

# Bridging the Digital Divide: Creating opportunities for marginalised young people to get connected

## Marginalised young people's use of Information and Communication Technology

Research conducted by the Inspire Foundation  
and ORYGEN Youth Health, University of Melbourne

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Supported by

# Executive Summary

## Project Summary

“Bridging the Digital Divide” is a three year initiative funded by VicHealth and the Westpac Foundation that brings together the work of Inspire’s Beanbag and ActNow programs. The project aims to positively impact marginalised young people’s mental health and wellbeing by using Information Communication Technologies (ICT) to increase their levels of social connectedness and civic engagement.

This report presents research findings from the first phase of the project exploring:

- The digital divide created by lack of access to ICT
- The role of ICT in young people’s identity formation
- The impact of ICT on young people’s social relationships
- The organisational capacity of youth and related services to utilise ICT to promote social connectedness and civic engagement

- Diversity: gaps exist in research on the experiences of young people from a variety of backgrounds.
- Participant research: the opportunity exists to involve young people in the design and implementation of research.

“Bridging the Digital Divide” aims to further our understanding of the role ICT can play in promoting social inclusion and civic engagement amongst young people experiencing marginalisation. These young people include Indigenous young people, young people from newly arrived, refugee or migrant backgrounds, young people with a disability, same-sex attracted young people, young people who are gender diverse, young people who are carers and young people from low socio-economic backgrounds.

## Background

The rapid growth of ICT’s including the internet and mobile phones in the last decade has simultaneously resulted in a growing number of technology based health promotion initiatives. Interactive technologies offer innovative ways of promoting health and wellbeing through their capacity to tailor content and delivery style while reaching large populations or populations at risk of isolation. Evidence is also emerging suggesting that the internet can play a significant role in mediating the social determinants of health and possesses great scope for fostering community development and empowerment. Despite this rapid growth and uptake of ICT their utilisation in mental health promotion activities is not well established. Wyn and colleagues (2005) outline four gaps in the literature:

- Wellbeing: comprehensive and systematic research on the nature and meaning of relationships and social connections and the role they play in enhancing (or harming) young people’s health and well-being.
- Meaning and social context: embracing a holistic approach to the complex use of the internet.

## Methodology

An extensive literature review was conducted exploring young people’s use of ICT and its potential use in mental health prevention and promotion initiatives. Sixteen focus groups were held with 97 young people aged 13-25 experiencing marginalisation or isolation. In depth interviews were held with 22 service providers from a broad range of organisations in metropolitan, regional and rural Victoria. All participants also completed a written survey which collected demographic information and asked them to audit their ICT skills.

## Findings

- The literature provides some promising evidence exploring the potential use of ICT in health promotion, however little information is available regarding the use of ICT to engage young people from marginalised communities.
- The literature suggests young people from marginalised communities are at increased risk of mental health problems. Limited data is available specifically exploring the challenges for young people who are carers or young people who have a disability.

- The 97 young people who participated in the focus groups came from a variety of backgrounds:
- 61.5% identified as being from a Culturally and Linguistically Diverse (CaLD) backgrounds, while 25% identified as Indigenous;
- 70% were in school, TAFE or completing undergraduate study;
- 54.2% lived with their parents or close family;
- 14.6% reported a disability or learning difficulty; and
- 29.1% identified as same-sex attracted.
- Young people from marginalised communities are confident in their computer, internet and photography skills.
- Young people from marginalised communities use instant messaging services (MSN, SMS), email and social networking sites to communicate, maintain and build new relationships with other young people and significant adults such as their youth worker or teacher.
- Young people from marginalised communities have created their own social networking profiles on sites including Bebo and Hi5 and are using them to maintain their online and offline connections.
- Young people are aware of the potential dangers online and have strategies to manage unsolicited contact, meetings in the offline world and cyber or text bullying.
- Not all young people are 'tech savvy' and some feel concerned about the risks associated with the internet and the breakdown in face to face communication.
- Service providers feel less confident in their use of ICT's, particularly their use of creative technologies
- Service providers express a need for education and training that provides them with the skills to engage young people from marginalised communities in the use of ICT.
- Service providers are concerned about the risks associated with ICT, specifically chat rooms and the economic vulnerability young people might experience due to the costs associated with mobile phones and broadband access.

services looking to use ICT to improve the mental health of young people experiencing social, economic and cultural marginalisation. This study challenges the concept of the 'digital divide' being purely about whether an individual has access. While acknowledging that access is not equitable, it finds that young people are using technology in a variety of settings, including libraries, are establishing their own agenda's around the way in which they use social networking sites (often creating their own spaces) and are 'safety savvy' building their own capacity to manage unsolicited approaches online.

- Service providers are less skilled in ICT but many have used innovative approaches to capture young people's stories. Building the capacity of the sector by providing education and training opportunities to up skill workers will enable them to keep pace with the rapid and ever-changing face of the internet and new media.
- Text heavy content and establishing social networking pages on MySpace and Facebook may not be relevant to young people from marginalised communities. Service providers who are serious about engaging young people must use sites and communication tools that are relevant to this demographic.
- The potential of ICT to provide a service to young people who are socially and economically isolated because they are caring for a person with a disability or mental illness, or because they have special needs themselves, must be explored further.

## Conclusions



- The rapid growth of the internet, access to broadband, creative technologies and the uptake of mobile technology by young people provides great opportunities for organisations and

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# About the Inspire Foundation

The Inspire Foundation is an Australian non-profit organisation established in 1996 in response to the then escalating rates of youth suicide. Inspire's vision is to have a global impact on young people's mental health and wellbeing.

With the mission to create opportunities for young people to change their world, Inspire serves young people aged 16-25 through three national, technology-based programs:

**Reach Out!** provides information, support and resources to improve young people's understanding of mental health issues, develop resilience, increase coping skills and facilitate help-seeking behaviour.

[www.reachout.com.au](http://www.reachout.com.au)

**ActNow** provides young people with opportunities to find out more about their world and take action on the issues they care about.

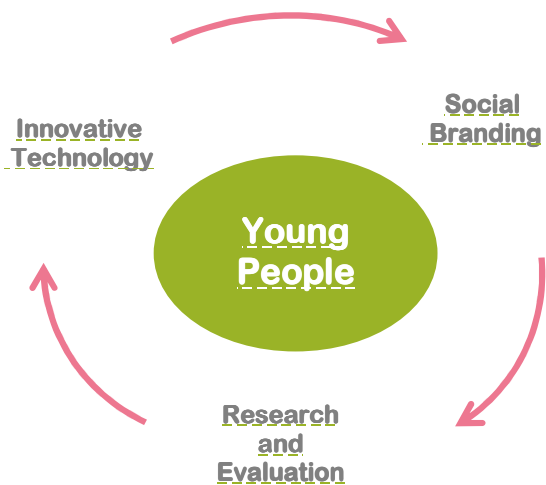
[www.actnow.com.au](http://www.actnow.com.au)

**Beanbag** provides young people with opportunities to improve their technical skills, self-confidence and social connectedness.

[www.beanbag.net.au](http://www.beanbag.net.au)

Young people are at the centre of all we do — as partners in the development and delivery of all Inspire initiatives. We use innovative technology to reach young people and we build trusted social brands that are a part of their landscape. Everything we do is evidence-based and is underpinned by research and evaluation.

## Our program model



# “Bridging the Digital Divide” explained

“Bridging the Digital Divide” is a three year initiative funded by VicHealth and the Westpac Foundation that brings together the work of Inspire’s Beanbag and ActNow programs. The project aims to positively impact marginalised young people’s mental health and wellbeing by increasing their levels of social connectedness and civic engagement. The project’s key objectives are to:

- Increase marginalised young people’s access to information communication technology (ICT) by launching four new Beanbag centres in Victoria;
- Provide opportunities for marginalised young people to connect, share their stories and viewpoints with the wider community and to take action that is meaningful to them through the implementation of Youth Action Workshops;
- Develop strong partnerships with youth-serving and community organisations in order to build capacity among professionals who work with marginalised young people;
- Produce an audit tool to identify agencies working with marginalised young people that have the capacity to utilise ICT to promote social connectedness and civic engagement;
- Produce a best practice model for engaging marginalised young people in technology-based social inclusion and civic engagement programs, that will also serve as a framework for increasing the number of young people benefiting from technology nationally; and
- Explore the feasibility of working with marginalised young people as participant researchers

The first phase of the project comprises research into the use of ICT by young people experiencing social, cultural and/or economic marginalisation, the launch of two new Beanbag Centres in Victoria and the design and delivery of ‘youth action workshops’ in selected Beanbag centres across Australia. Community consultation was conducted in late 2006, and both a Project Advisory Group and Youth Reference Group were established to guide the project’s development, implementation and evaluation. These groups also facilitate dialogue between stakeholders, researchers and young people.

## Project Advisory Group

This group includes representatives from both the youth and academic sectors. In addition to providing ongoing guidance around accessibility and participation of marginalised young people, the group also played an active role in the development of the research strategy and workshop design, ensuring both were methodologically sound and applicable to everyday practice.

## Youth Reference Group

Youth Reference Group members were recruited via ActNow, Victorian based Beanbag centres and through organisations represented on the Project Advisory Group. The purpose of this group is consistent with Inspire’s principles of promoting meaningful youth participation that values young people’s knowledge and capabilities. Similarly to the Project Advisory Group, this group has been actively involved in contributing to the design of the research tools and methodology; guiding workshop development and implementation; and participated in the community consultation.

[This report presents research findings from the first phase of the project, exploring marginalised young people’s use of Information and Communication Technology.](#)

# Acknowledgements

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## Project Advisory Group Members

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## Youth Advisory Board Members

- Calvin Tsang
- Helen Dang
- Keira Martin
- Thea Saliba

## Organisations and individuals who were consulted in the development and implementation of this project

Though there are too many to name, your contribution to this research is invaluable.

## Host Organisations for Focus Groups

- Barwon Youth Accommodation Service
- Centre for Multicultural Youth Issues
- City of Ballarat Youth Services
- City of Whitehorse Youth Services
- Fusion Youth Housing
- Good Shepherd Youth and Family Services, St Albans (Beanbag Centre)
- Homeground Broadmeadows
- Koori Employment Enterprise
- Mission Australia
- Open Family Footscray (Beanbag Centre)
- Whitelion
- Worawa Aboriginal College
- YAK, Action Centre, Family Planning Victoria
- Youth Disability Advocacy Service

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# Introduction

Information Communication Technologies play an increasingly significant role in the lives of young people, yet the current evidence base supporting their utilisation in mental health promotion activities is not well established. Wyn et al., 2005 outline four gaps in the current literature:

- **Wellbeing:** comprehensive and systematic research on the nature and meaning of relationships and social connections and the role they play in enhancing (or harming) young people’s health and well-being.
- **Meaning and social context:** embracing a holistic approach to the complex use of the internet.
- **Diversity:** gaps exist in research on the experiences of young people from a variety of backgrounds.
- **Participant research:** the opportunity exists to involve young people in the design and implementation of research.

Since 1996, the Inspire Foundation has worked directly with young people from a range of backgrounds to develop and implement ICT based programs to promote help seeking, resilience and community participation (Burns et al., 2007; Nicholas et al., 2004; Sullivan & Burns, 2006; Swanton et al., 2007). Inspire’s Beanbag program works specifically with young people experiencing social, cultural and economic marginalisation.

“Bridging the Digital Divide” aims to build on the experience of Inspire as well as address the gaps identified by Wyn and colleagues, furthering our understanding of the role ICT can play in promoting social inclusion and civic engagement amongst young people experiencing marginalisation. These young people include Indigenous young people, young people from newly arrived, refugee or migrant backgrounds, young people with a disability, same-sex attracted young people, young people who are gender diverse and young people from low socio-economic backgrounds.

In particular, the research aims to explore:

1. The role of ICT in young people’s identity formation
2. The impact of ICT on young people’s social relationships
3. The role of ICT in skill development as well as information provision and communications
4. The use of ICT by young people to exercise citizenship and civic engagement
5. The digital divide created by lack of access to ICT
6. Organisational capacity of youth and related services to utilise ICT to promote social connectedness and civic engagement

This report specifically addresses aims one, two, five and six. It commences by examining the literature regarding young people’s use of ICT and its potential to be used to prevent mental problems and promote emotional well being. Findings of qualitative and quantitative research conducted with young people experiencing marginalisation and the professionals who work with them are presented and the implications of these findings for practice working with young people considered.



# Literature Review

The following literature review examines the current evidence documenting the use of technology by young people experiencing social, cultural and economic marginalisation and the role that this technology can play in promoting mental health and wellbeing. It commences by examining the mental health needs of young Australians, specifically those experiencing social, cultural and economic marginalisation. Effective strategies for promoting mental health in these populations are discussed, within which the role of the internet and creative technology initiatives such as filmmaking and photography are also considered.

## The mental health of young Australians

The mental health of young Australians is cause for concern, with mental disorders being the leading contributor to the burden of disease and injury (49%) amongst 15 to 24 year olds in 2003.

Measuring the prevalence of mental health problems and disorders is complex, and it is thought the burden has been underestimated (Murray & Lopez, 1996). There is paucity in current prevalence and incidence data for young Australians. The most recent National Survey of Mental Health and Wellbeing was conducted in 1997 and found approximately 14% of children and adolescents experience mental health problems (Sawyer et al., 2000). The results of the next survey will be available in 2008.

Furthermore, while rates of youth suicide have declined by 46% since 1995 (ABS, 2005a), levels of psychological distress among young people have increased with 13% of males and 19% of females experiencing very high levels of psychological distress compared to 7% and 13% in 1997 (AIHW, 2007). Depression, anxiety and substance use disorders are the most common mental disorders, accounting for 75% of the burden generated by all mental disorders (Andrews & Wilkinson, 2002).

## Mental health problems amongst young people from diverse backgrounds

Young people who experience social, economic or cultural marginalisation are at an increased risk of experiencing mental health problems (Herrman et al., 2005). This is echoed by the most recent report on young people's health in Australia, which found that the prevalence of mental health problems is highest among groups experiencing social and economic marginalisation (AIHW, 2007). These groups include Indigenous young people, culturally and linguistically diverse young people, same-sex attracted and/or gender diverse young people and young people from low socio-economic backgrounds. Other groups at increased risk include young Carers and young people with disabilities.

### Indigenous young people

The availability and quality of data on the mental health of Indigenous Australians is limited by paucities in hospital records, statistical and practical challenges of surveying a small population, and the cultural relevance of the questions and concepts used (AIHW, 2007). Consequently, little national data is available.

Hospital separation statistics however provide some insights. In 2004–05, the hospital separation rate for mental and behavioural disorders amongst Indigenous 12 to 24 year olds was 1.6 times that of their non-Indigenous peers (AIHW, 2007). The most common diagnoses were schizophrenia and depressive disorders. Indigenous men and women in this age group also complete suicide at 3.8 and 6.6 times the rate of their non-Indigenous counterparts (AIHW, 2004).

The inequities in mental health experienced by Indigenous Australians reflect broader disadvantage across cultural, historical, environmental and socioeconomic factors (AIHW, 2007). The literature highlights that their health has been 'severely disrupted by the trauma and loss experienced as a result of dispossession of land and disruption of culture, family and

community' (NATSIHC, 2003; Ring & Brown,

## Young people from Culturally and Linguistically Diverse (CaLD) backgrounds

Decade old data reveals that, regardless of age, migrants from non-English speaking countries had a lower rate of common mental disorders than migrants from English speaking countries, and the Australian-born population (CDHAC 2000). However, this finding must be interpreted with caution, as there are numerous limitations and gaps in the data for this group (ARACY, 2007; Gorman et al., 2003).

Several studies demonstrate that CaLD young people experience unique issues that increase their risk of experiencing mental health problems. These include barriers to accessing support services, discrimination and racism, poverty, family stress, and social exclusion (Dyregrov et al., 2002; Gorman et al., 2003; Gorst-Unsworth & Goldenberg, 1998). Additionally, newly arrived migrants and refugees experience considerable stress immediately prior, during and after migration (particularly for those who have witnessed or experienced torture and trauma) that may contribute to increased rates of behavioural and learning difficulties, depression, anxiety, post-traumatic stress disorder, psychosomatic disorders and identity issues (ARACY, 2007; Gorman et al., 2003). Such factors may be compounded by other developmental and life transitions, especially during adolescence (Coventry et al., 2002; RRAC, 2001).

## Same-sex attracted and gender diverse young people

It is reported that same sex attracted and transgender young people exhibit higher rates of mental health problems than their heterosexual and non-transgender peers, however age-specific, Australian data is scarce. Gay men are up to 8 times more likely to experience depression than heterosexual men while 66 per cent of lesbians report having experienced depression at some point during their lifetime (McNair et al., 2001). In a study of 515 transgender people, 62 per cent of Male to Female transsexual (MTFs) and 55 per cent of Female to Male transsexual (FTMs) respondents met clinical criteria for depression, while 22 per cent of MTFs and 20 per cent of

2002).

FTMs reported a history of mental health hospitalization (Clements-Nolle et al., 2001).

Furthermore, research suggests both groups are at increased risk of suicide than the general population. Data collected from the most comprehensive Australian research to date, *Don't ask, don't tell: Report of the same-sex attracted youth suicide data collection project* (Dyson et al., 2003) found that same sex attracted young people were six times more likely to attempt suicide than heterosexual young people. It is also believed that approximately 20-42 per cent of same-sex attracted young people have attempted suicide compared to 7-13 per cent of heterosexual youth (Dyson et al., 2003; Remafedi et al., 1997; Russell, 2003; Russell & Joyner, 2001). Similarly, a growing body of Australian and North American research reports that between 30 and 40 per cent of transgender young people have attempted suicide (Di Ceglie, 2000; Holman & Goldberg, 2006; Ministerial Advisory Committee on Gay and Lesbian Health (MACGLH), 2002; Morrow, 2004; Ontario Public Health Association, 2003).

Both groups face significant challenges in negotiating their identity and developing a positive sense of self. These young people often experience discrimination, social isolation, stigma and internalised trans/homo-phobia, verbal and violent victimization as either a direct response to sexuality, gender non-conformity or disclosure of identity, anxiety around coming out and rejection, and a lack of familial or peer support (Ministerial Advisory Committee on Gay and Lesbian Health (MACGLH), 2002; Morrow, 2004; Nicholas & Howard, 1998). Risk is further compounded during adolescence, particularly for transgender young people as the development of physical sex characteristics can create additional feelings of distress, shame and self-loathing (Holman & Goldberg, 2006; Ministerial Advisory Committee on Gay and Lesbian Health (MACGLH), 2002; Morrow, 2004)

## Young carers

According to the ABS 11.6% of Australians aged under 25 are carers for someone due to disability and/or age. Furthermore, 23% of young Australians living at home have a parent with a mental illness (AIHW, 2007). These young people are at increased risk of developing mental health difficulties including depression, bipolar disorder

and anxiety disorders although prevalence rates differ between studies (Beardslee et al., 1998; Chang & Steiner, 2000; Clarke et al., 2001; Lieb et al., 2002).

United Kingdom research also reveals that considerable numbers of young carers report stress, anxiety, low self-esteem and depression (See for example (Banks et al., 2001; Dearden & Becker, 1998; Dearden & Becker, 2000; Shah & Hatton, 1999). Little research has been conducted in the Australian context, however, advocates have repeatedly called for better support for young carers (Carers Australia, 2006).

## Young people with disabilities

There is limited data available on the mental health of young people living with disabilities. However, research suggests that individuals living with an intellectual disability are at a higher risk of developing a mental disorder than those without such a disability. This risk has been attributed, in part, to related challenges in communication, processing skills, cognitive functioning and social skills and increased prevalence of problem behaviours (McIntyre, Blacher & Baker 2002). It has also been estimated that the prevalence of co-occurring intellectual disability and psychiatric disorders ranges between 20% and 35% (Nezu et al. 1992 in McIntyre, Blacher & Baker 2002).

Presently, little is known about the relationship between physical disability and mental health problems or disorders. Research in this area is urgently needed.

## Young people from low socio-economic backgrounds

Negative mental health outcomes are up to 2.5 times higher amongst individuals experiencing the greatest social disadvantage (Astbury, 2001) and depression is between 1.5 and two times more prevalent amongst low income groups within a given population (WHO, 2003). As well as limiting access to material and psychosocial resources, being from a low socio-economic background affects people's ability to exercise autonomy and decision-making placing them at greater risk of developing depression (WHO, 2000).

## The changing youth population

In order to address the ongoing mental health problems experienced by young Australians, future demographic trends must be considered. There are currently 2,704,276 young people aged 15 to 25 living in Australia, representing 13.6% of the overall population (ABS, 2007a). By 2015, young people will decrease as a proportion of the population as a whole, but the numbers of individuals aged 12 to 25 will remain roughly the same (Sercombe et al., 2002).

At the same time, it is suggested that life will be more stressful for young people, who vary in their ability and capacity to cope with these challenges (Sercombe et al., 2002). This view is concurrent with Eckersley's argument which highlights that, despite declines in overall suicide rates, attempted suicides and self-harm rates remain relatively unchanged, suggesting that 'more young people are seeking and getting help, not that fewer young people need help' (Eckersley, 2007). He suggests a decline in social cohesion and an increased focus on individualism as explanatory factors for the decline in young people's wellbeing.


Australia's population will diversify culturally in the next decade (Sercombe et al., 2002), heightening the need to address many of the challenges faced by CaLD young people in particular.

## Promoting mental health and wellbeing



Policy frameworks for mental health promotion increasingly recognise the importance of a comprehensive approach to address the complex myriad of factors influencing mental health and wellbeing (CDHAC, 2000; VicHealth, 2005). These frameworks are grounded in strong epidemiological evidence that demonstrates significant and persistent correlations between poor social networks and ill-health from almost every cause of death (Berkman et al., 2000). Knowledge regarding the determinants of mental health is also growing and there is consensus that many of these are located within social and economic domains (Herrman et al., 2005). Mental health promotion literature identifies social inclusion, access to economic resources, freedom from discrimination and violence (VicHealth, 2005; Walker et al., 2005) and demographics including age, gender and ethnicity (CDHAC, 2000; Herrman et al., 2005) as key determinants of mental health. Social inclusion can be used to refer to access to supportive relationships, involvement in group activities and civic engagement. Social networks can provide support and influence opportunities for engagement, facilitating links that promote a sense of belonging and meaningful connectedness (Glover et al., 2000; Twenge, 2000; Walker et al., 2005)

## The relationship between ICT and mental health and wellbeing



The rapid growth of Information Communication Technologies including the internet and mobile phones over the past decade has simultaneously resulted in a growing number of technology based health promotion initiatives. These interactive technologies offer innovative ways of promoting health and wellbeing through their capacity to tailor content and delivery style while reaching large populations. It is also recognised that the internet plays a significant role in mediating the social

determinants of health and possesses scope for fostering empowerment.

### ICT usage in Australia

The growth of the internet over the past decade represents the fastest adoption of any innovation in history (Bernhardt, 2000; Cline & Haynes, 2001). At the end of 2004 there were approximately 875 million users worldwide (International Telecommunications Union, 2005) and 6 million internet subscriptions in Australia (ABS, 2005b).

Unsurprisingly, both in Australia and internationally, young people aged 15 to 24 access the internet more than any other age group and have been dubbed the 'early adopters' of new technologies (ABS, 2007b; Lloyd & Bill, 2004; Lombardo et al., 2002). By virtue of the sociable and interactive nature of the internet, it is considered a youth friendly space, offering opportunities for interaction and creative expression (Lombardo et al., 2002).

While young Australians have clearly embraced the internet, their enthusiasm for mobile phones is even greater. The SPIN Sweeny Report which surveyed 1000 16 to 28 year olds found that 94 per cent of this group own mobile phones (SPINCommunications, 2007) Children as young as six also use or have access to a mobile phone and over a quarter of this group are mobile phone owners (DCITA, 2005c). Furthermore, while on an average day, nearly a quarter of Australians will send a text message and nearly two-thirds of people aged 18 to 29 will use SMS (DCITA, 2005c).

### The "digital divide"

Given the increasing role ICT plays in determining mental health and wellbeing, there is concern that disparities in internet access and related technologies may reproduce and generate further

health, social and economic disadvantage (Becta, 2001; Bernhardt, 2000; Wyn et al., 2005)

In Australia, existing material and economic inequalities determine access. While 60 per cent of Australian households have internet access, use is significantly higher amongst: households in the top two quintiles of household income; people with higher levels of educational attainment; the employed; and, non-Indigenous Australians (ABS, 2007b; National Office for the Information Economy, 2003).

Similar trends are reflected in terms of mobile phone use. Socio-economic background appears to be a key indicator of mobile phone access with a quarter of people living in households with income of less than \$50 000 having never used a mobile phone (DCITA, 2005c). Similarly, on a typical day, high income earners are more than 60 per cent more likely to use a mobile phone than lower income earners (DCITA, 2005c).

At present, internet access in Australia is predominately through dial up or broadband connections. A report by DCITA found that broadband access, contrasted with dial up internet access benefited consumers as it allowed them to access information much faster, lead to increased network reliability and lowered costs due to increased capacity to perform tasks in a shorter time frame. In September 2003, just 21.5% of Australian home internet users had a broadband connection (Becta, 2001; DCITA, 2005a). By July 2005 this figure increased to 57% (DCITA, 2005b).

It is suggested that apart from lack of terrestrial broadband access in some areas, key barriers to the uptake of broadband include a lack of understanding of the benefits, income, an assumption that broadband is expensive, literacy, education and scepticism about the solutions broadband might provide (DCITA, 2007).

There is debate about whether this digital divide is narrowing or widening. Many researchers highlight its complex nature, with some arguing there are now multiple divides encompassing access, ownership, type and quality of technologies (Becta, 2001).

## The influence of the internet on mental health and wellbeing

It is increasingly acknowledged that the internet plays a significant role in influencing mental health and wellbeing, and health more broadly, particularly in terms of promoting key determinants including social connectedness, civic participation, and skill development. As Lefebvre points out, the internet has 'the ability to create digital and social contours that surround health conversations' (Lefebvre, 2007).

The internet offers significant potential for empowering communities, strengthening social action and increasing community participation. Its interactive nature and capacity to facilitate interpersonal communication has led health and social researchers to conceptualise it beyond just 'an information repository' but also as a virtual 'community' (Bernhardt, 2000; Hegland & Nelson, 2002; Peattie, 2007). Many highlight the influential role of the internet in cultivating social networks and strengthening existing social ties (Boase et al., 2006; Kraut et al., 2002; Maibach et al., 2007). Wyn and colleagues (2005) suggests that the internet, is continuously increasing the possibilities of who we connect with, and how we 'belong' both online and offline. There is also a growing body of evidence that suggests these possibilities may also extend to political engagement that translates into offline, individual and collective actions which enhance social capital (Lombardo et al., 2002).

Furthermore, the advent of 'Web 2.0' has blurred the boundaries of consumer and producer, enabling individuals to create and publish content themselves through applications such as wikis, blogs, social tagging and networking, aggregative content management, RSS (Really Simple Syndication) feeds and pod/vod-casting (Boulos & Wheelert, 2007). Through participatory content generation, Web 2.0 fosters increased collaboration, ownership, and empowerment (Christensen et al., 2002; Crespo, 2007; Wyn et al., 2005). Additionally, some would argue these open programming interfaces may facilitate greater levels of flexibility, agency and democracy, thereby facilitating new forms of social organisation (Boulos & Wheelert, 2007; Lefebvre, 2007).

As such identity production also takes place on the web: young people are documenting, informing and engaging in online conversations to make sense of who they are. Increasingly it is in an online context that young people are developing a sense of self in relation to their broader social context, making sense of social issues and social boundaries (Wilkinson & Mulgan, 1995). Abbott argues that the internet has vastly increased the

opportunities available to young people to communicate amongst themselves (Abbott, 1998). He argues that young people producing media online is fundamentally different as it allows communities to form, responding to young people's desire to participate and feel 'part of something' (Abbott, 1998).

The internet may also offer opportunities to promote freedom from discrimination and violence. William Mitchell argues that in cyberspace we can be "freed from the normal social markers of physical space, such as suburb names and zip codes" (Wertheim, 1999). This then raises the potential (assuming access is available) for cyberspace to assist young people experiencing marginalisation to transgress the stigma and discrimination faced in their physical environments.

## **The influence of mobile phone use on mental health and wellbeing**

While the relationship between mobile phone use and mental health is less understood, emerging literature suggests this technology also offers potential for mental health promotion. Young people use the mobile phone in both positive (for example to organise and maintain their social networks) (Campbell, 2007) as well as negative ways (for example to ostracise or 'cyber-bully'). Market research suggests that for young members of the 16 to 28 cohort, "being blocked," from accessing chat rooms or having their calls barred is a new form of social rejection (SPIN Communications, 2007).

An analysis of themes emerging from international media coverage highlights the perceived positive and negative aspects surrounding young people's mobile phone use. These include the risks involved with young people accessing inappropriate and undesirable content and inappropriate wider social contacts through mobile phones; dependence on mobile phones; and their role in identity production (DCITA, 2005c). In addition, mobile phone related debt amongst young people is a key concern (Funston & MacNeil, 1999).

## **Opportunities for using ICT to promote mental health**

Much of the literature documenting the capabilities and advantages of the internet as a health

promotion setting focus on its highly cost-effective population reach and capacity to engage traditionally 'hard to access' groups, such as those experiencing isolation or stigmatisation (Cline & Haynes, 2001; Drabble et al., 2003; Griffiths et al., 2006; Hillier et al., 2001; Wyn et al., 2005). The internet also enables the delivery of health interventions in interactive formats, including dynamic audio-visual content, enabling individuals to tailor information and delivery style to suit their needs and learning preferences (Fotheringham, 2000).

The interactive nature of the internet creates opportunities for young people to be part of health promotion campaigns, participating in their development, implementation and evaluation (Peattie, 2007). Reach Out! is an exemplary case study of effective youth participation in internet based mental health promotion, and highlights several merits of this approach (Swanton et al., 2007). Youth participation not only promotes youth empowerment (thereby also positively impacting on participant's mental health), but also ensures program relevance. Word of mouth style 'viral' marketing through web 2.0 technologies such as social networking websites, has aided in the diffusion and adoption of the Reach Out! program.

## **Frameworks for ICT based health promotion**

At present there is no universally accepted framework for effective ICT based health promotion that integrates the fundamentals of health promotion theory with principles for leveraging the unique capabilities offered by this technology. Most publications focus on web based health promotion, and more specifically, web site design and aesthetic, quality and accuracy of content and disclosure of authors, sponsors and developers (Kim et al., 1999).

Drawing on McWilliams and Deighton (2006), Peattie acknowledges the limitations of existing criteria and suggests adapting insights from the '3 C's' of commercial web initiatives (content, commerce and connectivity) (Peattie, 2007)). Peattie (2007) recommends expanding these principles to include a fourth 'C factor' - 'Community' - which refers to the use of message boards, clubs, and chat rooms in order to encourage information exchange and support between the target group. However, absent from

this model is a solid theoretical basis in fundamental health promotion theory.

The STAR (Spiral Technology Action Research) model (Skinner et al., 2006) offers arguably the most comprehensive approach to developing and evaluating online health promotions so far. Their model explicitly aims to bring together key health promotion models and ICT development theory. It is underpinned by an action research methodology and acknowledges that community participation is central to the development process, particularly in terms of prototyping and usability testing of the technology and community mobilisation. The model is described as a 'rapid-cyclical change approach' comprising 5 core cycles: Listen; Plan; Do; Study; Act.

## Using ICT in arts-based health promotion initiatives

There is a growing recognition of the potential role that the arts play in promoting key mental health determinants and community engagement (VicHealth, 2006). In particular, the arts provide enjoyment, promote social inclusion, value diversity and contribute to greater access to economic resources among marginalised populations. The arts also provide an avenue for self-discovery. For young people, who are often seeking to make sense of who they are, this could be particularly beneficial, although limited research has been conducted in this area.

The advent of digital still cameras and recording technologies, alongside the evolution of Web 2.0 applications supporting user-generated content production (wikis, blogs, social tagging and networking, and pod/vod-casting), are facilitating new methods for participating in the arts. Thus, new opportunities are emerging for engaging young people in mental health promotion programs that integrate both ICTs and the arts.

## Conceptualising the role of ICT in young people's lives



Wyn and colleagues emphasise the potential for the internet to influence the health, economic and social outcomes of young people (Wyn et al., 2005). As they explain computers and computer literacy now play a major part in the lives of young

people, connecting them with information, support and the community. However, the popular perception amongst service providers is that many young people in under-served communities do not have access to this technology or the skills to use it. Service providers report that many of their clients are disengaged or do not feel comfortable in the places where computers are provided (such as schools or libraries).

Emerging research shows that internet use can strengthen communication and social connectedness by providing alternative spaces for people to meet and that even better outcomes are achieved when combined with strong social supports (Kraut et al., 2002). These strong social supports can also be built through ICT. A recent Pew internet and American Life Project report describes how the internet strengthens offline social ties (Boase et al., 2006). Their survey work showed that people not only socialise online but they also incorporate the internet in their request for information and advice as they seek help and make decisions. This report supports other research that concludes that the internet can help build social capital (Wellman, 2001). Building social capital online can therefore support civic participation and help to strengthen democracy (Putnam, 2000).

# Methodology

In order to investigate the role ICT plays in young people's identity formation and skill development, the use of ICT for information provision, the impact on their social relationships and the digital divide created by lack of access to ICT, data were collected through written (quantitative) surveys and qualitative methods including focus groups and semi-structured interviews with both marginalised young people and professionals who work with them.

The Project Advisory Group and Youth Reference groups were both involved in developing and refining the study design and research tools. Both groups contributed input into and feedback on the survey, focus group and interview questions, as well as focus group structure, survey design, and recruitment strategies. This process was particularly valuable in terms of identifying strategies to minimise potential barriers for marginalised young people's participation.

## Focus groups

Sixteen focus groups were conducted across 12 host organisations in Victoria. These organisations were selected through a snowballing methodology which commenced by meeting with peak organisations who work with marginalised young people, including the Council to Homeless Persons, Youth Affairs Council of Victoria, Rainbow Network, Youth Disability Advocacy Service and the Victorian Indigenous Youth Advisory Council. These organisations helped identify appropriate local sites.

Selection of host organisations for the focus groups aimed to ensure balance in terms of:

- Service type (e.g. state/local government, non-profit/community organisation, education provider);
- Gender of participants;
- Geographic spread (sites were based in the 25 most disadvantaged electorates according to the SEIFA index 2001 and included a mix of locations across Victoria including metropolitan, rural and regional

areas as well as urban fringe local governments).

- Organisations which do and do not have an existing relationship with Inspire,
- Organisations that do and do not currently use the internet and related technologies in their work with young people.

Staff at host organisations recruited participants for each of the focus groups. Flyers promoting the focus groups and information sheets were provided for participants and (if necessary) their parents and/or guardians.

The focus group questions are available on request.

Most focus groups lasted an hour and fifteen minutes and were held at venues familiar to participants, including youth and community centres, accommodation services and restaurants. Focus groups were designed to accommodate difficulties in understanding English or maintaining concentration. Frequent breaks were also offered to accommodate participant needs, and in one service, one-on-one and small group interviews were conducted instead of following a more traditional focus group format, as young people were more comfortable participating in smaller groups.

Refreshments and a \$20 gift voucher were provided to participants to cover out of pocket expenses. Information and contact details for key support services were also provided to participants at each focus group.

## Interviews with Service Providers

In-depth interviews with individuals who work with young people were conducted to explore the same key concepts covered in the focus groups with young people, as well as the capacity of youth and related services to utilise ICT to promote social connectedness and civic engagement. These interviews were conducted face-to-face with staff at almost all of the host organisations. A snowballing methodology was also employed to identify other organisations that work with young people from diverse backgrounds.



## Written surveys

Before focus groups with young people and interviews with host organisations, participants completed two written surveys. One consisted of demographic questions while the other included questions about ICT skills, access and use. ICT skills were also assessed using a five point, self-report scale based on criteria described in the Byte Report (Funston & Morrison, 2000) and the Department of Education, Skills and Training's *RealTime* study (Meredyth et al., 1999). The questionnaires are available on request.

Service providers, researchers and in some instances, other participants, assisted young people with lower literacy skills or other special needs to complete the survey, however it should be noted that few participants found completing the written survey challenging.

## Data analysis

Data were analysed in two stages. The first involved the members of the youth reference group and project advisory group who were asked to conduct a thematic analysis of responses to four key focus group and interview questions. Further thematic analysis was then conducted by the researchers drawing on frameworks from the fields of sociology, health promotion and psychology.

## Profiles of focus group sites

### **Action Centre, Family Planning Victoria**

[www.fpv.org.au](http://www.fpv.org.au)

The Action Centre is an adolescent sexual health service providing sexual and reproductive health counselling, education and health promotion activities; and a support group for same-sex attracted and gender diverse young people.

### **Barwon Youth Accommodation Service (BYAS)**

BYAS is located in Geelong and provides emergency and short-term accommodation for young people aged 15 to 20 experiencing homelessness.

### **Broadmeadows Neighbourhood Renewal/Homeground**

[www.homeground.org.au](http://www.homeground.org.au)

Homeground provides support services and community development to residents living on Victoria's public housing estates. Broadmeadows is ranked third out of Victoria's 30 most disadvantaged areas based on the SEIFA index.

### **Centre for Multicultural Youth Issues**

[www.cmyi.net.au](http://www.cmyi.net.au)

CMYI is a community-based organisation advocating for the needs of migrant and refugee youth through policy development and direct service delivery.

### **City of Ballarat Youth Services**

[www.ballarat.vic.gov.au](http://www.ballarat.vic.gov.au)

The City of Ballarat is a regional centre located approximately 110km north-west of Melbourne. The Council Youth Services team provide support and activities for young people aged 12 to 25 including a Youth Council, a same-sex attracted social and support group, music and cultural events.

### **Fusion Youth Housing** [www.vic.fusion.org.au](http://www.vic.fusion.org.au)

Fusion Australia runs a range of support services for young people experiencing homelessness, including crisis, temporary and short-term accommodation.

### **Good Shepherd Youth and Family Services St Albans** [www.goodshepherd.org.au](http://www.goodshepherd.org.au)

Good Shepherd targets newly arrived refugees (particularly those from the Horn of Africa) and young Vietnamese people. They provide after school, lunchtime and holidays programs, and are part of the Beanbag network

### **Koori Employment Enterprises (KEE)**

KEE provide employment and training services for Indigenous people living in Shepparton, located in the Goulbourn region of Victoria through the Federal Government's Community Development Jobs Program (CDEP). ABS Statistics show this region has Australia's second highest population of young indigenous people.

### **Mission Australia, LIFE Program, Frankston**

[www.missionaustralia.com.au](http://www.missionaustralia.com.au)

Living in Full Effect (LIFE) is an alternative education and life skills program for young people

aged 15 to 25 who are not engaged in education, training or employment because of substance use or involvement in the criminal justice system.

**Open Family Australia** [www.openfamily.org.au](http://www.openfamily.org.au)

Open Family work with young people currently experiencing, or at risk of homelessness. They primarily provide street outreach, but also support young people through home detoxification programs and their 'Back to School Program.' Open Family's Footscray Centre is part of the Beanbag network.

**Whitelion** [www.whitelion.org.au](http://www.whitelion.org.au)

Whitelion is a non-profit organisation, supporting young people living out of home or involved in the juvenile justice system through mentoring and employment programs. Whitelion's target group are often from lower familial socio-economic status, experiencing unstable housing, employment difficulties and/or poor health indicators. Those who participated in this study were all currently accessing their women's programs.

**Worawa Aboriginal College**

[www.worawacollege.com.au](http://www.worawacollege.com.au)

Worawa College is located in the Yarra Valley and provides Indigenous secondary students with a culturally appropriate education. The college focuses on learning from elders and remaining connected to culture and many of the students are from rural and remote communities.

# Results

## Young people's focus groups



### Demographics of participants

Ninety-seven young people participated in the study with 96 providing demographic information. Participants ranged in age from 13 to 25 years with 58% aged between 16 and 19 years. Just over half the participants were male (56.3%).

Fifty-nine participants identified as being from a CaLD background (61.5%). The cultures represented included: Sudanese (13); Vietnamese (7); Afghan (7); Ethiopian (4); Chinese (3); Italian (3); and, Greek (2). Individual young people also identified as being Somali, Iranian, Assyrian, Iraqi, Ugandan, Celtic, Egyptian, German, Scottish, Lebanese, Maori, New Zealander, Oromo and Samoan. A further 40 identified themselves as Australian, eight of mixed heritage and 24 as Indigenous.

A large proportion of participants spoke a language other than English at home (42.7%). Languages spoken included Arabic (14), Vietnamese (5), Dari (5), Dinka (5), Pashto (3), Tigrina (3), Amharic (2), Assyrian, Turkish, Chinese, Urda, Hindi, Oromo, Persian, Samoan and Sholuk (1 each). Four participants spoke more than one language at home.

Participants were undertaking a range of employment and or educational pursuits. Just over half were at secondary school (16 in year 9 or less, 27 in year 10 or 11 and 6 in year 12), 17 were completing a trade certificate, professional diploma or TAFE course (including alternative education programs) and two participants were completing undergraduate University study. Thirteen were looking for work, three were working or looking for work and studying and one was completing an adult migrant education program.

Living circumstances also varied. A majority (54.2%) lived with parents or close family, while 11.5% lived in temporary or supported accommodation. A further 7.3% lived with other family members, while 6.3%, each lived alone, with a partner or with friends.

A significant number (14.6%) identified as having a disability or learning difficulty, including anxiety, depression, psychosis, aspergers syndrome, intellectual disability and spina bifida. Five young people considered difficulty in learning English as a disability or learning difficulty.

29.1% of participants identified as same-sex attracted, while seven chose not to answer this question.

### Access to the internet

Most participants had access to the internet, with 93 of the 96 having access from a range of locations including home, the library and school. Interestingly, 42% had access to the internet at home. ABS statistics from the 2006 Census show that 61% of Victorian households have access to the internet. Given the social, cultural and economic backgrounds of those who participated in the research and anecdotal feedback from service providers, this figure is significantly higher than expected by the researchers.

### Frequency of internet usage

Young people surveyed reported varying frequency of internet usage. Over a third (37.5%) accessed the internet daily, 30.2% a few times a week, 12.5% once a week and 14.6% monthly.

**Table 1: Young people's access to the internet**

Access Point	n	% (note may not add to 100% as some listed more than one access point)
Home	42	43.8
Library	29	30.2
School	17	17.7
internet Café	9	9.4
Work	9	9.4
Youth Centre (excluding Beanbag)	5	5.2
TAFE	3	3.1
Family	3	3.1
Friends	3	3.1
Don't access the internet	3	3.1
Job Network	2	2.1
Phone	2	2.1
Juvenile Justice Centre	1	1.0
Beanbag Centre	1	1.0

## Type of internet connection

According to the ABS 2006 census, only 40.2% of Victorian households

have broadband access. However, in this study 49% of participants reported access to broadband. Based on these figures alone, broadband access amongst this group of young people is higher than expected.

**Table 2: Type of internet connection**

internet Connection Type	n	%
Broadband	47	49.0
Don't Know	25	26.1
Dial Up	13	13.5
Wireless	5	5.2
Don't access the internet	3	3.1
Dial Up and Broadband	1	1.0
Dial Up, Broadband and Wireless	1	1.0
Broadband and Wireless	1	1.0

## Restrictions on content young people can access

Almost a third (30.2) of participants reported restrictions placed on the content they were allowed to view online. Most of these restrictions applied to 'inappropriate' content such as nudity, sexually explicit or violent content. This has implications for delivering health interventions online especially in relation to sensitive topics such as Alcohol and other drugs, sexual health and sexuality.

Young people accessing the internet through school indicated frequent bans on accessing social networking sites such as MySpace and Bebo, free webmail and chat programs including MSN Messenger. This has particular implications for young people's identity formation and social relationships if school is their only internet access point. Young people who had experienced restricted access to these sites found it difficult to understand the perspectives of those who prevented their access.

Young people who accessed the internet through Job Network providers reported only being able to access employment related information. One young woman was unable to send emails because she was currently in custody.

### Young people’s ICT skills

A large proportion of young people reported that their ICT skills were of ‘a high standard’, stating that they could perform specific tasks ‘really well’. Self-reports therefore suggest that young people are well equipped to engage in programs that use ICT and creative technologies. However in the opinions of some service providers, some young people’s skills may not be as good as they report.

Measuring ICT skills is important in the implementation of any health promotion programs and the link between learning new skills, developing competencies and being provided with the opportunities to practice these skills requires further exploration, particularly in relation to improving mental health and emotional well-being.

Young people felt particularly confident in their word processing and internet skills with over 80% rating their capacity to perform the tasks as ‘well’ or ‘really well’. Young people felt less confident completing tasks such as creating music, using spreadsheets and databases and editing images. (see Table 3).

**Table 3: Young people's computer skills**

Skill		Can't do at all	Not very well	Okay	Well	Really well
<b>Computer Skills</b>						
Turn a computer on and off. Use a keyboard and mouse.	n	0	1.0	2.0	4.0	88.0
	%	0	1.0	2.1	4.2	91.7
Install a program on a computer	n	7.0	8.0	14.0	15.0	51.0
	%	7.3	8.3	14.6	15.6	53.1
Use a word processing program e.g. Word	n	3.0	2.0	12.0	15.0	63.0
	%	3.1	2.1	12.5	15.6	65.6
Print a document	n	2.0	3.0	3.0	11.0	74.0
	%	2.1	3.1	3.1	11.5	77.1
Get files from a CD ROM or Memory Stick	n	8.0	7.0	5.0	12.0	63.0
	%	8.3	7.3	5.2	12.5	65.6
Use spreadsheets or databases	n	15.0	11.0	19.0	14.0	34.0
	%	15.6	11.5	19.8	14.6	35.4
Create music or sound using the computer	n	8.0	10.0	18.0	14.0	42.0
	%	8.3	10.4	18.8	14.6	43.8
Create a program	n	29.0	17.0	23.0	5.0	18.0
	%	30.2	17.7	24.0	5.2	18.8
Create a multimedia presentation	n	14.0	14.0	12.0	18.0	34.0
	%	14.6	14.6	12.5	18.8	35.4
Play a movie on the computer	n	7.0	3.0	6.0	16.0	62.0
	%	7.3	3.1	6.3	16.7	64.6
Create an animation	n	25.0	15.0	15.0	8.0	27.0
	%	26.0	15.6	15.6	8.3	28.1
Play computer games	n	2.0	1.0	5.0	9.0	76.0
	%	2.1	1.0	5.2	9.4	79.2
Playback music on the	n	1.0	5.0	5.0	7.0	75.0
	%	1.0	5.2	5.2	7.3	75.0

computer (either from CD, MP3 etc)	%	1.0	5.2	5.2	7.3	78.1
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Young people were extremely confident in their internet skills with over 80% searching the web, sending an email and using instant messaging services. Interestingly, there was wide variation in how well young people felt they could engage in

an online community, although it could be argued that some may not have understood the term 'online community' without further explanation (e.g. providing examples such as MySpace or Bebo).

**Table 4: Young people's internet skills**

internet Skills		Can't do at all	Not very well	Okay	Well	Really well
Use the internet	n	2.0	1.0	8.0	11.0	69.0
	%	2.1	1.0	8.3	11.5	71.9
Search the Web using key words (e.g. through a search engine like <a href="http://www.google.com">www.google.com</a> )	n	2.0	2.0	2.0	13.0	72.0
	%	2.1	2.1	2.1	13.5	75.0
Send an email	n	3.0	3.0	7.0	7.0	72.0
	%	3.1	3.1	7.3	7.3	75.0
Chat to friends online using a program like MSN Messenger.	N	4.0	4.0	6.0	6.0	71.0
	%	4.2	4.2	6.3	6.3	74.0
Maintain a blog (e.g. LiveJournal) or MySpace page	n	12.0	12.0	15.0	15.0	37.0
	%	12.5	12.5	15.6	15.6	38.5
Download music or Podcasts from a site like iTunes or Triple J	n	10.0	8.0	8.0	12.0	54.0
	%	10.4	8.3	8.3	12.5	56.3
Make a website/home page from scratch	n	28.0	18.0	15.0	13.0	18.0
	%	29.2	18.8	15.6	13.5	18.8
Develop and participate in an online community	n	28.0	19.0	11.0	12.0	21.0
	%	29.2	19.8	11.5	12.5	21.9
Maintain a relationship with an online community	n	19.0	19.0	14.0	13.0	27.0
	%	19.8	19.8	14.6	13.5	28.1

Almost all participants reported feeling confident using mobile phones and using a digital camera and software.

**Table 5: Young people's digital photography skills**

Digital Photography Skills		Can't do at all	Not very well	Okay	Well	Really Well
Take photos with a digital camera	N	5.0	2.0	3.0	15.0	67.0
	%	5.2	2.1	3.1	15.6	69.8
Upload photos from a digital camera on to a computer	N	8.0	6.0	6.0	13.0	59.0
	%	8.3	6.3	6.3	13.5	61.5
Edit a photo using a program like Photoshop.	N	11.0	9.0	13.0	13.0	46.0
	%	11.5	9.4	13.5	13.5	47.9

**Table 6: Young people's mobile phone skills**

Mobile Phone Skills		Can't do at all	do Not very well	Okay	Well	Really Well
Send a text message (SMS)	N	3.0	6.0	2.0	5.0	76.0
	%	3.1	6.3	2.1	5.2	79.2
Send a multimedia message (MMS)	N	8.0	10.0	6.0	5.0	63.0
	%	8.3	10.4	6.3	5.2	65.6

## Young people's favourite websites

While social networking sites such as MySpace and Bebo were popular amongst participants, so too were special interest sites such as those for users interested in break-dancing, graffiti and pets. The top ten responses are shown below with Google the most frequently listed site.

**Table 7: Young people's favourite websites**

Note: Each young person named up to three websites, therefore percentages are not shown..

Website	Site Category	n
Google <a href="http://www.google.com">www.google.com</a>	Search Engine	27
MySpace <a href="http://www.MySpace.com">www.MySpace.com</a>	Social Networking	23
Hotmail <a href="http://www.hotmail.com">www.hotmail.com</a>	Email	20
Yahoo <a href="http://www.yahoo.com.au">www.yahoo.com.au</a>	Search Engine	14
Bebo <a href="http://www.bebo.com">www.bebo.com</a>	Social Networking	12
MSN <a href="http://www.msn.com">www.msn.com</a>	Email	11
youtube <a href="http://www.youtube.com">www.youtube.com</a>	Web 2.0	8
Hi5 <a href="http://www.hi5.com">www.hi5.com</a>	Social Networking	7
eBay <a href="http://www.ebay.com">www.ebay.com</a>	Online Retail	5
Wikipedia <a href="http://www.wikipedia.com">www.wikipedia.com</a>	Web 2.0	5

items. E-bay was a popular website amongst participants.

## What are young people doing online?

Young people cited participating in a range of activities online. Almost all participants have an email address, although a number admitted struggling to maintain this.

*"I used to email but I forgot my email address. My worker got one for me, but I lost the piece of paper with the information."*

Many young people used instant messenger programs such as MSN Messenger or Windows Live Messenger to communicate with friends and acquaintances. For some, instant messaging was a way of staying in touch with old friends they seldom see.

A large proportion had used the internet to bank online, download music, make purchases and sell

One Indigenous participant explained that using the internet for tasks like booking travel or accommodation or banking, helped him interact more confidently.

*"It's good because instead of going on the phone and getting weird with words, you can write it all down."*

For young people who identified themselves as having a disability, the internet provided an important link to the world around them.

*"Look up websites about disabilities and see what's coming up and stuff like that."*

*"I'm very involved with lots of autistic and deaf groups and they are great because I've started talking with a lot of parents in the states who have kids with Aspergers and they're always*

*asking me for info. I always have to tell them though, I'm not a doctor and what I say is my own experience."*

*"I think another important point is that email offers people with speech impairments a good outlet for communication. Sometimes it is difficult to communicate by talking. Same for email for people who are deaf or people who are...like Debbie one of my friends is deaf so I message her on my phone, write emails to her and stuff like that."*

Similarly, for young people with mental health difficulties or experiencing social isolation, the internet allowed them to seek help in a less threatening environment.

*"I use a few sites, like beyondblue, about depression and other mental health stuff. I've got a heap bookmarked. I keep in touch with a few mates and I let them know about the sites. I like reading the testimonials of people about their experiences."*

For one young man who considered himself socially isolated, using the internet was an important strategy in helping him through a difficult time.

*"I used to use it when I was younger to meet other people because I felt isolated. I found that really helped me through a tough time. With the internet people get to know your personality. There's a computer between two people and you get to know each other well. Whereas on the street people might just fob you off... Meeting people online was so much easier. You could talk to them about everything and not have to worry about them judging you. Actually meeting them face to face is a bit scary. You think what am I going to say; now I've told them everything about my life? You feel that hesitation about meeting them, but once you've met them it's okay"*

Another young Vietnamese woman who was bullied and excluded from friendship groups at school reported that she frequently used social networking and 'e-penpal' sites to maintain friendships with people she had not met face to face, usually people overseas.

*"I find it kinda hard to communicate with Australian people because my classmates are kinda nasty. So I try to look for people who*

*are nice because I think not everyone is like them (my classmates)."*

The internet proved an important tool for same-sex attracted young people both in terms of providing support and information, as well as the opportunity to meet new people. For example, one young woman who had grown up in a rural area explained

*"I used it (gay youth site Mogenic) to get information when I was younger. I grew up in the country and there was nothing around, when I was just starting out at Uni. I mean [this town] has more than small country towns, but I'm from the bush."*

*"I used to read the coming out stories. When I was deliberating over telling my parents years ago, I used to go on the site. I was interested to hear how other people did it."*

Others in the group echoed these sentiments and spoke of using other sites such as Pink Sofa, Gay Youth Centre (GYC) and Gaydar to meet people.

A younger member of the group said:

*"I sort of go to Mogenic to find other people who are gay youth to ask them about their experiences and how it is for them."*

It should be acknowledged that not all young people (particularly those who had already indicated discomfort with internet-based communication) favoured meeting potential partners online.

*"I attempted to meet people but it never really worked out. I don't know. I think I'm a bit touchy. When you're speaking with someone you don't know and you can't see them and they say something that's a bit offensive, you don't understand where they're coming from. There's no emotion. For example if I was talking to you, you could say something sarcastically that was really mean, but I'd know from the tone of your voice that you didn't actually mean it like I'm taking it. So there's that gap. Also because I don't go on the internet that much, so I don't talk to these people that much I kinda lost interest."*



Only a few young people used the internet to make contact with parents and teachers. Usually it was only particularly 'tech savvy' parents who were able to engage with their offspring using this medium.

*"I chat to my mum online; she's totally into the technological age. She's gone from being unable to use a computer two years ago to being able to IM and chat online."*

*"At school, our teachers gave us their email addresses so we can keep in touch. We also use a bulletin board to keep in touch with them and ask questions. We also have a whole subject through the internet, with a camera."*

*"At TAFE our teachers gave us their mobile numbers so that if we were running late or having family problems we can ring them up and let them know. Also we can ring them to ask questions and talk to them."*

## Social networking sites: the new public space?

Frequenting Social Networking websites such as MySpace, Bebo and Hi5 were particularly important activities in the lives of those who participated in this study, although there were a number of significant differences in the groups of participants who used specific sites.

Interestingly, while MySpace is reportedly one of the most widely utilised social networking sites in Australia (REF), the Bebo and Hi5 sites were almost as popular among young people who participated in the focus groups,

Indeed, for the young women who had experienced the juvenile justice system, the popular site MySpace was simply not part of their lexicon, responding to the question of 'do any of you have a MySpace page?' with "what's MySpace?"

Perhaps one of the most interesting findings was the prevalence of Bebo users amongst Indigenous participants, while participants from newly arrived and migrant backgrounds tended to use a site called Hi5.

**Young Woman:** *"All the Aboriginals are on Bebo. You name em, they're there."*

**Interviewer:** *Why do you think that is?*

**Young Woman:** *"There are African Americans, Maoris and all that. It's culture. I don't know whether it's a black thing or what...but they're all there."*

A handful of young people had joined culture specific sites such as "Asian Groove" and some Arabic sites.

Some young people viewed social networking websites as a creative outlet and a mechanism for expressing their thoughts and projecting their identity to the outside world.

*"I like MySpace because I'm a very creative person. With MySpace and stuff you can use it to meet people, but it's your page and no one can tell you what to do with it. If you're having a rough day you can just go on the computer, relax and talk to friends. You can be creative."*

While participants reported joining these sites because their friends encouraged them to, either via email or face-to-face, a number said they'd grown "sick" of these sites when their friends did not write back to them. Others said they "ditched the sites when they got too lazy to go on." One young woman also explained that "[w]hen no-one came to the site anymore it got boring."

Few participants used virtual reality sites like Second Life, with only a small group of participants in Geelong citing having used the Habbo site.

Similarly, chat rooms were not at all popular amongst participants, who preferred instead to post messages on social networking sites. One young man spoke quite emphatically against chat rooms saying:

*"I avoid chat rooms. People are just so stupid and petty in them. Personally, for me to get petty with someone there has to be a decent reason. They have to have done something horribly offensive for me to start being mean. However, people just do it at the drop of a hat. Can't we all just get along people? And they're superficial. I'd like to think I have a lot more depth than that."*

## What do young people like and dislike about their online experience?

The low cost of the internet, compared with telephone or face-to-face contact was important to many young people when asked what they liked about their online experience. This was particularly important for newly arrived and migrant young people, for whom the internet was often their only link to their home country and the family and friends they may have left behind.

Some young people expressed the importance of seeing what was going on in other peoples lives via YouTube or other social networking sites.

When accessing information sites, participants preferred sites that were comprehensive, rather than having to follow a number of links to get all of the information needed.

Young people are turned off by sites that have unfinished content difficult navigation, slow loading times or require you to sign up as a member to gain access.

For young people with a disability or English as their second language, accessibility and language were particular areas of concern, acting as barriers to utilising internet based resources to its full potential. As a young woman with an intellectual disability explained:

*“With the intellectual disability sites, they're meant to be for people with intellectual disabilities but there's so much text that you can't read it. I go away from it, even though it has lots of information because I can't read it all. It is all medical terms, so it needs to be easy terms. There are no specific sites for people with intellectual disabilities. There are sites for cerebral palsy, everything else, but nothing for intellectual disabilities, so I've really struggled to find information.”*

This particular group explained that simple dot points or well laid out paragraphs were important.

*“Sites need to be easy to get around. It depends on people's individual impairments. You need to make it easy for the [screen] reader. I understand that if they keep things simple or at least well set out it is easier for the screen reader. It depends on the site, but no*

*text overloads. If it's pages and pages of text I'm going to look at it and think I can't be bothered. Images are great. It's got to be easy, even on your Reach Out! Website, you need simple information for people with disabilities. For people who have trouble with text, they prefer dot points.”*

## Personal safety and security online

Participants displayed a sophisticated understanding of the risks involved accessing the online environment and reported knowledge of strategies to maintain their own safety and security.

When asked, “How they would feel about having information about them up on a website?” (for example, contact details on their profile, or their art), many focus groups were divided. While the majority felt comfortable with having personal information online (first name and a picture), large numbers were strongly opposed, explaining “[i]t would invite unwanted attention.” Being in control of personal information displayed was important to a large number of participants. One young man told of “finding photos of himself intoxicated online which he'd rather weren't available for the public to see”, while another spoke of avoiding the cameras on a recent youth services trip to the Mardi Gras Parade for fear it would ‘out’ him to his employer.

A number of young people had found their email addresses had been made public without their knowledge. Seeing content about themselves on other people's sites was also upsetting for a number of young people. These concerns have important implications in regards to ICT based youth programs which may encourage young people to produce artwork or stories to distribute online and highlights the importance of establishing clear processes with young people to identify what they are and are not comfortable being made public.

However, others reveled in having their stories and information online. One young man who had experienced homelessness proudly explained that if you ‘Googled’ his name and his suburb you would find an article that The Age newspaper published about him during Housing Week.

Many of those who participated in the study indicated that they had met people online, with a

number of those having gone on to meet these people in person. While this behaviour could be considered risky, young people routinely identified strategies to mitigate potential harms including only ever meeting people in a public place, letting people know where they were going and bringing a friend with them to meet the person.

Participants cited similar risk reduction strategies in terms of conducting online purchases and other transactions. In particular, young people were quick to point out they only use 'big name' sites they consider reputable such as e-bay or Ticketek. They also appeared aware of the risks of fraud online, particularly in relation to credit cards.

Of those who used social networking sites, many were aware of inbuilt privacy features such as being able to set their profiles to be viewed only by their friends. They were also careful not to put too many identifying features on their pages (e.g. many avoided posting school information), although a number reported publishing their full names and email addresses.

A small number reported negative experiences online. After gaining reassurance from the rest of the group that they would not identify him, one young man spoke of posting his details on a gay youth site and attracting unwelcome attention.

*"I did post my details up on a gay youth website; I think it was an international website. There were these other teenagers, other same-sex attracted teenagers who were joining and requesting and everything and one gave me his email address and when I added him and he turned his webcam on, it turned out to be this really old creepy guy (Ew! from other group members) and he was...you know...really. (Group: Ew enough said.) He said he looked at my page everyday. It did traumatise me a little bit. What I did was withdraw from the site, blocked him and never went there again. I don't know how people think they can get away with that sort of thing."*

Only one participant spoke of experiencing cyber-bullying, although it was acknowledged that it did occur amongst some groups of young people. This young man told an inspiring story of how he overcame the experience and took action on the issue.

**Young Man:** "A few weeks ago, I was on MSN, this guy came on, really homophobic

*and he was really digging into me, using four letter words. As if that wasn't bad enough, he gave my address to 15 other homophobic people and they all started abusing me. For about two weeks, I couldn't go online without someone abusing me like that. I was depressed after it happened, but I decided to do something about it. I had saved all the message history from the first contact and I put them into a display of all the things that could be said, the worst experiences that could happen, and at the end there was a gunshot to symbolise suicide. Some people interpreted it as taking a matter into their own hands; some interpreted it as a bully killing the person. But it wasn't that, it was meant to symbolise suicide."*

**Interviewer:** "So what are you going to do with the film?"

**Young Man:** "Well it was meant to be just to show the people here, but [the youth worker] said she'd take it to a conference and show some people there and I'm going to put in on youtube (yay! from group members) and give those homophobic people a way of being famous!"

## Identity and social relationships

When asked to consider the factors that impacted on their identity or 'who they are' young people cited peers, friends and family as their key influences, and acknowledged that the influence can be both positive and negative. A young woman who had been bullied thought her persona had changed from bright and talkative to much quieter as a result of being excluded by her peers, while a number of young men felt that they sometimes have a negative impact on their friends, encouraging them to take risks.

Same-sex attracted (SSA) young people spoke at length of the varying influences on their identity and the multi-faceted nature of identity. Participants in these groups talked about the role that the political and social context in which they lived influenced on them. Two young men also debated the role of nature versus nurture. The heightened awareness of identity development exemplified by this group is potentially related to the host organisation's focus on supporting SSA young people to understand and negotiate their identity formation.

Interestingly, only one focus group explicitly raised the role of technology in young people's identity formation. They spoke about the role that the internet plays in spreading gossip, which in turn influenced how people felt about themselves.

**Young Woman:** *"Gossip. People getting on the internet and talking about you. Now schools are getting involved if students are having a conversation on MSN and they let the police know and stuff."*

**Interviewer:** *"How does that bullying online affect who you are?"*

**Young Woman:** *"It puts you in a really bad place. You can be this bubbly, I don't care about anything, happy kind of person and then someone goes behind your back and you feel like nothing. You feel like you have no friends."*

A young man in the same group felt that the type of interaction his peers had online could affect their identities:

*"When people are just wasting time on their computer chatting. It depends on the person you are. If you are talking to negative people you feel negative. I think sitting in front of a computer all the time makes you feel good, but after a while, you feel tired and lethargic, but you still stay up until 5am chatting. Everything just goes around by you while you're sitting there watching a computer screen. You realise too late. If you get too used to chatting to people online, it can be hard when you go out and you try to meet people in real life."*

While most young people did not necessarily consider ICT to have a direct impact on their identity formation, its role in mediating the social relationships that did was important. Young people use social networking websites, instant messaging and email to meet new people, make friends and find partners. They use these same tools as well as mobile telephones to remain in close contact with these friends.

## Mobile Phones

Almost all of the focus group participants had mobile phones and the models as well as functionality were frequent topics of discussion.

"Sam just got a new phone. It's a really nice one."

Mobiles being stolen or damaged were frequent occurrences amongst the focus group participants and this was reflected in comments from youth workers explaining how difficult it sometimes is to reach young people.

The cost of different mediums impacted on how and the frequency with which young people could contact friends and family. Many preferred to SMS or email friends than talk due to the cost involved. A young woman on an Indigenous traineeship explained:

*"I'd rather text someone. It's cheaper. Makes credit last longer, as we don't get paid much here. Every cent counts."*

This was echoed by a number of young people who said their pre-paid accounts were frequently 'cut off' because they didn't have enough credit.

One young man owned three telephones, all on different payment plans in order to capitalise on 'cheap time.'

The internet and mobile phones were also important tools in helping young people to stay in touch with important adults in their lives. Young people frequently used their mobile telephones to contact youth and other support workers, saving money by texting their mobiles and asking them to make contact.

One youth worker who worked predominantly with young women exiting the juvenile justice system explained:

*"Often, if a young person's not answering their phone, I'll text them. It's just a lot less confronting. If you don't feel like talking to someone whether it's a worker or your best mate, you can still answer a text message."*

Only a few young people used the internet to make contact with parents and teachers. Usually it was only particularly 'tech savvy' parents who were able to engage with their offspring using this medium.

*"I chat to my mum online, she's totally into the technological age. She's gone from being unable to use a computer two years ago to being able to IM and chat online."*

*"At school, our teachers gave us their email addresses so we can keep in touch. We also use a bulletin board to keep in touch with them and ask questions. We also have a whole subject through the internet, with a camera."*

“At TAFE our teachers gave us their mobile numbers so that if we were running late or having family problems we can ring them up and let them know. Also we can ring them to ask questions and talk to them.”

# Interviews with service providers



## Demographics of interview participants

Twenty-two service providers participated in the study. Forty six percent were male and 54% were female. The age of participants ranged from 21 to 53 years, with the average age being 33.

Three of those interviewed spoke a language other than English at home (Vietnamese, Greek and Arabic).

Participants lived in a range of suburbs with all but one living in metropolitan Melbourne. One did not specify where they lived.

A majority had completed undergraduate or postgraduate study at a tertiary level. One worker had completed a trade certificate or diploma, while 54.5% had completed undergraduate study and a further 40.9% had completed postgraduate study.

Overall, the sample represented a range of experienced practitioners and those new to the field. Of the 21 who indicated how long they had worked in the field. Over half (52.17%) had been in the profession more than 6 years.

Those who participated in the study also represented a range of professions. Almost half (45.5%) identified themselves as youth workers, while others worked in the fields of social work (22.7%), psychology (9.1%), community development and family therapy (4.5%), nursing and health promotion (4.5%)

Almost all participants reported that 75% or more of their work was focused on young people aged 16 to 24.

## ICT skills

Most participants rated their computer skills as average (45.5%) or above average (36.3%). Overall they were confident completing tasks such as word processing and printing, but were less comfortable undertaking more complex tasks such as developing a multimedia presentation or playing a computer game.

**Table 8: Service providers' computer skills**

Skill		Can't do at all	do	Not very well	Okay	Well	Really Well
<b>Computer Skills</b>							
Turn a computer on and off. Use a keyboard and mouse.	n	0		0	1	3	17
	%	0		0	4.5	13.6	77.3
Install a program on a computer	n	0		4	7	5	6
	%	0		18.2	31.8	22.7	27.3
Use a word processing program e.g. Word	n	0		0	2	7	13
	%	0		0	9.1	31.8	59.1
Print a document	n	0		0	1	6	15
	%	0		0	4.5	27.3	68.2
Get files from a CD ROM or Memory Stick	n	0		1	0	7	14
	%	0		4.5	0	31.8	63.6
Use spreadsheets or databases	n	0		5	9	4	4
	%	0		22.7	40.9	18.2	18.2
Create music or sound using the computer	n	6		6	4	3	3
	%	27.3		27.3	18.2	13.6	13.6
Create a program	n	11		6	3	1	1
	%	50		27.3	13.6	4.5	4.5

Create a multimedia presentation	n	4	8	5	2	3
	%	18.2	36.4	22.7	9.0	13.6
Play a movie on the computer	n	1	1	5	4	11
	%	4.5	4.5	22.7	18.2	50.0
Create an animation	n	12	6	2	0	2
	%	54.5	27.3	9.0	0	9.0
Play computer games	n	1	6	5	4	6
	%	4.5	27.3	22.7	18.2	27.3

While most service providers felt they could use the internet well, a significant number did not feel

they would be able to participate in an online community, develop a webpage or maintain a blog.

**Table 9: Service providers' internet skills**

internet Skills		Can't do at all	Not very well	Okay	Well	Really Well
Use the internet	n	0	0	2	7	13
	%	0	0	9.1	31.8	59.1
Search the Web using key words (e.g. through a search engine like <a href="http://www.google.com">www.google.com</a> )	n	0	0	2	7	13
	%	0	0	9.1	31.8	59.1
Send an email	n	0	0	1	6	15
	%	0	0	4.5	27.3	68.2
Chat to friends online using a program like MSN Messenger.	N	4	4	1	6	7
	%	18.2	18.2	4.5	27.3	31.8
Maintain a blog (e.g. LiveJournal) or MySpace page	n	8	6	5	3	0
	%	36.4	27.3	22.7	13.6	0
Download music or Podcasts from a site like iTunes or Triple J	n	3	6	8	3	2
	%	13.6	27.3	36.4	13.6	9.1
Playback music on the computer (from CD, MP3)	n	1	1	6	5	9
	%	4.5	4.5	27.3	22.7	40.9
Make a website/homepage from scratch	n	12	6	1	0	2
	%	54.5	27.3	4.5	0	9.1
Develop and participate in an online community	n	10	3	7	2	0
	%	45.5	13.6	31.8	9.1	0
Maintain a relationship with an online community	n	5	3	4	6	4
	%	22.7	13.6	18.2	27.3	18.2

Most respondents were confident using digital cameras, but indicated they might find

manipulating images using programs such as Photoshop difficult.

**Table 10: Service providers' digital photography skills**

Digital Photography Skills						
Take photos with a digital camera	n	1	0	2	5	14
	%	4.5	0	9.1	22.7	63.6
Upload photos from a digital	n	1	2	1	5	13

camera on to a computer	%	4.5	9.1	4.5	22.7	59.1
Edit a photo using a program like Photoshop.	n	2	5	4	4	7
	%	9.1	22.7	18.2	18.2	31.8

While sending multimedia messages proves a challenge for some, almost all were confident sending text messages. Given young people's

confidence with this medium, mobile phone based programs could potentially be used to connect young people and service providers.

**Table 11: Service providers' mobile phone skills**

Mobile Phone Skills		Can't do at all	Not very well	Okay	Well	Really Well
Send a text message (SMS)	n	0	0	1	3	18
	%	0	0	4.5	13.6	81.8
Send a multimedia message (MMS)	n	6	0	1	1	14
	%	27.3	0	4.5	4.5	63.6

The potential for service providers to use ICT or support young peoples ICT use is particularly relevant given young people's confidence in using technology. This study finds that some service providers lack confidence in maintaining or upgrading ICT equipment, providing ICT support

and training to young people and their knowledge regarding the online services young people engage with. This is particular relevance as inadequate or broken equipment can prove to be a barrier to effective service delivery.

**Table 12: Service providers capacity to support young people's ICT use**

Supporting Young People's ICT Use		Can't do at all	Not very well	Okay	Well	Really Well
Understanding of consent issues around filming young people	n	1	2	3	7	8
	%	4.5	9.1	13.6	31.8	36.4
Using ICT to manage client info	n	1	2	4	8	6
	%	4.5	9.1	18.2	36.4	27.3
Maintaining or upgrading ICT equipment	n	5	4	8	3	0
	%	22.7	18.2	36.4	13.6	0
Providing ICT support and training to young people	n	4	4	9	4	0
	%	18.2	18.2	40.9	18.2	0
Knowledge regarding online communities young people frequent	n	2	5	5	8	1
	%	9.1	22.7	22.7	36.4	4.5
Knowledge regarding online support services for young people	n	2	5	4	8	2
	%	9.1	22.7	18.2	36.4	9.1
Develop and participate in online communities of practice	n	2	8	5	5	1
	%	9.1	36.4	22.7	22.7	4.5
Maintain ongoing relationship with online communities of practice	n	2	5	7	5	1
	%	9.1	22.7	31.8	22.7	4.5



## Service providers perceptions of the role of ICT in the lives of young people experiencing marginalisation

Participants expressed a range of opinions regarding the importance of ICT in the lives of their clients. While a number of service providers felt that communicating online and using mobile phones was central to their clients, others felt that their clients were less likely to have access to mobile phones and internet than other young people because of the cost involved.

Feeling pressured by their peer group to utilise technology often placed strain on the young person. In cases where computers had been donated to young people, they became difficult to maintain, as they constantly needed to be upgraded. Furthermore, for many of the clients of an inner city health service, literacy proved to be a major barrier to their use of ICT and they tended not to use the computers provided at the service at all.

### Mobile phones

Service providers felt that of those young people who did have access to mobile phones, they utilised these on a daily basis and was the primary way they communicated with others.

It was acknowledged that young people who were homeless or from a low socio-economic background that did own a mobile phone, often had little available credit, and therefore tended to use the phone to receive calls only. Workers felt this was useful as it meant they could contact the young person, even if the young person could not contact them or return their call.

However, it was felt that not having a mobile phone or access to the internet was a significant barrier to young people seeking employment as it became difficult for prospective employers to contact them.

For some, mobile phones were also a security device. One worker explained that they felt more confident about young people traveling home from

programs on public transport in the evenings when they had mobile phones in their possession.

While many young people only used pre-paid mobile phones, a number of service providers knew young people who had gotten themselves into debt because of their mobile phone usage.

*"I don't know if mobile phones are a good thing or a bad thing. We see many young people with massive phone bills. One person had a \$5000 bill after they were ripped off on a contract. I don't know if they actually understand what's going on. They don't read the fine print. Leads to massive complications."*

### Use of the internet and social networking sites

While interviewees were quick to point out that they did not monitor young people's internet use too closely (to ensure their privacy), they had received feedback to suggest that young people were using social networking sites and email to meet new people or stay in touch with people they no longer see face to face.

They reported that different cultural groups seem to use different sites, for example the Sudanese tended to use Hi5 to network with others. This is consistent with young people's self reporting. It was suggested that for newly arrived and refugee young people, cost was often a barrier to them owning a mobile phone, but they tended to use the computers at the youth centre to access social networking websites.

For young people who experience social isolation, such as young carers, the internet was considered an essential connection to the world around them. One service had established a brokerage fund to provide access to these young people as a way of addressing some of their educational needs and social isolation. As one worker explained:

*"It's an avenue to explore the world they otherwise might not have. In some high dependency care relationships online can be the only type of support these young people have. Talking with teachers they have seen young people's confidence grow with technology. They will often attach clip art and*

*icons attached to messages to emphasise what they are saying. The downside is the impact on their literacy. Teachers report that they often use internet abbreviations in their written work at school."*

By way of illustrating how popular the internet and social networking sites in particular were to the young people she worked with, one social worker told of needing to launch a public appeal to upgrade the service's computers:

*"We have free internet access. We found last year that our computers were not quick enough and soon became outdated. So we put an appeal out to the community, I did an article in the local paper and we were given five new computers and a printer. Our local ISP also donated free access that they have just upgraded because we were using our monthly usage in a week. Typically they're on MSN and chatting and sometimes they're on MSN to each other while they're sitting here, which is bizarre to me, but they love it."*

She also felt that mobile phones played an important role in connecting her clients to one another. The young people she worked with also downloaded content from their mobiles to the computers at the youth centre.

Another interviewee explained that his clients often referenced online conversations when they attended their weekly meetings.

*"It's the way they all communicate. They are always online. They come in and say 'I saw you online on Thursday night...' They all know each other's nicknames. Sometimes they start chatting to each other online and then realise they actually do know each other from the program or in real life."*

## Concerns about young people's ICT use

Some expressed concern over the levels at which they felt young people were reliant on technology. "I think it's sad when you see surveys and kids say they're most prized possession is their mobile phone," said one worker. He went on to say that, they "seem to always need to be in contact through that medium".

Others were concerned about the safety of young people who used the internet to meet people, particularly prospective partners.

*"I get nervous about technology in many senses. The kids are often looking for partners in the same-sex attracted field and they are actually getting into dangerous habits, which could happen without the internet I know that, but they are a very vulnerable bunch of kids and they get themselves into quite dangerous situations. [The internet has] just opened up a new area of more exposure to people who can exploit them."*

Another explained that the very role of social networking sites, which is to encourage people to network, placed young people at risk and raised duty of care concerns for service providers.

*"MySpace you need basic html and they say you should ask other people on MySpace for help, but from my perspective that opens up a whole host of other issues about where duty of care lies and what responsibility do we have for putting young people out there in a social networking environment. What happens if they run into a pedophile? It might not happen, but from my point of view it's a duty of care issue."*

## ICT needs of young people

Service providers reported that it was important for young people to learn how to use computers and the internet to prevent and/or reduce isolation. It was also thought that for those who did have access to technology at home, it was often out of date and that many did not have the same software at home as they did in the school environment (thereby placing them at a disadvantage). For example, many schools use flash, but this software may not be available to them at home to continue their learning.

A constant theme related to internet access and the quality of that access in lower socio-economic areas, this specifically related to dial up, which is insufficient to use most web 2.0 initiatives. This differs strongly from young people's self-report regarding their use of broadband. At one service, providers suggested that because the computers at the service were popular young people must therefore not have access at home. An alternative interpretation may be that young people are using the computers at the service for activities or

information searches they do not feel comfortable doing at home.

## Skills needed to work on ICT based programs with young people

Those interviewed felt there were a number of specific skills required to work on ICT based programs with young people.

These skills included:

- Basic internet skills (e.g. search)
- How to open and manage a webmail account
- Using Microsoft Office products such as Word, PowerPoint and Excel
- Managing client records online

For many service providers, these skills represented a significant challenge. Numerous interviewees reported that their clients were more skilled than they were in utilising ICT, although their completion of the ICT skills audit did not necessarily support this. There was a sense from some interviewees that those working in the human services oriented fields often lacked technical skills.

Service providers felt that having adequate policies and procedures regarding young people's internet and computer use in place was crucial. A number of service providers felt that ensuring young people's safety online was a prerequisite to implementing ICT based programs.

*"Another issue for us is monitoring where kids are going and making sure that whatever they're doing on the computers is in a safe environment. It is almost trying to stay one-step ahead of young people's ability. Often we find young people are on inappropriate sites, but they've got the thing so minimized that we don't know and as soon as you turn your back [it's back on the screen]."*

Almost all interviewees believed that they needed more training in issues relating to ICT.

In addition to ICT based skills, service providers also reported that there a number of personal characteristics and competencies, which related to working with young people that were central to their roles.

Service providers felt that being able to identify the specific needs of different cohorts of young people was incredibly valuable. For example, having the skills to use different techniques such as a narrative approach or art therapy to engage young people was considered advantageous or being aware when planning a program for young carers that they can only attend if respite care is arranged.

## Utilising ICT in practice working with young people

Interviewees described their experience utilising ICT in their work with young people.

Most service providers used email and text messaging to communicate with young people, reporting that it was often more efficient than traditional strategies such as outreach or home visits.

*"[SMS] is a very quick way to have that communication and nine times out of 10 they'll get back to you within half an hour, so it works. So now I tend to text rather than ringing or even doing a home visit and leaving a note."*

One youth worker who worked predominantly with young women exiting the juvenile justice system explained:

*"Often, if a young person's not answering their phone, I'll text them. It is just a lot less confronting. If you don't feel like talking to someone whether it's a worker or your best mate, you can still answer a text message."*

Service providers felt that text messaging a young person was a non-invasive way of making contact. For example, young people attending same-sex attracted support groups are often reluctant to disclose to their parents or friends that they are attending, but SMS allows them to send and receive messages with those service providers without fear of disclosure.

Text messaging was also considered an advantageous communication tool with young

people who do not have English as their first language. Young people, for whom English is a second language often find speaking over the phone or face-to-face contact challenging, but were more confident with SMS. Service providers reported that very few of their clients do not own a mobile phone.

For other service providers though, mobile phones were only of use if they were switched on or had enough credit on them. One worker explained that

she did not leave messages on voicemail because she did not feel that her clients checked it. She felt that this often occurred because they did not have credit on their mobiles.

Others from the same agency reported similar issues when using email:

*“If we have a young person here, we can email them, but a lot of the time I don't think they check it outside of here. In residential care, they can't. They can sometimes access the staff computers if they have got something specific, but it is rare that would happen. Maybe about 50% would have access.”*

Often computers and the internet were used by services conducting employment programs, to support young people to compile a resume and apply for jobs online.

*“With our program (housing) we've done resumes. If they need it to find work, they might come in and we will do a quick resume with them. If they are here and we are chatting about something, we might just have a quick look on the internet. More when you're doing one on one support.”*

Others reported that they often referred young people to various websites for information and advice. However, there were some concerns around online support groups. One interviewee who worked with young carers explained that despite young carers repeatedly requesting online support groups, they considered this risky and too resource intensive.

*“There are a lot of issues around running online support groups (even though young carers want them) for example consent and safety. For a small program, it is beyond our means to tackle these issues.”*

Service providers also articulated some examples of dedicated ICT projects they had undertaken. One recently graduated youth worker reported that during his student placement he worked with Victoria Police and a youth service to support young people to participate in a “scavenger hunt.” Participants were given a list of ‘evidence’ they needed to find as well as a digital camera and they were instructed to venture out into the local community, taking photographs of the evidence they found, before returning to the youth centre

and uploading the photographs to a computer and then presenting to the other groups of young people.

Another agency embarked on a digital storytelling project with young women who were leaving the juvenile justice and/or care systems. To do so, they hired an external facilitator and worked with the young women to help them tell their own stories. Many of the young women reported that they enjoyed this activity and used it as an opportunity to explore how they got to where they were.

Another worker from an inner city health service described how they used Photovoice to identify the health issues affecting their clients.

*“Photovoice has been used by a lot of people around the world to identify issues highlight the issue and raise awareness through photography. We have found it actually works really well. A photo can speak a thousand words. We just use disposable cameras, run courses for young people over a nine-week period, for example, how to take photos that are relevant to them. We originally used it, as a health promotion needs assessment, an avenue for finding out what the needs of young people were. We wanted to know what their health issues were.”*

By contrast, some service providers reported that they were unlikely to incorporate ICT into their work with young people, due to their limited skills.

*“You're looking at the wrong person. I wouldn't even attempt it.”*

*“No. I need to attend [an ICT program] myself.”*

## Barriers to utilising ICT in working with young people

Service providers were asked what they felt the barriers were to being able to run ICT based programs with young people.

The most significant barrier identified by the interviewees was staff skills. Very few staff felt confident enough in their own ICT skills to conduct programs that utilised ICT in its delivery.

*"I think a barrier would be my limited skills. I mean that sounds exciting, but if the kids wanted to do something with a film, I'd have to employ someone else so you know the potential's there, but..."*

The perception that the internet is a dangerous place or that other activities are more productive for young people was raised.

*"A barrier is us wanting to restrict young people's access to the internet. The only time I have spoken to young people in my program about the internet is about meeting people. I think the perception of the people running our units is that it's not a positive thing for these young people to be using the internet."*

Interviewees also reported that many of their clients would not have access to computers or the internet and providing access for the purposes of a program may be challenging.

Interviewees also felt that young people's ICT skills were limited, suggesting it was common for their clients to have limited computer literacy skills with some not knowing how to use a computer at all.

It was suggested that letting a young person know how to utilise a website of interest was often not enough. An interviewee felt that young people "expect you to do it for them" and often would not follow through in accessing a resource online.

A worker at one of the Beanbag centres expressed the view that ICT in itself was a dry topic for young people and that incorporating more creative activities such as theatre, hip-hop or dance was necessary to engage young people in utilising technology.

There was a concern amongst service providers that ICT based programs are expensive to run. However this was challenged by those who had actually engaged young people in this way. Often this was because agencies would hire external facilitators and presenters to run programs, due to their own staff not having skills in these areas. Projects were also considered resource intensive, particularly those involving the production of films or multimedia.

Others however argued that technology such as digital cameras were now a lot cheaper.

*"Previously to do a photographic program you've had to spend hundreds on cameras, now with digital they are always there and they're not as expensive. They are not as cost prohibitive. You don't have to get them developed and they are easy to edit."*

However, having enough equipment to deliver maximum value for young people was a considerable challenge, especially when working with young people who learn best experientially.

*"I'm a big believer in one hand one mouse. There is no point just watching a computer. It's about where the mouse goes."*

It was felt that it would be difficult to demonstrate the need for an ICT based program, while a youth health nurse explained that the need to have a strong evidence base to secure funding was a barrier, particularly given the innovation needed to engage marginalised young people.

The transient nature of young people experiencing marginalisation was a barrier to engaging them in ICT based programs. As one worker who had embarked on a DVD project with homeless young people to explore concepts of public safety and security explained:

*"They have other priorities like eating, having a roof over their head and then someone comes along with this great health promotion project and they say 'are you serious?' Really, in my life now, I could not give two shits about thinking about public safety. More importantly I'm worried about where I'm going to find food, where I can get a job.' That's where it's difficult."*

One worker with considerable experience implementing ICT based programs with young people felt that ensuring content produced by young people was appropriate for public consumption could also become an issue.

It was cautioned that for many young people, who are experiencing marginalisation, use of internet based resources to search for employment or accommodation was going to be of greater interest than more abstract concepts like self-expression.

## Benefits of ICT based programs

Despite many interviewees articulating significant barriers to being able to engage young people using ICT, they were unanimous in their appraisal of these programs, when conducted well, being of great value to young people.

It was felt that providing young people with exposure to ICT was particularly important given the prevalence of this technology in society. In particular, interviewees highlighted the importance of ICT skills as a pre-requisite for gaining employment in a wide range of roles. For young people who are disengaged from formal education and training, the role of youth services in providing opportunities to develop these skills cannot be under-estimated.

*“One of the big things is that they can get back in to education or work. IT is bounding away; it is becoming so central to life. They need those experiences otherwise; they are at a huge disadvantage. I work with 16 to 25 year olds. Their working life is another 30 to 40 years so they must get into it somehow.”*

There was an acknowledgement that communicating with others online could provide young people with a sense of connectedness. Many services used the internet to let young people know about upcoming events, while others reported that having a website or page on a social networking site made it much easier for young people to find them.

For one same-sex attracted support group, setting up a MySpace page with a weekly blog was an important way of keeping young people engaged with the group. To preserve young people's anonymity, only members of the group could visit the site. Young people who are not able to attend the weekly meeting can keep in touch with the group's activities through the blog and a video of the group at the Pride March was available for those who were unable to attend. The MySpace page also became an important way for the group facilitator (who also has a profile) to keep track of how the group were feeling:

*“We had a young guy who hadn't been to the group for seven weeks and I was really concerned about him. So I checked his blog,*

*he has really fallen in a hole. His blogs were about not being able to leave the home and experiencing depression. Even though he wasn't physically coming in, I could still communicate with him and see where he was at.”*

The role of ICT based programs such as film or photography projects in 'giving young people a voice' was also considered a possible benefit. Those who cited this drew a connection between young people having a voice and feeling like a valued member of the community. It was suggested that ICT could provide opportunities for young people to think differently about what is important to them.

*“Being heard is really important and it builds confidence in something that is important to them.”*

*“It's an avenue for them to voice what the issues are for them and it's a meaningful way of doing that.”*

It was also suggested that ICT was a non-threatening way for young people to access the information they need:

*“They can also get a lot more information and be educated a lot more quickly and it's hard for young people to always go into places and ask questions. If you are on a computer, you really are asking yourself the question and seeing where the answer is in the web. It means they can find the information they need. Young people might be asking questions that open up an aspect of their life they don't really want to talk about.”*

This form of help seeking was considered particularly beneficial for young carers for whom time was often a constraint.

*“For a lot of young people who care for someone in their family, it's takes forever to go to the library to find a book for an assignment, so if they can do it at home, whatever time of day it suits them it's much better.”*

## Ensuring programs are respectful of diversity

Interviewees provided a range of examples as to how they ensured that their programs and

services, ICT based or otherwise, were accessible for a broad range of young people. These strategies included:

- Programs that showcased young people's talents to the community: one of the Beanbag Centres used a film produced by refugee young people to challenge community perceptions of what it meant to be a refugee.
- Single gender groups.
- Ensuring that food provided for young people is culturally appropriate. This may include providing Halal, Kosher or vegetarian options. Also, ensuring that events held during Ramadan or other cultural festivals adhere to cultural conventions.
- Appointing staff, mentors and volunteers from a range of cultural or religious backgrounds, genders and sexual orientations.
- Being aware that young people who are same-sex attracted may not wish to identify themselves publicly.
- Being aware that not all young people may identify as male or female. Ensuring that young people of diverse gender expression feel welcome.

It was acknowledged that while it is important to be conscious of the needs of specific groups of young people, approaching each young person as an individual, listening to them and working with them to meet their needs is crucial.



# Discussion

## Methodological limitations: Challenges of conducting focus groups within youth services

When considering the findings from this study it is important to consider the methodological limitations. While a majority of focus groups were well attended and ran smoothly, the researchers experienced some challenges resulting from holding the focus groups in host organisations.

In a handful of cases, service providers found it difficult to understand the meaning of 'research' and to convey this to their clients. In these cases young people felt they were coming to the centre to be part of a 'meeting' or to complete a survey, despite it being communicated in writing and verbally that participants would be part of a focus group discussion, with a brief written questionnaire.

In a small number of locations, service providers acted as gatekeepers and on first enquiry told the researchers that their clients 'wouldn't be into that kinda of thing' or that the young people 'would struggle to be involved for more than twenty minutes.' Contrary to this, it was found in all but one location young people were interested and able to engage in a focus group setting.

Indigenous communities generally do not individualise their focus on children and young people, but see them as members of their family and community (Secretariat of National Aboriginal and Islander Child Care, 2004). This was evident when approaching Indigenous organisations to host focus groups and the researchers had to be particularly clear about the target group of the study.

## Implications of study findings for working with young people

This study found that ICT plays a much greater role in the lives of young people experiencing social, cultural and economic marginalisation than previously thought. Most young people who participated in this study have access to the internet, with over half accessing it at least a few times a week. Almost half of those who had access to the internet used a broadband connection.

Overall, the young people involved in this study felt that their ICT skills were of a high standard, indicating that they could perform specific tasks 'really well.' Many have access to an email account, although some struggled to maintain these as they had difficulty remembering passwords.

They reported that their favorite websites included search engines, social networking websites and Wikipedia, indicating that ICT plays a role in young people communicating with others as well as seeking to understand the world around them.

This research suggests that ICT does play a role in young people's identity formation. For many, mobile phones, email, instant messaging and social networking websites mediate their contact with the world and those who live in it, and have an impact on how they see themselves. Some young people reported that the internet provided another avenue for gossip to spread, and spoke of the impact this had on how they felt about themselves.

Young people who are same-sex attracted or questioning their sexuality, experiencing social isolation and/or mental health difficulties will often use web-based resources to find out about the experiences of others. Young people may also use the internet to mediate the world around them, with some using the internet as an outlet to express

themselves, channelling energy into their social networking websites or chatting to others online. Others, feeling like they have few friends in the face to face environment, use the internet to meet new friends or partners, building their confidence and self esteem.

For young people with disabilities, the internet was an important resource as they sought to understand their disability better.

ICT also plays an important role in facilitating young people's social relationships. Young people use text messaging, online instant messaging, email and social networking sites to maintain relationships with friends, as well as significant adults.

This study found cultural differences in the social networking sites that young people used to communicate with others, perhaps signalling that there may be other cultural differences in the ways that young people use ICT. Most notably, Indigenous young people frequented the Bebo site, whereas young people from newly arrived and refugee backgrounds used a site called Hi5. This has particular implications for utilising these sites as a tool in youth service delivery. For example, in designing an ICT based program for Indigenous young people, it would be advantageous to utilise Bebo, rather than other social networking sites. This is also of relevance to organisations that use social networking sites to promote their face to face services to young people. For example having a Myspace page may not necessarily reach young people at risk of marginalisation.

This is not to say that utilising these sites should be the sole tool to engage with young people. For many young people online interaction supplements face to face interaction. In one focus group, participants exhibited concern that only interacting online could have an adverse effect on their social interactions face to face.

Focus group participants displayed sophisticated understandings of the risks of online interaction. Many had developed their own strategies for staying safe online, including not disclosing personal information and ensuring that if they planned to meet someone face to face that they had previously met online, that they took a friend with them and let people know where they were going.

## **Organisational capacity of youth and related services to utilise ICT to promote social connectedness and civic engagement**

This study suggests that ICT does indeed play an important role in the lives of young people who are marginalised. In contrast to this, a number of the professionals surveyed felt that their clients often did not utilise ICT in the same ways that other young people might. There was a sense from service providers that due to economic factors, many of their clients were unable to afford access to the internet and mobile phones and for many finding safe and secure housing, employment, education and health took priority. There is a significant need to close the gap between service providers' understanding of young people's use of ICT and the reality of young people's experience. There is both interest and a need to develop training for professionals in this area.

There was a sense of concern from some of the professionals surveyed that the internet and related technologies still represents the unknown and that it is a potentially risky environment for young people. For those few agencies that had moved beyond this conceptualisation of the internet and had embarked on ICT based programs with young people, the benefits appeared to far outweigh these risks. In particular, service providers felt that young people stood to benefit in terms of educational and employment outcomes by developing computer and internet skills, and that these would be transferable to the workforce. It is for this reason that continued evaluation of ICT based programs for young people considering the impact they have on social inclusion and civic engagement is crucial.

The potential for internet based tools such as social networking websites to connect young people to services outside of weekly meeting times or regular appointments was also highlighted, but again service providers confidence and the difficulty in convincing their organisations of the merit are barriers.

What emerged from speaking with the professionals surveyed is that more work needs to be done to build the capacity of the youth sector to better understand the role that ICT plays in the lives of young people, as well as build their capacity to utilise these technologies in their work with young people. Professional development is needed to ensure that service providers feel confident in their own use of ICT, as well as engaging young people around their use of technology.

Service providers are often time poor so innovative ways of providing opportunities for them to develop this capacity is needed. Some agencies reported that their clients were more skilled in this area than they were, and it could be argued that perhaps young people are best placed to develop and deliver this training.

This research supports the continuation of the Bridging the Digital Divide project in the following ways. Firstly, there is growing evidence to suggest that ICT plays an emerging and important role in the delivery of mental health promotion programs. Secondly, it demonstrates that young people experiencing marginalisation do, in fact, have access to and engage with ICT. While the quality of access available to these young people is often limited, this alone should not deter services from utilising technology in their service delivery. Finally, it supports the development of a program that works not only with young people to promote social inclusion and civic engagement, but with professionals in order to ensure that these service providers have the capacity to utilise ICT in their practice on an ongoing basis.

# Glossary of Terms

## **Information Communication Technology (ICT)**

ICT is an umbrella term used to describe information technology (IT) (such as computer hardware and software) and telecommunications (including the internet and mobile and landline phones). While the exact definition is subject to debate, some practitioners in the arts sector also use this term to describe creative technologies such as digital photography, music and film making equipment.

## **Social networking sites (e.g. MySpace.com, Facebook.com, Bebo.com)**

As the name suggests, these focus on building online social networks for communities of people who share interests and activities. Often social networking websites contain directories of some categories (such as classmates), means to connect with friends (usually with self-description pages), and recommender systems (allowing users to search for others with similar interests).

Generally, social networking websites such as MySpace, Facebook and Bebo, allow users to create a profile for themselves. Users can upload a photo and become "friends" with other users. In most cases, both users must confirm that they are friends before they are linked. Some social networking sites also have a "favourites" feature that does not need approval from the other user that displays a list of 'top friends' on the user's profile page. Social networks usually have privacy controls that allow the user to choose who can view their profile or contact them. Additionally, users can create or join groups around common interests or affiliations, upload videos, and hold discussions in forums.

## **Wiki's e.g. [www.wikipedia.org](http://www.wikipedia.org)**

Wikis are collaborative 'social writing' software that allow users to add content that can later be edited by anybody else. Wikis can be used for sharing knowledge and/or running community projects.

## **Podcasting and streaming video services (vodcasting)**

Podcasts are time and location independent digital files (for example radio or TV shows that are available for download). These can be downloaded on an ad-hoc basis or, users can subscribe to regular podcasts and use free software to download them automatically. Users generally transfer podcasts to a portable device like an Apple iPod or MP3/MP4 player for later playback (or listen to/watch them on any laptop or desktop computer with media software such as Windows Media Player).

## **Social bookmarking, collaborative tagging and tag clouds**

Social bookmarking involves categorising resources by informally assigned, user-defined keywords, known as tags'. Social bookmarking services enable users to collect and annotate (tag) their favourite web links in an online, open environment, so that they can be shared with others.

## **RSS feeds and information aggregation**

RSS (Really Simple Syndication or Rich Site Summary) are sets of content distribution and republication protocols generally used by news sites and blogs to announce recent additions of content/updates. Users subscribe to the feeds using an RSS aggregator (the latest versions of Windows internet Explorer and Mozilla Firefox have inbuilt RSS aggregators). RSS aggregators 'crawl' the corresponding sites on a regular basis, displays the feeds and enables users to access related web pages or content.

## **Web 2.0**

The term 'web 2.0' is used to describe the second incarnation of the World Wide Web. Web 2.0 is also called 'social Web' since it is characterized by new applications that enable online activities and user-generated content that was not previously possible. Interestingly, Web 2.0 has been likened to the original purpose of the internet - to share ideas and promote discussion within a scientific

community. Web 2.0 has also increased online social interaction through the emergence of wikis, blogs and podcasts. It has been described as a more human approach to interactivity online as it better supports group interaction and is particularly effective in mobilizing online communities

#### **Virtual worlds (e.g. SecondLife and Habbo Hotel)**

These are online simulated environments that allow users to interact via avatars. **Avatars** are 'web based representations' of a user that generally take the form of 2D or 3D graphical characters that users can customise. 'Virtual worlds' are often based on the 'real world' and generally combine the concept of chat rooms and 'massively multiplayer online games' (see below). Some virtual worlds require users to download and install software whereas others can be accessed from within an internet Browser.

#### **Online games and MMOGs (massively multiplayer online games)**

Massively multiplayer online game (also called MMOG or simply MMO) is a computer game which is capable of supporting hundreds or thousands of players simultaneously. By necessity, they are played on the internet, and feature at least one persistent world. Some argue that small player-count games, with 200 and fewer players, are also part of the genre; the persistent world is probably the only "hard" requirement.

#### **Media sharing websites (e.g. YouTube.com and Flickr.com)**

YouTube is a video sharing website where users can upload, view and share video clips. Similarly, Flickr is a photo sharing website that allows users to share personal photographs. Both of these websites incorporate 'tagging' technology. Tags are essentially descriptive key words (or metadata) which users assign to media. This allows media to be categorised (and browsed) into what's called 'folksonomies'.

#### **Blogs (e.g. LiveJournal.com)**

Blogs are websites that are much like diaries or journals in which the blog owner regularly posts entries. The word "blog" can also be used as a verb, meaning "to maintain or add content to". Some blogs provide commentary or news on a particular subject; others function as personal online diaries. They often combine text, images, and links to other blogs, web pages, or online

media. Many also have the ability for readers to leave comments. While most blogs are primarily text based, there are emerging trends toward photo-blogging, video-blogging (vlogs), and audio (podcasting). Micro-blogging is also gaining popularity. This involves blogs with very short posts (often entered from mobile phones).

#### **Instant messaging (IM e.g. MSN Messenger)**

Instant messaging (IM) is a form of real-time communication between two or more people based on typed text (although some applications support communicating through web cams and/or voice over internet). Earlier forms of IM often involved users logging on to web based chat rooms and the use of IRC (internet Relay Chat) software. Although some young people still use these, the use of IM software such as MSN Messenger appears to be most popular. MSN Messenger requires users to register an account (in which they give themselves an alias or 'handle') as well as the installation of free software. Most IM applications allow the user to set an *online status* or *away message* so peers are notified when the user is available, busy, or away from the computer. Instant messages are typically logged in a local message history, thus allowing conversations to be saved for later reference. Additionally, users can often adjust privacy settings and 'block' other users from being able to message them.

#### **Peer to Peer (P2P) Downloading Software (e.g. Limewire, BitTorrent)**

P2P programs such as Limewire and BitTorrent allow users to share and download files. Most commonly these are used to download music and videos, but can also be used to download software. Most P2P software require users to agree to a terms of use at the time of installation that includes acknowledging and adhering to copyright infringement laws.

#### **Digital Storytelling**

Digital storytelling is a relatively new practice in which individuals tell their own stories (often about life experiences) using 'moving' images and sound. Digital stories are usually short (2-5 minutes) and often consist of a narrated piece of personal writing, a soundtrack, photos, still images, and/or video footage. They are produced using simple software (that often comes standard with most computers) such as Windows Movie Maker or iMovie, and therefore enable individuals who may not have a technical background to produce creative works. These kinds of software

are capable of animating still images and photos to add movement and depth.

*The above definitions were informed by:*

Boulos, K & Wheelert, S 2007, 'The emerging Web 2.0 social software: an enabling suite of sociable technologies in health and health care education', *Health Information and Libraries Journal*, vol. 24, no. 1, pp. 2-23.

Giustini, D 2007, 'How web 2.0 is changing medicine', *BMJ*, vol. 333, no. 7582, pp. 1283-1284

(No Author) 2007, 'Web 2.0 Communication Tools', *Journal of Visual Communication in Medicine*, vol. 30, no. 1, pp. 30 – 31

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