional discourses of social exclusion to discussions about exclusion and inclusion; these combined foci address social necessities like participation, community engagement, citizenship and identity. This shift is evident in Australia where policy focus on social inclusion has had an intersecting relationship with academic research in various areas of difference, marginality and exclusion/inclusion. Vinson (2009) reports that the Australian government's own initiatives dealing with social exclusion and inclusion were greatly influenced by the EU's debates around exclusion and inclusion, and the influences of these debates are evident in Australia's own social inclusion policy.

In 2007 the Australian Labour Party released the Australian Social Inclusion Agenda (Gillard and Wong 2007: online), which also saw the creation of a Social Inclusion Unit which aimed to 'tackle the social exclusion of individuals and communities...and invest in the human capital of all our people, especially the most disadvantaged'. Learning from the EU debates around inclusion and exclusion, the agenda clarified that reducing disadvantage was understood to be both a moral and economic imperative. Moreover it made clear that the government's concept of social inclusion was not solely about economic welfare and disadvantage, rather it was their 'effort to join social policy with economic policy to the benefit of both'. Innovative use of technology to promote social inclusion is consistent with the social inclusion agenda adopted by the Social Inclusion Unit in its 2009 report 'A Stronger, Fairer Australia'. This report acknowledges ICT as a means to address disadvantage and promote social, civil and economic participation. The Victorian Government has also adopted this approach through the release of 'A Fairer Victoria 2008:

Strong People, Strong Communities' (2008). One of the four key priority areas of the action plan is 'Developing Liveable Cities'; one way to do this is to 'build up communities assets [to] make them better places to live and work... [assets may be] the strength of its local leadership and community networks' (Victorian Government 2008: 46).

SOCIAL INCLUSION/ICT

Academic study into the impact of ICT on social exclusion and inclusion within the West has predominantly focused on adults, teenage adolescents, and teenagers and their families. Though there has been some work conducted with children in the US and UK (see: Livingstone and Helsper 2007), little research has been done on emerging adolescents, children between the ages of eight and 12, in Australia. There is a particular gap in knowledge on the 'tween' experience of/with ICTs in the Australian context. Our study with children and their families represents a significant contribution to the field.

Initial research into ICT participation in the 90's in Australia pointed to a 'divide' in regards to ICT access and infrastructure amongst economically disadvantaged groups (McLaren and Zappela 2002), rural and regional Australians (Curtain 2001) and those of particular family structures and ethnic backgrounds (Baum, van Gellecum and Yigitcanlar 2004). Gibson (2003: 239) summarises these concerns, suggesting that in Australia at the time there was:

...a strong class as well as spatial dimension to Australia's digital divides. Educational status and income mediate use of computers and Internet technologies, in addition to factors associated with location, Indigeneity and birthplace. Such observations reinforce those made elsewhere regarding the uneven

geometries of power apparent in information economies, and suggest interventions in public policy debates, particularly in the areas of telecommunications provision, resourcing of public schools, and regional economic development.

But as scholars (Warschauer 2003; Selwyn 2004; Livingstone and Helsper 2007) have argued, the concept of a 'digital divide' is far too simplistic to understand the complex interactions between various members of society and ICT. The technical dimensions of social inclusion, that is the provision of media devices and connection, are by themselves not enough to secure inclusion (Seiter, 2005; Valentine et al. 2002; Warschauer, 2003). Warschauer (2003) notes, for example, that access and inclusion requires a range of interconnected resources: physical (hardware/device); digital (connection); human (literacy); and social (social networks). Research in Australia and abroad shows that in developed countries the vast majority of people, and especially young people, have some kind of access to the internet (there is a connected computer at home, or school, or in a public space) (ABS 2008; ACMA 2007a, 2009e; Livingstone, 2009). Yet there is no simple equation where access equals inclusion. Instead, there is widespread agreement in the research literature that technology access must be accompanied by a range of social and educational resources in support of its use (e.g., Seiter, 2005; Valentine et al., 2002; Warschauer, 2003).

This recognition has shifted the terms of the debate about a digital divide and the presence or absence of an internet connection, to one of digital inclusion which focuses on the kinds of access people have and the differences or gaps in the qualities of their participation. Clearly, then, it is important to look at contexts of ICT use, and the ways that ICTs

emerge as different kinds of tools, resources or objects, with different meanings, in different communities and contexts (Holloway and Valentine, 2003). By focusing on the inclusionary and exclusionary potential of technologies, academics and policy makers address how ICT participation is connected to larger issues such as gender, race, class, ethnicity and social justice, as well as pragmatic problems such as infrastructure and access. This shift in analysing how ICT is experienced and affects the everyday lives of individuals has been most evident within academia and within policy initiatives addressing ICT and social inclusion/exclusion in Western nations. With the growing importance of ICT in most Western societies, equal access to electronic information, communication and services has become a social justice and social participation issue for every citizen, and more so for those who have been marginalised in other areas of society (First and Hart 2002); as Sewlyn (2002: 5) comments in the UK:

Those groups most likely to be 'digitally excluded' in terms of access to ICT are seen to be remarkably similar to those who can already be characterised as being socially excluded...therefore the potential exacerbation of existing exclusion coupled with the scale of such divisions is seen as a pressing cause for concern

Technology-based marginalisation can occur in many ways. Graham, for example, shows that computerised systems are frequently being used in a 'widening array of public, private and public-private spheres and mobility, logistics and service systems and spaces' (2005: 562).

There is significant evidence, however, that when marginalised populations are able to

use ICT, strong and purposeful on-line and off-line relationships can be developed. Notably, in her essay on youth and social networking sites, boyd (2007) shows how the MySpace community is helping young people across America build a public identity that is dependent on a strong ICT vocabulary. Western youth are not the only populations using ICT in relationship building; street and slum children in Asia, for example, use mobile phones to develop a 'cool' public identity which allows them to present a tech-savvy identity, forcefully subverting perceptions of their poverty, illiteracy and social class (Beazley and Chakraborty 2008). ICT also aids in keeping young people and adults connected to the world of work; Jager's work for example, has consistently shown that ICT facilitates workplace participation in situations where employment of disabled people would have been previously impossible (Jaeger 2006; Jaeger and Bowman 2005). Thus marginalised populations use of ICT has the ability to facilitate participation within greater society, and influence experiences of social inclusion.

CONNECTED COMMUNITIES

The potential of ICT in building and sustaining connection with society is of particular interest in this study as we are working in an outer urban area undergoing significant change. Outer-urban growth in Melbourne has been well documented, particularly following the Victorian Government's 2002 metropolitan planning strategy, 'Melbourne 2030' (Buxton and Scheurer 2007; Currie et al 2009; Beer, Kearins and Pieters 2007). As noted by Buxton and Scheurer (2007: 94), Melbourne 2030 introduced a 'legislated urban growth boundary (UGB) [that] concentrates outer urban development into four outer urban growth corridors, Wyndham, Plenty Valley/Epping North, Pakenham/Cranbourne and Hume'. Master planned

communities (MPC) have in many instances driven outer-urban growth (Minnery and Bajracharya 1999; Gwyther 2005; Costely 2006).

MPC's have been 'defined as private sector driven, large scale integrated housing developments on "Greenfield" sites in the outskirts of the cities ...[they] usually have a mix of housing types, shopping and services, open spaces and recreation facilities, and sometimes employment opportunities' (Bajracharya, Donehue and Baker 2007: 188). The growing occurrences of MPC in Australia, including in the area we have conducted this study, have led some scholars to question the meanings of social connection in such meticulously planned communities (Costely 2006; Gwyther 2005), and the implications of these connections on the larger surrounding population. For example a potential infrastructural advantage can be that MPCs bring high-speed Internet to outer-urban areas that may previously have had none. Alizadeh (2009; 2010) particularly investigates the role of ICT connection through MPCs and its impact on surrounding communities in Queensland. His work shows that ICT infrastructure brought in by MPCs have the potential to both advantage surrounding communities by attracting business and expanding ICT infrastructure. Costely's (2006) work, however, warns that infrastructural gains can result in MPCs developing into enclaves of advantage within a larger geographical area.

There is some evidence that wired communities or digital neighbourhoods have the potential to facilitate community connections, especially over a short period of time (Kavanaugh and Patterson 2002). Recent initiatives in developed nations have demonstrated that it is possible to provide access to internet technology in specific community settings such as in public housing

estates like Atherton Gardens in Melbourne (Meredyth, Thomas, Ewing and Hopkins 2006), private outer-suburban development like Netville in Toronto (Hampton and Wellman 2003; Hampton 2003) and MPC's like Ladra Ranch in California (Venkatesh 2002; Venkatesh, Chen and Gonzalez 2003) to build notions of community. Early indications are that the use of a community intranet and consistent high speed broadband can be a cost effective way of reducing inequities, creating community connections and promoting social inclusion (Meredyth et al 2005; see also Hampton and Wellman 2003; Kavanaugh and Patterson 2001). However these wired initiatives are difficult to maintain as they require volunteers, infrastructural and other support, and over all community driven initiation. Gaved and Anderson (2006), for example, have shown in their detailed review of wired and connected communities, that there is evidence that unless connected communities are community developed and sustained by and for the community, social capital gains resulting from the community can be negated, and social exclusion can be a possibility. Moreover their review indicates that maintaining gains from wired community initiatives are difficult if the concept of the community was created through a *top down* approach.

Our study takes place in the Shire of Cardinia where the entry of two large digital neighbourhoods, Lakeside MPC and VicUrban Aspect, is altering the physical and social fabric of the town. Our study contributes to a growing field of research in Australia that explores the effects and affects of outer-urban growth through MPC's, wired communities and residential estates (Alizadeh 2010; 2009; Costley 2006; Gwyther 2005; Bajracharya and Allison 2008). It also adds to a knowledge base of children's experiences of connected living and ICT interactions in a

rapidly connected world, and a rapidly developing outer-urban Melbourne fringe.

YOUNG PEOPLE: INCLUSION, RISK AND LITERACY

Our study investigates young people and their families' everyday interactions with ICT, and how these technologies can facilitate social inclusion and community connections. Our work specifically focuses on the experiences of younger, 'tweenage' primary school children under the age of 12. There is an evident gap in scholarly knowledge on the everyday experiences of ICT amongst children, particularly in Australia. When it comes to younger children's uses of ICT, previous youth media research has shown: their range of internet use is quite narrow; they visit few and return to familiar sites; and they tend to use the internet for education, entertainment or play rather than communication or information seeking (ACMA 2007a; Fox and Jones 2009; Livingstone 2009; Livingstone and Bober 2005; Roberts et al. 2005). Thus, for primary school aged children the role of technologies for promoting inclusion and wellbeing involve questions of providing access to support possibilities for learning, play, and social development, whilst also offering protection from online risks.

Questions of online safety and risk generate the most attention from government, the media, educators, and the community; and there is a growing body of media scholarship that is studying the possible adverse consequences for health and wellbeing of young people participating in digital culture (see for example ACMA 2007a; Dooley et al. 2009; Livingstone and Haddon 2009; McGrath 2009). Much of these discourses are grounded in a media effects tradition, which emphasises the dangers and risks of media use, and often positions young people as passive or vulnerable victims threatened by a myriad of

dangers from which they require protection. This literature has addressed a range of online risks to young people, and these are categorised in terms of *content*, *contact* and *conduct* (Livingstone and Haddon 2009)¹. *Content* risks relate to viewing inappropriate or illegal material such as explicit sexual or violent images; *contact* risks cover forms of unwanted, harassing or harmful communications, such as bullying, grooming or spam; and *conduct* risks revolve around children's personal behaviour online, and include things like participating in or instigating acts of bullying or illegally downloading content.

Livingstone has been a principal researcher in developing this classification of risk and in doing so has been careful to highlight that risks vary for different populations and ages; that children are not solely victims in such media ecologies, but can also be participants or perpetrators. Moreover, vulnerability to *risk* does not automatically equate with *harm*, as children often develop or possess forms of resiliency that counter the dangers of online risks (Livingstone and Haddon 2009). Despite these critical insights, parts of the research community have tended to focus attention on a limited range of risks, and in particular more overt risks, such as:

- unwanted *contact* – cyberbullying (for example ACMA 2009b; Cross et al. 2009; Dooley et al. 2009; Lenhart et al. 2005; McGrath 2009; Patchin and Hinduja 2006; Smith et al. 2008),

- solicitation or stalking (see Bowker and Gray 2005; Dooley et al. 2009; ISTTF 2008; Sheridan and Grant 2007; Wolak et al. 2002; Wolak et al., 2006);
- exposure to explicit *content* – pornography or violence (for example Dooley et al. 2009: 11; Flood and Hamilton 2003; Greenfield 2004a, 2004b);
- and certain forms of child *conduct* – internet addiction (example Chou and Hsiao 2000; Douglas et al. 2008; Griffiths 1998; 2000a; 2000b; Young 1996).

This literature has studied the definitions, prevalence, characteristics, ways technologies are used, and impacts of these risks. Despite this breadth of research, this focus has tended to concentrate on more explicit and serious risks. This is an important and valuable subject of study, yet it has meant that other more banal, subtle or hidden risks of digital culture have largely been neglected by health researchers. These gaps in the literature suggest that online risks could be considered along a spectrum that includes direct and hostile behaviours as well as milder events or incidents (Chisholm 2006; Dooley et al. 2009). The less studied risks include:

- information abundance and overload, and its impact on cognitive and psychological capacities (Buckingham 2005; Livingstone and Bober 2005; Purser 2002; Seiter 2005), or physical health (see Ijmker et al. 2007; Jacobs and Baker 2002; Janwantanakul et al. 2008; Taylor et al. 2008);
- the misuse of personal online data by peers, corporations and criminals, and risks associated with fraud and disclosing personal information online (Lenhart and Madden 2007; Marwick et al. 2010; Youn 2005);
- the implications for wellbeing of the commercial internet, including direct marketing (Berson and Berson 2006a; Cai and Gantz 2000; Lewandowski

¹ This classification of online risks to children in terms of *content*, *contact* and *conduct* is developed in the EU Kids Online Project (Livingstone and Haddon, 2009). In Australia, the Australian Media and Communications Authority (ACMA) have developed a different vocabulary to classify these same risks. ACMA categorises risks under three broad headings: *content risks* (inappropriate or illegal material); *e-security risks* (spam, viruses, fraud); and *communication or behavioural risks* (cyber-bullying, unwanted contact) (ACMA, 2007b, 2008).

2003), data mining (Chung and Grimes 2005; Montgomery and Pasnik 1996; Palfrey and Gasser 2008), the branded nature of children's online activity and spaces (Grimes 2008a; 2008b; Montgomery 2000; 2007), embedded advertising in children's content (Grimes 2008a; 2008b; Grimes and Shade 2005; Kenway and Bullen 2008; Montgomery 2007), and the logics of consumption that shape many children's sites (Seiter 2005);

- and potential for social isolation and social exclusion (Dutton 2005)

As a result of this research, many resources have been directed at securing online safety. In Australia, the management of online risk and the promotion of safety for people accessing and using online services have been addressed by the Government's cybersafety plan², by law-enforcement directed at cyber-crime, and by the regulatory body for communications, the Australian Communications and Media Authority (ACMA)³. Thus, there is a co-regulatory framework for addressing the breadth of cyber crimes in Australia. Within this framework, users need to implement self-protection measures, and these are informed by a number of education campaigns,

² In 2008 the Government committed \$125.8 million over four years to a broad-based cybersafety plan to combat online risks and help parents and educators protect children from inappropriate material. Measures include increased funding towards cybersafety education and awareness raising activities, content filtering and law enforcement. http://www.dbcde.gov.au/online_safety_and_security/cybersafety_plan

³ ACMA administers a number of functions, including: acting as a resource for information and reporting on internet content; developing and monitoring a code of practice for internet service provider industries (ISPs); providing information to the community about online safety issues, especially those relating to children's use of the internet and mobile phones; undertaking research on ICT usage and cybersafety to inform the dept. of BCDE on trends; and liaising with relevant authorities on cyber-crime.

government programs and online resources which provide information and advice to schools, parents and young people about e-security and cybersafety. These resources include the AFP's *ThinkUKnowAustralia* program and website⁴, the Australian Government *StaySmartOnline* website⁵, ACMA's *Cybersmart* program⁶, and The Alannah and Madeline Foundation's *Cybersafety and Wellbeing Initiative*. Whilst Government, police and regulators provide information, resources and reporting measures, ultimately it is up to users to protect themselves and mediate their children's internet use.

An inclusion framework, however, shifts the emphasis away from protection measures, legislating and policing the internet, to consider pedagogical and behavioural questions for empowering young people to actively and critically participate in digital domains (Livingstone 2009). This is reflected in The Alannah and Madeline Foundation's promotion of smart, safe and responsible online behaviours, and ACMA's idea of digital citizenship (2008), which situates online safety within a broader understanding of digital wellbeing by incorporating *etiquette*, *literacy* and *security* into a discussion of online practice in an effort to assist children, young people and their families to take responsibility for their own online safety and security. Digital literacy is a critical component of this approach, yet how literacy is understood and what constitutes literacy in contemporary culture varies quite widely. Definitions span from more technically-oriented computer literacy, such as information searching (Hobbs 2008), to culturally-oriented forms of participatory literacy or 'soft skills', such as appropriating and remixing of media content

⁴ See, <http://www.thinkuknow.org.au/site/index.asp>.

⁵ See, <http://www.staysmartonline.gov.au/home>.

⁶ See, <http://www.cybersmart.gov.au/>.

(Jenkins 2009; Livingstone 2009), to critically-oriented media literacy based on abilities to critically engage with and interpret media in terms of the political, economic, and social context in which media messages are produced, circulated and consumed (Buckingham 2003; Seiter 2005), and finally to a combination of these different literacies (Luke 2000; 2001).

Where children's learning takes place is often as much a part of everyday processes of interaction and play as it is a part of educational curriculum; and children are often avid users and consumers of digital technologies, displaying abilities to navigate the internet. Nevertheless, research shows that simply equating this with literacy or assuming expertise, can result in a certain complacency that neglects widely differing experiences, knowledge and competencies with media technologies (Buckingham 2003;

Livingstone 2009; Livingstone and Bober 2005; Seiter 2005). Instead it is argued that formal pedagogies need to complement the literacies being acquired through home use (Livingstone 2009; McPake et al. 2005). Further, there is a need to engage children in 'critical dialogues that help them to articulate more fully their intuitive understandings of these experiences' (Jenkins 2009: 12). This suggests a sophisticated kind of literacy is required for social inclusion by young people today, which encompass more than learning functional ICT skills, but also equipping children with the knowledge and skills to be active, ethical and critical participants online. Our study of children's everyday use of ICT in an emerging suburb attempts to add to a growing field of literature that addresses the gaps in the research around risk and age, conduct and content related aspects of risk and coping, and literacies and inclusion.

METHODOLOGY – SUMMARY

STUDY SETTING

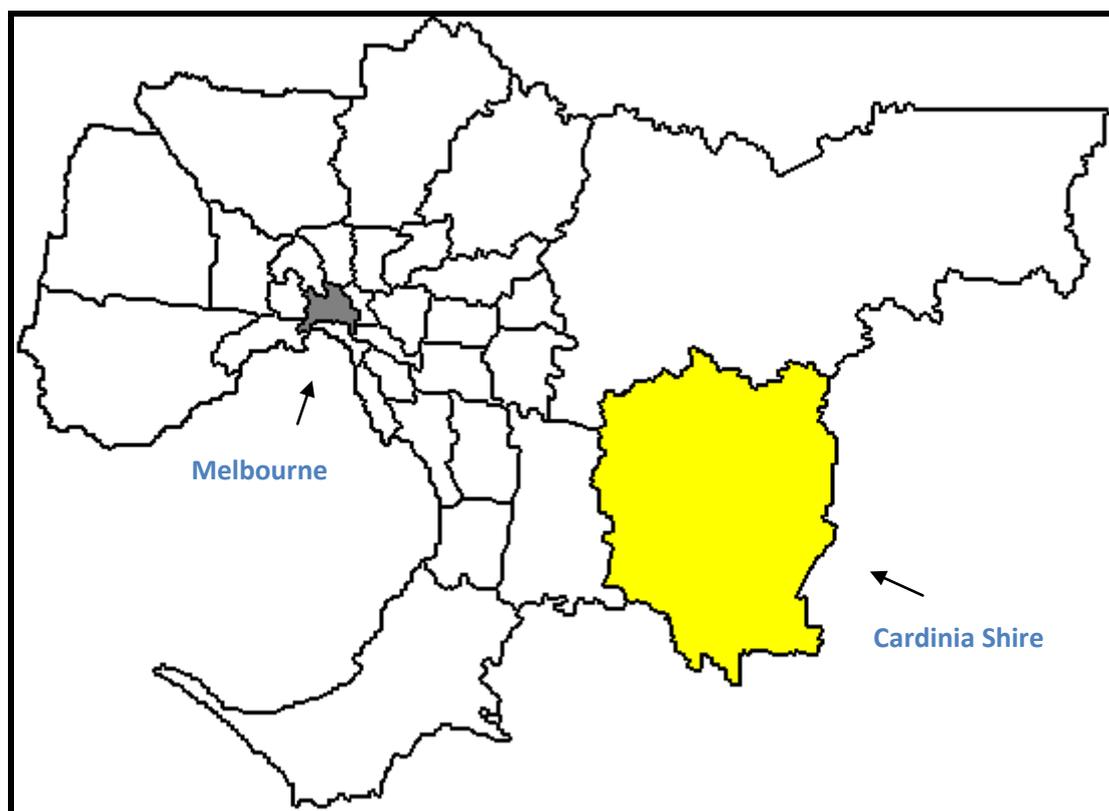


Figure 1: Map of the Cardinia Shire

The research took place in Melbourne, Australia, predominantly in the outer-urban growth area of Pakenham in the Cardinia Shire, which is in the 'Central Ward' of the Shire, see Figure 1.

This area has been identified as one of Victoria's fastest growing areas, and a community facing particular changes resulting from rapid development (Birrell et al 2004). This rapid growth, Robson and Wiseman (2009) argue, has the potential to drive experiences of social exclusion.

SAMPLING/RECRUITMENT

It was anticipated that we would work with 6 families with different socioeconomic circumstances and family structures. Our final group of participants included four families in the Cardinia Shire, one young adult in her early 20's who recently moved out to the Cardinia Shire, and one inner city family for comparative purposes. Because internet access was anticipated to be a factor affecting families' use of technology an inner city family was included in the sample to capture the contrasting perspectives of a family with well established internet access. Of the families that we worked with in this study all were

dual parent homes, all with children aged 12 years and under, and two of the families were from culturally and linguistically diverse (CALD) backgrounds. Participants were recruited through the local council and residents groups, through advertising in community newsletters and through snowballing (where initial contacts will lead to other contacts).

In addition to this ethnographic fieldwork, key informant interviews were conducted. These included: interviews with local council at Cardinia Shire, community development workers in Cardinia; the State's not-for-profit ICT collaborators VicNet; and wired housing estate residents in non-Cardinia based projects. These interviews took approximately one hour and were conducted at a time and location convenient to both the researcher and the informant.

DATA COLLECTION

In order to capture children and their families' everyday, embedded and typically ordinary interactions with ICT we used a variety of interactive qualitative methods as follows:

- a home hardware tour, in which participant families guided us through the geographies of ICT in the home, providing an inventory of technologies and their locations and uses in the home;
- an online tour by each family member, in which participants sat at a computer guiding us on a tour of their online life, providing us with an inventory of applications and sites regularly visited, as well as their expectations and experiences of these sites;
- a neighbourhood tour, in which participants guided us around the different places beyond the home where they use technologies, such as the school, workplace and library, and described the social interactions and

uses of technologies within and between those different sites;

- drawing flow diagrams, in which family members provided visual representations of the relationship (or lack thereof) between social connections and a range of ICTs (mobile; landline; computer; laptop), and what devices are used to access, connect to or maintain particular services, information or social networks;
- a daily clock, in which participants recorded the time they used technologies and applications over the course of a day, and to evaluate their experience of this use.

All mapping and touring exercises were audio-taped and photographed, and participants participated in semi-structured interviews, which took place parallel to the interactive qualitative processes in this research. Questions for the interviews were informed by the articulated and witnessed interactions that occurred during the various mapping exercises, and related to the uses, expectations, perceptions and reasons for ICT use in supporting social inclusion. The duration of the research was up to one hour for each exercise, and up to five hours per participant, spread over seven to fourteen days. As expected, the relevancy or usefulness of exercises varied according to age and the degree of technology engagement by different family members and the different creative capacities, literacies, and preferences. For example, children tended to use technology in a limited number of locations and so neighbourhood tours were less relevant, whilst parents tended to prefer discussion rather than drawing. Thus, exercises were applied differently depending upon context.

This exploratory, multi-method and multi-site approach was intended to provide an integrated picture of the everyday ICT interactions of children and their families. These interactive tools helped us understand: the main ‘who’, ‘what’, ‘where’, ‘when’, ‘why’ and ‘how’ questions of technological use; people’s everyday relationship with technology; and how social connectedness is, and is not, facilitated through technology. As Millen (2000) has demonstrated with his rapid ethnography method, using qualitative methods, observation and qualitative data analysis in a short period of time can provide rich data on people’s everyday interactions and experiences.

Within this study we used interactive qualitative tools in combination with the established qualitative method of semi-structured interviews. Semi-structured interviews in combination with drawing of maps and tours have been successfully proven to provide a thick description of people’s lives within academic anthropological investigations. Beazley (2003), Young and Barret (2001) and Punch’s (2002) work on participatory research with children and young people demonstrates that using multiple participatory tools in combination with interviews and other techniques (such as diaries) provides rich and descriptive data on the everyday lives of children, and draws out significant information on their everyday experiences, fears, dreams and desires. Cornwall and Jewkes (2000) have argued that multiple method participatory research within academia helps to address pressing issues of power/power imbalances amongst researchers and the researched.

These multiple methods were intended to accommodate important methodological and ethical difficulties that arise with child-focused research, particularly children’s capacities for expression. Our approach

intended to ameliorate these problems by providing a repertoire of communication modes – verbal, written, drawing, demonstration, and non-verbal – to enable children to choose from multiple ways to participate and share with us their experiences of and through ICTs in the contexts of other life experiences. In particular it was by sitting with children in front of a connected computer screen in their homes and having them show us their online activities – what sites they visited and what they liked to do – while also describing what they thought and felt about these sites – their *screen stories* – that the complexity of issues to do with digital learning, play, wellbeing and inclusion emerged.

These methods of data gathering necessarily entail a large commitment of time and energy, and therefore limit the range of perspectives that could be sampled: we worked with five families with children aged 6-10 (10 parents; 9 children). Yet this kind of ethnographic and qualitative research affords access to more detailed information, experiences and opinions in the context of people’s daily lives and so operates to complement the kinds of data collected in quantitative studies, involving smaller amounts of information from larger numbers of people to get a sense of patterns of behaviour across population groups through metrics such as surveys or interviews. The screen stories we encountered were often embedded in the contexts of technology use and location, and may not have been accounted for by less interactive methods.

DATA ANALYSIS

An inductive, thematic approach to data analysis was used to develop a conceptual understanding of the environmental and behavioural factors that influence technology access and use for children and their families;

to identify key issues in the establishment of technologically connected communities and their ongoing management in relation to social inclusion/exclusion; and to identify the resources children require to be active, ethical

and critical participants online. The coherence of the results with existing evidence was then assessed to determine the application of the findings to policy and practice decisions.

FINDINGS

INCLUSION/EXCLUSION AND COMMUNITY CONNECTION

Findings from the study point to an increasing division between the newly developed estates/MPC's and supported wired communities like VicUrban's Aspect, and older areas of the Cardinia shire. The Shire itself is experiencing rapid development in two areas of town: the 'new' Pakenham area and Officer. The growth in these areas consists of large residential and community projects, including the wired VicUrban community Aspect and the wired MPC Lakeside. Some participants in our study felt these particular new developments were creating a rift between new and old areas of town:

[It seems there is] more consideration [on] the beatification of the area including landscaping and planning for recreation reserve areas and roads in new Pakenham. Improved transport, parking and access in new Pakenham which goes with planning for the new estates...I suppose a lack of attention to develop of old areas, a feeling that new Pakenham is moving forward to be a nicer area with more facilities and leaving old Pakenham behind. Anon 1⁷

Rapid development, Costley (2006) has argued in an Australian context, has the potential to create social exclusion. In spaces of large rapid growth, state and local governments can fail to invest in surrounding areas, resulting in pockets of supported

growth and peripheries of neglect, leaving various populations feeling excluded from the benefits of development. In Pakenham the new developments like MPC Lakeside, the public/private estate Aspect and the private estate Arena have brought with them new shopping areas, large residential spaces and new infrastructure including roads, bus and train services and potential for new fibre connections (ADSL/Broadband) to homes and businesses. Some participants understood that 'the lack of attention' to old Pakenham and other areas of Cardinia has highlighted 'socio economic discrepancies that weren't visible prior' (Anon 2) to development. Not all residents agreed with this statement; many applauded the new publicly accessible – but privately developed – areas including cafes, shops and businesses. These spaces, although created to sit within a MPC, have been deemed accessible by many of the participants in our study, and understood to be a space where community connections can grow.

New development, however, was not the only root of social division in the community; some residents claim that poor ICT infrastructure has been a long standing problem for the town. High-speed internet (ADSL, T1, etc) is poorly available in the Pakenham and Officer area. Moreover the connections that do exist are patchy and unreliable, as expressed by all participants in this study. Many adults mitigate their poor home connections by juggling multiple information and communication tools including relying on work-based internet for some of their needs,

⁷ Participant has requested to be identified as Anon in this report.

mobile phones, landline phones with phone cards and social networking sites. Phone cards are pay-to-use cards which are similar to a prepaid mobile voucher; they allow users to make international and domestic calls on a landline phone for a flat fee and a calculated number of minutes.

Adult mobility allowed them to manoeuvre around poor communication infrastructure to access multiple sites of communication. Children, in contrast, were less mobile; their access to communication at home and at school also had greater restrictions than adults. In response to both inadequate broadband connections in the home, as well as monitoring and parental filters in place at home and school, children, like adults, found ways to negotiate several avenues of ICT use. The Cardinia MyBus service, for example, was one place where children were able to use computers and gain ICT skills. The MyBus is a mobile youth centre for children above the age of 12, yet was frequented by younger

aged children, and has been fitted with laptop computers with internet access with some filters in place, Wii games, D.J. console and other gaming and communication tools (see Figure 2). The bus travels to different public/private schools, public centres including train stations, and community venues. The main aim of the bus is to act as a youth centre, as Cardinia has no established (permanent) youth centre. This community service allowed children to gain a measure of freedom to use different technologies or develop an online identity outside of well monitored or poorly connected spaces, and parents may or may not know of young people's ICT participation in this venue:

Young people access the laptops mostly to access Facebook, YouTube, play games and to research information for school assignments as they may not have internet access at home. Anon 4



Figure 2: The Cardinia Shire MyBus (Courtesy of Cardinia Shire)

As a mobile service, MyBus was able to travel to many parts of the Shire reaching children in more rural areas of the town that have not benefited at all from recent development. MyBus also provides children from different schools a place to hang out and form friendship groups, bridging connection over different schooling, educational and cultural areas. MyBus has been supported by the Shire and other private organisations including Delfin (DLL), the developer of the large Lakeside MPC community in Pakenham. This study has also identified other community development initiatives supported by Delfin, specifically the financial and infrastructural support of a local Facebook page for their MPC residents, as well as a site for the local business group,

...[The] Lakeside residents forum, and we have just opened a Facebook page on that, and the idea is to promote the general business area in Lakeside and for local residents to know what's going on, events and stuff... the beauty of it is it is open to anyone, you don't have to be a Lakeside resident to participate...Delfin are trying to encourage us to do something on our own here, because eventually they are not going to be here anymore. They are encouraging to make this work without their help, as much as possible, although they are in the background they are trying to distance themselves from us so we can make this function without them being around...they have been very supportive, whether financially, or supplying the means of making it work, they will make it happen for us. (Andy, 4 year resident new Pakenham, male)

Our study identifies this support strategy by Delfin as an interesting and noteworthy

departure from the traditional wired neighbourhood model centred around a community intranet. As Kavanaugh and Patterson (2001) have best described in their critique of the Blacksburg Electronic Village wired community in Virginia, community intranets are difficult to maintain without a bevy of volunteers, funding and general community support. Community connection gains made through the intranet dissipate quickly as scholars have shown in their research of BEV (Kavanaugh and Patterson 2001) and Netville (Hampton 2003). The community Facebook page at Lakeside, in contrast, is a community directed, or 'ground up' initiative, which Gaved and Anderson (2006) argue is a more sustainable method of community connections. With the support of Delfin, we understand this strategy to be conducive to community building, and a more sustainable way for MPC residents to build social networks outside of their private community.

CHILDREN'S USE OF TECHNOLOGY

Our study found that children in the Cardinia Shire have limited use of ICT in the community context. Outside of the MyBus, ICTs were occasionally used in the school - particularly within learning modules including a specialised multi-media class, in the home, and at the public library. The latter environment forms the focus of this section on children's use of technologies. We have identified the primary roles of technologies for promoting inclusion and wellbeing amongst 'tweens' are to promote possibilities for learning, play, and social development, in a protective context.

All of the homes we visited had computers and internet access, but as we have detailed above, the internet service was sometimes unreliable. The places where primary school aged children used technologies, and the

kinds of things we found them doing with digital technologies was very similar across different households and locations. We found that apart from the Cardinia Shire MyBus, children almost exclusively used ICTs either at

home, at a friend's house or at school (see Figure 3). The home was the principal and most important site for children's developing ICT uses.

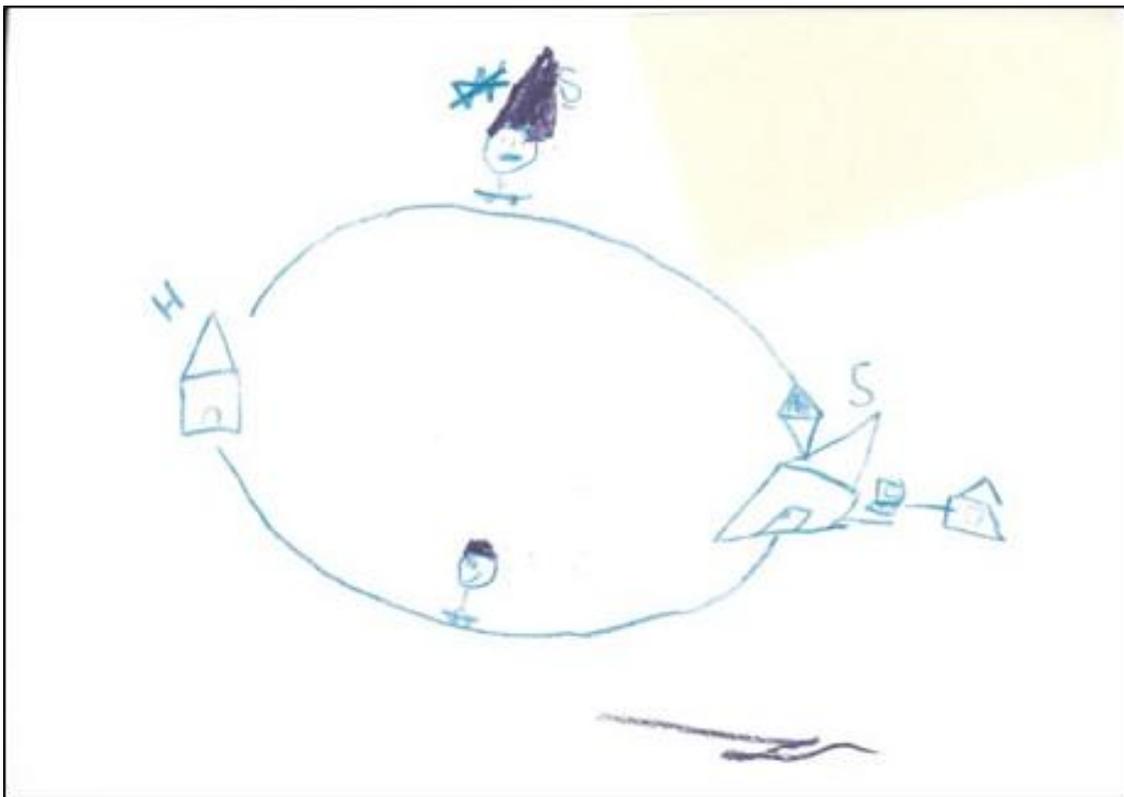


Figure 3: Tim (male, age 8) mapping his geographies of ICT use, which are limited to the home and school

Children tended not to use ICTs for communication: none owned a mobile phone or had an independent social networking account, while very few had an email account. Instead digital technologies for these children represented an avenue to play or learn. Most had used computers and the internet at school, but only in a limited and supervised manner directed at specific learning activities. This use of the internet for learning was also a major part of home use, particularly with the widespread popularity of a subscription-based educational maths website, called Mathletics. This site was universally mentioned as a favourite internet site by our child participants, and we found that most were provided with a subscription by their school and were using it both at home and school with the encouragement of parents and teachers (see Figure 4).

The other major focus of children's ICT and internet use was for play: the ownership of a home or mobile game console was common, children play games on their parents' mobiles,

and internet use was characterised by the repeated use of either free game sites (e.g., Miniclip), product-driven toy sites (e.g., Barbie.com), or role-playing virtual game worlds (e.g., Club Penguin). Thus our research supports previous youth media studies in finding that younger children's range of internet use is quite narrow, they visit few and return to familiar sites; and they tend to use the internet for education, entertainment or play rather than communication or information seeking (ACMA 2007a; Fox and Jones 2009; Livingstone 2009; Livingstone and Bober 2005; Roberts et al. 2005).

Whilst our research found limited uses by younger children, and especially the predominant use of the internet for play rather than communication, we also found some children beginning to tentatively experiment with different ICT applications. This was rarer, but included things like watching clips on YouTube, as well as creating an email account, and in one instance, creating a blog.



Figure 4: A game of Mathletics being played live

Researcher: Your son has created a blog?

Father: If he puts his mind to something he'll get stuck in and do it. It was quite amazing to do his own blog, he had worked through all the problems himself. He didn't sit and read the manual, he just worked it through; it was quite impressive.

Researcher: It was for his soccer team?

Mother: Yeah, so we know most of the people that join the blog.

Father: I will encourage that...He was running it and we tried to use it as a central communication thing, to let people know when matches were on and everything like that.

These instances of using the internet for communication purposes were not common or regularly used, but rather based on novelty and experimentation; they represent the emerging development of wider uses of the internet, and the transition to adolescent interest in the internet as a communication and information medium.

PARENTAL VIEWS

When we spoke with parents about their children's internet use within the home, we found a number of shared views about the role of technology for supporting their child's development, education and social inclusion. A major focus by parents in promoting technology use for their children was for education, followed by allowing its use for play. This was especially clear in parents encouraging their children's use of the online educational tool/game Mathletics. Mathletics is a combined learning and play site; through integrating networked games of maths, a

reward system and a customisable online profile with mathematics questions and courses. Yet, in addition to specific educational sites, the kinds of skills that parents perceived their children learning by spending time on the computer and using the internet were much broader, and included functional kinds of ICT skills, such as typing, using software applications and learning familiarity and proficiency with computers (Hobbs 2008; Tyner 1998), but also a vague sense of other more nebulous digital culture skills, which are sometimes referred to as 'soft skills' (Jenkins 2006; 2009; Livingstone 2009). These describe the kinds of skills required to navigate, participate or contribute to online content and life, and include things such as playfulness, experimentation, improvisation and discovery (Jenkins 2009: 56).

In expressing these sentiments, the parents in our study reflected the common media sociology findings that parents strongly believe the internet is beneficial for their child, and these benefits relate to learning and education, offering opportunities to develop a range of skills, including computer and communication skills, and providing a valuable resource for researching and completing homework assignments (see ACMA 2007a; Livingstone 2009), as expressed by one parent "I don't mind at all, I want her to use the computer as much as she can. Her playing on the easy site makes her competitive and fast...I think this is good for her future"

Despite these perceived benefits, parents in our study also expressed an awareness of and concern for a number of risks their children may encounter online. The kinds of risks they were currently concerned about tended to be shared by most parents, and centred on a few specific things like unwanted contact or communication from unknown others or 'stranger danger', accidentally viewing

inappropriate and explicit content online, especially sexually graphic or pornographic images, e-security risks such as viruses, as well as excessive use or 'screen time' and the associated impacts on physical or social wellbeing. These concerns reflect and are perhaps reinforced by some of the potentially more serious risks typically presented in media stories, particularly the tabloid media – such as online predators, pornography, and internet addiction – and they reflect prominent cyber-safety topics in the research literature (see ACMA 2007a; Dooley et al. 2009; Livingstone and Haddon 2009; McGrath, 2009).

Online risks to children are usually categorised in terms of *content*, *contact* and *conduct* (Livingstone and Haddon 2009), as previously mentioned. *Content* risks relate to viewing inappropriate or illegal material such as explicit sexual or violent images; *contact* risks cover forms of unwanted, harassing or harmful communications, such as bullying, grooming or spam; and *conduct* risks revolve around children's personal behaviour online, and include things like participating in or instigating acts of bullying or illegally downloading content. Acknowledging and trying to maintain a balance between these competing opportunities and risks to wellbeing was important to the parents we spoke with, and this is also reflected in the research literature (Buckingham 2003; Livingstone 2009; Montgomery 2007; Seiter 2005). Nevertheless, based on the limited uses and experiences of their children's internet use, and especially their lack of communication use, parents did not express concern for some risks, such as cyber-bullying. The potential for risks, however, was something that they perceived would probably change in the future as their children aged and developed different and independent interests and uses:

Mother: And you know the other thing I don't want her to access at this age is any adult materials. I don't want her to find out the details of (sex) from these sites. If she wants to know we want her to come to us, not learn from these perverted sites.

Father: Our main concern is controlling access and over-use. When he first got computer literate, we were worried about overuse, but he has since backed off a bit.

Mother: It comes in fits and spurts. If he discovers a new website, or a new game site, he is on it all the time.

Father: It will be a brave new world for us when he gets into it – the thought of him locking himself a way in the room for five hours a night communicating with people. I will be trying to stop it. I don't think it's good; that's why we try to stick him into sport, try and keep him away – keep him active. I think it is an horrendous thing to happen to a kid, to do a large amount of their communication by wire. And I will try and discourage it...

PARENTAL MEDIATION

Our study shows that children's uses of ICT in the home, regardless of socioeconomic circumstance, are often monitored and regulated by parents. In all the homes we

visited, parental management of children's internet use, or 'parental mediation', was a key feature of providing a safe online environment for children and protecting their welfare whilst also enabling them to develop a range of skills. In supporting the ambitions they held for their children's internet use and wellbeing, parents implemented a number of measures to direct, limit and supervise children's use, and thus protect their children from perceived or potential risks.

These mediation strategies were often quite similar, and included things like the conscious physical placement of computers in shared and visible spaces such as the living room rather than in the privacy of bedrooms, installing or running filtering technologies such as parental control software, checking the suitability and approving what sites their children can visit, supervising while their children were using the computer, placing time limits on use, and discussing perceived dangers. These different parental rules and strategies conformed to previous research on parental mediation of the internet, which has studied the range of measures parents use to manage or regulate their children's use of and safety on the internet (ACMA 2007a; Livingstone and Helsper 2008; Nikken & Jansz 2006; Roberts et al. 2005; Wang et al. 2005). Within this literature the styles of mediation have been categorised in terms of restrictive mediation, active mediation, and co-viewing or co-playing (e.g. Nikken and Jansz 2006); that is, restricting media use, talking about media use, and viewing or sharing use respectively.

We found that for primary school aged children restrictive forms of mediation, involving filtering content or placing limits on the times, spaces and sites of use tended to be more popular among parents than active mediation or co-play. When parents did discuss or supervise their children's online

activities, this was usually to stop them viewing certain sites or warn them about the dangers if they did so. The reason for adopting these forms of regulation was they were perceived to be more successful at protecting their children from the kinds of risks they were most concerned about and perceived them to be most vulnerable to – stranger danger, pornography, and excessive use. Thus parents directed their efforts towards the concerns they had, to more overt and well-known risks, and these were largely unwanted *contact*, explicit *content*, and certain forms of child *conduct* – over-use. At the same time, however, parents often expressed trust in their children's use of the internet. This trust was connected to particular sites, such as those encouraged or approved by schools (i.e., Mathletics), or those that were seen to be official, legitimate or safe, based on them being a known company, requiring subscription, or having an adult moderate activities on them (e.g., Club Penguin, Barbie). And when children were on such sites, parents largely allowed their children to play, alone or with friends, without mediation or supervision. This trust was also partially related to parents' sense of their child's expertise in using computers or navigating sites, to a sense of uncertainty about not knowing everything their child was doing online, and to the hope that their child already possessed or would develop competency and resiliency to face risks in the future:

Father: I can tell the (search) history, you can back track.

Researcher: Have you?

Father: No not really. He is not like that at the moment..."

Researcher: Will you filter or monitor in the future?

Father: If I've got a 13 year old kid sitting in his room with a computer, I can probably put filters in there, but it's gonna be this transition where all you can try and do is give moral guidance and hopefully it flows through.

Mother: And hopefully he won't have a computer in his room.

Researcher: But he will get unsupervised access at some point, so rather than monitoring you hope to empower him by talking?

Father: He will be out navigating us, he is already getting quite savvy, plus the added pressure of the other kids 'I have a computer in my room'.

Researcher: Do you already talk to him?

Father: Not really.

CHILDREN'S RISKS

Parental concerns and mediation strategies were directed at more overt and well-known risks, particularly unwanted *contact*, explicit *content*, and children's *conduct* of spending too much time in sedentary play. Yet, by sitting with children and having them show us and talk about what they did online we found that younger children's uses of digital technologies reflected a different set of risks to their wellbeing than those anticipated by parents or discussed in the research literature on teenagers or older children. Given that the younger children we spoke with tended not to use the internet for communication purposes (e.g., they were less likely to use social

networking sites, email or blogs) they are less likely to experience the more dangerous kinds of contact risks studied in the literature. And, given that these younger children were usually more supervised than older children through a range of parental mediation strategies to secure their safety on the internet, the likelihood of such contact risks or of viewing the kinds of explicit and inappropriate content that dominate cybersafety research (e.g., violent or pornographic material) are also less likely.

Instead, we found that for these younger children the risks they encountered to their wellbeing were more ordinary and subtle and related to online conduct or etiquette within existing interpersonal relationships; and to the ubiquity and impact of commercial content in children's online environments. The interpersonal conduct risks we noticed were not openly hostile or aggressive forms of interaction associated with conventional online bullying but instead involved more indirect and unintentional forms of misconduct, such as seeking to discover the passwords of their peer's online sites, accessing personal accounts without permission, and altering online profiles. Similarly, the content risks we noticed were not related to explicitly sexual or violent material but instead to the increasingly branded character of children's sites, the integration of advertising with other content and the logics of commerce that dominated children's sites. Our study found that while parents had awareness of and concern for some conduct and content risks, and had developed measures to respond to these, there was much less awareness or attention paid to these less obvious or less dangerous risks.

Conduct

Mother: She keeps on asking him for his passwords, she gets in there. First time she tricked him and she went in there...on Club Penguin she went in there and spent all his money and changed everything.

Father: His innocence got dented because he believed she didn't do it...he spent all this time building up points and she went and spent it all on crap...

Mother: ...and changed his identity and his look. So he has learned a lot about human nature.

Mother: (laughs) Once she left her computer page open and I quickly changed the girl's hair...she came back and saw what I did. She was so angry, so angry, she slammed the laptop shut and took the whole thing and went into the room! She didn't speak to me for the whole night (laughs).

Researcher: So she takes it very seriously?

Mother: Too seriously! (laughs)

Researcher (to daughter): Why did you get upset?

Kashmira (female, age 8): <shrugs>

Researcher: Is it because she changed the hair?

Kashmira: <shrugs>

Researcher: Were you upset because she changed the hair?

Kashmira: Yes

These incidents relate to how people treat each other online, and provide evidence for the kinds of ways we found children became upset by peers or family members mistreating their online profiles or accounts. While these incidents may appear minor or inconsequential, they suggest that more common, banal and subtle kinds of risks can be found in relation to the emerging online presence or identity of children. The latter conversation was especially informative; at the research site the parent was telling the story of her daughter's reaction to her (the mother) changing the background. The mother felt this was a very funny incident and called upon her daughter to explain how angry she was, to reinforce the mother's reaction of laughter. The researcher felt the daughter was uncomfortable, and perhaps reluctant to admit she was angry because she understood that her mother did not take her concerns seriously.

These incidents suggest that online etiquette and resiliency is part of a process of social development, yet also that conduct has repercussions. This may not pose physical danger or have the same scale of impact as something like more overt bullying, but it does impact on children's emotional lives and have implications for emotional and psychological wellbeing. They could be considered along a spectrum of harassment behaviours that includes direct and hostile behaviour such as bullying, as well as milder events such as flaming, impersonation, social exclusion, or trickery (Chisholm 2006; Dooley et al. 2009).

Content

Researcher: Have you ever seen ads on Barbie?

Cindy (female, age 6): I have never seen it.

Researcher: Does your Mum and Dad let you go onto it whenever you want?

Cindy: Yeah, Mum doesn't even care.

Our research found that the most popular sites mentioned or shown were commercially owned or oriented, yet parents dismissed their impact and children rarely noticed the existence of advertising or marketing online. Whilst commercial content may be less harmful than other kinds of explicit content, its ubiquity, lack of regulation and integration of advertising with entertainment (e.g. Chung and Grimes 2005; Montgomery 2000; 2007) presents challenges to the wellbeing and development of young people in terms of their capacities to discern the persuasive intent of advertising (John, 1999), to distinguish advertising from other content, and thus for the independence of their online spaces for play and leisure.

In addition to branded environments and integrating advertising with content to promote awareness and loyalty to a particular product (e.g. Barbie.com), we found that many opportunities to participate or play online for children were shaped by a logic and practice of exchange, accumulation and ownership (see: Seiter 2005). The most popular site across our sample, because being an educational site (Mathletics.com), was also commercial software based upon subscription, and this market logic was evident when asked what they liked about Mathletics, with children's responses emphasising accumulating credits, consuming virtual goods in the online shop and editing

their online profile, whilst parents did not think the consumer logic of games had a large influence on their child.

The concern is that children will predominately be socialised as consumers, in which behaviour, identity, social relations and wellbeing are mediated and understood in terms of market processes. When children's online life is defined by logics and practices of consumption it leaves little room to develop other non-consumer oriented forms of play or social interaction.

CHILDREN'S APPROPRIATION

While parents emphasised and encouraged children's internet use for learning, and implemented measures to support this, we found that young children in both inner city and urban growth areas often pursued playful uses or personal objectives. These playful sensibilities and tactics demonstrated negotiation with adult mediation, management and agendas. Similar findings are supported in youth media literature, with children using tactics of multitasking and minimising windows when parents look on (Shepherd et al 2006), of claiming educational value for a game (Livingstone 2009: 44), or through subverting the educational values of tasks (see Buckingham 2003 and his description of 'mocking behaviour'). Here, children's ICT use is often less about developing critical capacities or utilising the full extent of new media possibilities, than about negotiating commercial, parental or educational restrictions in order to satisfy or achieve personal goals of use – largely for leisure or play. We noticed that these appropriations occurred on the community youth bus, MyBus, where children took advantage of a less supervised space to, for example, view content restricted at home, such as YouTube. Public library computer use was also viewed to support Facebook

communications. Parents may or may not be aware of these activities. Within the home, we noticed these appropriations applied to both educational and commercial sites; yet these were not so much reflexive or conscious decisions to resist the imperatives of sites than intuitive responses that sought pleasurable forms of appropriation or play. Further, these forms of play were often improvised through possibilities available within sites, and involved things like selectively using sites for personal enjoyment (e.g., Barbie), repeatedly or only playing easy levels of maths (Mathletics), or even cheating by getting others to play on your behalf. These uses suggest that while the principal and general focus for adults in relation to child digital inclusion is on supporting possibilities for education and protecting children from risk, for children themselves inclusion is primarily about possibilities for play. Moreover, our comparative research shows that there was better internet connection in the inner city and less need for youth and child specific connected services like MyBus. In contrast connections were poor throughout the Cardinia study sites; the unpredictability of connection and slow connection speeds meant that reliable home internet use was rare, and public services like the Library and MyBus were better suited to the community.

STRENGTHS AND LIMITATIONS

Through ethnographic inquiry our study has been able to present the lived experiences of children and their families using ICTs in the developing outer urban Shire of Cardinia. The research uncovered other non-ICT areas which warrant further investigation. The issues around transportation access were also identified as future research sites. Thus a strength of the study has been the identification of new areas of research. The in-depth analysis with a select group of

families provided some important insights particularly in relation to young children's use of technology and parent's support and mediation of access. There were no teenagers in the sample so it is not possible to extend the understanding to this age group but as they are well represented in the existing literature this was not considered an issue of concern for this study. The focus on families with younger children meant that most technology use studied was in the home context, highlighting the importance of reliable internet access for adults and children. However, important additional findings relating to community wide initiatives also demonstrated opportunities for

promoting social inclusion and equity. Additional funding will support the translation of findings into meaningful strategies within the limits of the study scope for: VicUrban in relation to the development of the new Estate in Cardinia; and the Alannah and Madeline Foundation to contribute to the ongoing development and expansion of the CyberSafety and Wellbeing campaign. Additional University seed funding has been secured to support ongoing discussions with these partner organizations regarding the development of a research proposal and funding submission to address some of the research gaps identified in this study.

CONCLUSION

The findings of this study were consistent with previous research in relation to the potential for a divide between existing and new residential areas. In addition, this study identified the benefits of community initiatives such as cafes, walking spaces, social networking sites (like Facebook) and mobile youth buses to promote social inclusion for residents of both the new Estates and the older areas of the community. Unreliable internet access for both old and new residential areas were identified as significant barriers to social and economic inclusion and critical issues for attention in the development of new Estates that aspire to promote social inclusion. The increasingly popular social networking sites may also provide a sustainable alternative for developing social connections within new Estates compared to high maintenance, developer-led community intranets.

The current research was consistent with the existing evidence in relation to young children's use of technology as a limited site for play, education and entertainment. And it was consistent with previous research showing that parents were aware of the benefits of young children's digital inclusion as a means of education and entertainment and particularly the development of online competencies. Yet this study has provided new evidence, showing that children's technology use was mediated by parents with a concern for risks that are more relevant to older children's use of social networking and information sites; that parents were less aware of the potential for children to have negative experiences arising from peer misuse of password access and online identities; and

that they were also less mindful of and did not regulate the commercial applications of young children's game sites. Community access was identified as an important means of increasing equity and opportunities for digital inclusion and development of competencies. However, adult mediation needs to provide a balance between 1) promoting access, 2) supporting the development of competence, resilience and critical enquiry through more active forms of mediation, such as discussions of appropriate online etiquette/conduct and media literacy, and 3) age appropriate mediation, which addresses protection *and* empowerment to ensure child safety as well as equip children with knowledge and skills to be active, ethical and critical participants online.

These findings will be used to inform consideration of strategies that promote the use of communications technology in a way that is safe, but also active, ethical and critical, and supports community cohesion. Further research is required to examine whether different styles of parental mediation of children's technology use may impact upon the development of various ICT competencies; and what role the context and experience of negative events play in children's development of resiliency for later risk encounters. Other issues emerging out of the study include poor public transportation access and the affects of these on marginalised residents, thus there is a call for further research into the lived experiences of marginalised residents in the area.

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