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Simon: It's almost like the Internet – I've always been on it in a way.

JF: Yeah.

Simon: I don't really know when I first started.

Helen: I have no idea.

(Simon, Male, 15yrs; Helen, Female, 13yrs; Focus Group 1 [see Chapter 2])

# Chapter 1. Introduction

The Internet,[1] and the cyberspace[2] it provides access to, has existed for as long as these young people can remember. For them, cyberspace provides opportunities for knowledge gain, sociability, entertainment, and cognitive and emotional development. Equally, as with other developmental settings, cyberspace also presents challenges to their safety and wellbeing. The thesis aims to explore the place of cyberspace in the lives of a range of young people[3] in Aotearoa/New Zealand (NZ), assessing in particular how they experience and manage the challenges of this developmental setting.

To achieve these aims, the thesis will draw on a range of approaches from psychology, however a community psychology framework will be used to organise, understand, and investigate this topic. This chapter will begin by discussing these psychological perspectives, including the fact that community psychology advocates, among other things, broad assessment and understanding of the contexts of human behaviour and wellbeing. A complex interplay of biological, cognitive, and social development during the teenage years forms the bedrock for understanding behaviour and wellbeing within these contexts. The following section of this chapter will examine the biological, cognitive, and social development of young people during adolescence, and explore how media interacts with these aspects of development. For the purposes of the thesis, media refers to the tools, artefacts, and devices used to store and deliver the information that makes up its messages.

Having demonstrated the significance of media in young people's developmental contexts, the next part of the chapter will explore how '*new media*' innovations may then change such contexts. These sections will introduce the concept of new media and trace the history and genesis of the current new media developmental setting. Departing from the psychological literature, this part of the chapter draws from history, sociology, and media

[1] A network, hosted by globally distributed, interconnected computers (see Section 1.5.1). The Internet hosts the World Wide Web (see Section 1.5.2).

[2] Cyberspace, originally coined in a science fiction novel by William Gibson (1986), can be understood as the environment, or space (see L. Green, 2001), produced by people's interaction with converged information and communication technology (ICT) like the Internet, telephone networks, and mobile phones. Such interaction includes the use of computer mediated communication (CMC) to manifest "words, human relationships, data, wealth, and power" (Rheingold, 1993, p. 5)

[3] While the term "young people" can apply to various younger age groups, for the purposes of the thesis, this refers to people aged between 12 and 19 years of age. "Children" refers to young people less than 12 years of age.

theory, to survey some of the new media evolutions associated with, and produced by, cyberspace. The next part of the chapter will describe the evolution of a new media environment characterised by interactivity. Beginning with the development of the Internet, and solidified by the invention of the World Wide Web and early mobile phone networks, cyberspace will be shown to have become a developmental context for a sizable number of young people by the early years of the new millennium. This section will also introduce the fact that this environment produced a range of challenges, which often resulted in protectionist responses that sought to restrict young people's access to content and technology.

The chapter will then trace how the media environment of cyberspace changed again. With the increasing phenomenon of convergence and the technological innovation and diffusion that accompanied it, the second iteration of the World Wide Web, Web 2.0, will be shown to be associated with an explosion in young people's potential access, activity and interactivity, in cyberspace. The by now burgeoning access to the Internet, combined with the advent of Web 2.0, with its host of new activities, contents, and interactions, will be shown to have changed the technological landscape to produce a further new media developmental setting for young people. The next section of the chapter will trace how this new developmental setting was hypothesised to be associated with a range of opportunities, including its ability to facilitate identity development and social connection, civic engagement and participation, creativity, as well as education, learning and cognitive skill development. However, the next part of the chapter will explore how this new developmental context also produced challenges to young people's wellbeing.

The following section of the chapter will then detail the specific research objectives of the thesis and outline the methodology used to achieve these objectives. Having summarised the significance of this new developmental setting, the chapter will end with a description of the ensuing chapters and form of the thesis. The thesis will demonstrate that this new setting is a significant site of development, challenge, resilience, and ensuing opportunity, for a range of young people in NZ.

## 1.1. The Approach

The thesis draws on many theoretical and methodological approaches from psychology, including aspects of:

- Social psychology; which focuses on how other people, as well as cultural norms and attitudes, affect individual behaviours, thoughts, feelings and attitudes (e.g., as articulated by Allport, 1985).
- Health psychology; which utilises biopsychosocial approaches to understand behaviour (e.g., as introduced by Engel, 1977).
- Public health psychology; which advocates public policy level interventions to affect behaviour (e.g., as summarised by Marks et al., 2005).
- Developmental psychology; which explores the influences of human development on behaviour and vice versa (i.e., as chronicled by Dixon & Lerner, 1992).
- Media psychology; which explicitly explores the influences of media on behaviour and vice versa (i.e., as introduced by Giles, 2003).

However, the overarching approach this project most heavily draws from is community psychology.

### 1.1.1. Community psychology

> Community: (...) a social group sharing common characteristics or interests and perceived or perceiving itself as distinct in some respect from the larger society within which it exists (usually preceded by the) (Webster's Unabridged Dictionary, 1997, p. 414).

The approaches, methodologies, ideologies, and targets, of community psychology action are many (see Rappaport & Seidman, 2000, for an overview) and are often under debate (e.g., see Fryer, McKenna, & Hamerton's, 2000, and Rappaport's, 2000, responses to Prilleltensky and Nelson, 2000). Perhaps for these reasons some authors (Nelson & Prilleltensky, 2005; Seedat, Duncan, & Lazarus, 2001), including the contemporary founder of community psychology, Julian Rappaport (1977), have struggled to produce a "satisfactory" (p. 2) definition of community psychology. The difficulty of definition may stem from the fact that, according to Rappaport (1977), and as noted nearly 30 years later by Nelson and Prilleltensky (2005), the common theme of community psychology is, paradoxically, one of evolution and change itself:

> This theme is actually a perspective rather than a formal theory or a definition of community psychology, and its predominant characteristic is that of a search for new paradigms, for new ways of understanding and of doing (Rappaport, 1977, p. 2).

Despite its dynamic nature, Rappaport (1977) nonetheless went on to clarify other key themes of community psychology, all of which are mentioned in contemporary definitions of community psychology (e.g., Nelson & Prilleltensky, 2005; Seedat et al., 2001). These themes included an ecological analysis (as hypothesised by Bronfenbrenner, 1979) of the relationship (fit) between people's behaviour and the multiple aspects (ecology) of their environments; the theme of valuing individual diversity in the face of community-level analyses that could inadvertently prescribe singular, and therefore oppressive, ways of being in the world; and relatedly, a theme of social justice as achieved through participatory social change by community psychologists. In arguing for an ecological perspective, Rappaport (1977) claimed:

> ...an ecological perspective, focussing on the match or "fit" between persons and environments, rather than on "fixing up" those who are seen as inferior, or trying to make all people the same by controlling their environments, is the most sensible perspective for a psychology of the community (p. 3).

At the heart of ecological and contextual approaches to psychology is the "...strong belief that people cannot be understood apart from their context" (Nelson & Prilleltensky, 2005, p. 5). Nelson and Prilleltensky argued that ecological approaches enable analysis and intervention to focus on a range of levels, including societal levels (thus enabling social change), rather than solely at the level of the individual, which can produce victim-blaming discourses. A contextual view also enables community psychology to focus on individual and community level strengths and resources.

Community psychology positions the building of strengths, competence, and wellbeing, as key facets of a psychology approach (Nelson & Prilleltensky; Rappaport, 1977). In line with competence and strengths-based approaches, Cicchetti and colleagues' (2000) book canvassed a range of work to highlight that community psychology emphasises early problem intervention and prevention approaches. Wolff (2000) drew on practitioners' own experiences "in the field" to demonstrate that community psychology also describes the practices of community psychologists to support the development of such strengths and competencies in partnership with communities.

To summarise, the methodological influences of community psychology on this project resulted in a focus on:

- Understanding the contexts in which behaviours are produced and enacted for young people online and on mobile.
- Exploring how this new developmental context may affect young people's wellness.
- Spotlighting young people's competence, resiliency, and protective strategies online and on mobile.
- Hypothesising how these competencies may be utilised by primary prevention and health promotion interventions.
- Working with, and within, a community-based organisation (NetSafe)[4] throughout the research.

While community psychology framed the approach to the current work, the thesis did not focus on local implications for the participating communities in the research, as the thesis was not designed to focus at the local level. Instead, the thesis focussed on larger scale and more generalisable findings, to assess implications for a range of communities in NZ (including the communities from which such findings were produced).

In line with the contextual approach that characterises community psychology, the chapter will now briefly summarise the complex interplay of biological, cognitive, and psychological development that occurs during the teenage years. This section will also spotlight how media interacts with these biopsychosocial changes to become a significant aspect in young people's developmental contexts.

## 1.2. Changing Bodies, Changing Minds, Changing Worlds—Themes of Development

> Indeed, if a visitor from another planet were to peruse the recent [adolescence research] literature, he or she would likely conclude that teenagers' lives revolve around three things: parents, problems, and hormones. We suspect that this characterization is only partially true. (Steinberg & Morris, 2001, pp. 84-85)

Steinberg and Morris (2001) are not the only reviewers to highlight problems with the adolescent development research. Gosawmi's (2008) review for the *Byron Report*[5] (Byron, 2007) demonstrates that rigid prescriptions about ages and stages of development are now not seen as accurately descriptive of the full range of human development experiences. Burman's (2008) critique of the literature calls attention to the unspoken place and influence of culture and values within much of the adolescent development literature.

Noting these limitations, this part of the chapter will explore how adolescent development theory can be applied to understand the place of media, and cyberspace particularly, within adolescent development. Noting the criticisms above, this review seeks to include positive development literature where possible. Additionally, as these findings are mainly based on data from wealthy, and often Anglophone, 'developed' nations, their validity is then very much tied to contemporary developed nation contexts. However, while respecting that every

[4] NetSafe promotes digital citizenship and cybersafety by educating and supporting individuals, organisations, and industry, on a range of cybersafety issues. NetSafe, a multistakeholder group, focuses on a range of interventions, including systemic level interventions, to promote better outcomes for [young] people in cyberspace.

[5] The British Government commissioned Consultant Clinical Psychologist Tanya Byron to assess how children and young people in the United Kingdom (UK) may be harmed by cyberspace and computer games.

teenager is unique and the exact timings of these features of adolescent development vary across individuals, in developed nations like NZ, the transition period of adolescence from childhood dependence to autonomous adulthood, involves some common developmental themes. This review will explore these themes by noting how aspects of biological, cognitive, and social development, during adolescence, produce opportunities for media and cyberspace to play a significant role in adolescent development.

### 1.2.1. Biological development

Physical development during adolescence centres on the transition of child bodies to adult bodies. This period is marked by relatively strong growth spurts in body size and function, including puberty and brain development. Puberty begins with a surge in hormone production that leads to rapid growth, organ development, secondary sexual characteristics, and sexual maturation. Susman and Dorn (2009) have recently reviewed the puberty literature and have drawn on Tanner's extensive earlier work (e.g., Marshall & Tanner, 1969, 1970; Tanner, 1962) to highlight that these sexual changes include the development and maturation of the sexual organs, pubic hair for boys and girls, breast and hip enlargement, and menarche, in girls, and spermarche, facial and body hair, muscle-bulk, the decent of the Adams Apple, and voice changes, in boys.

These physical changes, particularly those associated with sexual maturation, may affect young people's media choices so that sexual media is more attractive at this time. Media that provides information or comparison on bodily changes and sexuality may also be sought during puberty. Buckingham's (2004) qualitative UK research and Sutton, Brown, Wilson, and Klein's (2002) USA survey research, with young people, confirmed that media plays a major role in the transmission of sexual knowledge to young people in these nations.

Romeo (2003) reviewed the neuroendocrinological evidence to conclude that the changes in hormones at puberty are also likely to affect neural development. Following an experiment on voluntary response suppression (i.e., the ability to ignore distracting stimuli in an experimental situation), Luna and colleagues' (2004) results with young people also indicated that the brain continues to develop during adolescence.[6]. Luna and colleagues' findings went further to support the hypothesis that adolescent brain development involves the thinning of redundant neural connections (the *grey matter*) and increasing myelin (the *white matter* that enhances neural signal transmission), resulting in improved brain functioning.

Blakemore's (2008) review, *The Social Brain of Adolescence*, revealed that the frontal cortex and prefrontal cortex of the brain undergo significant development during adolescence. Miller and Cohen's (2001) neuroscientific review concluded that the frontal cortex and prefrontal cortex were heavily involved in planning, reasoning, and decision making. Together, these reviews, along with Luna and colleagues' (2004) results, indicate that compared to children, young people in adolescence continue to show brain changes that are associated with significantly improved motor, sensory, attention, concentration, and [working] memory abilities. The development of increased brain function and concentration at this time may result in a desire for more complex media requiring the use of longer-attention spans, working memory, or better motor control (e.g., longer media episodes, more complex plot-lines, dexterous computer games, etc.). This brain development underpins

[6] Kuhn (2009) stresses however, that biological brain development happens in conjunction with experience. Experience and brain development interact with each other to produce new experiences and new brain development: "Sufficient amounts and kinds of experience are necessary for anticipated neurological developments to occur. These developments in turn create potentialities for new kinds of experiences" (p. 154).

the ability for young people to increasingly multitask, including the ability to consume more than one form of media at a time.

Brain research conducted by Galvan et al. (2006) focused on mesolimbic structural development during adolescence. The mesolimbic structures sit in the lower sections of the brain and interact with the cortex layer. Galvan and colleagues examined the development of the nucleus accumbens (NAcc) of this sub-cortical area during adolescence. During adolescent development, activity in this area increases. Increased activity in the NAcc, dubbed the "reward network" of the brain (e.g., see Johnson, 2008), has been associated with increased belief of reward following a “risky” decision. As such, this activity is also associated with risk-taking and addiction (Galvan et al., 2006).

Galvan and colleagues (2006) demonstrated that during this time, this increased subcortical activity hinders adolescents' ability to consistently make accurate decisions. Specifically, the activity in this area makes it difficult for young people to make decisions, which rely on a realistic assessment of the likelihood of reward versus the potential for risk. In other words, the maturing pre-frontal cortex (responsible for planning and reasoning, and therefore inhibition of risky activity) of the adolescent brain "...is ‘hijacked’ by an impulsive subcortical system, which might render it unable to appropriately modulate decisions in the context of future consequences (Bechara, 2005)" (Galvan et al., p. 6891).

This aspect of biological development during adolescence may mean that young people may make more impulsive decisions about media use than they would have previously (or later, once they are adults). For instance, this factor could play a role in young people's consumption of media that increases fear and distress levels (e.g., horror films or visiting torture websites); their posting of inappropriate information (assuming that the risks from doing so are lower than they previously would have thought); or the consumption of media at the expense of sleep or [home]work time.

#### 1.2.2. Cognitive development

The brain development described above sets the stage for changes in adolescents' thinking and minds, producing further cognitive development. The increasing reasoning, planning, working memory, and processing abilities of adolescent brains support the development of further cognitive processes. As teenagers age and develop, these biological changes support the critical cognitive skill of abstraction. Abstraction is the ability to abstract ideas away from concrete structures in the world and subject them to theoretical manipulation (e.g., to draw theoretical parallels between concepts without being distracted by the concrete details of the situations).

By late adolescence, capacity for abstract thought approaches adult levels (though Kuhn's 2009 review of the adolescent thinking literature pointed out that not all adults are able to use these abilities all of the time). Abstract thought, enhanced by the brain's increasing ability for reasoning, attention, and working memory, enables young people to think hypothetically about various courses of action, the future, and various perspectives on the same topic (Kuhn). This development can foster research, experimentation, rule- and limit-testing, development of ideals, and the selection of alternative role models. Brown's (2000) review and analysis of ethnographic research with American young people, and Fenaughty and Harre's (2003) interviews with young gay and bisexual NZ men, demonstrated that media intersects with this aspect of development by providing various perspectives on the world, as well as additional role models for young people.

Cognitive development in later adolescence is marked by continued improvements in cognition, and, importantly, as Kuhn (2009) noted, by the maturation of metacognitive ability. Metacognition, thought of as knowledge about knowledge, refers to the abilities to reflect on knowledge and evaluate the source, partiality, and efficacy of specific pieces of information for the decisions at hand (Kuhn). From her review of the field, Gosawmi (2008) argued that the development of metacognition could enable truth-claims to become less about what is black and white, or right and wrong, and more about what is relatively more accurate and valid given the information, and the source of the information at hand.

Metacognitive abilities also interact with working memory and moral development to enable evaluation of previously held (or handed-down) moral ideas. In his textbook on adolescent development, Muuss (1988) suggested that these cognitive developments may see further changes in adolescent ideological development (including the rejection or softening of previously held, or recently adopted, ideologies). Cognitive development during this period enables young people to form complex decisions about their worlds. These decisions require information, and in addition to role models, media can also provide 'facts', perspectives and cultural information about the world. In this way media plays a role in this aspect of cognitive development by providing the content and motivations for the development of ideas and subsequent ideological changes.

### 1.2.3. Social development

Social development both builds on, and interacts with, the biological and cognitive changes of adolescence. As noted, cognitive changes, like abstract thought and metacognition, enable young people to study and evaluate their decisions, thought processes, and personality. In 1967, Elkind drew upon the sparse literature at the time to argue that the increased cognitive abilities of adolescence enabled young people to begin to conceptualise the thoughts of others. The conscious realisation that other people may hold different points of view to the individual represents, in some ways, the beginning process of individuation. In this sense, individuation is equal to what has been hypothesised as a critical task of adolescent development: identity formation (Elkind; Erikson, 1968; Steinberg & Morris, 2001).

In his review of the identity development literature, Lapsley (1993) argued that the development of a mature personal identity requires that adolescents separate and individuate from their primary supports (e.g., family members) and develop their own sense of self. Improved cognitive ability and moral development provide the foundation for these changes, where the handed-down rules of the world can be viewed as one perspective of many. With the recognition (aided by media) that there are many perspectives and many ways to view the world, a singular world view is challenged and the world becomes infinitely more complex and varied.

Realising that parents and caregivers are not always right and that there are other ways of reading and managing the world, adolescents may seek their own ways to manage problems rather than relying on caregivers. This reflects the developing independence that is another hallmark of adolescent development in individualistic developed nations. In their extensive review of media and young people, Roberts, Henriksen, and Foehr[7] (2009) drew empirical findings and theories together to note that media is often used by young people to obtain information about numerous aspects of the world, instead of caregiver advice:

[7] The thesis synthesises a significant and diverse body of scholarship, much of which has already been well reviewed individually. Key reviews include Roberts, Rideout, and Foehr's (2009) recent chapter "Adolescence, Adolescents, and Media" which features strongly in the first section of this current thesis chapter. Additionally, Jenkins, Clinton, Purushotma,

"As youth construct their identity, they may use media to relieve anxiety about developmental changes, explore alternative solutions to problems, reinforce the choices they make, or perhaps most important, reflect on who they are and who they may become" (Roberts et al., 2009, p. 324).

Elkind (1967) argued that as young people continued to develop their independence, and reflected on their identity, they would increasingly focus on themselves. Elkind's hypothesised concept of adolescent egocentrism has been used widely in the literature to understand this aspect of adolescent development. Drawing on Piaget's theories of cognitive development, Elkind argued that adolescent egocentrism is characterised by adolescents' focus on themselves as playing a central part in the (their) world. Vartanian (2000) reviewed the literature surrounding the mechanisms and basis of this egocentrism, revealing that this field is staunchly contested. However, her review nonetheless highlighted that adolescent egocentrism is a significant feature of adolescent development.

Lapsley's (1993) review concluded that egocentrism supports the developing adolescent as they establish their personal identity and become independent from their families. Lapsley suggested that adolescent egocentrism is a response to this task of identity development. O'Connor (1995) agreed with this hypothesis, and drew from theory and empirical data on adolescent egocentrism to argue that egocentrism results from concerns (e.g., Who am I? What will I do with my life? Am I normal? How well do I fit in?) associated with identity becoming so important to the adolescent. Furthermore, adolescents feel, as important as these concerns are to them, they must be equally important to everyone else around them:

> Adolescents may therefore become self-conscious in social situations because of their own personal concern with who they are, and because they assume that others will be surveying them closely for signs of individuality, since budding individuality is expected at this time of life. The self-concerns and social demands of the identity development process may lead adolescents to confuse their own concerns with the concerns of others. (O'Connor, 1995, p. 207)

The concept of adolescent egocentrism invites consideration of Elkind's (1967) concept of the *invisible audience*. The invisible audience concept refers to young people's feelings that they are constantly being surveyed by others. The invisible audience is hypothesised to explain young people's concern with what other people apparently think of them. Elkind suggested that much adolescent behaviour and "faddish dress" was "...probably provoked, partially in any case, by a failure to differentiate between what the young person believes to be attractive and what others admire" (p. 1030). boyd's[8] (2007) ethnographic research with young people in the USA drew on a range of identity performance theories and her data to indicate that this audience is not always invisible. boyd hypothesised that young people rely on multiple avenues of feedback and [dis]approval from peers so they can gather information about desirable ways to be in the world:

> What we put forward is our best effort at what we want to say about who we are. Yet while we intend to convey one impression, our performance is not always interpreted as we might expect. Through learning to make sense of others' responses to our behavior, we can assess how well we have conveyed what we intended. We can then alter our performance accordingly. (boyd, 2007, p. 11)

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Robison, & Weigel (2006) and Buckingham (2007) produced reports reviewing the literature and theory on the benefits of the Internet for learning and development, and these are heavily referenced in that part of the chapter. Hasebrink, Livingstone and Haddon's (2008) multi-national European study review was invaluable in the later section which addresses challenge.

[8] Note: danah boyd's name is spelt without capitalisation.

The findings and theories discussed by boyd (2007), Elkind (1967), and O'Connor (1995), though diverse in origin and action, nonetheless bring into focus another key theme of adolescence: The desire to "fit in" to peer society. At this time of significant change and identity development, information about what is currently desired by the culture of young people is also provided by media. As Roberts et al. (2009) noted, media provides information and cues to young people about what is desirable (hot) and what is not.

Manago, Graham, Greenfield, and Salimkhan (2008) demonstrated, albeit in focus group research with emerging adults (aged 18-23), the myriad of ways that social media (i.e., *MySpace*) delivers, produces, and hosts such information. *MySpace* enables young people to both post and consume photos, videos, and conversations, as well as indications of social group membership (e.g., particular peer groups or social categories like being "emo"), on public areas of social media profiles, enabling them to explore what is "hot or not" (Manago et al., 2008). Importantly, aspects of this "hot or not" information may be implicitly provided by media whether it is actively sought or not. For example, Roberts et al. (2009) concluded that while a "thin ideal" for women's bodies may not be the information a young person is necessarily seeking from media, this is a message that many young people face nonetheless.

To the extent that messages from media are understood, critiqued, and/or acted upon by young people, such messages, and the media that host them, are pivotal in framing desired adolescent identity, which in turns affects individual adolescent development as well as the peer society that young people co-construct.

Brown, Mory and Kinney (1994) conducted qualitative research interviews with young people from the USA and reviewed the literature to conclude that peer structures like 'crowds' and 'cliques' are a dominant feature of peer society. Surveying USA high-school students' levels of self-esteem, Brown and Lohr (1987) found that membership in certain school crowds was associated with higher status and higher self-esteem. Milner's (2004) ethnographic work with young people in the USA found that membership of high-status social groups requires a certain amount of cultural competence.

Cultural competence relies on cultural capital. Bourdieu (1986) coined the term *Cultural Capital*, to refer to the cultural resources required to succeed in a particular culture. Elaborating on this concept, Portes (1998) highlighted that cultural capital includes culturally valued knowledge(s), education, and skills. At one level cultural capital is ideological knowledge about the world, including the common assumptions and practices that underpin it (e.g., individual autonomy vs. collective responsibility, capitalism, a shared language). For young people, this cultural capital also includes valued knowledge and skills about their particular sub-cultures (e.g., popular culture and the slang needed to communicate about it). Cultural capital is important because, as Stanton-Salazar & Dornbusch (1995) hypothesised in their work with Mexican students in the USA, it may be used to produce another form of capital: *Social Capital*.

Portes (1998) explained that social capital refers to the delivery of valued resources afforded by enduring social relationships (e.g., homework assistance via study groups, or job opportunities from friends). Social capital is distinct from cultural capital because it directly involves other people, whereas cultural capital involves only the beliefs, knowledge, and practices of society. However, to use social capital, people still need to have enough cultural capital to interact with other cultural members effectively (i.e., you need to know the language before you can ask for help in it).

Roberts and colleagues' (2009) review concluded that media constitutes a large amount of contemporary youth culture. Knowledge of, and from, media, becomes a large part of the cultural capital required by young people for successful participation in peer society. Baker's (2001) ethnographic work illustrated how popular music is used as significant cultural capital in the lives of young Australian women. Baker traced how this cultural knowledge is used in the production of conversation, commonality, identity, and connection with other young people to achieve social capital. Roberts and colleagues' also quote research dating from the 1970's, which demonstrated that even solitary popular music consumption helped young people earn social status with peers.

Coincidentally, such solitary media consumption may increase as young people become autonomous and separate from family. Conducting research with young people in the USA, Larson, Richards, Moneta, Holmbeck, and Duckett (1996), and Steinberg, Fegley, and Dornbusch (1993) found as young people developed they spent increasing amounts of time alone or in the social and cultural worlds of their peers. Roberts et al. (2009) concluded that young people may use media to help them gain space from the family environment, and may use media in their bedroom as a way of separating from family, and adult supervision. Roberts and colleagues went on to note that using media to produce solitude provides young people with time and space to develop identity. The significance of media in the contemporary development of young people increases two-fold, in addition to providing space for development, it simultaneously provides timely information on important developmental questions and concerns:

> Given that much of contemporary Western adolescents' private (solitary) time occurs in the context of mass media, and because media content frequently touches on important adolescent issues and depicts a wide array of potential roles and personae, media are arguably increasingly important socialization agents for contemporary youth. (Roberts et al., 2009, p. 324)

Equally, as young people age, time with peers grows, due to increased time involved in school activities, work environments, and non-family based entertainment options. Roberts et al. (2009) noted contemporary time with peers also involved significant amounts of media consumption, either actively (e.g., watching videos or playing computer games) or implicitly (e.g., background music at parties or in cars).

Some of the increased time with peers may be increasingly associated with the beginnings of intimate relationships, including sexual relationships. Diamond and Savin-Williams' (2009) review of recent sex research, concluded that over a third of adolescent males and females in the USA have had sexual intercourse with the opposite sex by the age of 15. Data from the nation-wide Youth 2007 study in NZ (Adolescent Health Research Group, 2008) also found that approximately 40% of NZ students had had "sexual contact" by the age of 15 years. Diamond and Savin-Williams pointed out that while the majority of this sex occurs within "romantic" relationships, recent research suggests that more young people are meeting with "casual" partners for sex. These findings highlighted that relationship formation, the development of intimacy, and sexual activity is a significant part of the developmental context for many young people.

As noted earlier, media interacts with these social aspects of development in a number of ways. The increasing interest in sex and sexuality of this period may see young people consume more [sexually-themed] media as they seek to gather more information about the new sexual opportunities that their developing bodies and/or relationships open up to them (Buckingham, 2004; Sutton et al., 2002; Suzuki & Calzo, 2004). This is especially the case for topic areas, like sex and sexuality, where caregivers may be reticent about providing information to young people.

Roberts, Henriksen, and Foehr's (2009) review also highlighted the significant role that contemporary media plays in facilitating contact and connection between peers. Their review showed that media are frequently used to conduct and produce the communication required to sustain friendships and romantic relationships, and produce the intimacy that is a key part of adolescent development. In fact, adolescents' increasing cognitive and verbal abilities combined with their desires for privacy and intimacy may produce intensive private communication sessions with other peers. Family interventions in such communications can be very frustrating for young people.

To summarise, the process of finding identity has often been seen as a struggle, as young people combine sometimes contradictory ideas about themselves, and the world, together. This produces some interesting contradictions in itself. For instance, this section has examined the belief that adolescent development is about separating and individuating from families. However, given the prominence of peers at this stage of development, the individuating aspect of development often takes place within a peer group context (see Turner, Hogg, Oakes, Reicher, & Wetherell, 1987, for discussion on identity development and group membership). Peers become a point of reference for young people as they compare themselves to each other. As Brown, Mory and Kinney's (1994) research found, there are different types of peers and peer groups, and as such these different groups will enable different types of identity [exploration].

Media interacts at various points across all these aspects of development. Media is widely used alone and with others. It provides information about young people's bodies, the world, their beliefs, their homework, their relationships, and their cultures. It creates the space and individuation from family for identity development. Media choices and consumption are used to create identity and facilitate cultural capital and connection with peers. It is used to conduct friendships and relationships and plays a key role in producing opportunities for the development of intimacy. While the place of media in adolescent development is significant, the following section will highlight that most media influence has been viewed predominantly negatively by wider society.

## 1.3. Media: A Bad Influence?

Drawing from historical media accounts and research, various authors demonstrate that media has long been viewed by adults, researchers, politicians, and "traditional" media, as a negative influence on adolescent wellbeing, risk-taking, and psychological development (Croteau & Hoynes, 2000; L. Green, 2002; Roberts et al., 2009). Concerns voiced reveal fears that media will result in loss of "family time" and increases in social exclusion (L. Green, 2001), depersonalisation, disposition to violence and/or lasciviousness (Roberts et al.), and even poor grammar and spelling (Buckingham, 2007). Interestingly, in Buckingham's review, he noted that similar concerns were articulated with the popularisation of the novel when it was still a new media. By charting a history of media innovations over the centuries, Buckingham's review, as well as Marvin's (1988) accounts of new media in the 19th Century, highlights the often similar waves of concerns that are produced by the introduction of new media forms (see Croteau & Hoynes, 2000, for a 20th Century analysis).

Lelia Green (2002) argued that such concerns are partly reproduced by traditional media as a response to the perceived threat that new media forms pose to their market dominance. Highlighting Stanley Cohen's (1972) work, L. Green argued that the extreme negativity with which traditional media frames new media, characterises the production of a "moral panic". Moral panics are described as a disproportionate level of concern about a societal issue or innovation that are widely distributed and propagated by traditional media. The problem with

moral panics, in L. Green's opinion, is that their hyperbole does not enable a realistic assessment of the issues (even where there may be some truth to the concern). Payne (2008) draws on research and theory on online moral panics to note that the perceived vulnerability of children is used to leverage disproportionate concern.

Roberts and colleagues' (2009) review highlights that academic and parental concern are heightened as they apply to young people, who, given their developmental stages, are sometimes seen as particularly prone to [negative] media influences. Leila Green (2002) clarifies this with explanation of the hypothesised "hypodermic" model of media effects, which holds that as young people individuate and go out on their own and increasingly interact with the world without adult supervision, they will be easily manipulated and "injected" with media messages. This fear may stem from the reality that, adolescence, as noted earlier, necessarily involves young people increasingly separating themselves from parents and seeking other sources of influence (including media). However, as Brown (2000) reported in her USA analysis and as some other media scholars believe (Buckingham, 2007; S. Jackson, Low, Gee, Butler, & Hollings, 2007), these concerns do not acknowledge that young people are not simply passive uncritical receivers of a unified media message but that young people actively use, filter, and reconstitute media and its messages.

Such concerns and panics as produced by the media, and as considered and reproduced by adults and politicians, have resulted in anxiety, regulation, legislation and software to protect young people. Both L. Green (2002), and Strasburger and Wilson (2002) outline examples of these reactions and interventions in various countries. Evans and Butkus (1997) noted one reason for such panic was that traditionally, most media diffusions have been relatively slow and usually driven by adults. Evans and Butkus integrated media accounts with theory to identify media panics associated with the availability of sexual material to young people in cyberspace. Traditionally, adults were the ones who developed expertise first, having the ability to afford, experiment, master and then regulate and control the technology prior to significant numbers of young people gaining access. However, in their article, Evans and Butkus quoted a US Senator's statement in *Time Magazine* to demonstrate that the same could not be said for the current iteration of new media:

> We face a unique, disturbing and urgent circumstance, because it is children who are the computer experts in our nation's families," said Republican Senator Dan Coats of Indiana during the debate over the controversial anti-cyberporn bill he co-sponsored with Senator Exon (Time Magazine, 1995 in Evans & Butkus, 1997, p. 68)

## 1.4. New Media

What is really new about this "unique" circumstance? Marvin's (1988) USA account of the introduction of the telegraph in the 1800's demonstrates that new media forms have been emerging for centuries. However, Flew (2005) argues that just because a media form is new, does not necessarily make it significantly qualitatively different in experience from its older media cousins. Both Flew's and Croteau and Hoynes' (2000) books argue that newness and distinctiveness are not synonymous when it comes to defining new media (e.g., compare the qualitative differences between cassette tapes and CDs, with the much fewer differences between CDs and DVDs). Flew argues it is not necessarily the newness of the media itself that makes it new media, but rather how it differs from existing media, and how those differences in turn affect how media is used by society. New media in this analysis is something that results in significant changes to society. New media is that media which makes society new.

With that caveat in mind, Flew (2005) analysed the current media innovations to conclude that contemporary new media is, among other things, digital:

> "The major shift in media technologies has been from the storage, delivery, and reception of information in analogue formats, to storage, delivery, and reception in a digitised form." (Flew, 2005, pp. 8-9).

The digital nature of new media is the building block for the new affordances, characteristics, and effects, of the current wave of new media. This is because digital data is:

- Manipulable (Flew, 2005): in comparison to analogue information, it is relatively easy to change and adapt digital data.
- Networkable (boyd, 2007; Flew): the nature of digital data, which is manipulable, and therefore compressible and dense, means that telecommunications networks can distribute digital information relatively easily and even simultaneously.
- Searchable (boyd): strings of specific data (i.e., data tags, or words), can be searched for and identified within this binary code on these networks.

#### 1.4.1. Interactivity

The qualities of digital information, listed earlier, also enable digital creators and consumers to interact with each other. Interactivity in this sense includes the ability for consumers to shape access to data from media creators (e.g., the ability to "pull", or download, desired information rather than receiving "pushed", or broadcasted, information), as well as the ability for creators to easily create and provide media to consumers (e.g., to produce and post digital information to others) (Croteau & Hoynes, 2000; Straubhaar & LaRose, 2007). For instance, Lévy's (2001) book on new mass media notes that the digital revolution can sustain two-way one-to-one, one-to-many, or many-to-many communications, compared to the previous "...one way nature of 'mass' communication" (Croteau & Hoynes, 2000, p. 317).

This interactive communication, like other interactive communications (e.g., face-to-face conversations) can affect the shape of particular media that is then produced and consumed (i.e., the form of a digital conversation on a blog changes depending on earlier [and anticipated future] comments and interactions between participants). Straubhaar and LaRose (2007) point out that the interactive characteristics of some new media is not limited to exchanges between two or more humans, but can include human and computer interaction (e.g., by winning in a digital game environment, the digital environment may change in response to this human interaction to increase the difficulty of play, which then in turn may produce different actions by the human participant, and so on). These aspects of interactivity represent a shift in the way media is consumed, produced, and utilised by society.

## 1.5. The Contemporary History of the Current "New Media" Context

> We can define new media as those forms that combine the three Cs: computing and information technology (IT), communications networks, and digitised media and information content (Barr, 2000; Miles, 1997; Rice, 1999), arising out of another process beginning with a 'C', that of convergence (Flew, 2005, p. 2).

### 1.5.1. The Internet

The Internet epitomises the digital and interactive characteristics of contemporary new media. As noted at the beginning of the chapter, the Internet is a network hosted by a globally distributed group of interconnected computers. The commercial history of the Internet in NZ began in 1989 (Newman, 2008). Newman reported that the beginnings of the 1990's saw a fledgling NZ Internet-user community dominated by programmers, scientists, and computing enthusiasts. However, by 2000, the Internet in NZ had migrated into a number of schools, businesses and homes (2020 Communications Trust, 2009; Newman, 2008). At this stage the International Telecommunications Union (ITU), the United Nations agency responsible for global standardisation and monitoring of information and communication technologies (ICT), reported NZ Internet use at 22.2% (830,000 people) of the population (ITU, 2006). However, it was not until after this point that even more dramatic increases in Internet use were realised. ITU figures showed that compared to the diffusion of the Internet in NZ in the 1990s, Internet access increased by a factor of five for the first three years of the new millennium (hitting 51.2% population penetration in 2003). In fact, the years 2001 and 2002 saw the addition of more new Internet users in NZ as had the entire 1990s. By 2007, seven out of ten New Zealanders were online (ITU, 2009).

Bell and Tang (1998) quoted statistics demonstrating that the high rate of diffusion of the Internet relative to other historical innovations was unprecedented and brought with it unexpected results. Young people surveyed from across 21 nations in Europe (Hasebrink et al., 2008) and NZ (Reddington, 2005) were particularly active and proficient with this technology relative to their parents and caregivers. In fact the pre-eminence of young people in this space earned them the popular (if not problematic - cf. H. Green & Hannon, 2007) moniker "digital natives", while their parents (or adults generally) were deemed "digital immigrants" (Prensky, 2001). For the first time it seemed that young people were the ones leading the roll out of a technological innovation, and adults were left to follow.

The accelerated diffusion of these technologies among young people may reflect the interaction of two factors. By providing the tools and environment to achieve the developmental tasks discussed earlier (e.g., establishing autonomy, peer group activity, cultural capital, and dating) these technologies became valuable to young people. Secondly, by becoming more popular, economies of scale, innovation, and policy shifts, meant the technologies became cheaper, more efficient at delivering data, and connected more people. Once the technology was cheaper and better, it diffused even more. Having diffused further, it again increased its ability to meet peer-dependent developmental tasks, which in turn made it more attractive as a developmental setting for young people. Potentially these two factors of adolescent development, and technological diffusion and innovation, interacted with each other to produce an accelerated diffusion of these technologies among young people.

### 1.5.2. The World Wide Web and Web 1.0

Abbate's (1999) book provides an excellent summary of the early development of these technologies, focussing on the Internet and the invention of the World Wide Web. Abbate concludes that the invention of the World Wide Web, along with the construction of useful web browsers, underpins the dramatic rise in Internet diffusion. Resting on the technical developments and innovations of Hypertext Transfer Protocol (HTTP), Hypertext Markup Language (HTML), as well as Uniform Resource Locators (URLs), Abbate reported that the World Wide Web was publicly launched mid 1991. Unidirectional Hypertext (i.e., accessing Internet resources via web-links) combined with an accessible language (HTML) and early graphical interfaces (browsers), as well as a platform

independent protocol (HTTP) for retrieving information (via ULRs), meant "...a much wider range of people could become producers as well as consumers of content on the World Wide Web" (Flew, 2005, p. 7). The Web offered more people more ways to use the Internet and as such created a new context for young peoples' activity and developmental task completion.

For users, there have been two significant iterations of the Web: Web 1.0 and Web 2.0.[9] Web 1.0 sites were initially characterised by the provision of relatively static content published by web-masters. Rheingold's early ethnographic work (1993) on the Internet noted that at its nascent stages the web was famous for its text-dominated interaction. Early Web 1.0 activity often involved information provision, and other than those with the technical know-how to participate in fledgling text-based virtual communities (see Rheingold), interactivity was often limited to searching for information on websites. At this point, prior to *broadband*,[10] Internet access was largely reliant on fixed-line, dial-up technology (Newman, 2008). Internet opportunities, if available, for young people were physically limited to the class room, or, more rarely, the home computer.

Evans and Butkus' (1997) work quoted earlier, found that media concern during this period mirrored some previous fears associated with other static and passive media content providers (e.g., sexual content in video and publications). However, S. E. Stern and Handel's (2001) historical analysis of various media evolutions, and their production of ensuing sexual concerns by parents, politicians, and researchers, revealed that the Internet differed from earlier media in its ability to deliver a lot more information, cheaply, quickly, interactively, and at any hour of the day to young people. These factors likely elevated concern and honed a focus on young people's feared [increased] exposure to certain forms of inappropriate information, like sexual material (e.g., see Mitchell, Finkelhor, & Wolak, 2003, for an earlier large study of young people in the USA and their experiences with sexual material online) and violence (e.g., see Cantor, 2000, for an early call-to-arms on the challenges of violent media for young people online).

During this time young people were viewed as naïve about Internet risk (e.g., Cantor, 2000) and drawing upon experience with traditional (passive and static) media concerns, risk prevention focussed mainly on regulation and preventing (filtering) access (Cantor; Evans & Butkus, 1997; Magid). However, as the Internet infrastructure developed, the reliance on media management strategies based on passive static media became problematic. As time went on, software and computer programming developments continued and more data was able to be effectively transmitted to more people (Abbate, 1999), expanding the potential for interactivity.

Leinbach (2001) studied the development of online commerce in the USA and found that the burgeoning Internet-user base of the late 1990's, saw the maturation of much stronger commercial [inter]activity online. Along with the popularisation of online commerce, and the burgeoning user-base, came a market for chat rooms. Chat rooms are online sites or applications, which can enable two or more people to use text to communicate in real-time. Chat rooms could push conversations and information to users rather than rely on users pulling information from the Web (Rheingold, 1993).

The advent of a much larger Internet-user base, plus the easy ability to communicate with strangers in chat-rooms, introduced sexual predation and ‘stranger danger’ to the list of worries in the media (e.g., Abu-Haidar,

[9] A term coined in a speech by business people O'Reilly & Battelle in (2005).

[10] In contrast to dial-up technologies, broadband technologies can deliver more information (a broader band) (L. Green, 2002) significantly more quickly, whilst not preventing the use of a fixed-line telephone on the same line.

1997, and an article from The News - Boca Raton, Associated Press, 1995 [largely reproduced by Keenan, 1995] are early news items about online offenders). By this time it became clear that the protectionist strategies of regulation, monitoring and filtering young people's access were not solving the "problem". Tarpley's (2001) chapter *Children, the Internet, and Other New Technologies* drew from popular media accounts to note that such regulation and filtering was of limited efficacy for teenaged people, who could apparently circumvent the filtering. Acknowledging that regulation, or the practicalities of filtering or supervision, were not necessarily going to solve the problem, required the translation and promotion of stranger danger protection measure to cyberspace, which witnessed the production of mid 1990's public safety messages exhorting young people to protect themselves and remember that online contacts "might not be who he or she seems to be" (Magid).

### 1.5.3. Mobile phones

O'Connell's (2003) online participant observation work highlighted the danger of online offenders to UK children and migrated fears of offender contact to mobile phone users. Around the beginning of the millennium, the range of phones and phone plans expanded dramatically, to enable more young people (and/or their caregivers) to afford these previously unaffordable technologies (ITU, 2006 and see Section 2.4.1 in Chapter 2). Survey research conducted by NetSafe in 2004 with 1,528 NZ high-school students (NetSafe, 2005) found that approximately three quarters (73%) of participants reported using mobile phones. At that point, data from the NetSafe survey indicated that mobile phones were mainly for texting and talking with friends.

The increasing uptake of mobile phones highlighted a new safety issue: mobility. Mobility resulted in decreased [physical] control by adults over young people's use of ICT. Mobility meant that young people could use the media wherever and whenever they liked and could communicate with whoever they wanted to. At the same time, banning mobile use was harder to do or achieve, as statistics from the NetSafe research (2005) indicated that the technology had become normative in some peer environments. Managing concerns now relied on educating and persuading [young] people to use the technology appropriately, as well as providing support and policy to manage negative outcomes (e.g., policy around harassment and legislation on online sexual offending).

### 1.5.4. Convergence

The strong growth in NZ numbers of mobile phone and Internet users (ITU, 2009) was associated with improvements in technical infrastructure. National surveys indicated that Internet access in NZ increased dramatically from the beginning of the century onwards (ITU, 2006; Statistics New Zealand, 2009), and 2005 saw the beginning of NZ's Third Generation (3G) mobile telephony roll-out (Keall, 2009). Third generation networks delivered significantly more data and functionality than the previous analogue networks (2G), and enabled a host of functions not previously accessible (ITU).

These technological developments were mirrored throughout the world (ITU, 2006), and provided the infrastructure to support the burgeoning phenomenon of convergence. Convergence describes the phenomenon where a number of previously stand-alone functions and/or services converge in one place. Sites of this convergence include modern hardware devices, networks, and/or software applications that provide more than one (usually multiple) previously stand-alone functions or services. Third generation phones are an example of hardware convergence, as they provide traditional voice communication, as well as texting, multimedia messaging, video calling, email, calendar functions, and Internet browsing.

Rising convergence within hardware devices mirrored increasing convergence within software applications. Historically, online applications were usually dedicated to a functionally constrained range of tasks. For instance, popular email applications were used to send email; LISTSERV applications were used to host a-synchronous discussion groups (e.g., email chat groups); chat room and messenger applications were used to host synchronous discussions; and file-sharing applications were used to share files. However, in a relatively small period of time the functionality of many online applications converged into single sites (e.g., social networking sites like *Bebo* and *Facebook*) (see boyd, 2007, a description of social networking sites).

Barr's (2000) book examined the media environment, and in particular the new media environment of Australia. In noting the relatively long and complex history of convergence, Barr pointed out that maturing convergence eventually saw “traditional” media forms (e.g., music and TV shows) converging on these next generation sites and devices as well (see Jenkins' 2006a book for more on convergence within media channels in the USA). The phenomenon of convergence furthered the digital media revolution, and changed the technological landscape by offering and facilitating more content and activity, in more places, both online and on mobile.

#### 1.5.5. Web 2.0

Web 2.0, the second iteration of the World Wide Web, was sustained by this maturing convergence. United States media scholar Henry Jenkins has conducted a lot of research and theorising into new media (and therefore Web 2.0). Leading the 2006 report *Confronting the Challenges of Participatory Culture: Media Education in the 21st Century*, (2006) Jenkins stressed that Web 2.0 is marked by its focus on participation, interactivity and [potentially] collaboration. Web 2.0, in comparison to Web 1.0, revolves around user-generated content, activity, and the interaction that such content and activity can produce among users.

##### 1.5.5.1. Web 2.0 content

Web 2.0 user-generated content eclipsed the text, and static image, dominated pages of Web 1.0, to include blogs, online video, image sharing, mashups (the mixing of two or more data sets [which can include audio and visual information] to produce new content), virtual goods (e.g., virtual clothes or furniture), and many other contents (e.g., see Section 1.7.3 and Chapter 2).

##### 1.5.5.2. Web 2.0 activity

Web 2.0 activity differed significantly from the often text-constrained Web 1.0 surfing experiences (Flew, 2005), to include real-time participation in graphical online environments (e.g., gaming environments and virtual worlds), customisation of virtual assets (e.g., the construction of avatars and virtual real estate), video calling, and many other activities (e.g., see Section 1.7.3 and Chapter 2).

#### 1.5.5.3. Web 2.0 interaction

The particular forms of user-interactions that Web 2.0 enabled included the distribution of digital artefacts (e.g., posting things onto video-sharing sites, blogging items, re-tweeting[11] or re-sending items onto others, etc.), collaborating and affiliating in Web 2.0 environments (e.g., within web-based collaboration tools, like online brainstorming applications, or affiliating in online games, and fan-communities), trading, and discussing/debating issues in large online communities (e.g., social networking services) (Jenkins, 2006a; Jenkins et al., 2006)(also see Section 1.7.3 and Chapter 2).

The advent of Web 2.0 thus brought with it a host of new activities, contents, and interactions, and as such, further changed the technological landscape from this point:

> "Participatory culture is emerging as the culture absorbs and responds to the explosion of new media technologies that make it possible for average consumers to archive, annotate, appropriate, and recirculate media content in powerful new ways." (Jenkins et al., 2006, p. 8)

### 1.5.6. Rapid technology diffusion

The period in the middle of the first decade of the new millennium also witnessed large scale roll-outs of devices characterised by convergence. Thorsen (2009) charted sales figures of converged devices from Sony, Microsoft and Nintendo. Thorsen reported that the hand-held Nintendo DS and the Sony PSP (PlayStation Portable) led the initial sales of converged devices. As relatively cheap and portable wireless Internet connected (Wi-Fi) devices, they enabled gaming, Internet browsing, visual and audio media hosting, instant messaging, and in Sony's case, real-time Internet voice and video conversations (via a *Skype* service).

Shortly thereafter came the third generation gaming consoles, including Microsoft's *XBOX 360*, Sony's PS3 (PlayStation3), and Nintendo's *Wii*. These consoles were marked by convergence, sporting Wi-Fi, web browsers, media centres, chatting functionality, online communities and services, as well as gaming functionality. By this period most new laptops were offering Wi-Fi connectivity (Griffith, 2003). Wi-Fi Internet routing was becoming more popular in homes and businesses, and as Greenwood (2005) reported in NZ's *CIO Magazine*, even some schools had implemented Wi-Fi by this time. The rapid diffusion of Wi-Fi technologies enabled more people to access much cheaper and faster Wi-Fi services from a range of places. This environment laid the path for the later roll-out of Wi-Fi devices like the iPod Touch, iPhone, and various other Wi-Fi enabled phones.

### 1.5.7. A bedroom culture

The rapidly expanding Wi-Fi technologies meant more people could access the Internet in any room of a Wi-Fi enabled house. No longer limited by the expense of hard-wired connections and disruptiveness of dial-up services, Wi-Fi homes could enable multiple people to use the Internet from anywhere covered with signal. This change, in addition to broadband proliferation, meant that young people, increasingly equipped with the appropriate technology, could also access the Internet from their bedrooms. By 2004, a fifth of the young people

[11] Re-tweeting in this context refers to the practice of forwarding of a short message shared through a public message sharing application (like Twitter). Message sharing applications like Twitter enable people to post messages (e.g., Tweets) to their "followers" or the online world more generally, and to gather responses in return.

surveyed in both the *UK Children Go Online* (UKCGO) project (Livingstone & Bober, 2004), and the USA's *Generation M* report (Roberts, Foehr, & Rideout, 2005), reported having Internet access in their bedrooms.

Despite increasing concerns about online safety, this period saw a large rise in young people's solo access to the Internet. In some respects, this reflects the phenomenon Livingstone and Bovill (1999) coined as "bedroom culture". From survey and interview work with young people and their families in the UK, Livingstone and Bovill found that the majority of young people's bedrooms already included a lot of media (including, for example, televisions, personal computers, stereos, MP3 players, or gaming consoles, etc). Livingstone and Bovill argue that the high concentrations of media in UK bedrooms did not necessarily reflect high parental belief in the value of solo-media consumption. Instead, this high level of media in bedrooms was rather the by-product of parental concerns that young people needed to be kept at home to keep them safe.

This point was later supported by Gill's UK review (2007) and boyd's (2007) USA research. Gill reviewed research and media panics on child safety issues in the UK, while boyd interviewed young people in the USA about their use of social networking sites. Both authors concluded that concerns about stranger danger and physical injury outside the confines of the home, lead more parents and caregivers to restrict young people's play and socialising opportunities to structured after-school settings and/or home. Given this context, Livingstone and Bovill (1999) demonstrate that a media-rich bedroom becomes almost a necessity. A bedroom culture helps to entertain young people (and their friends) and provides privacy, for both young people and their caregivers, when young people are stranded at home for hours on end. Ironically, fears about child safety and danger outside the home, contributed to a media environment inside the home that enabled more and more young people to use ICT technology alone.

Lealand's (2001) media assessment of NZ children's bedrooms, while not as television-rich as those of UK children, nonetheless reported significant levels of media saturation in 1999, with even higher rates of computers in NZ children's bedrooms relative to the UK. The existing bedroom culture of the 20th century, let alone any media increases in the 21st century bedroom, suggests significant numbers of young people in NZ may also have increasingly gained Internet access in their bedrooms, as well as in other areas of their homes.

## 1.6. A New Developmental Setting

The developments outlined above significantly evolved and changed the technological landscape for young people. The invention and diffusion of the Internet facilitated interactivity in media to levels never seen before. The development of the Web, in addition to the expansion of mobile phone ownership and broadband technologies, offered this technology to more young people. The evolving technological landscape saw the maturation of convergence and ushered Web 2.0 into being. To summarise, by 2006 the technological landscape, flavoured with strong doses of bedroom culture, increasingly offered this generation of users:

- A large increase in high-speed, and often wireless, Internet access.
- A large scale diffusion of cheap Internet-capable, often mobile, and Wi-Fi, converged devices.
- An increased ability to access the Internet privately from one's bedroom, or elsewhere.
- A massively expanded offering of Web 2.0 activities, interactions, and contents.
- An ability, and tendency, to combine these activities, interactions, and contents, into converged sites and devices.

Essentially, these changes enabled more young people, to do more things, in more places, more often. The expanding numbers of young people going online, doing more things online, and doing different things, in new online and mobile environments, is important because it suggests that young people were developing in a new setting—a setting that raises [new] issues to consider for young people's safety and wellbeing. By enabling significantly more activity (and different types of activity) than the Web 1.0 context, convergence may well increase the amount of opportunity and harm experienced by young people.

## 1.7. Opportunities and Benefits of the New ICT Developmental Setting

While it is outside the scope of the thesis to study the many benefits ICT can provide young people, there is room to summarise its importance for education, entertainment and lifespan development. Following her review Byron (2007) suggests these benefits could be grouped into four domains:

- Identity and social connection.
- Participation and civic engagement.
- Creativity.
- Education, learning and cognitive skills.

Jenkins and colleagues' (2006) USA report on the need for digital literacy also highlights the opportunities of ICT for the development of new cultural skills as well as economic advancement. Facilitated by relative ease of use and flexibility, ICT's contributions to global connection, as well as entertainment and relaxation are also frequently mentioned as benefits (Buckingham, 2007; Byron, 2007; Gee, 2003; Hasebrink, Livingstone, Haddon, & Ólafsson, 2009; Livingstone, Bober, & Helsper, 2005).

### 1.7.1. Identity and social connection

As noted earlier, identity development is the overarching focus of adolescent development, and ICT provides rich opportunities for identity development. Following ethnographic and interview research, a range of researchers demonstrated that ICT can facilitate space for adolescent identity work in blogs (Bortree, 2005), social networking sites (boyd, 2007), and online gaming environments (Pearce & Artemesia, 2009). Qualitative data from the UK government report *Children and the Internet* (Ofcom, 2007a) demonstrated that virtual environments now play a key role in enabling some young people to socialise and gain support for the development of their identity.[12]

To the extent that identity development requires social connections, ICT's benefits are realised in its ability to facilitate young people's social connection with others. boyd's (2007) analysis of young people in the USA demonstrated that ICT facilitates these social connections in two ways. It provides the means for such connections (e.g., social networking services like *Facebook* and messenger applications), and by providing

[12] Families in Lealand and Zanker's (2008) NZ research also said that the "contactableness" of mobile phone technology can alleviate concerns over children's exploration of public spaces. By expanding the availability of safe physical space, mobile phones may enable such young people more social connection with their peers.

shared content, it also provides the basis (cultural capital) for discussions in social interactions (e.g., discussion points and topics of commonality, like a popular video on *YouTube*).

ICT can also facilitate social connection by providing opportunities to connect with others while sharing media experiences. Survey research with young people in NZ (Lealand & Zanker, 2008) and interviews with young people and their families in the UK (Ofcom, 2007a) concluded that young people and families may strengthen social connection by consuming media together (e.g., by watching movies, or gaming together). Roberts and colleagues (2009) also noted that shared media consumption also characterises a significant amount of the time that young people spend with peers and can be used to produce social connection (e.g., going to a concert with friends or tackling a new mission in a virtual world).

Jenkins' (2006b) examples of contemporary fan-culture and Pearce and Artemesia's (2009) research with online-gamers, also highlights that new social connections can be established using ICT (e.g., making friends with people in online forums about TV shows or joining a new game community). Affiliations around particular interests (e.g., environmental concerns or fan communities) are beneficial as they enable people to form groups (both formal and informal) from which they can grow their social connections and group memberships, both key parts of identity development.

Finally, as noted in Section 1.2.2, the content of media itself can be used to help shape personal ideas about what is important. ICT offers access to an enormous amount of media and information. Young people can use this media to gather information about the world and one's place in it, and form their own ideas and beliefs about the values, ethics, and topics that are important to them.

### 1.7.2. Participation and civic engagement

Having developed personal tastes and values, ICT can facilitate and promote civic engagement. Bennett and Toft (2009) reviewed international case studies to demonstrate that ICT can connect people to communities that promote civic participation. The “World Says No to War” protests in 2003 are an example of civic participation that benefited from ICT’s ability to easily facilitate these connections (via email lists). Bennett and Toft detailed how ICT produced affiliations, knowledge sharing and organisation, and awareness-raising of the protests globally. ICT can also provide on-demand access to political news, policy, speeches, and events. This can even happen when national media are restricted or unavailable. For instance, videos and tweets about the 2009 presidential campaign riots in Iran both raised awareness and motivated political action globally.

Young people may participate in this civic action or initiate it themselves. For instance, within four days of a political announcement suggesting a raise in NZ’s driving age, a 14-year-old had already created an online petition against the move (iPetition, 2010). Combined with interest groups on the topic on *Facebook*, which included links to news articles about the legislation, ICT was able to connect, inform and engage local young people about this civic issue.

### 1.7.3. Creativity

ICT can also benefit young people by providing an environment to stimulate creativity. ICT can provide the inspiration for creative works, the need for creative solutions to gaming problems, the tools for producing creative products, and the ability to share creative works with others.

Jenkins and colleagues' (2006) work highlighted opportunities for creativity by cataloguing the new creative "expressions" that ICT has enabled. ICT enables pre-digital creative practices, like photography and music composition/recording, to be relatively easily and often more cheaply, conducted digitally.

Additionally, Jenkins and colleagues (2006) highlighted that ICT now enables young people to participate in new activities. For example, digital sampling is a new creative form enabled by ICT. Digital sampling represents the process whereby an existing digital creation is captured and "sampled" into a new creative work (e.g., inserting a fragment of a political speech into a dance track). Currently, the high-rating TV show *Glee* has highlighted the new creative form of mashups, where two songs are "mashed-up" to produce a new song (creations).

ICT can also facilitate creativity by providing young people with material for creative inspiration. For instance, some young people produce fiction about their characters' adventures in the online *World of Warcraft* game (e.g., Fanfiction.net, 2010). Media can also provide impetus for play, such as when young people act out characters from computer games in play. Media may also stimulate further research on a topic or hobby young people discover or foster through media (e.g., learning more about planes after using flight simulation software).

Gee's (2003) book on the benefits of video games for learning and literacy offers insights into how video games can promote and support creativity. With his participant-observation approach, he found that many computer games offer challenging problems that require solving. His work highlighted that creativity is a key requirement required to solve many of the challenges and problems in games.

Finally, ICT enables creative opportunities for young people by offering a number of ways with which they can share their creative materials with others. Jenkins et al. (2006) argued that the skill of "circulations" is required to share user-generated material with others. Circulations skills refer to the ability to circulate and broadcast media products to an audience. In the user-generated world of Web 2.0, young people now have additional creative licence over the tools they use to share their material with others. Coming up with the right media distribution solution is yet another creative and skilled opportunity that ICT produces for young people.

#### 1.7.4. Education, learning, and cognitive skills

The opportunities offered by ICT for learning and knowledge development are immense. This section already demonstrated that ICT offers opportunities for learning by fostering knowledge and skills from social connections, participating in political awareness-raising, producing creative works, solving problems in games, and circulating creative material to others. ICT also offers young people additional opportunities for learning, knowledge and skill development, by providing content and requiring skills for effective use of ICT.

The often text dependent nature of ICT interaction (even within many contemporary games) makes the skills of reading, writing, and vocabulary development crucial to effective participation. Motivations to do well at a game, or to find a particular piece of information (e.g., a song) online, may help drive such literacy and online skill development. The cognitive development benefits of the Internet, particularly as realised through computer games, can facilitate spatial awareness skills, hypothesis testing, sustained attention, strategic thinking, collaborative problem solving, collaborative knowledge production, and multitasking skills in young people (Foehr, 2006; Gee, 2003; Greenfield, 2009; Roberts et al., 2005).

ICT can provide young people with global knowledge content for educational and personal use. Having learnt online searching skills, the Web can provide easy access to general and specific knowledge. As noted earlier, health information is likely to be a specific interest to young people going through significant biological and sexual changes. The Kaiser Family Foundation (2001) published the results of their USA survey of young people's (defined as 15–24 years in this report) use of the Internet for gathering health information. Of the 1,209 respondents, three quarters (75%) had used the Internet at least once to gather health information. Suzuki and Calzo's (2004) study examined content posted in two USA "teen" health bulletin boards over a two month period, finding that the majority of this health interest revolved around issues of romance and sexuality.

#### 1.7.5. Summary

ICT can provide many benefits to young people. It provides opportunities to strengthen social connections and thus facilitate identity development. It can provide space for identity work (e.g., blogs), as well as the content to facilitate social lubrication (e.g., music videos on the blog). ICT can offer young people access to information and political processes that can result in civic engagement and participation (e.g., going to a rally following a protester's tweets to action). Creatively, ICT provides numerous benefits to young people, including tools for creative productions and content for creative inspiration. In these processes ICT can also provide opportunities for knowledge gain and skill development. However, the many benefits that ICT can provide are not automatically associated with unstructured ICT use, but depend on the social and educational context of such use. Therefore, like any learning medium, the technology itself will not necessarily produce learning, but it is how the technology is used, and how the opportunities are realised, that will determine learning.

Perhaps it is for these reasons that Europeans report a mainly positive reception of the Internet. The majority of parents, and young people themselves, from most of the European[13] countries in the *EU Kids Online* (EUKO) research project, reported that the Internet was educationally beneficial (Hasebrink et al., 2009) and 81% of 8-17 year-olds (N=513) and 92% parents (N=537) in the UK, agreed that home-based Internet helps with homework (Ofcom, 2007b). However, only just over half (57%) of these same parents agreed with the statement that "the benefits of the Internet for my child outweigh any risks" (Ofcom, p. 66).

## 1.8. Challenges of the New ICT Developmental Setting

The new ICT developmental setting included those challenges offered by Web 1.0, as well as the new, or modified, challenges associated with the increased access, affordances, and activities of Web 2.0. The earlier challenges and concerns mainly centred on young people's exposure to inappropriate content (e.g., sexual material and violence) and people (e.g., sexual offenders and people who bully). However, the participatory, interactive, and converged nature of Web 2.0 technologies still produces those earlier concerns at the same time as introducing new concerns:

> [Web 2.0 phenomena] continue to evoke well-established concerns of the kind considered above, albeit sometimes in *new* [emphasis added] forms. Social networking sites, for example, have generated *new* [emphasis added] anxieties about 'stranger danger' and bullying; while file-sharing

[13] The project included 21 European states, including: Austria, Ireland, Poland, Belgium, Netherlands, Denmark, France, Finland, UK, Norway, Germany, Sweden, Italy, Poland, Estonia, Iceland, Portugal, Czech Republic, Spain, Slovenia, and Greece.

> and user-generated content sites have provided *new* [emphasis added] opportunities for circulating sexually explicit or violent material that some consider inappropriate for children. Familiar concerns about addiction, about the demise of healthy family life, or about the physical effects of excessive use, have all been expressed once more in respect of these *new* [emphasis added] phenomena. (Buckingham, 2007, p. 44)

The new concerns mainly centred on the user-generated and interactive nature of Web 2.0. Hasebrink et al. (2009) produced diagrams summarising the research literature from Europe and its descriptions of the nature of challenges and opportunities of this new environment. Figure 1 (see below) reproduces their risk diagram, where 'risk' is defined as the negative "experiences that might result from transactions between communicators, the content/services they provide, and the user" (Hasebrink et al., p. 8).

### 1.8.1. Challenging 'risk'

The thesis uses the concept of 'challenge' in place of this conception of risk. 'Challenge' includes many of the characteristics of risk. Like risk, 'Challenge' is a situation or experience that has the realistic potential to produce a negative outcome for a person, regardless of whether or not it produces a negative outcome. It is in the potential for negative opportunities and situations that both risk and 'challenge' exist. Equally, both risk and 'challenge', if successfully resolved, can produce positive outcomes and learning.

However, 'challenge', as is used in the thesis, differs from risk in some key ways. Rodham, Brewer, Mistral, and Stallard's (2006) focus group research investigated how young people in the UK understand and make sense of the concepts of risk and challenge. Their findings highlighted that risk was framed as "taking a chance" on an activity that could produce a negative outcome, despite not knowing if they could avoid the negative outcome. Risk existed because of the potential for negative consequences that were perceived to be out of their control. This frames risk as an outcome of fate, and in doing so severely diminishes young people's agency.

'Challenge' conversely, was seen by the participants as activity that, whilst tough, could produce controllable and positive outcomes. 'Challenge' as defined by the research, represented a potentially negative situation that, with effort, could be managed and controlled to produce positive outcomes. Challenge reframes young people from passive receivers of risk outcomes, to active negotiators and managers of the challenges in their lives. One of their participants' highlights this point particularly well:

> I see a challenge as something you kind of affect the results because, with a risk, it could be either way and you can't affect it, it's chance really, whereas a challenge is something that you do well or do badly. You have more control of it. (Male, 17). (Rodham et al., 2006, p. 266)

This concept of 'challenge', and young people's agency in producing positive, as well as negative outcomes, is important in the thesis because of its focus on resiliency and challenge-management. The thesis focuses on the actions (if any) that young people take in managing 'challenge'. Interest does not so much centre on whether or not young people are unlucky enough to face risk, but what they do when they face 'challenge'.

A second point of difference is also apparent in the concept of 'challenge' versus 'risk'. Participants in Rodham and colleagues' (2006) work also highlighted the idea that risk was largely seen as a choice. Risk was often framed as the decision to do something that could produce negative outcomes. Conversely, challenge was framed as the activity that had to occur once a challenging event was already underway. The important

differences in these conceptions are that risk is framed as a decision, which implies that young people can choose to engage in risk activities or not—that young people can choose to avoid risk or not.

However, some 'challenges' in cyberspace may be unavoidable (e.g., pop-ups or spam of sexual material, or being targeted by abuse) and are not necessarily the result of a young person making a decision and taking a gamble on the result, but instead represent the commerce of this deregulated commercial space. Activities required for forms of participation in cyberspace (e.g., communication) will inevitably produce 'challenges' for young people (e.g., managing inappropriate comments) just as other unavoidable activities do (e.g., travelling to school exposes young people to road danger). Given the size and significance of the developmental setting of cyberspace, it seems inaccurate to imply that young people can choose to avoid such risks (e.g., sexual material or harassment online).

Instead, cyberspace, as mandated as it seems to be, will rather inevitably produce challenges for many young people, just as other mandated environments do (e.g., schools and bullying). For this reason, the term risk may falsely ascribe agency to take risks in cyberspace and over represent the phenomena of risk-taking and label certain young people risk-takers. Instead, this concept of 'challenge' highlights that challenging events may happen even when the situation that produces such events is not necessarily chosen by young people. This refocuses analysis away from why young people 'choose' to take risks, to why cyberspace is important to them, and how they manage the inevitable challenges it presents.

To summarise, the concept of 'challenge' includes many aspects of 'risk' but differs in two main ways. Rather than fates determining a positive or negative outcome following a risky decision, 'challenges' represent an active process by which young people manage potentially negative situations either positively or not. Whereas discourses of risk falsely imply that young people choose risk; the concept of 'challenge' implies that negative outcomes are not necessarily avoidable. In sum, 'challenge' calls for a focus on how young people manage such situations. Where other authors' definitions of risk in cyberspace can be considered with these understandings of 'challenge', the thesis will call them challenges from this point onwards.

### 1.8.2. Accessing contexts of challenge

The concepts of access and usage are important forerunners to understanding the challenges listed in Figure 1. By determining how much, and for what purposes, young people use ICT, the factors of access and usage in turn influences the amounts and types of risks encountered. The more access and usage young people make of ICT, the greater the opportunity they face for both positive and negative outcomes. Hasebrink and colleagues (2009) also hypothesise that young people's online skills[14] and media literacy, in addition to access and usage, may also mediate their experiences of positive and negative outcomes (e.g., given similar amounts of online activity, cyber-skilled and media literate young people may experience fewer negative outcomes than young people without such skills or knowledge).

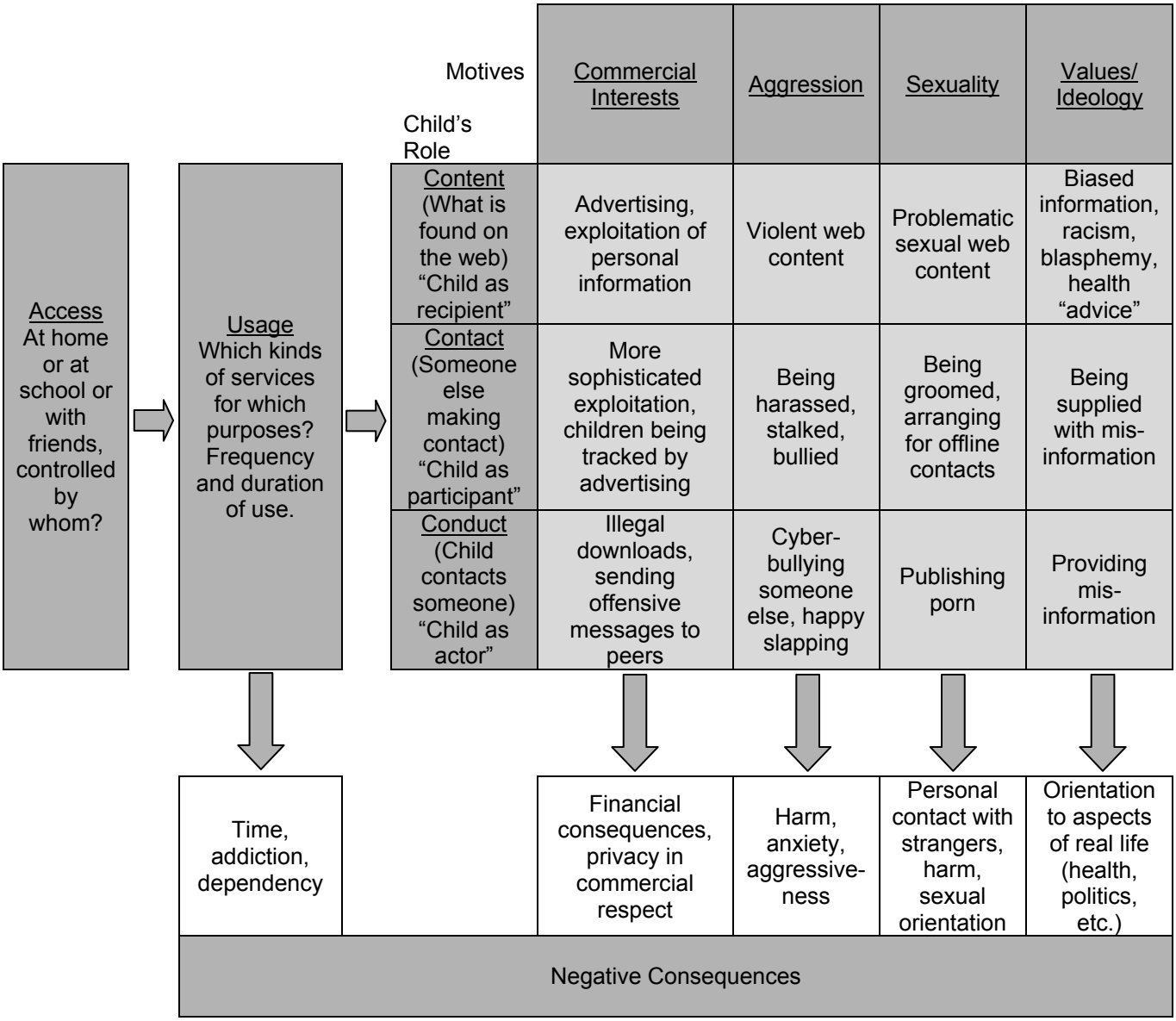
[14] Hasebrink et al. (2009) note however that currently there is little consensus in the literature about how skills and media literacy as related to ICT should be defined, let alone measured, so these stand currently as hypothetical influences.

### 1.8.3. Types of challenge

The top row of Figure 1 lists the categories of challenges that ICT can present (Hasebrink et al., 2009, p. 8). These challenges are arranged according to categories of motivation for the challenge (e.g., a sexual motivation by an offender may see them target a young person, while a sexual motivation for a young person may see them seek out sexual material online). The row headings in Figure 1 refer to the role of the young person in an interaction, either receiving, or providing, inappropriate content, contact, or conduct. Hasebrink et al. highlight that this model is transactional. The motivations (columns) interact with the role of the young person (rows) to produce the challenges in the body of the table. A challenging interaction may include a single motivation or more than one motivation (e.g., illegally downloading [commercial] sexual content [sexuality] with racist overtones [values/ideology], etc.). The base of the table represents the negative consequences[15] that may result from the challenges listed within the table and, in the case of 'addiction', from overuse of ICT.

[15] The term "sexual orientation", noted as a negative consequence, is not defined and is itself an ambiguous term. For the purposes of the thesis it is understood to mean an increased "orientation to sexuality" rather than to mean an increased disposition to non-exclusive heterosexuality ("sexual orientation").

Figure 1. Risks as Transactional Results of Access, Usage, the Child's Role, and Underlying Communicative Motives Leading to Negative Consequences (Hasebrink et al., 2009, p. 8).




### 1.8.4. Existence of challenge

Hasebrink et al. (2009) gathered teams together from various European countries to assess these challenges across nations. Enough research was reviewed to demonstrate that in most nations "…significant minorities and, in some cases, a majority of teenagers are encountering a range of aggressive and sexual risks" (Hasebrink et al., p. 25). Specifically, the meta-analysis estimated (via median figures—see Table 1) that young people (mainly teenagers) across the majority of European Union (EU) nations experienced often wide-ranging amounts (see the ranges in Table 1) of the following ICT challenges:

- *sexual content challenges*, with young people receiving unwanted sexual content;
- *sexual contact challenges*, with young people receiving unwanted sexual comments and with young people as participants in meeting online contacts offline;
- *aggressive content challenges* with young people receiving hateful or violent content;

- *aggressive contact* and *aggressive conduct* challenges with young people receiving and sending harassing, bullying, or stalking messages.

Many young people from these nations also indicated that they had given out personal information online, a situation reportedly associated with increases in contact challenges (Hasebrink et al., 2009) (see Section 3.2.10 in Chapter 3 for more on this).

Table 1. Summary of National Reports on Evidence for Risk Types (Hasebrink et al., 2009, p. 25).

| | | Online teenagers in Europe (%) | | |
|---|---|---|---|---|
| | | Estimated median | Lowest % reported | Highest % reported |
| Sexual content (child as recipient): | Seen pornographic or unwelcome sexual content | 40% | 25% | 80% |
| Sexual Contact (child as participant): | Received unwanted sexual comments | 25% | 6% | 56% |
| | Met online contact offline | 9% | 6% | 20% |
| Aggressive content (child as recipient): | Seen violent or hateful content | 32% | 15% | 90% |
| Aggressive contact (child as participant): | Been bullied/ harassed/ stalked | 18% | 10% | 52% |
| Aggressive conduct (child as actor): | Sent bullying/ harassing messages | 12% | 8% | 18% |
| Additionally, a risk associated with most contact risks: | Given out personal information | 50% | 13% | 90% |

Large scale national studies from the USA (Wolak, Mitchell, & Finkelhor, 2006; Ybarra, Espelage, & Mitchell, 2007), Canada (Media Awareness Network, 2005), Australia (Cross et al., 2009), and NZ (Adolescent Health Research Group, 2008) have highlighted that young people across these nations also experience some of these challenges (see Chapter 3 for more detail on the extent, details, and contexts of these challenges). The findings in Table 1 demonstrate significant cross-national variation in the prevalence of challenges. For instance, while only 6% of young people in Portugal reported receiving unwanted sexual comments, nearly ten times as many young people in Poland reported the same experience. The differences are even more dramatic when considering the challenge of posting personal information online. Around one in ten young people in Belgium reported posting personal information online, compared to nine out of ten young people in the Czech Republic.

### 1.8.5. Age and gender effects

In addition to international differences, survey findings demonstrate age and gender differences for various challenges. Young women are more likely to report experiencing cyberbullying (Clark et al., 2009), distress associated with cyberbullying (Wolak et al., 2006), distress associated with unwanted sexual content exposure (Livingstone & Haddon, 2009), and sexual harassment in cyberspace (Wolak et al.), than young men. Whereas young men were more likely to report encountering wanted, and unwanted, sexual content in cyberspace (Livingstone & Haddon; Wolak, Mitchell, & Finkelhor, 2007b), as well as being more likely to report posting

inappropriate personal content online (Ybarra, Alexander, & Mitchell, 2005) and copyright infringement (Lenhart & Madden, 2005; Millwood Hargrave, Livingstone, & Brake, 2007) than young women.

Age effects have also been identified. Older survey participants were more likely to report sexual harassment (Wolak et al., 2006), unwanted sexual content exposure (Wolak et al., 2006), copyright infringement (Lenhart & Madden, 2005; Millwood Hargrave et al., 2007), and wanted sexual content exposure [in the case of young men] (Wolak et al., 2007b), in cyberspace, than younger adolescents.

## 1.9. Aims of the Research Project

Given the disparity of these cyber-challenges, and the often high proportions of young people that report such experiences, it is timely that the following section will introduce the objectives and aims for the current research project. A range of research and practice recommendations from other researchers in this field that were published prior to, or since the beginning of the current research, have been incorporated into the current research design, including calls to:

- Employ a contextual and developmental focus in understanding young people's use of cyberspace:

  > Children's Internet use, especially regarding risks, is complex. Much research focuses narrowly on particular aspects of online experience and neglects wider contexts of use. We advocate multiple theoretical perspectives and complementary research methods to understand children's Internet use in the round. (Livingstone & Haddon, 2009, p. 32)

  > If research on young people's online communication is to be relevant long after the life of the communication form itself, researchers must study them in the context of relatively unchanging, core developmental issues. (Subrahmanyam & Greenfield, 2008, p. 417)

- Assess the range of user-generated activities that the phenomena of convergence, can enable:

  > Much research concerns the use of websites (i.e., Web 1.0) rather than interactive, peer-to-peer, multi-user applications accessed via convergent platforms and emerging technologies (i.e., Web 2.0 or 3.0). Research on activities and norms associated with peer-to-peer exchange and user-generated content is urgent. (Livingstone & Haddon, 2009, p. 27)

- Research activity associated with Internet access produced over a range of technologies (not just fixed Internet access):

  > Online contents and services accessed via mobile phones, games consoles and other devices raise new challenges for research and policy that demand investigation, especially given implications for parental supervision and safety awareness. (Livingstone & Haddon, 2009, p. 27)

- Research challenges that have received "little research, despite their importance on the public agenda" (p. 28), including user generated content and illegal downloading (Livingstone & Haddon, 2009).

- Consider how young people can avoid and/or manage the range of challenges that cyberspace may produce:

  > [Awareness raising] must also address the question of how children cope with risk once encountered. In short, anticipating risks so as to prevent them is necessary but insufficient, since

> children also need guidance on what to do after they have experienced a problem online. (Livingstone & Haddon, 2009, p. 23)

Reflecting on these insights, and given the proposed significance of this new developmental setting and the potential it offers for greater opportunity, as well as challenge, the aim of the thesis is to assess the wellbeing of young New Zealanders in the Web 2.0 era of convergence. Specifically, the thesis aims to extend the research field by assessing how high-school students experience and manage a range of the challenges they face both online and on mobile in the comparatively new era of convergence and Web 2.0. In the developmental context of convergence and Web 2.0, the thesis will address the following research topics:

1. What activities do young people in NZ undertake on the Internet and mobile phones?
2. What challenges do young people in NZ experience on the Internet and mobile phones?
3. How are such challenges related to experiences of distress?
4. How do young people in NZ manage distressing cyber-challenges?
5. Are age and gender effects evident within these topics for young people in NZ?

By examining these themes, and particularly by focusing on young people's management of challenge, the thesis aims to provide the missing empirical data required to suggest recommendations on how to support the wellbeing of NZ young people as they negotiate cyberspace in the context of convergence and Web 2.0.

## 1.10. Summary and Thesis Outline

This chapter aimed to introduce the research context and objectives by reviewing a range of relevant literature. The chapter began by introducing and articulating the benefits of the contextual and strengths-based approach of community psychology. Then a brief summary demonstrated that adolescent development is a complex interaction between biological, cognitive and social aspects of development. Importantly, this summary, and the methods of community psychology, highlighted that this development happens in context. The developmental context provides young people with the opportunities and challenges that will affect their wellbeing and further development. Media is a significant aspect of these adolescent developmental contexts. New media, which is defined by its resulting qualitative changes in society, in turn, changes the developmental contexts of young people. New developmental settings may then change existing, as well as offer new, challenges and opportunities to young people's wellbeing and development.

The chapter then described the evolution of a new media environment characterised by interactivity. This began with the development of the Internet, and was solidified by the invention of the World Wide Web and early mobile phone networks. By this point cyberspace had become a developmental context for a sizable number of young people by the early years of the second millennium. The Web 1.0 world was associated with a range of opportunities and challenges that were largely managed by protectionist strategies that involved restricting young people's access to perceived inappropriate content and technology.

With increasing convergence and technological innovation and diffusion, the chapter traced how the new media environment evolved further. The second iteration of the World Wide Web, Web 2.0 was associated with an explosion in young people's potential access and activity in cyberspace. Web 2.0 increased opportunities for the production of user-generated content, affiliations, community building, collaboration, media dissemination,

creative forms, civic engagement, knowledge, and skill development. This new developmental context also increased opportunities for the production of [a variety of] challenges to young people's wellbeing. The suggested increase in access and activity, in the bedroom culture context of convergence and Web 2.0, potentially affected the amounts of challenge young people experience in this new developmental setting.

With the recognition that a large number of young people around the world, including NZ, are participating in this new developmental setting, the chapter then articulated the aims and objectives of the thesis.

### 1.10.1. Methodological approach

The thesis utilised a mixed-methods approach to achieve its aims. The first part of the project drew on qualitative research methods to explore and gain detailed contextual information about NZ young peoples' experiences of the Internet and mobile phones. This phase gave in-depth understanding of the context, characteristics, issues, feelings, and language, associated with NZ young people's experiences of the Internet and mobile phones. The second phase utilised the information and knowledge produced from the first phase to construct an anonymous questionnaire. The questionnaire was administered to large numbers of young people around NZ to explore the context, extent, and relationships of these issues in the wider population of school-based young people. The results from this phase of the research were then discussed and considered in conjunction with the findings and literature covered from the first phase of the research project.

### 1.10.2. Chapter 2: Activity in context

Chapter 2 will begin with a description of the methodology of the qualitative phase of the research project. It will outline how the data were produced, and will then leverage these data to explore in detail how young people in NZ experience this new context of development. Interest will centre on examining the context of young people's use of cyberspace, what they do in cyberspace, and how aspects of this use are associated with the themes of adolescent development listed in the introduction. This chapter will demonstrate the multiple aspects of cyberspace use by young people, as well as its importance for them both academically and developmentally.

### 1.10.3. Chapter 3: Challenge and management

Chapter 3 will continue to highlight the voices of these young people as it examines their experiences of challenges in cyberspace. Combining the [largely overseas] literature with local voices, this chapter will explore the range of challenges that cyberspace presents to young people. Acknowledging criticism of solely deficit- and risk-focused accounts, chapter 3 will also address resiliency and competence, exploring young people's strategies (or lack thereof) for managing challenges. Some additional factors (e.g., personality or social factors) associated with increased challenge or resiliency will also be reviewed in this section to ascertain how they affect young people's wellbeing in cyberspace.

### 1.10.4. Chapter 4: Quantitative methodology

Chapter 4 will begin by describing the quantitative methodology that makes up the second phase. This chapter will discuss the construction and administration of a questionnaire to a range of NZ high-school students.

#### 1.10.5. Chapter 5: Quantitative results

Chapter 5 will discuss the analytic schedule for the quantitative analysis and report on the quantitative analysis. The chapter will explore participants' reports of activity, challenge, distress, and [effective] challenge management, in cyberspace. The chapter will finish with post hoc analyses of associations between activity and [distressing] challenge, and various characteristics of cyberbullying and distress.

#### 1.10.6. Chapter 6: Discussion

With a strong evidence base in place from the literature reviews from Chapters 1, 2, and 3, and the empirical data from Chapters 2, 3, and 5, Chapter 6 will synthesise this information to articulate the implications of the contexts, activities, challenges, and management strategies of NZ young people in cyberspace. Having addressed the research limitations, the chapter will end with a set of conclusions and recommendations to promote and enhance the wellbeing and resilience of NZ young people in cyberspace.

## 1.11. Conclusion

The new media environments produced by convergence and Web 2.0 offer young people a range of valuable opportunities for development and growth. This developmental setting, like all developmental settings, also produces challenges for these young people's wellbeing. As opportunity and challenge are two sides of the same coin (the coin being activity-in-cyberspace); focusing on how young people experience and manage these inevitable challenges is vitally important if we want to support young people to maximise their opportunities and produce positive outcomes from their challenges.

# Chapter 2. Activity in Context

Community psychology stresses the need for a contextual approach in understanding behaviour and attitudes. Context includes the environment and settings in which activity happens. Chapter 1 has provided a detailed history and background of the context of cyberspace for young people in NZ. Chapter 2 will now explore how this context, and the actions undertaken within it, lay the bedrock for young people's experiences of opportunity and challenge in cyberspace.

This chapter reports the results of focus group research, interwoven with research findings, to explore the context and activities of cyberspace for young people in NZ. These findings provide insight into what NZ young people do in cyberspace and why they do it. Chapter 3 will explore the challenges (and their management strategies) produced by these activities.

This chapter will begin with a description of the approaches used to analyse the data, as well details of the sample and the interview methodology. The results section will then discuss the analytic framework produced by the initial inductive analysis. The deductive analysis will follow, beginning by considering the context of cyberspace for young people in NZ. This section will outline the normativity of this setting, and then address the themes of multitasking, cost, and [ineffective] adult sanctions and rules, that characterise it. The final part of the chapter will then explore eight categories of activity undertaken in this context by young people. Throughout the analysis, I will highlight features of adolescent development in these contexts and activities.

## 2.1. Qualitative Methodology

### 2.1.1. Focus groups

Qualitative methodologies are valuable for their ability to gather in depth information on novel topics, particularly in health and wellbeing research areas (e.g., see Kitzinger, 1995; Wilkinson, 2004 for brief UK reviews). At the time of the current research, little qualitative work had been conducted on NZ young people's use of ICT in the era of convergence.

Focus group methodology was chosen for its ability to gather rich data on areas where interviewers are naïve (Morgan, 1988). In his book, *Focus Groups as Qualitative Research,* Morgan highlights that focus groups enable participants to question, query, and interrogate each other, as "experts" on the particular shared topic of interest. In this way participants may tease out additional insights, contradictions, themes, and produce more fruitful discussion, than a researcher-led one-on-one interview (Morgan). Additionally, and importantly for the thesis, these groups provided opportunity to hear and use the language and jokes young people used when discussing cyberspace (Kitzinger). This language was used in the construction of the questionnaire in the second phase of the project (see Chapter 4).

Wilkinson (2004) details how focus group interviews, particularly when conducted with friends, can be useful to highlight areas where participants may be in error, or may be contradicting themselves, or contradicting each other. Friends, for instance, armed with historical knowledge of each other, can point out contradictions that the interviewer lacks the knowledge to identify. Participants may also identify contradictions or insights that the

interviewer may simply miss at the time. Conversely, this methodology is limited to the extent that some members may feel inhibited in discussing, or admitting, something that may be perceived as socially undesirable by other group members (Kitzinger, 1995; Morgan, 1988). On the whole, this methodology is particularly useful in producing information on novel topics that have not received much formal analysis or exploration.

### 2.1.2. University of Auckland Ethical Approval

The University of Auckland Human Participants Ethics Committee approved the methodology and this phase of the research. Selected schools received a letter outlining the research proposal (see Appendix A) and a consent form (Appendix B). Following agreement, all participating schools nominated students to receive information sheets (Appendix C) about the project. These students also received information sheets (Appendix D) and consent forms (Appendix E) for their parents and caregivers to sign. The focus group interviews were conducted on school property at a time convenient for the students and the school.

### 2.1.3. Sample

Schools were selected to produce a range of participant demographics, including students from metropolitan to semi-rural schools, schools inside and outside the Auckland region, mixed-sex (co-ed) and single-sex schools, state- and independently-funded schools, and schools ranging in decile[16] ratings. Schools were progressively approached, and all schools agreed to participate in the research. As described in the information sheet for schools (see Appendix A) schools were able to choose students to participate; as this process was managed by the school, response rates have not been collected for this phase of the research.

To produce this range I asked friends and colleagues with relationships to school administrators and teachers to facilitate my contact with those schools. Having produced a list of potential schools, I matched the list to the desired demographic characteristics for the research. By the eighth school's affirmative response, I was confident that I would be able to interview students from each of these relevant demographics.

Table 2 shows the demographic information for the sample. Participants ($N$ = 36) ranged in age from 13 to 15 years, and near equal proportions of males and females participated in the interviews. Approximately three quarters of participants identified themselves as New Zealand European/Pākehā. Group numbers ranged from three to seven participants. However, as detailed by Greenbaum (1998) in his handbook for focus group research, this phase of the research aimed to keep participants numbers within the 4–6 participant "minigroup" size (p. 2). As Kitzinger (1995) and Morgan (1988) explain, smaller groups enable interviews to produce more detailed personal accounts compared to larger groups, which produce more surface level discussions of the phenomena under investigation.

[16] The decile rating of a school is a factor calculated from census data on various measures of students' families' social economic status. The decile rating refers to the fact that schools are organised into ten segments according to their proportion of students from low social economic families. Decile one schools represent the 10% of schools with the highest proportion of students from low social economic homes. Decile ten schools are the 10% of schools with the lowest numbers of students from low social economic communities. Social economic status scores are constructed by combining census data on low household income, 'unskilled' parental occupation, low parental education levels, high household crowding, and the receipt of state income support. Decile ratings of schools are usually assessed every five years (following the national census).

Table 2 shows how the schools varied against the key demographic variables of interest (i.e., metropolitan to semi-rural, co-ed to single-sex, state- to independently-funded, and high, mid, to low-decile).

Table 2. Demographic Information for Focus Group Participants (*N* = 36).

| Focus Group Characteristics | Participant Name[a] | Sex | Age | Ethnicity[b] |
|---|---|---|---|---|
| Focus Group 1: | | | | |
| State school, co-ed, Auckland, metro, low decile (3). | Pete | Male | 14 | NZ European |
| | Helen | Female | 13 | NZ European |
| | Honor | Female | 15 | NZ European |
| | Simon | Male | 15 | NZ European |
| Focus Group 2: | | | | |
| State school, single sex, non-Auckland, metro, high decile (10) | Eva | Female | 15 | NZ European |
| | Sian | Female | 14 | NZ European |
| | Jenny | Female | 15 | NZ European |
| | Libby | Female | 15 | NZ European |
| Focus Group 3: | | | | |
| State school, co-ed, Auckland, metro, low decile (2) | Tia | Female | 15 | Tongan |
| | Lucy | Female | 14 | Samoan |
| | Anne | Female | 15 | NZ European |
| | Mana | Male | 14 | Tongan |
| Focus Group 4: | | | | |
| State school, single sex, Auckland, metro, high decile (9) | Trish | Female | 15 | NZ European |
| | Mary | Female | 15 | NZ European |
| | Jill | Female | 14 | NZ European |
| | Becky | Female | 14 | NZ European |
| | Joan | Female | 14 | NZ European |
| | Mags | Female | 14 | NZ European |
| | Emily | Female | 14 | NZ European – Fijian |
| Focus Group 5: | | | | |
| State school, co-ed, Auckland, metro, high decile (10). | Kate | Female | 15 | Malaysian |
| | Tim | Male | 15 | NZ European |
| | Sarah | Female | 15 | Asian New Zealander |
| Focus Group 6: | | | | |
| Independent school, co-ed, Auckland, metro, high decile (10). | Mike | Male | 13 | NZ-Australian |
| | Jack | Male | 14 | Korean |
| | Kevin | Male | 13 | Kiwi-Chinese |
| | Felix | Male | 14 | NZ European |
| | Neil | Male | 14 | NZ European |
| | Paul | Male | 14 | NZ European |
| Focus Group 7: | | | | |
| State school, single sex, non-Auckland, metro, mid decile (5). | Rick | Male | 14 | NZ European |
| | Marty | Male | 15 | NZ European |
| | Sean | Male | 15 | Pākehā |
| | Bob | Male | 15 | NZ European |
| Focus Group 8: | | | | |
| State school, co-ed, non-Auckland, non-metro, mid decile (6). | Cindy | Female | 15 | NZ European |
| | Stu | Male | 14 | Unspecified |
| | Tony | Male | 15 | White |
| | Sue | Female | 14 | NZ European |

[a] All participant names have been changed to protect identities. [b] Ethnicity descriptions were self-defined by participants.

The average age of participants was 14 years. Previous overseas research (Livingstone & Bober, 2004; Media Awareness Network, 2005; NetRatings Australia, 2005; U.S. Census Bureau, 2005) highlights that it was around this age (13 and 14 years) that cyberspace-use reaches its maximum plateau. This, combined with other

research suggesting that some challenges (e.g., bullying) are particularly significant at this age (e.g., Cross et al., 2009), influenced the decision to focus on this age group. To the extent that older participants may use technology differently, these particular results are limited to describing situations and uses by younger students. However, as the research was descriptive, this limitation was ameliorated by the second phase of the research (see Chapter 4), which included older high-school students as participants.

### 2.1.4. Interview schedule and process

As per Morgan's (1988) suggestions for conducting focus groups, all interviews occurred in quiet and private rooms of each school. Interviews were scheduled within school time, and to reduce fatigue no interviews went over 90 minutes. To begin, the group was given name tags and were briefed on the general purpose of the interviews. Key points from the information sheet were repeated for participants, including the fact that the interview was voluntary and that participants did not need to answer any questions they did not want to.

As Morgan (1988) and Kitzinger (1995) advised, participants were also reminded that while the interview was confidential, and their consent meant they agreed not to talk outside the group about the interview, the confidentiality of all the participants could not necessarily be guaranteed. For this reason, participants were reminded that if there was something sensitive they wanted to say, but were worried that someone may share it outside the group, then it was best not to say it. With that proviso, participants were told that there was no right or wrong answer to the questions, but that the focus group was about sharing opinions, experiences, and beliefs. Noting the strength of focus groups for producing novel topics and themes (Kitzinger; Morgan; Wilkinson, 2004), group members were welcomed to ask questions of each other if they wanted to hear others' opinions or ideas.

While the interviews began with questions to the group as a whole, at other times in the interview, individual participants were questioned directly. For instance, participants who reported experience with an issue of interest, would often be questioned further about the particular details of their experiences or their opinions, either by the interviewer or group members (see Wilkinson, 2004 for a description of such participant questioning). Some of this questioning also reflected Kitzinger's (1995) suggestion to query participants about inconsistencies. At times, specific questions were directed to participants who were relatively more quiet and shy. All forms of direct questioning were done to bring more voices, clarity, and plurality into the interview.

Following my work at NetSafe, which entailed exposure to literature (including popular media) on cyber challenges, adolescent identity, and resiliency, I produced a semi-structured interview schedule for the focus groups (see Appendix F for the list of questions). Whereas, previous research often focused on the challenges associated with a particular cyber-technology (e.g., the Internet) or a particular application within these cyber-technologies (e.g., chat rooms), this study sought to examine young people's experience of cyberspace more generally, and avoided being constrained by a focus on a *particular* technology or application. The semi-structured schedule included items on the following broad topic areas:

- What ICT devices were used, when, and how long they were used for.
- What were ICT devices and applications used for.
- Their likes or dislikes about using ICT.
- Use of ICT devices for school activities.
- Use of ICT within friendships or relationships.

- Encounters with sexual material or sexual information on ICT.
- Encounters with disturbing content on ICT.
- Their safety and security concerns about using ICT.
- Victimisation and harassment involving ICT.
- Posting or sending pictures and video using ICT devices.
- Responding to challenges on ICT devices.
- Talking with adults, friends, and others, about challenges on ICT.

Within a topic, there were a series of sub-questions that may or may not have been explicitly asked depending on whether or not those sub-topics were produced spontaneously in the focus group. As Morgan (1988) noted, by their very nature focus group interviews can meander through different topic areas and various questions (or altogether different questions) may be covered in a different order to a typical interview schedule. With this in mind, these interviews were semi-structured, and, as noted earlier, group discussion was able to shift the direction of the interview if relevant to the research objectives. As recommended by Morgan, as moderator, I kept track of most topic areas covered in discussion and if discussion seemed too tangential for too long (e.g., approximately between one and three minutes) I would return the group to a topic from the interview schedule.

The interviews were recorded on a digital audio device and transcribed into written text for analysis. The transcripts were checked once more against the digital recordings to ensure accuracy. All names in the interviews have been changed to protect identities.

### 2.1.5. Analysis

The analysis utilised a two-stage approach. The first represents aspects of the *inductive* grounded theory approach described by Chamberlain (1999), appended with insights from Braun and Clarke's article on qualitative thematic analysis methods (2006). The second approach was *deductive* and it involved identifying data, which aligned to the initial analytic framework produced by the inductive approach. This dual methodological approach was selected for its ability to explore both new, and previously identified, themes of NZ young people's experience of cyberspace. The resulting themes were analysed and used to form a framework for understanding challenge in cyberspace (see Section 2.2.1).

#### 2.1.5.1. Inductive analysis

The first analytic approach involved reading the transcripts to identify common themes. As advocated by Braun and Clarke (2006), Chamberlain (1999), and Morgan (1988), this inductive approach involved reading through the transcripts and building up themes that described points of interest.

As Braun and Clarke (2006) advise, qualitative thematic analysis is a recursive process, and the themes shifted as more data were analysed and more relevant themes and ways of making meaning and understanding the data were produced. In practice, this meant that as an extract that addressed a significant or interesting issue was identified, it was coded under a first level thematic heading (e.g., harassment). Whenever a significant part of the interview did not neatly fit within an existing first level code, a new first level code (e.g., copyright infringement) or sub-code (e.g., harassment: text-bullying) was created to incorporate that point.

#### 2.1.5.2. Deductive analysis

As Section 2.2.1 highlights, the inductive thematic analysis produced an initial analytic framework that identified how four *meta-themes* (context, activity, challenge, and management) described the context of young people's production and management of challenge in cyberspace (see Figure 2). These meta-themes were then used as the basis for a second, deductive, thematic analysis. These meta-themes provided an organising framework for analysing the data, and produced the following deductive questions for the analysis:

- What contexts of cyberspace were present in the data?
- What categories of activity in cyberspace were present in the data?
- What categories of challenge in cyberspace were present in the data?
- What categories of challenge management and response were present in the data?

The resulting data within these four meta-themes was analysed to identify the presence of distinct and meaningful sub-themes. Figure 3 (on page 122) graphically represents these themes.

The results sections in this chapter and in Chapter 3 include interview extracts that seem particularly clear or evocative in highlighting these themes. Where possible, each thematic section in the results will also include findings from the international and national research literature, which explores the prevalence and characteristics of each theme amongst larger numbers of young people.

## 2.2. Results and Discussion

The process described above resulted in the production of an analytic framework for understanding and conceptualising young people's experiences in cyberspace (Figure 2). While the reader has not yet been exposed to some of the concepts in the model, the preliminary model is included at this point to provide a guide for the reader for the ensuing analysis.

#### 2.2.1. Preliminary analytic framework

A key focus in the focus group interviews revolved around young people's activity in cyberspace. The inductive analysis revealed that understanding and organising activity by its technological setting (e.g., social networking sites) was unhelpful, because many of the activities young people undertook within one technology, they also did within other technologies. This is to be expected given the strong prevalence of the phenomenon of convergence (discussed in Section 1.5.4) in contemporary cyberspace. In fact, preliminary attempts to organise activity by the particular technologies or types of applications used, produced significant repetition of similar data, and did not construct the distinct themes recommended by Braun and Clarke (2006). Instead, the thematic analysis revealed that it was more useful to organise the activity data by the categories of activity that young people undertook in cyberspace. This lead to the production of a meta-theme called *activity*.

Having recognised that the particular site of activity was problematic as a thematic structure, the inductive analysis assessed young people's experiences of challenge as categories of challenge (e.g., harassment) rather than as challenges tied to a particular technology or application (e.g., harassment on social networking sites).

This thematic organisation also proved worthwhile, demonstrating that the same type of challenge could be produced by a similar category of activity conducted over a range of different technologies or applications. The inductive analysis also found that some categories of challenge (e.g., exposure to inappropriate content) could be produced by multiple categories of activity (e.g., exposure to inappropriate content could result from communicating with others, researching, consuming media, and gaming in cyberspace). These two findings lead to the production of a meta-theme called *challenge*. This meta-theme described the various situations and experiences that have the potential to cause harm and distress for young people.

The next step in this analysis was to assess how young people respond to challenges. The analysis again revealed that some strategies were used to manage a range of challenges, regardless of which technologies or applications were involved with these challenges. This resulted in the production of a meta-theme called *management.* Similar to the relationship between challenge and activity, the management meta-theme existed in relation to experiences of challenge (i.e., challenge management cannot exist without challenge) and described the responses young people made (or did not make) when faced with challenge.

Finally, the preliminary inductive analysis also generated themes that described the contexts and environmental features of young people's use of cyberspace. These themes affected young people's access to, and activity in, cyberspace. This analysis lead to the production of the final meta-theme called *context*. This meta-theme described the contexts of young people's access and activity in cyberspace.

These provisional meta-themes were used to construct a preliminary model for understanding the production and management of challenge in cyberspace. The model highlights that context determines activity in cyberspace, and that activity may produce challenge. Challenge may then produce challenge management responses by young people (even if the response is simply to ignore the challenge). Figure 2 graphically represents the relationships between the meta-themes in the preliminary analytic framework.

Figure 2. A Model for Understanding the Production and Management of Challenge in Cyberspace


### 2.2.2. A Framework for understanding the production and management of challenge in cyberspace

As noted in Section 2.1.5, the second stage of the analysis involved analysing the data to identify some of the sub-themes within the four meta-themes. The analysis then populated the provisional framework with themes that were identified within the focus groups. The following results sections will discuss the themes that make up the model. The remainder of this chapter will focus on the top two sections of the diagram: context and activity. Chapter 2 will examine the bottom sections: challenge and management.

## 2.3. Context

The context meta-theme describes the environment, settings, and circumstances of cyberspace access and use. The analysis found that young people's cyberspace access and use was affected by a range of contextual themes. The context theme that opens this section, demonstrates that cyberspace is now a normative developmental setting for young people in NZ. Within this now normative context, access and activity was further affected by the multitasking of ICT activities, cost factors, and adult sanctions and rules.

### 2.3.1. Cyberspace is normative

Extract 1

JF: All the time, [Kate: Yeah] practically every day?

Sarah: It's like our lives.

JF: It's like your lives?

Sarah: Everyone's lives.

JF: Yeah, yeah. Tell me about that, like, is it just like… it's such a huge part of…

Kate: Yeah, I can't live without it. [Sarah: Yeah] It's just-

Tim: - It's like communicating [Kate: Yeah], it's just so convenient…

JF: Yeah, yeah.

Kate: And it's just like you kind of like listen to music and like find random bands and you know.

JF: Yeah.

Sarah: *MySpace* <chuckles>.

JF: So, so, do you have a *MySpace* page?

Sarah: Yeah <chuckles>.

Kate: I think everyone does.

Sarah: Yeah.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

All focus groups highlighted the centrality of cyberspace in the lives NZ young people, this no doubt reflects that each participant reported personal access to at least one ICT device. Quantitative studies from around the world and NZ demonstrate the pervasiveness of ICT among young people. For instance, international research from a similar period, found that 72% of 12–15-year-olds in the UK (Livingstone & Bober, 2004, N = 1,511), 94% of 9–17-year-old Canadians (Media Awareness Network, 2005, N = 5,272), and 94.6% of 10–17-year-olds in the USA (U.S. Census Bureau, 2005, n = 33,900) reported accessing the Internet at home, school, or work. Locally, the Census @ School (Department of Statistics - University of Auckland, 2005a) project reported that 83.7% of NZ 14-year-olds (*n* = 6,675) reported home Internet access.

Focus group participants often reported daily personal access to at least two ICT devices. Although the statistics above addressed Internet access, mobile phones were the most commonly personally accessible devices available to focus group participants (closely followed by a personal computer (PC) at home). Even the small number of participants who did not own a phone said they intermittently used someone else's phone (often a friend's or caregiver's phone). The Census @ School (Department of Statistics - University of Auckland, 2005b) results demonstrated that 84% of the NZ 14-year-olds surveyed, reported phone ownership. Combined, these qualitative and quantitative findings underscore the normativity of personal access to both mobile phones and the Internet among young people in NZ.

Further highlighting the normativity of ICT, the qualitative results found that participants who did not own a mobile phone, all nonetheless reported personal access to PCs with Internet access. Additionally, for the few phone owners without personal access to Internet capable PCs at home, each reported use of alternative settings, in addition to school use, for daily PC Internet access. Wylie and Hipkins (2006) already noted that Internet access at school was nearly universal (93%) among the diverse 14-year-olds (*N* = 475) they surveyed in Wellington between 2002 and 2003. Thus, in addition to high rates of Internet access at school, focus group participants also accessed the Internet at friends' and relatives' houses, and commercial and public venues. Reddington's (2005) NZ study of 500 children and young people's (aged 6–17 years) Internet use reflected these findings, with her participants reporting access at friends' or relatives' houses (58%), public libraries (24%), parents' workplace (19%), and Internet café's (15%). Combined, these findings highlight that frequent Internet access is likely to be normative even among young people in NZ with restricted access at home.

The overseas research on Internet use demonstrates that the proportion of young people who go online, and the frequency with which they go online, increases steadily up to around the ages of 14–15 years (Livingstone & Bober, 2004; Media Awareness Network, 2005; NetRatings Australia, 2005; U.S. Census Bureau, 2005). These findings, and those detailed above, suggest that cyberspace is a normative setting for the current participants and for the majority of teenaged young people in NZ, Canada, the UK, and the USA. This builds on and reflects the premise from Chapter 1 that cyberspace is likely to be a significant developmental setting for young people. The results in this and the following chapter demonstrate some developmental reasons for this significance.

### 2.3.2. Multitasking

The popularity of cyberspace may inflate, and be inflated by, the phenomenon of multitasking. Multitasking refers to the phenomenon where more than one media form is used simultaneously. Prior to the normativity of cyberspace, opportunities for media multitasking commonly involved simultaneous use of print material with television or music media (e.g., reading a magazine whilst watching television). However, the large diffusion of ICT equipment, combined with the phenomenon of convergence, during the later part of this decade, has facilitated an increase in multitasking with ICT (Foehr, 2006). Extract 2 (below) exemplifies how commonplace multitasking is for some participants; multitasking was so much a part of participants' context of cyberspace that they thought it was humorous that I did not know this already.

Extract 2

JF: Yeah; and so it's like some people sort of say that, you know, their parents will be like "Are you doing your homework?" and they'll say "Yeah, I'm doing my homework" but they're not. Or they kind of are doing their homework, but they're also kind of instant messaging. Do you guys do that? Do you kind of?

Multi: Yeah!

Sarah: No, it's fine if you're just doing your homework <chuckles> and then instant messaging is just there, it's like-

Kate: -Yeah.

Sarah: It's considered as doing your homework <laughs>

JF: Yeah.

Kate: Yeah.

John: Do you use it to help you do your homework, instant messaging?

Sarah: Yeah-

Kate: -Ask people [Sarah: Yeah] what's going to be in it [Sarah: mmmm] [the test] so yeah.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

Foehr's 2006 study of young people in the USA found that both the amount of media multitasking and numbers of young people media multitasking has increased this century. In Foehr's review and study on the topic, she noted that the amount of time spent using multiple electronic media forms by young people (aged 8–18 years) nearly doubled from 16% in 1999 (Roberts, Foehr, Rideout, & Brodie, 1999, N = 621) to 26% in 2005 (Roberts et al., 2005, N = 694). Furthermore, both Foehr's, and UK (Ofcom) findings demonstrate that multitasking is a very common aspect of cyberspace for young people, with around 80% of the teenaged[17] young people in those samples reporting media multitasking. Locally, Reddington's (2005) statistics showed a similar enthusiasm for multitasking among NZ young people, with the majority of 15–17 year-olds reporting listening to music (91.8%) or watching television (56.1%) "at least some of the time" while using the Internet.

Further, underscoring the place of ICT within contemporary multitasking, nearly two thirds (64%) of the media multitasking reported by Foehr's (2006) participants involved doing multiple media activities at the same time on the same computer. The phenomenon of convergence discussed in Chapter 1 plays a key role supporting and producing this context of multitasking. As previously noted, convergence has enabled people to use ICT to do more things, more often, from more places. Extract 2 above demonstrates the utility of convergence by highlighting how it easily enables some participants to do more than one thing simultaneously within this context of cyberspace. Furthermore, Extract 2 shows how multitasking in a converged environment enabled participants to not only accrue benefit from each activity individually, but to combine individual activities to produce a better outcome. For instance, not only was the participant able to do homework as well as communicate with her friend, but she could also communicate with her friend about their homework as they did it.

Aspects of adolescent development may also underpin multitasking. As noted in Chapter 1, development during adolescence may furnish the cognitive resources required to support such multitasking abilities (e.g., working memory and attention) (Kuhn, 2009). Equally, the increasingly complex vocational tasks required of young people as they age, may require significantly more time and resources to complete relative to their earlier tasks. For instance, as the extract above and the researching section (see Section 2.4.2 below) demonstrate, many young people are involved in school activities that utilise ICT. In order to achieve their vocational objectives and the other developmental tasks (e.g., communication and identity development), young people may multi-task using ICT to meet these requirements.

The multitasking feature of this context is notable because it means that young people's use of ICT may often involve multiple activities at the same time. As this and other chapters indicate, activity is important as it is within activity that opportunity and challenge arise. Multitasking affects context by increasing the overall activity. This

[17] Note, while Foehr (2006) assessed 8–18-year-olds, there is no separate statistics based on age for the multitasking topics. However, Foehr noted that the teenage responses differed only by 1% from the full sample–for this reason the overall statistic has been quoted here.

contextual feature of multitasking is important because it may increase NZ young people's chances for opportunity and challenge in cyberspace.

### 2.3.3. Cost

Despite the pervasiveness of cyberspace in young people's lives, the focus group data nonetheless indicated that this context was affected by cost. Cost in this sense refers to the amount of money needed to buy ICT technology, and the ongoing costs of connecting that technology to cyberspace. Statistics New Zealand (2004) reported that a digital divide existed in NZ, which saw lower income families with significantly less access to the Internet than those with higher incomes. However, while the focus groups were selected to provide a range of social economic communities to participate in the research, cost was raised as an issue across all focus groups. In total, two participants reported that they did not have Internet access at home. While one of these was at a low decile (one) school, the other was at a decile six school. However, for the decile six student, cost of access was nonetheless cited as one of the reasons for preventing home access (see Extract 3 and Extract 23).

Other issues of cost reflected the differential expense of dial-up and broadband access. Within most focus groups there were a variety of dial-up and broadband households. At the same time period as the focus groups, data from the World Internet Project (WIP), collected from 1,430 New Zealanders (aged above 15 years) also indicated a diversity of Internet connections across the country (A. Bell et al., 2008). Of the 1,121 Internet users in the WIP sample, two thirds had broadband connections while a third reported dial-up access (A. Bell et al.). Bell and colleagues also identified that household income affected broadband penetration, with 20% more families in the top income bracket (NZD$100,000 and over) reporting broadband access compared to the lowest quintile of families (NZD $25,000 and below). However, the WIP data nonetheless noted that around a quarter of the highest income families in their sample reported dial-up access. This finding was also reflected in the current data, with a participant at an affluent decile 10 independent school reporting dial-up access.

Dial-up affected the context of use because it limited how much data could be transmitted, and thus limited the extent to which young people could participate in "data-heavy" activities online. Dial-up also meant that young people had to fit their access to cyberspace in around the family's needs of ICT, including the landline telephone. As Marty demonstrates below in Extract 3, this could include other family members needing the landline, or someone wanting to use the Internet from another computer at home. Additionally, around the time of the research, many dial-up plans involved time limits and were designed for a Web 1.0 world where web browsing was mainly used for short bursts of information gathering, or retrieving email into an email client on the computer. If families were cost-cutting and not buying "unlimited" dial-up plans, then young people's access at home, like Marty's, would be further curtailed by having to fit within often small monthly time limits.

Extract 3

Marty: I don't have a time limit, like set, but it depends what's happening at that point, so if Mum wants the phone, because our thing takes over the phone line, so if Mum wants the phone I have to get off.

JF: Yeah, absolutely.

Marty: And since we've only got 20 hours a month I have to be within that or I have to pay for it.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Cost also affects the provision of technology for cyberspace access. The amount of technology that participants had access to varied widely. For instance, within Focus Group 1, one participant talked about sharing and fighting over Internet access with siblings (e.g., Extract 4 below), while another participant's household contained a range of computers (e.g., Extract 5).

Extract 4

Honor: As soon as Mum leaves the house, it's like run to the computer who gets there first.

JF: So, you share the computer with, is it your brother, did you say?

Honor: I've got my brother and three sisters.

Simon: Unlucky!

Honor: But my sisters don't go on as much as me, and they tell on me, like, 'Honor was on *Bebo*', but my brother he likes *Maple Story* and *Runescape* and stuff.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Compared to Pete in the same group:

Extract 5

Pete: We just have a wireless Internet so that the main desktop computer, my brother's desktop computer, my Mum's laptop, my Dad's laptop, my brother's laptop and my other brother's laptop can all go on the broadband at the same time…

Surprisingly, despite these cost issues and the differential effects they may have had on young people's personal access to cyberspace, the focus group participants produced remarkably similar responses across most domains, regardless of home broadband access. However, this may not so much reflect that Internet access at home is irrelevant, but rather, as noted earlier, that young people without quality access may seek access elsewhere. This is reflected in Extract 6 below (and Extract 9) where Tia, who had no Internet access at home, would access the Internet at school, the local library, and at the homes of her extended family. The effort that such participants went to, to gain broadband access, no doubt reflects the significance of cyberspace to them.

Extract 6

JF: And so when you're going online, so you go online at school. All of you use the Internet at school, if you haven't used it up yet, and stuff and then there's home. Who else uses it at the library, 'cause you do it at the library?

Tia: Yeah, our library and relatives' house.

JF: And whose house?

Tia: Relatives.

JF: Is that the same with you guys, do you use the Internet in other places other than home and school?

Lucy: No.

Lucy: No, just home.

Mana: Sometimes the library 'cause like friends want to go there and look at their page so I just thought I might go there and, you know, just go on the Internet too.

(Lucy, 14, Female; Tia, 15, Female; Anne, 15, Female; Mana, 14, Male; Focus Group 3).

Mobile phones helped to equalise the cost equation in the technology field. The majority of focus groups included young people who had purchased their own phones. Therefore access to mobile phones was also able to partly ameliorate lack of quality Internet access at home. However mobile phone activity was also affected by cost. At the time of the focus groups, text messages sent incurred a cost of 20 cents, unless a young person had invested NZD $10 upfront to buy 1,000 text message credits for the month. The cost of text messaging, or the fear of going over a 1,000 monthly cap, however sometimes drove some participants to text less, and where possible, like Cindy (Extract 7), they would go online to communicate, because it was cheaper:

Extract 7

JF: What do you like about that, about *MSN*?

Cindy: It's a lot easier, it doesn't waste money from texting.

JF: Yeah, absolutely. So you've got a mobile phone as well?

Cindy: Yeah.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

To summarise, cost issues are experienced by focus group participants in a variety of ways. While participants' home Internet access (Statistics New Zealand, 2004) and broadband access (A. Bell et al., 2008) is affected by cost, the majority of young people without access, or with slow or limited access, searched out and accessed quality Internet from other locations. Additionally, the relatively cheap cost of mobile phones and texting means that many participants used these technologies to supplement Internet access. However, for some participants with access to the Internet, the costs of mobile phone access may push them online to communicate with others.

### 2.3.4. Adult sanctions and rules

Extract 8

JF: So, you know if they tried to kind of, you know like, if say a lot of your parents went "Right!", you know like people at home said you're going to have to, we're going to move the computer into the lounge and that kind of stuff - - -

Sean: I wouldn't use it.

JF: Would you not use it after that point?

Sean: Probably not.

JF: Would you be, do you think, would it be a really big deal if that happened to you?

Sean: Yeah, as I said before, it's my own sort of private place. The things that I join and stuff it's somewhere where I can get away from my parents and stuff like that.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Sean's point above in Extract 8 was highlighted in Chapter 1, where part of the importance of media, and cyberspace, was explained by its ability to provide young people with solitude and privacy from parents. ICT can play a key role in producing space from family and parents so young people can differentiate and explore who they are (Roberts et al., 2009). Unsurprisingly then, another common theme produced in the focus group interviews, concerned adult intervention and sanctions around use of ICT.

As Marty mentioned in the cost section above (Extract 3), some young people in the focus groups reported that their experience of cyberspace was mediated by adult sanctions and rules. In situations, like Marty's above, rules from parents and caregivers limited how much time they could spend on the Internet. Overseas research highlighted that other young people may also face rules about time use, with around a quarter (23%) of young people (aged 12–15 years) in the UK reporting time limits (Ofcom, 2006, n = 416).

Other rules mentioned in the focus groups concerned where the Internet would be placed within the home, with some participants limited to Internet access from a shared room. The WIP study (A. Bell et al., 2008) reported that the majority (80%) of Internet access in NZ homes was outside the bedroom, with the study/office (41%) and living area (36%) most popular. Similar findings were reported by the 2006 Ofcom study above, which found that only 18% of the 12–15-year-olds (*n* = 425) reported using the Internet in their room, compared to the remainder who used it from a shared room in the house.

Other rules concerned activities that participants were allowed to engage in, with gaming and communicating online the target of sanctions (e.g., Extract 4 highlighted rules placed on Honor). The WIP study reported that around 80% of families had rules in place for under-18-year-olds about use of the Internet (A. Bell et al., 2008). Specifically, of the 400 or so families in the WIP study, rules focused on not giving out personal information online (88%), not chatting with new people met online (81%), not meeting with new people met from the Internet (80%), and not visiting "some sites" (75%) (A. Bell et al., p. 17). However, as Livingstone and Bober (2004) demonstrated in the UKCGO survey, the numbers of young people and their parents who actually agreed over the existence of rules for ICT, varied depending on the particular rule and the age of the young person.

Even where there may be agreement that a rule exists, some participants reported circumventing rules and monitoring by using technology out of view of sanctioning adults (e.g., as indicated in the normative [2.3.1] and cost [2.3.3] sections above). The Ofcom study (2006), supports this finding, with only 22% of 12–15-year-olds (*n* = 416) saying they "usually" (p. 36) used the Internet with a parent in the same room. Some participants also reported simply engaging in unsanctioned activities when adults were out of the house (e.g., Extract 4 – Honor on *Bebo*).

Alternatively, some young people may avoid adult monitoring by accessing cyberspace outside the home, which, as noted earlier, is relatively easy to achieve (e.g., see Extract 6). As noted in Chapter 1, adolescence is

characterised by increased opportunity for earning money and gaining financial independence from caregivers (Staff, Messersmith, & Schulenberg, 2009). Increasing financial resources combined with the desire for access may see some young people, like Bob and Rick below, paying for access in other places.

Extract 9

JF: So if it did happen though, like—say if they like said "look no—we're taking the Internet off the computer at home".

Bob: I'd pay it for myself.

JF: You would?

Bob: I've got a job so I can afford it if I want to.

JF: Yeah. Would you, I mean would you probably go to an Internet café if they said we're not having the Internet anymore?

Bob: I've done it before.

JF: Yeah, you've done that before?

Rick: A little while ago there was a gaming place where we went to play games.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Parents' monitoring strategies are also challenged by young people's technical knowledge. If some of the current participants accessed sanctioned material, they had a range of strategies for hiding their activity. Some used hidden browsers that parents could not access, and instead loaded "educational" pages into the family browser, which they flicked onto should a parent come into view. Others like Sean below, simply surfed sanctioned sites when adults were out of view and then deleted the Internet history.

Extract 10

Sean: In the holidays my mum's at work and stuff, so she wouldn't know, I can just delete history.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

UK research conducted in 2006 with 1,003 young people aged 11–16 also found that 65% reported that they could delete browser histories (NCH, 2006). Given that so many young people can avoid monitoring, it is not surprising that families frequently install Internet filters on home computers to control activity. Filters block access to particular websites or applications. International data suggests that around half of families with home Internet access have installed filtering in the USA (Wolak et al., 2007b), the UK (Ofcom, 2006), and across the 27 EU countries in the *Eurobarometer* study (Livingstone & Bober, 2004; Livingstone & Haddon, 2009). Wolak et al. (2007b) found that home filter use in the USA reduced unwanted and wanted exposure to sexual contents online by up to 40% for some participants in YISS2.

However, the YISS2 data nonetheless showed that 44% of young people (aged 10–17) reported an unwanted exposure to sexual content ($n$ = 400) on filtered computers (Wolak et al., 2007b). Furthermore, filters on those home computers only stopped 53% of wanted exposures to sexual content. Most of the current participants also

reported being able to circumvent filters if they wanted to (e.g. see Extract 11). This finding was replicated by the NCH study (2006), which found that while two thirds (65%) of parents thought they could effectively filter their child's Internet access, 46% of participants aged 11–16 were confident they could circumvent such filtering.

Similarly, some participants in the current study also talked about circumventing even stricter filtering measures at school. UK research has also identified widespread contemporary failure of Internet filters and monitoring practices in UK schools (Hope, 2005, 2007). In the current study, some participants laughed about teachers' failed attempts to monitor and prevent forbidden access. For instance, the young women below in Extract 11 highlighted how proxy sites are often used to get around school filters so other students could go onto the social networking site *Bebo*. Proxy sites are websites that reroute web traffic through an "innocent" unfiltered page name (e.g., http://app1e.in/) to an encrypted page that delivers the desired website (e.g., *Bebo*.com). Some participants in the current research were motivated to bypass school filtering so they could game online, watch videos on *YouTube*, or, as below, to go on social networking sites.

Extract 11

Mags: We sometimes, like you're not meant to but when you're on the computers and stuff everyone goes into their accounts and like spend the whole, like - - -

Becky: At school when you're supposed to be doing your work you can go on *Bebo*. They've blocked it from our school, but then you go on either by proxy.

Girl: Yeah.

Emily: Prox-g and there's like so many.

JF: Yeah.

Mags: And you go on like the whole lesson, instead of doing the work.

Mary: I can look over to see what someone else is doing and that's on *Bebo*.

(Jill, 14, Female; Trish, 15, Female; Mary, 15, Female; Becky, 14, Female; Emily, 14, Female; Joan, 14, Female, Mags, 14, Female; Focus Group 4).

#### 2.3.5. Summary

Cyberspace is now a normative part of life for young people in NZ. The phenomena of multitasking and convergence produce more activity. Despite increases in activity from multitasking, access to this context is nonetheless affected by cost and adult sanctions. However, as the last two sections demonstrated, cost and adult/school mediation rarely seem to stop access, but rather change what young people do to gain access. The ability to access cyberspace from a range of locations and/or to bypass monitoring and filtering measures, demonstrates the resourcefulness of young people that is a key feature of their adolescent development.

## 2.4. Activity

Given the normativity of cyberspace in the lives of NZ young people, this section of the chapter will use focus group data and research findings to explore the activity meta-theme that cyberspace enables. Within this meta-

theme, the data revealed a number of themes that describe some of the distinct actions undertaken by NZ young people in cyberspace. The analysis will show that these themes include communicating, communicating with "new" people, researching, trading, gaming, banking, consuming "popular media", and publishing content.

### 2.4.1. Communicating

Extract 12

JF: If I had to say one page is gonna disappear from the Internet, like one site's gone, what would be the most terrible thing to lose?

Helen: *Bebo*

Honor: *Bebo*

Simon: Aw, I don't care.

JF: You're pretty like, you can choose any - - -

Simon: Yeah I'm fine with it, if it disappeared it would be like oh stink but it's not like a big thing for me.

JF: What about if *MSN* messenger disappeared?

Simon: Yeah, if *MSN* disappeared I would be like noooo.

Honor: I'd cry.

Simon: 'Cause I'm on it like every day.

JF: Yeah.

Helen: It's like a daily ritual

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Communication, be it via instant messaging during homework, or on dedicated social networking sites[18] (e.g., *Bebo* or *MySpace*), was a major activity in this context. This was the most common and frequent reported use of cyberspace among focus group participants. The importance of the Internet and mobile phones in the social lives of young people has already been reflected in the opening quote of this analysis (Extract 1). Kate's dramatic statements about not being able to "live without it" (see Extract 1) reflect the central place of communication and cyberspace in the work and social life of this diverse array of young people. The fact that specific social networking sites (i.e., *Bebo* and *MySpace*) are often named as activities in their own right, underscores the prominence of these social settings.

The focus group discussions indicated that communicating in cyberspace nonetheless occurs across a range of different technologies. Extracts from the focus groups highlighted that such communication can include mobile phones (Extract 15), online games (Extract 30), online social networking sites (Extract 18), chat rooms (Extract 19), messenger programmes (Extract 7), email (Extract 16), and participants also mentioned communicating on voice or video over Internet protocol applications (e.g., *Skype* or *MSN*).

[18] See boyd (2007) for a detailed description of the form and function of these sites.

International and local research conducted prior to the focus groups, reflected the diversity of young people's communication in cyberspace. For instance, 9–19-year-old participants (*N* = 1,511) in the UKCGO study (Livingstone & Bober, 2004) reported using email (72%), sending and receiving instant messages (55%), and using chat rooms (21%). The majority of young people in the USA YISS2 study also reported using email (79%) and instant messaging (68%), while a smaller number (30%) reported using chat rooms (Wolak et al., 2006). In Canadian research (Media Awareness Network, 2005) near equal numbers of Grade 8 students (13–14 years of age) reported using email (74%) as said that they "talk to friends on instant messaging" (75%) when online. Wylie and Hipkins' (2006) NZ research with 14-year-olds, reported that email (84%) was the second-most popular online activity overall, and was closely followed in popularity by "chat online" (70%).

Later research reflected the explosion in online social networking and communication (Lenhart & Madden, 2007b). Social networking refers to the recruitment and practice of "friending" people and allowing these contacts to see, meet, and "friend" other contacts (e.g., see boyd, 2007). For the purposes of the thesis, social networking refers to the process of making and maintaining friendships in online applications where participants share information about themselves and their activities. Social networking sites in some ways represent the acme of convergence, enabling people to share media, play games, as well as communicating via instant messages, emails, public notes, videos, forums, and event invitations, within such sites.

At the time of the focus groups in late 2006, the PEW Internet and American Life Project surveyed 935 young people (aged 12–17 years) in USA about their use of social networking sites (Lenhart & Madden, 2007b). By this point, just over half of participants reported using social networking sites. This represented a significant addition of a new communication media. The fast growing popularity of social networking was also reflected in the talk of the current focus group participants. Some participants had heard about social networking sites, even if they did not actually use them. For instance, Cindy's comments in Extract 13 below demonstrate the knowledge that even non-users of the sites may have of their form and function.

Extract 13

Stu: And *Bebo* – oh, just some girls I met had *Bebo*.

JF: Yeah and they said "oh, you should sign up to *Bebo*" and stuff like that? But did you find that it wasn't the main thing to chat on *Bebo*?

Stu: I don't know, because I could not find any of them so I kind of just left it. Yeah.

JF: Yeah. Do you think – are there many people at this school who'd have *Bebo*.

Cindy: Yeah.

Stu: Quite a few here do.

JF: So it would be pretty – If you had a computer at home would you get *Bebo*?

Cindy: Oh, I don't know – If I knew how to set it up probably. It would take ages just to put all like pictures and everything on there.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

Mobile phones are another key vector for communication in cyberspace. The 2005 Census @ School study showed that 84% of the 14-year-olds (*n* = 6,675) reported owning a mobile phone (Department of Statistics - University of Auckland, 2005b). The 14-year-old participants in Wylie and Hipkins' (2006) research (*N* = 475), reported that phoning or texting friends was the third most common activity they "often" did over a week (after watching television and doing homework) (p. 9). In fact slightly more participants said they often talked or texted with friends (54%) than actually "hung out" with them (53%). Comparable to the Census @ School results, 82% of the 764 participants (aged 12–15), in a similar-timed UK study, reported mobile phone use (Ofcom, 2006).

Unlike Internet connections which are often, for young people, used from fixed locations (e.g., home, school, or Internet cafés), the focus group interviews demonstrated that mobile phones enable a range of 24-hour "any-time, any-where" communication opportunities. Text messages, multi-media messages, and voice and video calls, all enabled young people to stay current with their social scenes. This "any-time, any-where" ability helps to explain why some participants talked about the mobile phone as the primary device for managing their social lives. The significance of this cyber-communication is highlighted in the following quote (Extract 14), which demonstrates how "horrible" it would be to lose Internet messaging or mobile phone access.

Extract 14

Rick: Like if, if I was using *MSN* and my parents found out that someone else was probably pretending to be someone else and they'll probably not let me use it anymore.

(..)[19]

Bob: It'll be horrible.

JF: It will be horrible?

Bob: Yeah.

JF: Yeah.

Marty: I love my phone that's just - - -

JF: Yeah.

Marty: I need to use it.

JF: Yeah.

Marty: I can live without it, but it's just - - -

JF: Yeah.

Sean: I'm not obsessive about my phone. I can easily - - -

Marty: It's quite sad actually really.

Sean: It is.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

[19] This symbol indicates that a small section of un-related transcript has been cut to reduce the size of the extract.

The importance of mobile phones, as well as online social networking opportunities, for NZ young people cannot be overlooked. Given the ubiquity of mobile phones and online communication, these features are likely to constitute a main strand of the social context for most NZ young people. Despite this, the data also indicate age and gender differences in rates of communication in cyberspace. For instance, the 2006 Ofcom study quoted earlier (*n* = 764, aged 12–15 years) found that more young women (87%) reported mobile phone use than young men (77%). Interestingly, while Lenhart and Madden (2007b) reported that social networking sites were more popular with young women, they also found that social networking sites rose in popularity as young men aged. This may reflect the situation recounted above (see Extract 13), where maturing young men may increasingly use communicating online to develop romantic relationships.

As noted earlier and in Chapter 1, the biological changes of puberty, including the development of sexuality and intimate relationships (Diamond & Savin-Williams, 2009), may be associated with various online activities. To the extent that social networking is a popular activity for young women, sexually maturing men interested in women, may find they need to participate in these forms of communication, to interact with young women (Lenhart & Madden, 2007b). As these men age and mature, the desire for this activity may rise, resulting in more social networking and cyber-communication (Media Awareness Network, 2005; Roberts et al., 2009).

Thus, the focus group data demonstrates that limiting access to ICT may limit some participants ability to socialise. Given the significance of social connection for achieving many of the developmental tasks of adolescence (boyd, 2007; Elkind, 1967; O'Connor, 1995), it is not surprising that this context has become something that some young people say they "can't live without" (Extract 1). Extract 15 demonstrates how central and critical the mobile phone can become for some young people. In this extract, Tia extends the life-line metaphor of cyberspace, mentioned by Kate in Extract 1, by reporting physical and emotional distress following separation from her mobile phone. At the end of this extract, the critical and central importance of the mobile phone is underscored with a metaphor comparing it to one's heart.

Extract 15

Tia: My Mum and Dad took my phone off me, like, for the weekend and like, all I could think of was, like, my phone <chuckles>. [JF: Yeah] It is like when they took my phone, I felt like a part of me is gone, like… [Multi: <Chuckle>] it was boring, like, I didn't even eat or anything. I felt sick, like, oh my gosh, I'm attracted to my phone! <giggles>.

Multi: <Laughter>.

Mana: When I first started the school this year in Term 2, there was probably two weeks of school and my phone, it was, like, stolen. I looked and I was, like, I was panicking, I ran everywhere to find it and it is true [Tia: Yeah] that it is like something has gone [Multi: Yeah] and you just need that back, so then I didn't have a phone for a month and then, in the period of that month, I went to my Mum and I kept asking her if I could use the phone. I just needed a text. It was like, I needed to talk [Tia: Yeah] [JF: Yeah] so yeah.

Tia: It is like… it's like, they are taking your heart away <chuckles>.

Multi: Yeah! <laughter>.

(Lucy, 14, Female; Tia, 15, Female; Anne, 15, Female; Mana, 14, Male; Focus Group 3).

As noted above and in Chapter 1, the importance of communication in cyberspace reflects the important role communication plays in identity development and socialisation (boyd, 2007). This partly reflects the ability for communication in cyberspace to enable young people, like Tia, to participate in the culture of their peers. Such participation is required to develop and sustain one's cultural capital and social connection (Baker, 2001).

Social connection is important because it enables young people to utilise the social networks of their peers to inform and support their identity development (boyd, 2007) and autonomy (Elkind, 1967). To the extent that important social details are shared in cyberspace (e.g., party details), young people require this information to participate in the peer culture (i.e., be at the party) that will provide opportunities for social connection, identity exploration, and peer feedback. Extract 16 below highlights how peer-interaction may motivate this cyber-communication, with these participants communicating online because their friends were.

Extract 16

JF: What made you guys get email accounts?

Cindy: Other friends had them.

JF: Other friends?

Stu: Mm, same.

JF: Same with you? And would they just like "Oh, you should get it so we can chat and stuff"?

Stu: Yeah.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

In addition to the social connection that such communication can produce, communicating in cyberspace also offers opportunities for young people to develop and accrue cultural capital. As discussed in Chapter 1, cultural capital is key information about a culture that is required for participation in that culture (Portes, 1998). Peer conversations offer a rich source of information about what is currently valued youth culture (e.g., Extract 25 demonstrates the peer promotion of *YouTube*). Thus, young people may be motivated to communicate in cyberspace to sustain the social connection and cultural currency required for identity development.

Secondly, as a highly popular and significant activity itself, knowledge of communication in cyberspace also becomes important for cultural capital. As communicating in cyberspace becomes normative, it will become more important for young people to have a working knowledge of this significant feature of peer culture, to furnish them with enough cultural capital to participate effectively in peer culture and conversation (Baker, 2001). For instance, Helen's talk in Extract 17 below demonstrates that some young people may need the cultural capital associated with knowledge of cyber-communication to assist participation within peer society.

Extract 17

Helen: Yeah I thought that 'cause I didn't have it and everyone was talking about *Bebo* and how cool it was and I was like "oh I might as well give it a try" and then it was like really fun and you can change everything and catch up with your friends that you haven't talked to for ages and stuff.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Furthermore, given the complexities and politics of peer group cultures (B. B. Brown & Lohr, 1987), communication in cyberspace may also offer developing adolescents a better chance to successfully negotiate peer politics to explore a larger range of identity positions. For some young people, like Honor, cyberspace is talked about as offering a way to transcend peer-group dynamics, enabling young people to explore different things, and even risk occupying stigmatised identities (like "emo" —see Extract 18). In this way, communicating in cyberspace may also be valued for its ability to produce more social connections with more, and new, people. As adolescence is about exploring identity (Elkind, 1967; Erikson, 1968; Steinberg & Morris, 2001), the popularity of communicating in cyberspace may reflect Honor's perspective that this activity can offer young people a way to do this that offers more opportunities than communication in offline worlds could.

Extract 18

Honor: Like, with *Bebo*, you can just leave comments and stuff, and it's really cool, you can have your pictures and see what people think about them and you can have, you can kind of like talk about whatever you want and people won't diss you for it 'cause I dunno; I find that online, like on *MSN* and *Bebo* is like completely different from school, you can talk about whatever, and at school it's kind of more like don't talk about that or you'll just be like "eww why is she talking about that" — so on *Bebo*, I like *MySpace* 'cause you can, like it's more like, more people from like America use *MySpace*, but on *Bebo* it's like more like my friends from school and stuff and people that don't normally go on *MSN*, you just talk to on *Bebo* and they don't have to reply straight away.

JF: When you say you talk about things that you wouldn't talk about much at school, is that, can you tell me about that?

Honor: It's more like stuff about, like at school you, you talk but if you're not in their group you don't talk to them that much, so on *MSN* you can just talk and they don't really know you so you can just kind of talk about whatever, like what you like about music, and not be like, "Oh what an emo kid" or something or whatever, so you can talk about that and it won't be like, at school they won't think of you any worse or anything 'cause it's different.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Communicating in cyberspace is a popular and frequent activity for young people. This activity is associated with many developmental tasks, including the development of relationships, intimacy, and identity (Roberts et al., 2009). Communicating in cyberspace offers young people the opportunity to connect with people (both online and offline) to develop relationships as well as to gather information and perspectives for their own identity development. Communicating in cyberspace is also able to generate the cultural capital required to sustain these critical social connections. Social connections are important during adolescence as they enable young people to communicate with others to interrogate, evaluate, experiment, and eventually establish, the opinions and perspectives that constitute identity. To the extent that communication in cyberspace can play a lead role in producing social connection and relationships, it will remain popular among young people during adolescence.

### 2.4.1. Communicating with new people and strangers

While most of the cyber-communication discussed above occurs within participants' existing friend and family networks (as also noted in Ofcom's 2006 study mentioned earlier), some participants also reported communicating with people they only met in cyberspace. Data from the UK and the USA demonstrates that around a third (30% & 34% respectively) of young people in the UKCGO project (who went online at least once a week) and YISS2 study, reported such activity (Livingstone & Bober, 2004; Wolak et al., 2006).

Young men in the focus groups seemed more likely, than young women, to discuss communicating with new people in cyberspace. For some young men, this activity seemed to reflect their increased engagement (relative to young women) with online multiplayer games that required collaboration (e.g., see Section 2.4.5); for instance, Extract 19 below introduces the involvement of online games in the production of this activity. Prior to the extract, both Marty and Rick mentioned that they communicated with previously unknown people through online games. While the online game *Runescape* was the medium through which they communicated with these new people, the extract also demonstrates how mobile phones may be involved in communication with new contacts. Finally, this extract also highlights that the activity of communicating with new people often began before participants were even teen-aged.

Extract 19

JF: *Runescape*, oh, yeah.

Marty: That's cool. I used to play it with my friend, Ashley, I – my Mum thought this was really weird, she was my cousin's friend so I started texting her, this is like a couple of years ago and we got to be really good friends, but I never met her. So like my Mum thought this was really weird, but eventually I met her, that's all right, but yeah.

JF: What's the name of your friend up in Auckland?

Rick: I think it's Charlie.

Bob: It could be anyone,

Sean: And some sleazy old man.

JF: Is there ever that concern, like do you ever think "oh"?

Rick: I don't think so, because well - - -

Sean: Who cares if they're - - -

Rick: Yeah.

Sean: If they're cool to talk to.

(..)

Rick: Yeah, you should be able to tell.

Marty: I've never come across anything like that.

Sean: I never think of it. I don't go on chat sites really.

JF: Yeah.

Sean: I used to when I was like 11 and stuff, but - - -

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Extract 19 also introduces complexity in defining new people in cyberspace. For the purposes of the thesis the *new people* term is contrasted with *strangers*. This distinction is important because, as Marty demonstrates above, some strangers may include new people already connected to a young person's existing offline social network. Technically, while such new people may not have previously been met (e.g., cousins of a friend), they do not share the same characteristics as strangers who have no prior connection to one's offline social network. New people are qualitatively different to the stranger popularly seen as a predatory adult (e.g., see L. Green 2002, and Section 1.3). Wolak, Finkelhor, and Mitchell (2008) assessed a similar distinction in the YISS2 data. Half (51%) of the YISS2 participants only interacted online with people they knew offline, 10% communicated with new people who were already known to their existing friends, while 38% interacted with people not previously known by themselves or their friends.Understanding this distinction is important as other participants, like Kevin in Extract 20, reported communicating with strangers who were in fact already connected to their offline friends, peers, or environments.

Extract 20

Kevin: Sometimes people from our school, they get your *MSN* and you like start chatting to them and then you meet them at school.

JF: Oh yeah.

Kevin: That is all good.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

The focus group data also indicates that some NZ young people reported communicating with 'strangers'. While such communication may be a by-product of other activities (e.g., online games), developmental factors may also play a role in producing this activity. Adolescent development requires a certain amount of social connection for healthy identity development and exploration (boyd, 2007; Elkind, 1967; O'Connor, 1995). As Honor indicated earlier (Extract 18), communicating with new people and 'strangers' may enable young people to explore new ways of being in the world; particularly when they offer fresh perspectives. boyd's(2007) analysis could be extended to suggest that young people might seek out such people to gain different feedback on aspects of their identity. To the extent then that such people may offer fresh or perceived unbiased perspectives, communication with new people and 'strangers' may seem attractive to some developing young people.

Additionally, as noted earlier, adolescence also marks the beginnings of romantic- and intimate-relationship formation. At various points in the focus groups some participants talked about relationships and romance in cyberspace, with at least a few young men talking about flirting with young women as a reason for communicating online (e.g., see Extract 13). Young people's desires for romance, relationships, and/or sexual activity (Diamond & Savin-Williams, 2009) may also result in some developing young people seeking others to meet these needs. Such contacts may include new people and 'strangers' met in cyberspace.

To the extent that communicating online with new people and 'strangers' may enable young people to meet the developmental benefits of identity exploration and the development of relationships and [sexual] intimacy, these motivations may also play a role in producing this activity.

### 2.4.2. Researching

Extract 21

JF: But one of the first questions I was gonna ask you is what you most use the Internet for? What's the thing you do most using the Internet?

Helen: *Bebo* and homework.

JF: *Bebo* and homework?

Honor: Probably homework at my mama's but a few emails and *Bebo*, *MySpace* and stuff.

JF: Yeah absolutely.

Simon: Yeah pretty much the same but I also use it for games and stuff.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

The popularity and extent of access to ICT discussed in the context and communicating sections above also reflects the important place of cyberspace within school activities, as well as within socialising and entertainment. International research supports the popularity of researching online, noting it as one of the most popular ICT activities among young people surveyed in Australia (NetRatings Australia, 2005), Canada (Media Awareness Network, 2005), the UK (Livingstone & Bober, 2004) and the USA (Wolak et al., 2006). Locally, even the older findings from Wylie and Hipkins (2006) demonstrated that "seeking information for homework/projects" (p. 16) was the most frequently reported online activity (85%) by the 14-year-olds ($N$ = 475) in their research. As Stu and Cindy mention in Extract 22 below, the popularity of cyberspace is often explained by its ability to deliver research information quickly and easily:

Extract 22

JF: What are you like about using the 'Net?

Stu: Well you can find information on pretty much anything.

JF: Yeah.

Cindy: It helps with homework and - - -

JF: And that kind of stuff?

Cindy: It makes it a lot easier to find information.

JF: Do you find that you use it quite a lot when you're doing that stuff?

Cindy: Yeah.

JF: Like you use it?

Cindy: Yeah.

JF: How often would you use it for homework projects do you reckon?

Cindy: We haven't got a computer at home, so I try to do it as much as we can at school.

JF: Yeah.

Cindy: Just like sometimes at lunchtime or during class.

JF: Do your teachers often get you to do stuff on the computer?

Cindy: Yeah.

JF: Yeah, same with you guys?

Multi: Yeah.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

The extract above highlights that researching using ICT was sometimes also influenced by adult suggestion and request. Teachers (as mentioned above) and caregivers had encouraged or requested participants to research particular information online. Interestingly, the UKCGO project (*N* = 1,511) also assessed non-school related research using ICT (Livingstone & Bober, 2004), finding that slightly more (94%) participants (aged 9–19 years) reported using the Internet for getting information on "other things" (p. 21) rather than researching for school work (90%). Generic web surfing was popular with Wylie and Hipkins' (2006) NZ participants, with 63% reporting using the Net for "surfing" for non-homework/project related information.

The utility of the Internet for research was keenly felt by participants who did not have Internet access at home. For the two participants who did not have home access, both went elsewhere to use the Internet for research. Tia went to the library to do research and "bebo" (e.g., see the verb use of the name *Bebo* in Extract 6), while Cindy would go to her neighbour's house to use the Internet. The inconvenience of travelling to these locations (and in Cindy's case managing primary school children next-door) underscores Cindy's perception below (Extract 23) that ICT offers an efficient way research and get homework completed.

Extract 23

JF: Is it tough not having the 'Net at home Cindy?

Cindy: Yes.

JF: Have you talked to people at home about getting it?

Cindy: Yes and my Mum won't get it.

JF: What's the – are there various reasons for why she won't get it.

Cindy: Cost and she thinks that we'll waste our time on it.

JF: Yeah, really!

Cindy: But we totally need it for homework – but –

JF: She still thinks - - -

Cindy: Yeah. She thinks there's other ways of doing it. It's so much easier on the 'Net – it's faster.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

The popularity of cyberspace for researching school and non-school related topics may reflect some of the developmental changes of adolescence. As noted in Chapter 1, adolescence is a time of significant biological (Susman & Dorn, 2009), cognitive (Kuhn, 2009), and identity (Elkind, 1967), development, and these aspects may be associated with self-directed research. For instance, biological changes, along with the increasing interest in romance and sexuality, may motivate young people to research and understand bodily changes, sexuality, and romance (Kaiser Family Foundation, 2001; Suzuki & Calzo, 2004).

As noted in Chapter 1, adolescent cognitive development is associated with increasing ability to consume and analyse information. Researching activity is often fostered and required of young people as they develop in their school and vocational careers. In addition, the developing metacognitive abilities of adolescence, combined with ideological development, may also result in young people seeking out information to contest handed-down moral beliefs of childhood (Roberts et al., 2009).

Chapter 1 also concludes that adolescence usually sees young people individuate from family and establish their own identities (Lapsley, 1993). This feature of adolescent development may also result in young people seeking out information to help them evaluate and construct their identity. While much of this information may be shared via popular media (e.g., see Roberts, et al., 2009 and Section 2.4.3 below), young people may also actively seek out targeted information to determine if they are "normal" (O'Connor, 1995) or to fit in with peers (boyd, 2007). Given the relative ease with which ICT can deliver information, these developmental motivations are also likely to increase researching activities in cyberspace.

Combined then, these developmental changes, as well as cognitive age and stage changes and other school-related motivations, are likely to interact to underpin the immense popularity and usefulness of researching in cyberspace for young people during this period.

### 2.4.3. Popular media consumption

Much of the information young people gather online may come from "popular" media sources. For the purposes of the thesis, popular media refers to media that is widely available and preferred by a particular group of people (in this case, young people). Some participants reported generic web surfing that included the consumption of popular media, including music and music videos. Extract 23 highlights how in the era of convergence, mobile phones may also be used in this activity. Tia demonstrates how this activity, by enabling people to have conversations, and share resources (e.g., music), can build social connections.

Extract 24

Tia: Well, especially when you come to school or when you're with your friends they're like "Oh, have you heard of this song?" and like "Oh, yeah, yeah, I've got on my cell phone" like "Oh, can I listen to that?" "Yeah, sure go ahead" it's like that.

JF: Yeah, yeah.

Tia: And like they go – and but it's good because like, like when they share stuff with you, you want to share stuff with them - - -

JF: Yeah.

Tia: - - -and usually what we talk about is music and you know, cell phones, that's what teenagers minds are all about, you know - - -

JF: Yeah, yeah.

Tia: - - -That's all they think about, music and yeah.

Mana: And boys.

Multi: And girls.

(Lucy, 14, Female; Tia, 15, Female; Anne, 15, Female; Mana, 14, Male; Focus Group 3).

The ability for ICT to deliver popular media is not limited to music. At the time of the interviews, the video-sharing site *YouTube* was a year old and gaining popularity with participants who consumed video media online, like that recounted by Rick and Sean (in Extract 25 below).

Extract 25

Rick: And everyone's cracking up laughing and *YouTube* is being watched and those on *YouTube*.

Marty: I've never been on *YouTube* – what's on it?

Rick: Have you never been on it?

Sean: *YouTube*'s a crack up.

Rick: I've been on it so many times.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Internationally, the research on consumption of music and video via ICT are in some ways conflated with the phenomenon of file-sharing and downloading music (also see Section 3.2.8 on copyright infringement). The Media Awareness Network study (2005) in Canada assessed how many Grade 8 students ($n$ = 654) reported downloading or listening to music, and the high numbers (77%) of young people reporting this activity reflected its popularity. Reddington's (2005) local statistics of NZ young people aged 15–17 years, underscored a similar level of popularity of music consumption online (76.5%). Around a third (30.6%) of Reddington's participants also reported consuming online movies and video. Two years later, UK research on a national sample, demonstrated increases in the popularity of online video, with two thirds (66%) of 12–15-year-olds ($n$ = 188) reporting that they watched video online (Ofcom, 2007b).

Chapter 1, as well as other sections in this chapter (e.g., Section 2.4.1), highlighted the importance of social connection for adolescent identity development. Consuming media can play an important role in producing the cultural capital required for the development of this social connection (Baker, 2001). Music and other popular media delivered by ICT offer developmental advantages for young people by not only becoming a facilitator for social connection, but by also serving as a potential marker of "unique" identity (Baker). For instance, Extract 18 demonstrates how music can also offer young people opportunity to distinguish themselves and produce an identity that may be separate from others (e.g., listening to "emo" music). Both of these developmental reasons, combined with the relative ubiquity of ICT, are likely to underscore the utility and frequency of popular media consumption via ICT among NZ young people during adolescence.

### 2.4.4. Publishing content

The Web 2.0 world in which these young people have access to (e.g., see Section 1.5.5) means that young people do not just consume media, but that many can produce and publish media in cyberspace. For the purposes of the thesis, publishing in cyberspace refers to the process whereby digital content is uploaded to a web server that can serve this content again. Some of this content may be served to the general online public or to specific publics (e.g., members of a particular social network service or specific friends who are granted access) (see boyd, 2007 for discussion about such networked publics).

Some participants in this research also talked about publishing digital content in cyberspace. Content included text, art work, videos, music, and images. Such content can be published in a range of places, including personal home pages, blogs (*web logs*), forums, and, increasingly, on social networking sites. At the time of the focus groups, just after the widespread introduction of social networking services *Bebo* and *MySpace*, participants mentioned publishing content (usually images) within these sites. While social networking sites offer opportunities for networking and communicating (e.g., see Extract 18), in the context of convergence, they became a site of digital content publication.

Overseas and local quantitative data reflect these findings. Prior to the widespread introduction of social networking services in 2005, between 13% (Wylie & Hipkins, 2006) and 57% (Lenhart & Madden, 2005, n = 971) of young people, in a variety of countries, already reported publishing content online (Media Awareness Network, 2005; Wolak et al., 2006). However, at the time of the focus groups in late 2006, Lenhart and Madden (2007b) reported that just over half of their 12–17-year-old USA participants had begun to use social networking sites. Participants in the current research talked about frequently publishing pictures and videos (see Extract 27) on such sites. If Lenhart and Madden's figures on the popularity of these social networking sites were mirrored by NZ young people, this would suggest that many more NZ young people gained additional opportunities to publish content in cyberspace after 2005.

Publishing user-generated content in cyberspace also offers young people a chance to share their creative works with others and gain feedback on their work. Current participants, like those in Extract 26 below, talked about publishing photos, videos, and artwork online with an interest in others' thoughts of their work.

Extract 26

Simon: Yeah, I made a movie of [indistinct] thing. I just got clips and stuff and like edited the clips with the music and everything and made this about five and a half minute movie and I put it on *YouTube* just for fun.

JF: Yeah.

Simon: And I got responses and it was like five star rating and it was like "oh excellent movie". I was quite surprised actually because the clip that I put on was really pixilated.

JF: Yeah.

Simon: And then when I put it on *YouTube* it was so pixilated it wasn't funny, but you could still see what was happening and I was surprised that I got five stars because it was so pixilated.

Honor: It's really cool seeing what people say.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Publishing digital content may also be motivated by features of adolescent development, like social connection and identity development and exploration (see below). For instance, commenting specifically on online video publication, Buckingham's (2007) review highlights how this activity may be used to produce communication to facilitate the social connection needed during adolescence:

> Sharing and discussing media on user-generated content sites such as *YouTube* is one way in which young people are socialising, much in the same way other media are used in social relationships (for example, discussing popular television shows, movies or music). (Buckingham, 2007, p. 49)

Such video production and sharing may also play a role in identity development and exploration. Prior to the widespread diffusion of online video-sharing, Australian ethnographic research with young women highlighted the role that video production may also play in adolescent identity construction and exploration (Bloustein, 1998). By chronicling 10 young women's experiences with video construction "on any aspect of their lives that they considered important" (p. 117), Bloustein found that video production was valuable because it offered them opportunities to self-reflect on, document, and play with, their developing and shifting identities.

The extract below suggests that young men's identity development may also benefit from similar activity online. For instance, Kevin talks about how selecting and publishing photos on his social network profile is part of a process which helps construct identity. The talk in Extract 27 demonstrates how this activity of publishing content online can enable young people to customise and display material that reflects and constructs identities, albeit within the overall constraints of particular [peer] cultures (Willett, 2008).

Extract 27

JF: Great. Just back on that *Bebo* thing – I am quite interested about that – you said it is cool because you can put photos up and things too. What do you like about putting the photos up?

Kevin: So you can express yourself in like the photos that you put up and it has got a video thing so you can use *YouTube*.

JF: Yes.

Kevin: And get the videos of *YouTube* and express yourself there.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

Susannah Stern's (2008) work with "hundreds of [online] authors ranging in age from twelve to twenty one years" (p. 96) is particularly helpful for understanding some of the identity development motivations associated with publishing content in cyberspace. Whilst noting that some young people are motivated by the technical challenges of this activity, she also catalogues how the production of online blogs and social networking profiles enabled young people to engage in "self-reflection, catharsis, and self documentation" (p. 101). Susannah Stern clearly documents how these three processes can be produced by online content creation and publication by young people in the USA. Her data demonstrate how these processes may provide young people with other avenues to explore who they are, how they feel, and how they are changing—all invaluable benefits for the task of identity formation during adolescence.

Buckingham (2007) further highlights that publishing content on social networking sites is important developmentally because it combines the adolescent developmental motivations of social connection with identity explorations. The process of producing a social networking profile requires users to publish content, like a textual summary or a picture of themselves (see boyd, 2007 for more details on this). However, Buckingham contends that the point of a page is not just to explore identity through publishing content, but that publishing content also enables young people to situate themselves within peer culture and develop social connection:

> Research shows that online social networking is seen as part of youth culture: the point of having a page is to be part of a peer network, to define one's identity for a wider social group, to negotiate and manage public identity and to build a community of 'friends'. (Buckingham, 2007, p. 48)

To the extent then that ease of publishing content in cyberspace can advantage young people in their efforts to create, explore, reflect, and develop aspects of their identity, this activity will remain popular in the Web 2.0 world of convergence. In terms of social connection, the popularity of publishing content in cyberspace may also reflect the need to participate effectively on social networking sites to produce social connection.

### 2.4.5. Gaming

Extract 28

JF: So when you talk about this, it sounds like lots of people are probably playing games and stuff like that at some point, eh?

Felix: All of us do.

JF: Yeah. You would say it would probably be like 100 percent maybe of people?

Felix: Yeah, even the goody-goods play games.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

The exchange above highlights the pervasiveness of gaming reported among the young men in the research. Felix's statements above in Extract 28 back this up, observing that the high level of normalisation of gaming in this cohort extends to students who would not normally be assumed to participate in this activity (i.e., the "goody-goods").

Online gaming refers to games played in an Internet browser, and/or games that use Internet resources as part of the game. For instance, personal computers, and third generation gaming consoles, like the *PS3* and *X-Box 360*, may use the Internet in game play by connecting players to an online community. As noted earlier, the game community can enable people to play against others, communicate with others, and share content online (e.g., new game levels or digital products). Games may also use Internet resources to enable players to play in large game areas and interact with others. Such games are often termed Massively Multiplayer Online Role Playing Games (MMORPGs), like the *Runescape* game mentioned earlier (Extract 19). Participants in the current research also talked about the MMORPG *World of Warcraft*, which, by the end of 2008, had 11.5 million subscribers (Cavalli, 2008).

The popularity of games like *World of Warcraft* is also reflected in international studies demonstrating that significant amounts of young people game online. More than two thirds (70%) of Livingstone and Bober's (2004)

UK participants, 83% of Wolak and colleagues' (2006) USA participants, and 75% of the Grade 8 (13–14 years of age) Canadian participants (Media Awareness Network, 2005), reported online gaming. Wylie and Hipkins (2006) research reflected the popularity of gaming for the majority of NZ 14-year-olds, with two thirds (63%) of the sample reporting online game play as far back as 2002.

These studies show popular but not universal game play, which differs from Felix's opening sentiments (Extract 28). A number of reasons may underpin this difference. Firstly, the statistics above focused on online gaming; to the extent that some young people game offline, they will not be measured by those statistics. However, the focus group data suggested that the majority of gamers in the current project also gamed online. At this point additional details from the quantitative studies quoted above are useful for revealing that gaming activity, like many other activities in cyberspace, differs by the age and gender of the participants.

The international data indicate that gaming diminishes as young people age. For instance, the Canadian Media Awareness Network survey (Media Awareness Network, 2005) found that 15–16-year-old students were less likely to report playing online games (63%) than the 13–14-year-old students (75%) or the 10–11-year-olds students (88%). The reason for an age drop-off may reflect the fact that as young people age, they face more responsibilities and more demands on their time from homework and paid work (Staff et al., 2009), which diminishes their opportunities for gaming.

While the statistics quoted above assessed young people in general, they obscured gender differences in this activity. In the current research, some young women participants reported having little interest in gaming. Yee's 2006 American research supports this observation. Yee (2006) surveyed 5,493 players of MMOPRGs to reveal that while only a quarter were teenaged, the majority (85.4%) were men. Research from NZ and Canada with 14-year-old participants also reflected a gender difference, finding that 20% more young men reported online gaming than young women in these studies (Media Awareness Network, 2005; Wylie & Hipkins, 2006).

Some young women, like Mags and Jill below in Extract 29, reported contact with games through their peer group.

Extract 29

Mags: I played – you know *Grand Theft Auto*?

Girl: Yeah.

JF: Mmm.

Jill: My brother's got that.

Mags: It's so violent – at my friend's house all her brothers – like all of them and sometimes we play it, like - but I don't even see the point – you just run around with like different guns and shoot people and there's like prostitutes and stuff - - -

JF: Yeah, yeah.

Mags: I don't even know they go on it. But sometimes I'm over and they're playing it.

(Jill, 14, Female; Trish, 15, Female; Mary, 15, Female; Becky, 14, Female; Emily, 14, Female; Joan, 14, Female, Mags, 14, Female; Focus Group 4).

The account above also demonstrates how sharing media (games) may be involved in producing social connection. As Roberts, Henriksen, and Foehr's review (2009) noted, many young people frequently consume and share media experiences together. Extract 29 demonstrates that the popularity of games by young men may enter the shared social environments of many young women. Discussions in the focus groups highlighted that shared gaming, even when it involved being an audience member, was nonetheless used to produce conversation and social connection among known peers. Interestingly, Extract 30 below also highlighted the ability for online gaming to produce social connection with new people.

Extract 30

JF: Pete, what do you like about those sort of games, what's the, why do you play them?

Pete: I play them because, you get all the benefits of *MSN*, you can chat to people, um, also you don't need to, people don't need to know your name, you can chat to people from all over the world, and at the same time you can kill zombies and stuff.

Simon: Also, you've got this topic to talk about, the games and stuff.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Both of these accounts (i.e., Extract 29 and Extract 30) further highlight the cultural currency accrued from knowledge of gaming, and detail how that currency may facilitate social connection. In the majority of the focus group interviews, participants talked about particular games in their discussions; the age restricted (R-18) game *Grand Theft Auto* (GTA) was most frequently referenced. The focus group data indicated that most of the current participants may play GTA or have seen GTA played. To participate in peer discussions, even if only to have a negative opinion of the game or gaming (e.g., that it's a waste of time or that it promotes violent activity), one must necessarily have some knowledge of gaming and/or the game/media in question. To the extent that gaming is popular, and particular games are popular, knowledge of these games is a requirement for social connection within these conversations.

Beyond its ability to produce social connection and cultural currency, the popularity of gaming in cyberspace may also reflect other features of this activity. The first and most common reason offered by participants for gaming was that it was simply "fun". The fun aspect may reflect many things, including the ability of games to enable young people to explore new environments and consume a narrative. For instance, in Extract 31 below, the participants drew on the common (and the relatively rarefied) media form of books, to argue for the legitimacy of games as important and worthwhile. These participants discussed how the narrative in some games is compelling. For this reason they reported frustration that caregivers cannot understand that the desire to game may be similar to the compulsion to finish a good book.

Extract 31

JF: And why is it annoying when you can't play it, is it because you don't think it should be - - -

Rick: Cause you want to find out what happens next but you can't and it's like reading a book and your parents tell you "oh, you can't read that book anymore".

Marty: That never happens.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Gaming may also be popular because it provides additional opportunities for developing adolescents to be challenged both cognitively and socially. For instance, the desire to participate in more complex narratives and in activities that require longer attention periods may reflect a desire to test and expand the developing cognitive skills and ability of adolescent minds, including working memory (e.g., see Johnson, 2008). Gee (2003) also highlights that games provide an excellent environment to challenge learners to develop knowledge and implement problem solving strategies. Additionally the MMORPG games challenge young people's social skills as they negotiate the requirements of teamwork, collaboration, and leadership (Pearce & Artemesia, 2009).

The popularity of gaming in cyberspace may represent its ability to advantage young people in a variety of ways. Games offered participants opportunities to share media, increase their cultural currency and social connection, as well as the ability to be challenged by a range of complex tasks, narratives, and skills, in a fun way.

### 2.4.6. Trading

Extract 32

Felix: Yeah I use it for *MSN*, some games and my Mum gets me to do *TradeMe* stuff on it.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

When asked about their favourite places online, some participants specifically mentioned the NZ online auction site *TradeMe*. For the purposes of the thesis, trading online refers to the activity whereby people exchange goods for a profit of some description. Some participants in the current research, such as Felix above (Extract 32) reported that they used *TradeMe* to both sell and buy new material, although as Extract 33 below highlights, some reported that caregivers prohibited such activity.

Extract 33

Rick: And sometimes my Mum, if I've used up all my time gaming and then I've got to do some homework or something quickly like research and emails and *TradeMe*, whatever, then she'd probably let me go on quickly.

Sean: Oh yeah, *TradeMe*.

JF: Do you guys use *TradeMe*?

Sean: Yep.

Bob: No, I don't.

Rick: You're supposed to be over 18.

Bob: My Mum didn't let me.

JF: Your Mum doesn't let you?

Bob: Well, I once [indistinct]

Sean: I've sold stuff on there.

Rick: Yeah, same, I sold, I've bought more than I've sold.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Caregiver sanctions may partly explain the low amounts of trading reported by quantitative studies on this topic. For instance, only 25% of 14-year-old Canadian young people (Media Awareness Network, 2005) reported using the Internet for "shopping and getting product information" (p. 20). Even fewer NZ 14-year-olds reported trading (3%) and buying things online (6%) in Wylie and Hipkins (2006) 2002–2003 investigation. However, Reddington's later research (2005) found that around a quarter (27.6%) of slightly older teenagers (15–17 years) reported trading online in 2005.

The timeframe between Wylie and Hipkins (2006) data collection and Reddington's (2005) may help explain the difference between the popularity of trading between Reddington's and Wylie and Hipkins' participants. For instance, these results may reflect growth in online trading since Wylie and Hipkins' quantitative data were collected (between 2002 and 2003) and Reddington's study. Additionally, while such sites may be popular, many young people like Jill and Mags below in Extract 34 may not trade on them as much as use them as a form of "window shopping" and price researching.

Extract 34

Jill: It's like with, kind of, *TradeMe*, like you can easily just if you're like "I wonder how much this would be" and then you just go on and have a look.

Girl: Yeah.

JF: Yeah. Who uses *TradeMe* here in the group? So Mags you do, Mary?

Mary: Sometimes.

Mags: Yeah, I just go and I have a look, but I don't actually really - - -

Multi: Yeah.

Mags: My parents use it, I just like looking.

Trish: My Mum is addicted.

(Jill, 14, Female; Trish, 15, Female; Mary, 15, Female; Becky, 14, Female; Emily, 14, Female; Joan, 14, Female, Mags, 14, Female; Focus Group 4).

Like the other activities discussed in this chapter, trading in cyberspace may also be affected by various adolescent developmental factors. As already noted in this and the preceding chapter, adolescence is characterised by many developmental features. Of particular interest to this section is the adolescent development of autonomy (Elkind, 1967; Lapsley, 1993) and the increasing financial resources that may also characterise this period (see the review by Staff et al., 2009, on adolescent paid work in the USA).

These features of autonomy and increased financial resources may combine with other developmental motivations and processes to produce trading in cyberspace. For instance, some current participants reported trading educational material and sports gear online. For young people engaged in sporting activities, the physical changes of adolescence may see young people out-grow their current equipment and require new

equipment and clothes. Equally, as young people develop and progress through school, they may require additional academic resources (e.g., calculators, computers). Additionally, other tangible goods and services important for the development of identity, cultural currency, and social connection (e.g., clothes, make-up, media, and hobby materials) may also be required.

At an age where young people are becoming autonomous and potentially increasing their disposable incomes, many young people may buy such items themselves. With the ubiquity of cyberspace in the lives of young people, it would seem likely that some may choose to trade online to acquire and sell such items.

### 2.4.7. Banking

In addition to trading online, some participants also reported banking online. Wylie and Hipkins' (2006) report also noted that only 6% of NZ 14-year-olds said they banked online from 2002 to 2003. Extract 35 below highlights some of the reasons for those who do bank online. For instance, Honor indicates that some young people may use this activity simply checking to check balances to help them manage their finances and stretch out their funds where possible:

Extract 35

Simon: Automatically, and I normally do a scan whenever I feel like it, and one thing I hate about viruses, I'm scared they're gonna take passwords to like my um, bank accounts and stuff.

JF: Yeah, yeah.

Simon: Cause I, my, I do online banking- - -

Honor: Oh yeah.

Simon: And, oh man, every time I go on online banking I automatically do a virus check, because I'm just like so nerve, I don't want anyone to go on my bank account.

JF: Do you guys do any online banking?

Helen: My parents go on it.

Honor: I just check my accounts just to see, like before I go out I'm like, I've got $2.00 on this card and I've got $4.00 on this card, that'll get like a burger or something.

JF: Do you do that Pete?

Pete: I don't do online banking.

Like the other activities mentioned in this chapter, banking in cyberspace may also be associated with age differences. For instance, banking may increase as young people age and their potential to generate disposable incomes increases (Staff et al., 2009).

### 2.4.8. Conclusion

This chapter appended the qualitative data from a diverse range of NZ students with local and international research and literature reviews. In conducting the analysis, a framework was produced to understand and

organise the data. The framework (see Figure 2) suggests that young people's experiences of cyberspace are affected by four things: context, activity, challenge, and resiliency. Context factors affect young people's access to cyberspace. This access in turn affects the activities that young people may undertake there. These activities then affect which challenges young people may face, which in turn produce opportunities for resiliency.

The chapter began by exploring the contextual issues, demonstrating that cyberspace access is normative among young people. This normativity is driven, in part, by the opportunities that cyberspace can offer. The first part of the chapter demonstrated that access and activity is affected by a range of factors including the phenomena of convergence and multitasking, as well as cost and adult sanctions. However, in the context of convergence, where much [simultaneous] activity can happen from a range of devices, cost and adult sanctions do not so much stop access, as affect what young people have to do to gain access. This section concluded that these participants accessed a wide variety of activities in cyberspace despite cost issues and adult sanctions.

The desire to access cyberspace in the face of sanctions may reflect the opportunities this normative setting offers young people. The chapter demonstrated that cyberspace provides settings and opportunities to meet many of the developmental tasks of adolescence. In addition to providing solitude and privacy from caregivers, and other family members, the data demonstrated how this setting furnished opportunities for the production of cultural currency, social connection, and ensuing identity development. Additionally, the popularity of this space is underscored by its ability to provide young people with opportunities for fun, entertainment, knowledge, material goods, and academic and economic advancement.

The importance of this context, and the activities that it enables, were underscored by the framework introduced at the beginning of the chapter. With the understanding that challenge exists within activity, and having explored activity, the next chapter will address the challenges young people may face in cyberspace. Importantly, Chapter 3 will again draw on the data from local participants, as well as from the existing research, to address how young people manage the challenges they face online.

# Chapter 3. Challenge and Management

Chapter 2 explored cyberspace context and activity. This chapter will use the focus group data, and relevant research, to explore young people's experiences of challenge in cyberspace. The chapter will begin by reviewing academic theory and research on challenge. Then the chapter will describe the 11 themes that constitute the challenge meta-theme in the model discussed in Chapter 2. The next section will review the concept of resilience. The analysis will then return to the focus group data, and relevant research, to describe the four themes that constitute the meta-theme of challenge management. The chapter will conclude by introducing a model for understanding the management of challenge in cyberspace by young people in NZ.

## 3.1. Challenge

As established in Section 1.8.1, 'challenge' has similarities with 'risk', so this review will draw on 'risk' literature where relevant, to explore ideas for the genesis of young people's experiences of challenge.

### 3.1.1. Genesis of challenge

Challenge may result from a lack of knowledge about the danger of a particular activity. For instance, at the early stages of new technology diffusions, or as young people first gain access to new technologies, they may not know of the challenges that new technologies can enable (e.g., initial users of chat services may not have known that other chatters may not have been who they said they were). However, as time, awareness programmes, and media headlines have progressed, overseas data suggest that naivety is not the genesis of challenge in cyberspace for most young people. For instance, survey data from 7,393 young people (12–18 years) across 8 European nations (MEDIAPPRO, 2006), demonstrated that many were aware of particular challenges online (e.g., communicating with strangers or publishing personal information online). A comprehensive study commissioned by the USA Department of Justice, found that the majority of 2,099 high-school students (Chibnall, Wallace, Leicht, & Lunghofer, 2006) reported awareness of a range of online safety concerns (e.g., sharing personal information and "predator identification").

While naivety may not be the key to the genesis of challenge in cyberspace, other reasons have been offered to explain such challenges. Rolison and Scherman summarised some of the main theories in their two studies on the topic (2002, 2003), noting that individual differences like personal dispositions (e.g., high levels of sensation-seeking), or low levels of parental monitoring, may result in an increased likelihood of challenge. However, they also stress note that normative biopsychosocial changes during adolescence, such as identity exploration, decision making, and the development of autonomy, may also produce challenge.

#### 3.1.1.1. Development and challenge

Chapter 1 discussed the developmental changes associated with brain growth and functioning in the adolescent years. During adolescence the brain undergoes significant development and its capacity for action, planned behaviour, and complex thought increases dramatically. Equally, human bodies change significantly during this time, eventually becoming sexually mature. Both of these changes may increase young people's drive to seek out new, and social, experiences (especially where sexuality is involved) (Byron, 2007, p. 37). As such these

normative developmental aspects may introduce new and more significant opportunities for challenge (e.g., sexual health issues or more sophisticated forms of harassment).

Ironically, as Galvan et al. (2006) noted, during this period of significant growth and neural organisation, certain areas of the brain may be "overstimulated", leading to a decreased ability to accurately assess the cost-benefit of particular decisions. Young people's increased ability to do more, and more complex, things, may then coincide with decreased impulse control and increased sensation seeking. Such aspects may also increase young people's chances of experiencing challenges.

Chapters 1 and 2 highlighted the centrality of identity development to successful adolescence. Seeking and experiencing challenges, especially when such challenges involve "pushing the boundaries" of childhood behaviours and rules, may represent a part of this process. Lightfoot (1997) interviewed 41 young people in the USA and examined the nuances of identity development and challenge, finding that relatively serious challenges may offer young people a chance to prove themselves as mature. Lightfoot's research concluded that such challenge experiences can enable young people to escape the identity of naive child, and rather be seen as a maturing young adult capable of producing (and facing) serious issues.

Both Lightfoot (1997) and Hope (2007) reported that such challenge experiences and their re-tellings may also help young people to develop social status. Hope's research, included interviews with 57 young people in the UK about their experiences of Internet "misuse" at school. Both Lightfoot and Hope concluded that challenge experience can provide the young person (and their peers) with the knowledge that they are adventurous, cunning, sensation-seeking, self-reliant, resilient and willing to face fears. Such attributes may be very attractive to young people as they establish their identity and sense of self (Lightfoot) and in so doing make experiences of challenge attractive to developing young people.

Equally, Lightfoot (1997) highlighted the importance of challenges for facilitating critical learning experiences. In fact, she argued that such experiences provide opportunities for "self transcendent challenge" (p. 20) which, when managed well, can facilitate a sense of control and self-efficacy. Challenge can be seen as necessary to provide young people with the skills needed to understand, manage, and potentially avoid, future challenges.

### 3.1.2. Adversity and challenge

In addition to normative developmental challenges, some young people experience challenges due to their particular social setting or personal characteristics. For instance, if young people have problems with impulse control (i.e., a personal characteristic), which may be a result of neglectful or hostile parenting (i.e., a social setting), then this may mean they are less equipped to face challenges in cyberspace (Goswami, 2008). Coleman and Hagell's (2007) review summarised the additional stressors facing young people who experience poverty, mental illness, disability, substance use, risky sexual behaviours, poor educational attainment, or are in foster care, or in custody. Their review highlighted that the action of these stressors (and no doubt the interaction between some of them) are likely to increase the number of challenges young people face, at the same time as decreasing their resilience. This is because the action of stressors may exhaust young people's coping resources, negatively affecting their ability to effectively manage challenges (Compas, Hinden, & Gerhardt, 1995). Both Compas and colleagues', and Coleman and Hagell's, reviews highlighted that adolescence is a particularly rich time for the changes that may produce some of these stressors.

In line with this broader theory, a range of studies from the UK and USA have highlighted how stressors in young people's offline lives may also be associated with challenge in cyberspace. Livingstone and Helsper (2007) reported on an analysis of the UKCGO project (*N* = 1,511), finding that the 11–19-year-olds who reported lower life satisfaction in general, were more likely to report a range of online communication challenges, including meeting up with online contacts face-to-face. An earlier USA study by Gross, Juvonen, and Gable (2002) found that 12-year-olds who were lonely or socially anxious were also more likely to talk to strangers online. The first Youth Internet Safety Survey, which assessed 1,500 American young people's (10–17-year-olds) experiences of the Internet between 1999 and 2000, found that those with depressive symptomatology were 3.5 times more likely to report experiencing sexual harassment online than those who did not face depression (Ybarra, 2004). A range of findings from YISS2 also highlighted that young people are more likely to report experiences of interpersonal victimisation if they have experienced offline physical or sexual abuse as well as a range of borderline or clinically significant behavior problems (as measured by the Youth Self Report instrument) (Ybarra, Mitchell, Finkelhor, & Wolak, 2007).

While, a certain amount of challenge seems to be a part of a healthy childhood, the data indicate that additional challenge may also reflect the effects of adversity. Either way, the analysis above suggests that challenge is likely to be a common feature for large numbers of young people. The chapter will now explore NZ young people's experiences of challenge in cyberspace.

## 3.2. Challenge

The analysis will now explore situations and experiences that can cause harm and distress in cyberspace. The meta-theme of challenge will be shown to include themes of harassment, cyberbullying, unwanted sexual solicitation, exposure to sexual and other inappropriate content, in person meetings with 'strangers', inappropriate digital footprints, copyright infringement, and computer security and time-management issues.

### 3.2.1. Harassment

The category of cyber-harassment is a broad and relatively well-researched challenge, which includes cyberbullying and sexual harassment.

### 3.2.2. Cyberbullying

Espelage and Swearer (2003) analysed the 30-year-old bullying literature to argue that bullying exists when three conditions are met: 1.) aggressive and negative behaviour was directed towards at least one other person; 2.) that behavior was carried out repeatedly; and 3.) the behavior occurred in a relationship where an imbalance of power existed between the target and the person conducting the bullying behavior. A definition of cyberbullying, could apply this bullying definition to similar actions in cyberspace. However, there are problems translating these conditions to cyberbullying.

Firstly, cyberbullying may be anonymous (e.g., when someone uses a pseudonym), which raises interesting issues for understanding the power-differential of the previous bullying definition. Cyberbullying can involve people who have never physically met and/or people who share no common acquaintances. Can an imbalance of power be produced in situations where the target does not know who is producing the bullying behaviour?

Does anonymity confer differential power on the person doing the bullying behaviour? Until more research is conducted around contemporary understandings of power in anonymous bullying situations, it would be difficult to effectively assess this criterion.

Secondly, the requirement for repetition of aggressive behaviour may be complicated by situations where someone is cyberbullied by anonymous people. Additionally, some situations—like a "txt bomb" (e.g., see Extract 38 and Extract 69)—may result in a number of [un]known people bullying a target, but each person only bullying them once. Alternatively, one person may use multiple online personas to target someone with negative and aggressive behaviour once each time. The requirement that a target of bullying in cyberspace would need to identify the repetitive bullying actions of particular individuals, for it to be described as cyberbullying, seems unlikely to survey the range of harassing experiences that may occur.

In order to address a range of aggressive phenomena, which may or may not be "bullying", the focus groups assessed how participants understood the term cyberbullying. Cyberbullying was discussed as intentional acts of interpersonal aggression involving one or more people in cyberspace. This definition is different from the bullying term discussed above, and although it may include such experiences, it is not limited to those situations. In the spirit of exploring a range of significant phenomena, this analysis will not focus on young people's understandings of rarefied definitions of "bullying" versus "harassment", or "sexual abuse" versus "grooming" versus "sexual harassment", but examine how young people react across the range of harassment experiences. In this way the research does not presume that certain experiences are more or less significant than others, but seeks to understand how young people manage distressing harassment experiences.

The definitional issues discussed here may partially inform the extensive variation in peer reviewed research assessing the prevalence of cyberbullying. For instance, the Internet Safety Technical Task Force (ISTTF) (2008) reviewed eight recent and large studies from the USA to find significant diversity in definitions of cyberbullying. The results of the ISTTF review suggested that this variation may explain the finding that anywhere between 4% and 46% of participants from these studies reported "victimisation" in cyberspace. Noting the additional methodological variation accessing cyberbullying across these studies, Table 3 describes the characteristics of the five main studies this analysis will draw from. Table 3 demonstrates that even these five studies vary in age groups, breadth of cyberbullying harassment definitions and time frames. This variation may also explain the variation in cyberbullying prevalence rates across these studies.

Table 3. Selected Cyberbullying Study Characteristics, Prevalence and Perpetration

| Study | Year(s) of Data Collection | *N* | Age Groupings (Years) | Cyberbullying descriptors | Perpetrated Cyber-bullying (%) | Time Frame of Bullying | Target of Cyber-bullying (%) |
|---|---|---|---|---|---|---|---|
| Australian Covert Bullying Prevalence Study | 2007 | 2,122 | Australian School years up to Year 9. For this analysis, Years 8 and 9 are included: age grouping 12–15 years. | "'Bullying' is repeated behaviour which happens 'to someone who finds it hard to stop it from happening'." "'Being bullied (in anyway) is defined as 'being bullied again and again by another student or group of students every few weeks or more often in the term".<br><br>Covert bullying involved bullying "in ways that cannot easily be seen by others".<br><br>Cyberbullying described instances online or on mobile "every few weeks or more often"; that included "threatening emails"; receiving "nasty" messages or "prank calls"; someone sending or posting "mean or nasty" comments, or pictures; someone "pretending to be them to hurt others";or being "deliberately ignored and left out of things on the Internet" (Cross et al., 2009, pp. 169-170). | 5.2% | The school term | 7.8% (Internet and mobile phone) |
| Growing Up with Media (USA) | 2006 | 1,588 | 10–15 | "In the last year, how many times did the youth: (1) receive rude or nasty comments from someone while online; (2) be the target of rumors spread online, whether they were true or not; and (3) receive threatening or aggressive comments while online." (Ybarra, Diener-West, & Leaf, 2007, p. S44) | 21% | The last 12 months | 34% (Internet) |
| UK Children Go Online | 2004 | 1,511 | 9–17 | "Has someone ever said nasty or hurtful things" online/on mobile (Livingstone, 2004, p. 38). | 4% | Ever | 33% (Internet and mobile phone) |
| 2nd Youth Internet Safety Survey (USA) | 2005 | 1,497 | 10–17 | (1) "In the past year did you ever feel worried or threatened because someone was bothering or harassing you online?"; and (2) "In the past year did anyone ever use the Internet to threaten or embarrass you by posting or sending messages about you for other people to see?" (Ybarra, Mitchell, Wolak, & Finkelhor, 2006, p. e1171) | 9% | In the previous year | 9% (Internet) |
| Youth'07 (NZ) | 2007 | 9,107 | 12–17 | "Bullying is when another student or group of students say, write, text, or message nasty and unpleasant things to another student" (Clark et al., 2009, p. 12) | N/A | The last 12 months | 4.5% (Internet); 13.6% (mobile phone) |

Table 3 nonetheless demonstrates some commonalities across these studies, with most describing the nature of cyberbullying content as “nasty” or “threatening”. The results from the focus groups support these descriptions. While some participants initially said they had never heard of “cyberbullying” (cf. “textbullying”), after further discussion they often conceptualised it simply as “bullying in cyberspace”. Like the studies in Table 3, some participants discussed that meanness and hurtfulness were key differentiators between bullying and teasing. Some participants like those in Extract 36, named behaviour in cyberspace that was purposefully mean, harmful, or threatening as bullying. Participants distinguished this from behaviour that was not purposively mean, or harmful, but was teasing nonetheless.

Extract 36

JF: You said that sometimes–you know like, friends will be kind of like harsh to each other, but would you call that cyberbullying?

Honor: No. Friends are more like funny – you’d say something like “I saw you tripped over or something and made a real dick of yourself”.

Pete: It’s more cyber-teasing really.

Helen: You just like “oh, yeah – oh, that’s a great picture”.

Honor: Cough, cough <spoken words, not sounds>.

JF: Yeah.

Simon: Cyber-teasing.

JF: So, cyber-teasing?

Pete: Yeah, I really regret saying that now.

Honor: Cyber-teasing, being like laughing with them.

Helen: Not at them.

Honor: But cyberbullying is like laughing at them.

(..)

Honor: And if you’re laughing with them, but cyberbullying is more if you’re being abused or something online.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Participants further distinguished bullying experiences from teasing, by claiming that cyberbullying could be significantly hurtful and distressing (e.g., see Extract 37 & Extract 40). Both iterations of the Youth Internet Safety Survey found that around a third of cyberbullying targets in the USA reported significant emotional distress (self-rated as “very or extremely upset or afraid”) after online harassment (Ybarra, 2004; Ybarra et al., 2006). Additionally, “after adjusting for all other significant characteristics” young men (aged 9–19 years) who reported online harassment in YISS1 were approximately three times ($AOR = 3.64$, $p = .03$; 95% CI = 1.16–11.39) more likely to report major depressive symptoms (as measured by the Diagnostic and Statistical Manual IV [American Psychiatric Association, 1994]) than non-targets (Ybarra, p. 252).

Interestingly, five years later, the YISS2 results showed that more young women reported harassment (58%) and distress (68%) than young men (42% and 32% respectively) (Wolak et al., 2006). However, Ybarra and colleagues (2006) found that young people of either gender in YISS2 were twice as likely to report distress if they had been targeted three times or more in the past year. These data indicate that for some young people cyberbullying and harassment is associated with distress, that gender effects have been observed, and that the intensity of harassment is likely to be associated with more distress.

The potential for distress from cyberbullying was well known by some focus group participants. In every focus group, participants, like Paul in Extract 37, discussed the high-profile suicide of the 12 year-old school girl Alex Teka in 2006, which most media reports linked to text bullying (e.g., O'Rourke, 2006):

Extract 37

Paul: Oh yeah, we just like had a big blitz on text bullying like here, like um, cause that girl at Putaruru, so like, um, at like assemblies and stuff, they've been like, telling us there are these things to go to if you are getting text bullied, you can talk to someone and stuff.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

The distress associated with online harassment may reflect the potential "always-on/always-available" nature of cyber-portals. This introduces another key difference between cyberbullying and face-to-face bullying: the potential for a 24-hour, location-irrelevant, window for bullying. Cyberbullying offers other opportunities for direct aggression and enables school bullying to easily migrate from the school yard to the bedroom. Of the Year 8 and 9 students who reported covert bullying in the ACBPS, nearly a third (30.9%) said that they were at home when they were cyberbullied (Cross et al., 2009). This means, that the traditional sanctuary of the home may no longer offer protection from school harassment.

However, USA data from the YISS studies and the Growing up with Media study showed that targets of cyberbullying were also significantly more likely to report being targets of face-to-face bullying (Ybarra, 2004; Ybarra, Espelage, et al., 2007; Ybarra et al., 2006) than non-targets, suggesting that targets of cyberbullying may also be physically targeted.

### 3.2.3. Cyberbullying and harassment

The following sub-sections describe some forms of cyberbullying, including cyberbullying via mobile phones (commonly termed "text bullying" in NZ).

#### 3.2.3.1. Direct aggression: Harassment via mean, hurtful, and/or threatening content

As noted earlier, the centrality of mean and hurtful behaviour was key to defining bullying. Participants usually talked about cyberbullying as the transmission of mean and hurtful communications, and content, to someone online or on-mobile. Sending negative communications is the cyber-equivalent of face-to-face verbal bullying. Such messages can be sent through mediums that support the publication or routing of messages (e.g., text message, email, instant messenger, bulletin boards, and blogs). Extract 38 highlights how this "mean"

communication can happen on mobile phones. This extract also introduces the concept of "text bombing", later defined in the interview as the reception of multiple harassing text messages from one or more persons.

Extract 38

Rick: Well it's people like text bomb people.

JF: Text bombing?

Sean: Harassing people just being generally mean to them.

Bob: Yeah.

Bob: I think it's just generally mean.

JF: Generally mean "on text"?

Bob: I guess they only know that.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

The majority of cyberbullying experiences in YISS2 involved direct aggression, with two thirds (65%) of targets ($n$ = 130) saying that they "felt worried or threatened because someone was bothering or harassing" them online in the last year (Ybarra et al., 2006, p.e1171). A similar situation was revealed by the ACBPS, with the majority of Year 8 and 9 students who reported cyberbullying saying it involved them being directly sent "nasty" messages on email, messenger, mobile, or email that school term (Cross et al., 2009). The UKCGO study also sampled this form of harassment, reporting that 39% of the sample disclosed that someone had "ever said nasty or hurtful things" (Livingstone, 2004, p. 38) to them online or on mobile in the past year (Livingstone & Bober, 2004). The Youth'07 research from NZ also surveyed forms of direct aggressive cyberbullying, finding that nearly all (94.9%) of the high-school students who reported receiving "nasty or threatening messages" in the past year (19.0%), received these via cyberspace (Clark et al., 2009). Clark et al. demonstrated that young women were significantly more likely ($p < .001$) to receive this form of abuse (23.7%) than young men (14.9%).

Targets of cyberbullying may also be sent abusive pictures and images, including images of violence, injury, gore, death, as well as sexually harassing images (in this way, this form of harassment may intersect with other challenges in this chapter, like unwanted sexual solicitation and inappropriate content exposure). In my practice at NetSafe, I am aware of young people who have been sent images that accentuate accompanying textual abuse to further intimidate the target (e.g., being sent a picture of a dead person and a threatening message stating that the target will look like this after school tomorrow).

Reviewing the literature, Cross et al. (2009) noted that some images used in cyberbullying may be of the target themselves. Such images can include sensitive images produced by the target that were later acquired and used by others to harass the target. Such images may have been hosted online where others may find them (e.g., online photo albums), or images may have been made collaboratively, whilst the target was friendly with someone, who later turned and used the image against them. This may particularly be the case in situations involving ex-boyfriends and ex-girlfriends, who may be in the possession of sensitive sexual images that they can [threaten to] send out to others (e.g., see Ward, 2008 for a news media account of how such images my even be threatened to be sent out by parents of such ex-partners).

Even innocent images of the target can be digitally manipulated into something embarrassing or degrading for the individual. Furthermore, the proliferation of digital photography means many targets may be photographed without their consent in sensitive situations (e.g., in school changing rooms or when intoxicated at a party) (Cross et al., 2009). Such images may also be used to harass or threaten the individual.

#### 3.2.3.2. Relational and social aggression: Reputational harassment and exclusion

Distributing images like those described in the previous paragraph can represent indirect, or relational, harassment, when such images are sent to others rather than solely to the target. Relational harassment can describe situations where someone uses information to harass the target in cyberspace and negatively affect their relations with others. Such information can be generated from conversations where someone spuriously befriends the target to obtain sensitive information from them. This potentially embarrassing information can then be used for subsequent harassment or blackmail. Reputational harassment can also occur when someone pretends to be someone else (e.g., a new [or existing] age-related peer or boy/girlfriend) in order to gain their trust and elicit sensitive information (e.g., see E-Bully's evil suicide plot, 2007, for a local news account where two young women were tricked into a relationship with a suicidal young man who was infact a young woman at their school). The young men in Extract 39 below articulates similar concerns when answering a question about how they would advise someone their age, who had never used the Internet before.

Extract 39

JF: You talked about being careful about what you I.M. [instant message] as well. Would you tell them about that?

Jack: Like don't click [indistinct]

Mike: – and don't say stuff …

Felix: Yeah, like if you don't want to say something, you don't say it. You should like think about what you want to tell people before you go on, because sometimes they can sort of like trap you so that you let something slip that you don't want to and you can't take it back. So it is really bad.

JF: Yeah.

Kevin: Like on *MSN* you can – in Options – you can do this thing where you save all your conversations to this file, and so you can look back on your conversations. And other people can do that and show other people.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

ACBPS findings supported the concerns of the participants above, with up to 8.8% of Year 8 and 9 students, who reported being covertly bullied, saying they were bullied by having their "private emails, messages, pictures or videos" sent to others that school term (Cross et al., 2009, p. 1191). Cross et al. also found that 10.6% of these participants said that mean or nasty messages and/or pictures about them had been sent to others' mobile phones that term. Furthermore, 10.6% also said that they had experienced bullying that involved "mean and nasty comments, or pictures" being posted on websites in that school term (Cross et al., 2009, p. 1191). YISS2 participants also reported forms of indirect harassment and cyberbullying, with approximately a third of those

who reported harassment (*n* = 130) saying they had been threatened or embarrassed by others "posting or sending messages about [them] for other people to see" in the past year (Ybarra et al., 2006, p. e1171).

Relational harassment may also occur when someone assumes the real "cyber-identity" of the target or produces a fake online identity for them, to bring them into disrepute. For instance, someone may gain access to the target's cyber-identity by accessing their phone, or by guessing, or using previously shared passwords, for access to their online profiles. Such profiles can then be populated with spurious or abusive and socially damaging information about the target.

Alternatively, particularly in the case of stolen profiles, the profile page may not be used to harass the target per se, but the profile may be used to send out messages that contain spurious, or sensitive material, or abusive comments – making it look like the target has sent out such messages, and thus bringing them into disrepute and diminishing their social status. Such messages may be sent out to end friendships or antagonise an aggressive peer at school. The ACBPS assessed these phenomena, finding that up to 10.4% of Year 8 and 9 students who had reported being covertly bullied, said someone had cyberbullied them by using their screen name or passwords that term (Cross et al., 2009).

Such indirect cyberbullying can serve to isolate someone from their support network, and increase the number of people involved in directing aggressive and negative action towards the target. Although defined prior to the large scale uptake of cyberspace, Crick and Grotpeter's (1995) synthesis on bullying would frame such behaviours as "relational aggression". Relational aggression describes bullying that aims to "...harm others through purposeful manipulation and damage of their peer relationships" (Crick & Grotpeter, p. 711). Extract 40, describing a "hate page", demonstrates relational aggression as a combination of reputational harassment and the communication of abusive and nasty content. Hate pages are easy to produce on social networking sites, and may even involve someone stealing the target's existing page and morphing it into a hate page. Hate pages are dedicated to aggregating (and concentrating) negative views and content against the bullying target.

Extract 40

Honor: And if someone like – doesn't you – they make a *Bebo* site about you and I've seen a couple of people – like "have a look at this" and it's like this girl, she was I don't know – had gone online about how much they hated her and all that sort of- - -

Simon: That's sad.

Honor: - - - it was like her *Bebo*, but it wasn't.

Helen: She made it.

Honor: Like people had made it for her, and then made people like add her and stuff.

Simon: She should like add comments – "oh, this person is so awesome!"

JF: And was that someone that you knew at this school?

Honor: Yeah, I knew someone who would know who made it, but I didn't know the person, so - - -

Helen: His name?

Honor: Yeah. It was more like just her – like how much they didn't like her and it made her sound really bad. I was like, if she ever found that site, it would really suck, kind of thing, but I've never been really text bullied, not that I know of, there could be some hate Honor site round.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Extract 40 also highlights that the published, and therefore often highly visible nature of cyber-harassment, makes many young people bystanders to it. The experience of by-standing can be uncomfortable; bringing with it the realisation that one is not immune to harassment.

Bystanders may also observe social exclusion and ostracism. Galen and Underwood's (1997) research and review demonstrated that bullying and harassing behaviours also include indirect aggressive behaviours like social exclusion and isolation. Cyber-ostracism occurs when someone is unfairly or cruelly excluded from cyber social networks—that person may not be allowed to activate friendships with others' online social networking profiles, or messages (either on mobiles or online) may be sent to everyone except the target. Cyber-ostracism may result when everyone, except the target, are invited to join an online group. These behaviours can be innocent; however they become aggressive when they aim to isolate and hurt the target "by doing harm to her self-concept of social standing" (Galen & Underwood, 1997, p. 589). Up to 18.5% of students who reported covert bullying in the ACBPS said they had been "deliberately ignored or left out of things over the net" that term (Cross et al., 2009, p. 191).

#### 3.2.3.3. Modality of cyberbullying and cyber-harassment

Although text bullying was talked about as a form of cyberbullying, participants distinguished text from cyberbullying. Cyberbullying, though providing more avenues for abuse, was seen as less serious than text bullying, because text bullying was seen as particularly hard to manage, in comparison with cyberbullying on the Internet. Participants noted that Internet abuse could be more easily dealt with by using simple technical solutions (e.g., see Section 3.4.2.2 for more blocking and filtering). As Felix highlights below (Extract 41), the ease of digitally blocking harassers online, and the ability to form multiple personal profiles online, seemed to diminish the seriousness of direct aggressive cyberbullying, relative to text bullying.

Extract 41

Felix: It's more like serious on a phone, because on the Internet you can just block them, or go somewhere else, on a phone unless you change your phone, or your number, you can't do anything.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

Furthermore, the always on and always available, single point of contact, of mobile phones, may intensify potential distress. As noted earlier these features meant that young people could be cyberbullied in places that were traditionally safe (like their homes), or whilst travelling to or from school. The ACBPS revealed that nearly a quarter (23.7%) of Year 9 students who were covertly bullied, reported receiving mobile phone harassment whilst travelling to and from school that term (Cross et al., 2009).

Some participants (and reviewers, e.g., Patchin & Hinduja, 2006) also thought that the single point of contact of mobile phone numbers may produce a different harassment experience to Internet harassment. Participants said their unique mobile numbers, and the always-available nature of mobile phones, made them significantly "more personal" than the Internet. For these reasons, Extract 42 demonstrates that mobile phone cyberbullying was distinguished by some young people as more distressing than Internet cyberbullying.

Extract 42

Honor: I think it will make you feel kind of worse if you were cybertext bullied, because it's kind of more personal when you're texting someone. Because like on the Internet you can just talk, but like when you've got text saying you're kinda, you're talking about something and they've got your number it's more personal like. And so if someone said something to you it would probably hurt more than it would online, because like online it's like "who cares".

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

With these data in mind, the results from the Youth '07 study, discussed earlier, become more salient. Of the participants (19.0%) who reported receiving a "nasty or threatening messages" in the past year, the overwhelming majority of these (71.6%) were sent via mobile phones and not the Internet (23.5%) (Clark et al., 2009), demonstrating that most NZ cyberbullying involves phones. To the extent that phone harassment is more distressing than Internet harassment, there is likely to be more distress associated with cyberbullying in NZ, relative to countries where there is less mobile phone involvement. Clark and colleagues' finding that young women were significantly more likely to report mobile phone harassment than young men, suggests that young women in NZ may experience a higher chance of distress from this challenge, compared to young men.

#### 3.2.3.4. Conducting cyberbullying and cyber-harassing behaviours

Targets of cyberbullying may also be more likely to report conducting cyberbullying. Targets of bullying in the YISS studies (Ybarra & Mitchell, 2004; Ybarra et al., 2006) and the Growing up with Media study (Ybarra, Espelage, et al., 2007) were more likely to report harassing others in cyberspace than young people who were not targets. The data in Table 3 show that a minority of young people reported bullying and harassing others in cyberspace. The focus groups show that some cyberbullying and harassment includes retaliatory situations (e.g., see Sections 3.4.2.1 and 3.4.1.3).

However, conducting cyberbullying and cyber-harassment may be associated with a range of other problems. For instance, data from YISS2 found that young people who self-reported harassing others in cyberspace were significantly more likely to report aggression and rule-breaking problems (as measured by the Child Behaviour Check List) than those who did not (Ybarra & Mitchell, 2007). These students were also more likely to report victimising others offline as well as online. ACBPS participants who reported covertly bullying others also reported higher levels of school loneliness and lack of school connectedness, than those who did not (although such rates were much higher among participants who had been bullied) (Cross et al., 2009).

#### 3.2.3.5. Summary of cyberbullying and cyber-harassment challenges

The sections above describe a diverse range of complex harassing behaviours in cyberspace. Cyberbullying and cyber-harassment have been defined in many ways. However, the centrality of mean, hurtful, and nasty bullying behaviours, conducted via cyberspace, seems common to most definitions. Young people both overseas and in NZ conduct harassment and bullying in cyberspace. The research suggests that age and gender effects are present, with young women and older students receiving more harassment and young men being more likely to conduct harassing behaviours in cyberspace.

The review and focus group data indicate that there are two main forms of cyberbullying and cyber-harassment: direct and indirect/relational aggression. Direct aggression includes instances where the target is sent mean, nasty, and hurtful content in cyberspace. Indirect/relational aggression includes cyber-harassment where aggressive acts focus on diminishing the target's social status and standing. As such, this form of harassment more frequently involves other peers as the recipients of the mean, nasty, and hurtful content about the target.

Cyberbullying may be conducted via the Internet or mobile phones; however mobile phone involvement may be associated with more distress. Negative outcomes and associations have been reported both for the targets of cyber-harassment and bullying as well as for those who conduct cyberbullying.

### 3.2.4. Meeting with new people and strangers

As noted in Chapter 2, some of the current participants talked about chatting with new people in cyberspace (see Section 2.4.1), however Cross et al. (2009) found that such contacts may produce cyberbullying. Around a third (29.6%) of the Year 9 participants, who reported being covertly bullied in the ACBPS, said they had met their harasser on the Internet. Equally, over half (57%) of the young people in YISS2 who reported online harassment were harassed by "online-only" contacts (Wolak, Mitchell, & Finkelhor, 2007a).

An additional concern associated with communicating with new people is that young people may physically meet these people and experience harm. A minority of the current participants discussed meeting up with new people face-to-face (e.g., Extract 19). The EUKO project also found that such meetings were the "least common" though "arguably the most dangerous risk" among teenaged participants (Livingstone & Haddon, 2009, p. 16), with around 9% of European teenagers reporting such meetings. Data from the UKCGO confirmed a similar amount of this challenge (7%) among the 1,511 participants (Livingstone & Bober, 2004). Furthermore, only one of the 106 participants who reported a meeting, said they did not "enjoy" it (Livingstone & Bober, 2004).

However, as intimated earlier, participants reported meeting with 'strangers' who were in fact already known to their offline friends. For instance, Extract 43 illustrates broad acceptance of friends' referrals of new people, even via mobile phones:

Extract 43

JF: Have you guys ended up meeting new people on text before, like on mobile phones, that you haven't met in person?

Multi: No.

Neil: It's usually just friends' friends.

JF: Friends' friends?

Paul: But sometimes, like they can pass your number, or whatever, but.

JF: But that's only rarely?

Paul: But your real friends wouldn't without your permission.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

The degree to which friends of friends' are qualitatively different to 'total' strangers may be differently related to experiences of challenge upon meeting with such people (Wolak, Finkelhor, & Mitchell, 2008). This finding further queries the high attention this issue receives from mainstream news media.

### 3.2.5. Unwanted sexual solicitation

Communicating with new people may however be associated with sexual harassment, including unwanted sexual solicitation. YISS2 participants who received unwanted sexual solicitations were five times more likely (*AOR* = 5.35, $p < .01$) to report being sexually harassed by someone they had met in cyberspace than by someone previously known offline (Wolak et al., 2007a). For the purposes of this analysis, sexual harassment describes purposeful harassment and aggression that is enacted via sexual means or has a sexual outcome.

Sexual harassment in cyberspace, including the phenomena of "grooming", has garnered significant media and research attention (e.g., Potter & Potter, 2001 for a review on this). Grooming refers to a particular form of sexual harassment whereby a young person is systematically prepared (groomed) for sex with an adult (O'Connell, 2003). Grooming may involve the identification of vulnerable young people, who perpetrators isolate from social support networks, so that they have more power and control over them (O'Connell).

Given social desirability biases (see Section 3.4.5) it is not surprising that no focus group participants reported offline or online grooming experiences, although participants did report other forms of sexual harassment in cyberspace. The ITSFF review (2008) noted that grooming is rarely reported, while other forms of sexual harassment are more frequently reported by young people. In fact, nearly a third (31%) of young people aged 9–19 years in UKCGO reported receiving unwanted sexual comments in cyberspace (Livingstone & Bober, 2004). However, as noted in the previous section, only one UKCGO participant reported not "enjoying" an offline meeting with someone met in cyberspace. This suggests that while some forms of sexual harassment online may be relatively common in the UK, offline abuse perpetrated by cyber-contacts is likely to be very infrequent or disproportionately under-reported relative to other challenges.

The YISS2 study also surveyed unwanted (including unwanted or wanted adult) sexual solicitations and approaches (including grooming) over a 12 month period (Wolak et al., 2006), finding that 13% of young people reported unwanted solicitations (e.g., requests for sexual talk, activities, or information) or approaches (e.g., involving off-line contact or requests for off-line contact). Young women in YISS2 were significantly more likely to report unwanted sexual solicitation (*AOR* = 2.33, $p < .001$), and aggressive sexual solicitation (involving offline contact with the participant) (*AOR* = 4.59, $p < .001$), than young men (Mitchell, Finkelhor, & Wolak, 2007). Approximately a third of young people in YISS2 who were sexually solicited online said their experience was associated with significant distress (i.e., reports of being very or extremely upset or afraid) (Wolak et al., 2006).

Similar to the YISS2 participants, Extract 44 below demonstrates that some NZ young people may also experience distress associated with this challenge. For Sarah, accepting a chat request from a new person online produced a sexually harassing situation that resulted in a level of distress that drove her off the Internet for a week. A week is no small amount of time given her agreement with Kate's earlier comments (Extract 1) that she couldn't "live without" cyberspace.

Extract 44

JF: Through *MySpace*. And have you ever been in a situation where some of those people you've kind of met more randomly have sort of said like things that have made you feel uncomfortable or anything like that or?

Sarah: Yes.

Kate: Yeah.

JF: Yeah?

Sarah: This guy like sent me a picture of his penis, I'm like "Eww" it's all like blunted and then I deleted it and it was like "Yuck, yuck, yuck" and then I didn't go on the computer for like a whole week.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

The YISS2 data also indicated that young women, like Sarah and Kate, were more likely to experience cyber sexual harassment than young men (i.e., approximately 70% of girls vs. 30% of boys were sexually harassed online) (Wolak et al., 2006). Older teenagers in the YISS study also reported more of these challenges relative to younger teenagers. Wolak and colleagues suggested that this may reflect, among other things, the increased time and responsibility older teenagers may have for unsupervised activity on the Internet.

### 3.2.6. Sexual content

Extract 45

Sean: Yeah, if you haven't found it, you haven't searched the net, have you?

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

The "it" in Extract 45 was sexual content. Unwanted sexual content was received through chat conversations (like that in Extract 44 with Sarah), via spam emails/messages, *Google* image searches on "innocent" topics, by typing in a wrong website address, or more commonly, through viewing unwanted pop-up advertisements on websites. Overseas data notes that over half (57%) of the UKCGO sample said they had ever accidentally encountered sexual material online (Livingstone & Bober, 2004). Even within the past year, a third (34%) of YISS2 participants reported unwanted exposure to sexual content online (Wolak et al., 2007b), with such reports more common for older participants (rising to 44% of 16-17-year-olds).

Focus group participants often recounted that such unwanted sexual content challenges were first faced when they were of primary school age. Extract 46 exemplifies one, of many, instances that can produce accidental exposure, also highlighting how this can happen before the teenage years:

Extract 46

Mags: Oh, and another thing, Sue and I, when we were, one of my friends, Sue, we were at intermediate and we were making this map and we wanted to have like this water source thing, so you know like the shape of a tear?

JF: Yeah.

Mags: Yeah, we typed in "teardrops" and it came up with all these like naked guys, and also guys in like G-strings.

Girl: Eww.

(Jill, 14, Female; Trish, 15, Female; Mary, 15, Female; Becky, 14, Female; Emily, 14, Female; Joan, 14, Female, Mags, 14, Female; Focus Group 4).

In contrast to the young women, some young men (particularly those in the single-sex focus groups) also talked about actively seeking sexual material. This finding was also reflected in overseas research. The YISS2 study found that young men were more likely to report both unwanted and wanted exposure to sexual material online than young women (Wolak et al., 2007b). In fact, nearly nine times more young men in the YISS2 research reported purposefully seeking out sexual content than young women. The YISS2 data showed that wanted exposure to sexual content also increased with age, with 38% of the 16-17 year-old male participants reporting such activity in the last year (compared to 8% of young women of this age group). Similar gender findings were also reflected by the EUKO project, with young men from a range of European countries significantly more likely to report seeking out sexual content in cyberspace than young women (Livingstone & Haddon, 2009).

For some young men in the current study, consuming sexual content online was so common it was seen as an integral part of the Internet, and its non-consumption was viewed suspiciously by others. The normativity of pornography was underscored by the often candid and open discussion about personal pornography-use demonstrated in Extract 47 below. The discussion below also highlights how common-place sexual material may become somewhat "boring" for some seasoned 15-year-olds.

Extract 47

Sean: If you haven't looked at porn, you're pretty pathetic.

Bob: You're weird.

Sean: Because everyone does. I mean it gets boring after a while, it's all the same thing.

JF: When did you guys probably start looking at it? Like how old would you have been?

Sean: About seven.

Marty: At the start of this year, maybe.

Rick: Probably at the same time, maybe a little while after I started looking at the Internet, I suppose it comes with it.

JF: Yeah, was that the same with you guys?

Marty: Probably like the middle of last year.

Sean: No, I've been looking at it for ages, I don't know why.

Rick: Yeah.

Bob: It was a bit ago, but it was when I first learned to like masturbate.

Sean: That is probably the first lesson - - -

Bob: Yeah, but I didn't know that before.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

The extract above acutely highlights how media use intersects with puberty and adolescent development. Bob talks about how sexual media was involved in the instigation of masturbation. This is reflected in Jackson, Low, Gee, Butler, and Hollings' (2007) review, which notes the often extensive and fascinating role of media in sexual development and sexual knowledge transfer. Extract 47 above, also highlights that some of this sexual content will be accessed before young people have reached puberty.

Fewer young men in the focus groups reported concerns over sexual content they had seen online, than young women (e.g., Extract 48). This may reflect the fact that young men often reported actively searching for sexual content. Greenfield's (2004) submission to a USA Congressional Committee reviewed the literature on sexual content consumption by adolescents and indeed noted that unwanted sexual content exposures were recalled more positively by young men than young women. The EUKO project also found that young women were more likely to report distress upon encountering such content than young men (Livingstone & Haddon, 2009).

Overall, data from the UK and USA revealed that around a quarter (24% and 26% respectively) of sexual content exposure incidents were "very or extremely upsetting" for participants in the UKCGO (Livingstone & Bober, 2004) and YISS2 (Wolak et al., 2006, p. 33) studies. Like Sarah (Extract 44), the large majority (79%) of participants in YISS2, who reported distress, reported stress symptoms, including "staying away from the Internet or a particular part of it, being unable to stop thinking about the incident, feeling jumpy or irritable, and/or losing interest in things" (Wolak et al., p. 33).

Interestingly, young women and men in the focus groups articulated one shared concern about sexual content. Both genders were concerned about being punished by adults for accidentally viewing sexual content online. Participants in most groups reported instances where caregivers or school staff had punished them for accidentally accessing sexual content. In Extract 48, Eva explains that such accidental access then was also associated with fear they would be punished for something perceived to be out of their control.

Extract 48

Eva: You feel like ooohh they're going to tell me off for looking at it, and it was an accident!

JF: So is the concern more like "oh my god, one of the teachers might have a go at me" rather than like "oh I just saw something kind of gross"?

Eva: Well it is when you look at it and you have recognised it is gross and you are just like "eeww" and then you're like "oh no am I going to get in trouble for looking at that, but it wasn't my fault".

(Sian, 14, Female; Eva, 15, Female; Jenny, 15, Female; Libby, 15, Female; Focus Group 2).

### 3.2.7. [Non-sexual] inappropriate content

Focus group participants also encountered non-sexual inappropriate content that produced distress, including violent, gory, or gruesome images of injured or dead humans and other animals (including babies and young animals), as well as suicide and self-harm content. Byron's extensive review (2007) noted that inappropriate content can also include hate material and problematic body-management information (e.g., "pro-ana" websites that are sympathetic or promotional of anorexic methods or ideals). The EUKO review reported that around a third of European teenagers reported encountering violent and hateful content in cyberspace, making this the third most common cyber-challenge to face young people in Europe (Livingstone & Haddon, 2009). Some focus group participants recounted historical incidents when they had come across [non-sexual] inappropriate content.

Extract 49

Sean: I was on Albino Black Sheep. You go to pranks. This was the first time I did it and you had to click on these things and then you sort of got bored and you kept on doing it and then suddenly it just came up like these screaming dead babies and you know , it was . . .

JF: Yes.

Sean: That was really disturbing.

JF: Pretty horrible?

Sean: Yeah.

JF: When did that happen for you? Was that like, in the last year or?

Sean: No. I think it was a couple of years ago.

JF: Yeah.

Sean: I never went on it again because I got goosebumps a lot.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

The discomfort articulated in Extract 49 was also produced by a number of participants in other focus groups. Around one in five (19%) 12–15-year-olds (*n* = 764) in the UK also reported that they had ever encountered "…anything that they had found nasty, worrying or frightening on the Internet" (Ofcom, 2006, p. 40). Locally, a smaller interview study with 12–13-year-olds in NZ (*n* = 138) found that of those with the Internet at home (*n* = 99), 8% had seen content that had "bothered or upset them" which included violence or "scary/spooky things" (The Broadcasting Standards Authority, 2008, p. 53).

Encountering particular forms of inappropriate content, like self-harming and suicidal material, may be associated with even more distress for some young people. For instance, some participants in the current study talked about their experiences encountering such content within interpersonal communications online. Neil and Felix's accounts in Extract 50 highlight that such situations may not only be associated with content distress (e.g., about such notions or their imagery), but can produce distress associated with ones conduct in a sensitive interpersonal situation. For instance, following such communications, young people may experience distress associated with their belief that they may have exacerbated another's self-harming behaviours through their actions (or lack thereof):

Extract 50

Neil: Some of the annoying things is, on some of the forums people are like saying they are going to commit suicide and stuff and then like after a while they came back and they are like hi, I was just joking.

Felix: Yeah. It puts you on a bit of a downer, because like all the people say they are going to kill themselves and you have just been talking to them, so you like don't know if you have done anything to persuade them or whatever.

JF: Sure. Sure. Absolutely.

Felix: And so like, but they are just mucking around and you don't know that because you don't know them personally.

JF: Yeah. That is pretty horrible. Has that happened to anyone else? Have you guys? That sounds pretty stink. When you are sort of talking about that kind of stuff, is that something that you would talk to your parents about, or someone else?

Multi: No.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

Interestingly, at no point was [non-sexual] inappropriate content discussed as being derived from inappropriate access to officially restricted content (e.g., age restricted games and movies). This was despite the fact that restricted games and movies had been widely viewed by participants (e.g., the R-18 game *GTA*). Some participants said that accessing restricted content was "fine" for them, because they were mature enough to manage it. This notion was reflected in a local survey for the Office of Film and Literature Classification (UMR, 2005). Of the 331 high-school students UMR surveyed, 62% had played at least one game that was age-restricted to them, with the majority (76%) reporting that age-ratings made no difference to their consumption of media generally. Together these data, combined with the qualitative analysis, suggest then that a number of young people in NZ do not view age-restricted material as inappropriate content per se. Furthermore, the findings also indicate that age restrictions do not necessarily work to prevent access to such material.

### 3.2.8. Copyright infringement

Some of the age-restricted content that young people in the focus groups reported viewing was accessed via peer-to-peer file-sharing services, which enable people to share media, including copyrighted material, over the Internet. Overseas research suggested that file-sharing is popular, with 51% of online teenagers ($n$ = 971) in the Teen Content Creators and Consumers study reporting this activity in the USA (Lenhart & Madden, 2005). While UK research later found that around half (47.5%) of 12–17-year-olds reported "downloading music files, movies, or video clips" (Millwood Hargrave et al., p. 19). Both of these studies reported that infringement increased with age, and that young men were more likely to report file-sharing than young women.

Copyright infringement reported by focus group participants focused on music, and less frequently, movies. Noting the earlier gender split in gaming, in Chapter 2 (Section 2.4.5), and perhaps explaining some of the increased file-sharing observed among young men overseas, some of the young men in the focus groups also

discussed using file-sharing to download games. The young men in Extract 51 demonstrate how copy-protected media, even when designed for console games, may easily be "cracked", acquired (via the file-sharing programme *LimeWire*), and then shared amongst the peer group (via USB drives) at school (there is irony that such a transaction should occur in the library).

Extract 51

Kevin: There are like some people, like in home right, you can buy the programme *LimeWire Pro* and it's faster and things, but some people, you download *LimeWire Pro* off *LimeWire*.

Felix: It's like cracks, you can get cracks for disc games.

JF: Cracks are like?

Felix: Disc games that you don't need, like…

Paul: You don't need your CD for, you just install it.

Felix: Discs like, so you can share it around, and like *Vice City*,[20] or whatever, you could, they've got a crack of that around the school at the moment, and you don't have to have the disc. So like, one person gets the game, everyone gets it.

(..)

JF: So that would, so it's not, and where do you end up getting most of those sort of R18 games when you play it, is it at friends' houses, or?

Felix: Just school, pretty much come to the library, or whatever, and give it on a pen drive.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

There are a range of challenges that young people face with file-sharing, including computer security issues (see the next section [3.2.9]), legal ramifications from supplying age-restricted content to other minors (New Zealand Films, Videos, and Publications Classification Act, 1993), and exposure to inappropriate and sexual content. Indeed, Wolak et al. (2007b) found that YISS2 participants, who used file-sharing programmes, were twice as likely to report unwanted sexual content exposure compared to young people who did not.

Lenhart and Madden's (2005) study also revealed that around a third (30%) of young people, who reported downloading music, said they used free peer-to-peer services to do so. Such services are usually synonymous with copyright infringement (cf., paid services which buy the rights to use the media). Copyright infringement also introduces legal implications. Copyright infringement in NZ is covered by civil statutes and the criminal law code (where trading or profiteering from copyright infringement occurs) and can result in fines up to NZD$150,000 and a five year maximum prison sentence. Recent changes to Section 92A of the Copyright Act provide provision for the Copyright Tribunal to fine people NZD$15,000 per infringement under the civil code (Copyright (New Technologies) Amendment Act, 2008).

Participants differed in their knowledge of the legality of copyright infringement practices. Notably, most participants reported that their parents and caregivers were naïve about peer-to-peer file-sharing and copyright

[20] The fourth sequel in the R-18 rated *Grand Theft Auto* series.

infringement. This naivety played out by them either "over-reacting" to trying to stop infringement (by removing well-known file-sharing programmes) or at the other extreme, by parents and caregivers requesting young people to infringe for them.

Extract 52

JF: And when you are downloading stuff like, are you, you know, do your parents know about that? Like are they okay about that?

Kate: Yeah they want me to download - - -

Sarah: They make me download songs for them.

Kate: Yeah, oh my god, yeah.

JF: They make you download it for them. What stuff do they want you to download?

Kate: Like the songs they like, like 80s songs, sometimes *Grease*.

Sarah: *Grease* is cool!

Kate: I know.

Sarah: Oh I forgot what it was called. Ah *Frank Sinatra*.

Kate: I have *Frank Sinatra*.

JF: They want you to download *Frank Sinatra*.

Kate: Or Neil Diamond.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

The data above suggests that young people in NZ currently face a range of challenges from file-sharing, including vulnerability to significant legal ramifications from copyright infringement.

### 3.2.9. Computer security issues

Downloading material via file-sharing programmes may produce computer security challenges. Some participants reported that computer security issues were one of their biggest "dislikes" about the Internet. Participants, like those in the two extracts below, perceived such security issues to present a range of problems, including pop-ups and poor computer performance. In Felix's case in Extract 53 below, computer security issues resulted from accidentally downloading malicious software (Malware) from a games site that had been compromised.

Extract 53

JF: Um, just while we are on that little thing, in terms of those are some of the things you like about, you know, using the 'Net and computers, are there things that you dislike about using the 'Net or computers?

Paul: Like, sometimes if you download something and like it can give you a virus on the computer and stuff.

Mike: Yeah, and people who do it on purpose.

Felix: And coz people can, they can log into your computer through viruses and stuff, so that is pretty dodgy. So you need to get it off sites that are big, because like the random little ones people corrupt them and stuff, but like *MiniClips*, like anything off there is good pretty much.

Jack: And sometimes pop-ups.

Mike: Yeah, pop-ups are really annoying.

Jack: Just when it comes up, oh you have been the millionth customer to this site, when you say click on *Google*, it's like a big site.

JF: Yeah. So the security stuff is important. Have you guys ever had a virus attack?

Multi: Yeah.

Felix: Yeah, it screwed my whole Internet up once.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

Like Felix, the majority of participants also recounted experiences where their [families'] machines had been significantly damaged by computer security issues. Findings from the 2007a Ofcom survey of young people in the UK revealed that some participants there also reported being "worried about" computer viruses (8%) or "pop-up adverts with harmful or inappropriate content" (17%) (p. 73). The UKCGO study found that pop-ups had exposed around half (i.e., 39% & 56% of 12–15- and 16–17-year-olds respectively) of all teenaged participants to unwanted sexual content (Livingstone & Bober, 2004). In addition to these issues, some focus group participants reported that computer security was a challenge because it was associated with losing homework, passwords, and photos or financial and scam concerns.

Extract 54

Pete: I got a virus when I was - - -

Simon: It took me like three days to fully clean up the computer and it was fine after that and I was like so proud of myself.

Pete: Yeah, it destroyed our hard drive. I had to actually buy a new one.

Helen: Oh, that's a nice virus.

Honor: I'm more worried if we get a virus it will delete all my files.

JF: Yeah.

Helen: Yes.

Honor: Like, my parents, they'll be fine.

Simon: I'm just worried about them getting all my passwords.

Honor: All my files and all my like homework and stuff that I've done over a couple of years and I might need it – that would scare me.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Unseen in Extract 54 above were earlier comments where Honor and Simon's parents were furious about computer security issues compromising the family computer. For some participants, perceived family concern, and cost, following a computer security incident may increase distress associated with this challenge.

### 3.2.10. Inappropriate digital footprint

With the easy ability to publish, contribute, tag, and retrieve content, Web 2.0 has intensified challenges for young people who share [contact] information.

Overseas research demonstrates that some young people provide contact information online. The EUKO review ranked this the most common cyber-challenge for European young people, with half reporting such activity (Livingstone & Haddon, 2009). The results from the 1,257 young people (9–19 years) in the UKCGO project reflected this EUKO finding (Livingstone & Bober, 2004), with 51% of those who went online at least once a week, reporting ever providing at least one form of personal information online, including information like their email (24%), full name (17%), school (9%), or phone number (7%). Research also demonstrated the popularity and variety of personal information posted publicly by USA young people (e.g., Lenhart & Madden, 2007b; Wolak et al., 2006). Both the European (Livingstone & Haddon) and USA research (Ybarra et al., 2005) found that slightly more young men reported posting personal information online than young women.

However, in later analyses Ybarra and Mitchell et al. (2007) found providing contact information was not necessarily related to increased risk of interpersonal victimisation. In some respects, they noted that this represented that such activity was becoming normative for YISS2 participants. However, as noted earlier, harm from inappropriate digital footprints may be delayed and/or influence more than interpersonal victimisation. For instance, inappropriate footprints may cause harm by damaging young people's reputation among [future] peers, employers, and family members. In Extract 55 below, the participants highlight a certain level of vigilance in managing their digital footprints. These young people also discuss how publishing certain content can produce harm and stress for a young person, who due to the complexity of cyberspace (once something is posted online it is hard to delete), may be unable to consider the scope of the audience of an inappropriate digital footprint.

Extract 55

Jill: Yeah, everyone has to watch what you say, like –

Mary: – cause if you say like "I love so and so" and someone else is like his girlfriend or something –

Emily: Yeah, there'll be a fight.

Mary: There will be.

Mary: At the tuckshop.

Emily: And [indistinct] your *Bebo*, you need to be aware if you're saying something to someone, you're not just saying it to them, everybody else can read it, so I think you need to be aware of that, cause that's the – like and what you say and everything.

JF: That's great.

Jill: And also that even if you delete it off yours you've got to make sure that it's going to be able to be read from people reading the other person's, cause a lot of the time people are like "well I've deleted it off mine, it's all fine now" it's like "well, it's not actually, it's on theirs as well".

(Jill, 14, Female; Trish, 15, Female; Mary, 15, Female; Becky, 14, Female; Emily, 14, Female; Joan, 14, Female; Mags, 14, Female; Focus Group 4).

The key issue with this kind of material is that once it is published online, particularly in a public places, it can be very difficult, and sometimes impossible, to effectively remove the content. As Jill and Trish explain below in Extract 56, this is because other users may choose to download the content and simply repost it even after the original content has been deleted. The key concern with sensitive content is that young people lose control of it and potentially experience harm when someone uses that content against them.

Extract 56

Jill: Yeah, so if stuff is said, like if you say it to one person a lot of people don't realise that it actually goes to, like everybody reads it and then by the time you've even sent it and then you go to delete it like half your email like 30 people might have already read it and then it's - - -

Trish: There is a thing on it where you can check your messages before you put them on your page as well and they can take your photos off, even if it says 'keep them as confidential' they can still copy and paste it.

(Jill, 14, Female; Trish, 15, Female; Mary, 15, Female; Becky, 14, Female; Emily, 14, Female; Joan, 14, Female, Mags, 14, Female; Focus Group 4).

The young women in the following extract demonstrate how digital footprints may be used to police the group identities that are a key part of social connection and personal identity development in adolescence (B. B. Brown et al., 1994). For instance, at an earlier point in the focus group interview, the participants in Extract 57 talked about being careful about posting social networking profile photos that could be perceived to be 'too sexual'. Some women participants critiqued women whose profile photos featured revealing clothing and suggested that such photos were inappropriate (and in so doing, these participants produced/policed norms for group membership). Extract 57 demonstrates the rationale behind some of the norms for peer-policed digital footprints, and group membership, may stem from some wanting to avoid being considered a 'slut'.

Extract 57

Jill: … we just do things to try and protect like how we are known as well with other people, like you don't want to get the wrong - - -

Emily: When people think of our group, they don't think "oh my gosh, their group's are sluts" or anything.

Jill: Yeah.

While previous American research revealed that young men were more likely to post sensitive information online (Ybarra et al., 2005), newer findings revealed that slightly more young women in the USA posted pictures of themselves online, than young men (Lenhart & Madden, 2007b). The extracts above and below demonstrate

that many women focus group participants also posted their images online. In Extract 58 Sarah details below how she accidentally produced an inappropriate digital footprint that caused some discomfort.

Extract 58

Sarah: Because it attracts unwanted attention.

Kate: Yes. And weird people.

Sarah: And then all these girls would be like “Eww, what a slut”.

(..)

JF: How do you know that, is that from - - -

Kate: You can see that from the comments like they leave, yeah.

JF: Because it sounds like quite a lot of people look at other people’s *Bebo* page and then kind of learn like “Oh, I wouldn’t have put that photo up and stuff like that” and - - -

Sarah: No, because I remember last year when I was on *Bebo* and we had – I had this pool party and we were just like all these girls and my mum was just taking pictures and stuff and so we decided to just put it up, you know, what the hell, it’s having fun, and then just all these people were like “Oh my god, oh my god” so we took it off.

JF: Yeah, so when you say all these people “Oh my god, oh my god”, you mean like all these people were messaging you on *Bebo*?

Sarah: Yeah, like, “Oh my god, look at all these sexy girls” and it’s just “Eww”.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

Sarah’s comment in line 3 above mirrors the previous quote (Extract 57) and further highlights how issues of identity management and group membership may play out when young people post personal information online. Whilst developing physically and sexually, these extracts highlight that developing young women also become cognisant of occupying “slut” identity categories. For some, like Sarah, Jill and Emily, this meant avoiding posting sexually provocative images that would produce a digital footprint associated with negative attention from [women] peers and men. Manago and colleagues (2008) found that such tensions continued to be reported by 18–23-year-old women in the USA.

### 3.2.11. Time-management

Time-management is another challenge produced by activity in cyberspace. For the purposes of the thesis, time-management challenges refer to situations where cyberspace use causes problems for people finding the time to fulfil the requirements and desires of their day-to-day life (e.g., school), or when tiredness from late night cyberspace use impacts on the following day’s performance (e.g., in school, sport, or work).

Some participants reported struggling with this challenge at some point, and often (like Cindy in Extract 59) drew upon addiction language (prevalent in mainstream media) when discussing time-management issues (cf., Widyanto & Griffiths, 2006, who reviewed and critiqued most applications of this “addiction” label).

Interestingly, all time-management issues discussed for young women were associated with communication in cyberspace. This may represent the particular significance of communication for producing social connection for young women. However, in Extract 59, Cindy highlights how cyberspace activity may become difficult to manage. The resulting tiredness from her time-management challenge, associated with communicating with others, contributed to her eventually selling one of her phones to help her manage her time.

Extract 59

JF: Lots of people sometimes say that they find it easier to have two phones for the free texting and stuff like that?

Cindy: Yeah.

JF: Did you get two phones?

Cindy: Once I did then I sold it 'cause it takes up too much time, like you get too addicted to it.

JF: Yeah. When you were addicted to it how did that work?

Cindy: If you're tired and I don't know, they just want to keep, your friends just want to keep talking to you all the time.

JF: Yeah.

Cindy: They keep you up.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

While some of the young men in the focus groups also talked about time-management issues around communication (e.g., Extract 60), they also mentioned time-management problems associated with gaming and surfing the Web. This likely reflects that, as noted in Chapter 2, these two activities were more popular for young men than women. Johnson's (2008) review highlighted that developmental issues may help explain excessive gaming time during adolescence, suggesting that the improving cognitive ability of adolescence may make young people:

> …particularly engaged by tasks at which they are only partially successful, and motivated to persist until they have achieved mastery (which may provide a basis for the "addictive" quality of some video games where difficulty increases when competence at one level is achieved. (p. 5)

Such gaming activity, in addition to the increased activity of young men in cyberspace (both in terms of frequency and range of activity), may mean they face more time-management challenges than young women. Extract 60 exemplifies how long some young men may spend online, as well as highlighting their time-management concerns.

Extract 60

Marty: My cousin, she had broadband, she went on the Internet like quite a lot, and then she got broadband, she was on it continuously. You go onto *MSN*, she's always on there.

JF: Yeah, so – and is there a problem being online continuously do you think, is it a bad or a good thing?

Sean: Bad, cause you don't – you get lost in your own – especially in the holidays, you're on there for hours and hours, you get lost and just hours just tick by and you get lost in cyberspace.

Rick: It's like "woah, six o'clock at night already!"

Sean: Yeah, it's freaky sometimes when you're on there from like nine in the morning till six at night and stuff, you're just - - -

Rick: My mum would never let me do that.

(..)

JF: No, you've always managed to keep it in that sort of limit? What about when – you know like you said you can sometimes be online and it's just like "oh", it's suddenly six o'clock or something, what are you doing when you're online for that amount of time?

Sean: I don't know, eh. Probably talking to people. I don't know, I look at random things. You look on one site and add and stuff, and it just leads to another and another, and you just - - -

Rick: I'd just be downloading.

Sean: Sometimes it's quite interesting 'cause you discover heaps and heaps of stuff.

JF: Yeah.

Sean: But sometimes you're in your pyjamas for the whole day and it's kind of sickening.

JF: Yeah.

Bob: That's a bit scary.

Rick: You need to get out of the house.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

Like the participants above, most young men and women in other groups expressed hesitancy about "too much" time online. Most participants suggested that too much time in cyberspace was not desirable. Reflecting the conclusions of reviewers in the field (Byron, 2007; S. Jackson et al., 2007), other participants, mirroring those above (Extract 60), were concerned that too much time on ICT could isolate young people from offline supports and be associated with negative outcomes.

### 3.2.12. Summary

Challenge is a normative part of human development. It is a by-product of young people's increasing autonomy and exploration of the world. The review that opened this chapter noted that some young people's experiences of challenge may be disproportionately associated with poverty, abuse, neglect, and lack of social support, however, the current focus group research was not used to assess these aspects. Instead this research focused on exploring which challenges young people faced in cyberspace, including bullying and harassment behaviours, exposure to sexual, scary, or inappropriate content and contact, copyright infringement, computer security issues, the production of inappropriate digital footprints, and time-management challenges.

## 3.3. Resiliency and Challenge Management

The analysis demonstrates that young people may experience a range of challenges in cyberspace. How young people manage these challenges, is of particular interest. Resiliency describes the management of challenge to produce positive outcomes. This section will begin by briefly describing the literature and theory on resiliency and challenge management to highlight what resiliency is and what is associated with it. The analysis will then detail how resiliency in cyberspace was discussed in the focus groups and addressed by the literature.

Resiliency describes outcomes where people have successfully managed significant challenges and adversity to produce health and wellness. In their extensive review, Compas, Connor-Smith, Saltzman, Thomsen and Wadsworth (2001) explained that resilient outcomes result from the interplay of environmental factors, individual competencies, and effective coping strategies. Resiliency may also be framed as the ability to avoid similar future challenges. All resiliency definitions highlight that resiliency exists in relation to challenge.

The features that may enable people to effectively manage challenge are often called protective or promotive factors (Compas & Reeslund, 2009). Protective factors mediate and moderate stressors, and include a range and interplay of behaviours, attitudes, characteristics, context resources, and skills. Reviews emphasise the importance of positive relationships that provide social support (ideally from at least one parent and from peers) (Werner, 1995) and love and trust (Compas & Reeslund, 2009; Rutter, 2000; Werner). Werner's summary of longitudinal data, highlighted that the possession of high self-esteem, positive self-concept, high self-confidence, an internal locus of control, and extraversion, are all associated with resilient outcomes.

A range of behaviours are also associated with resiliency, including help-seeking behaviours and obtaining information and guidance (Compas & Reeslund, 2009). Particular skills and attitudes also facilitated resiliency, including understanding the limits of one's control and self-efficacy in managing a challenge (Wyman, Sandler, Wolchik, & Nelson, 2000). Problem-solving skills themselves are also associated with resilience (Werner, 1995). However, these skills may be conflated to some degree with intelligence, as this is also noted to be associated with resilience (e.g., see reviews: Compas & Reeslund, 2009; Rutter, 2000; Wyman et al., 2000). Skills in communication and social self-efficacy are also reported to be associated with resiliency (Werner). However both of these skills may be related to their ability to produce social support—noted earlier as a key resiliency component (Werner; Wyman et al.).

This research referenced the role that context plays in facilitating resiliency. For instance, contexts of poverty or parental neglect and abuse are more likely to produce significant challenges at the same time as potentially removing key protective features, like social support and the modelling of problem-solving skills (Compas & Reeslund, 2009; Wyman et al., 2000). As such, resiliency is also associated with the absence of some of the chronic stressors and toxic contexts discussed at the beginning of this chapter.

## 3.4. Management [of Challenge]

So far, this chapter has demonstrated that young people face a range of challenges in cyberspace. While focus group discussions are not suited to addressing some of the resilience features discussed above (e.g., the presence of caregiver love and support), they can provide accounts of some of the options and coping strategies young people use to manage challenge.

The management meta-theme describes young people's responses to various challenges and focuses on the strategies they may use to manage them. The analysis will show that this meta-theme includes three main themes of response. The response theme of social support describes young people's use of others' assistance or support in responding to and managing a challenge. The analysis will show that young people may draw on parents and caregivers, peers, and school and other adults, to help manage challenges. The second theme is problem-solving, which describes the actions young people take themselves to manage challenges (i.e., technological solutions and confrontation and fighting). The final response theme of this section describes how some young people [try to] ignore challenges as a management strategy.

### 3.4.1. Social support

Participants suggested that a range of social supports could be helpful in managing cyber-challenges, and the analysis will consider three sub-themes of social support: parents and caregivers, peers, and other adults.

#### 3.4.1.1. Parent and caregiver support

Despite the research literature's emphasis on the importance of family environment and parenting for resiliency, some participants reported that they would not communicate with parents or caregivers about most cyber-challenges. This reflected concerns that parents' negative reactions would outweigh the benefits of telling them. Such negative reactions included parents and caregivers' "overreaction", "drama", potential victim-blaming, and most critically, technology sanctions. For instance, in response to a question about harassment online, the participants in Extract 61 talked about overreaction, victim-blaming ("you're not ready for this"), and technology sanctions, as reasons to avoid telling parents about cyber-challenges.

Extract 61

JF: What about like, would there ever be a time when you think you would like – if you've been text bullied would you talk to like any adults about it and stuff?

Mana: [indistinct] it's probably friends.

Girl: Yeah, or just [indistinct].

Anne: Yeah, 'cause your parents will exaggerate the situation and make it into a big drama.

(..)

Tia: Usually when like your cousins like they already gotten to that stage of adult, then you – like that's when you like talk to them, talking to parents and that is just, you know, Island ways, it's straight taking you off the phone and say "you're not going to get this phone anymore and that's why I told you you're not ready to get cell phones", and all those stuff. And yeah, that's more likely why we don't really go to parents.

(Lucy, 14, Female; Tia, 15, Female; Anne, 15, Female; Mana, 14, Male; Focus Group 3).

In the extract above, Tia talks about technology sanctions following a challenge and ties this to "Island ways". One reading of her talk is that a Pasifika ("Island") ethnicity parenting style may unfairly or disproportionately punish a young person for experiencing a challenge. However, the punishment of technology confiscation was

reported by participants of different ethnicities (e.g., see Extract 62) (also see Finkelhor, Mitchell, & Wolak, 2000 for accounts of technology sanctions in the USA).

Faced with sanctions on technology, some participants reported that they would prefer to manage issues themselves rather than risk losing their technology. Such was the case for a third (32.1%) and a half (49.1%) of the Year 8 and 9 students (respectively) in the ACBPS (Cross et al., 2009). Following covert bullying, these students reported not asking anyone else for help. However, for the half of those that did seek assistance, only half, again, approached parents or guardians (56.5% and 42.1% of Year 8 and 9 students respectively) (Cross et al.). Participants in the current study suggested that despite fears of sanction, young people would risk negative parental outcomes should a challenge become very serious. Like Honor in Extract 62, most participants felt that "very serious" meant when a challenge was associated with physical danger.

Extract 62

Honor: So if it was cyberbullying I think it would have to get really, really bad, like threatening really bad before I'd talk to my parents about it, because I'd be like, I'll just get my friends to add them and see if they knew them or whatever before I – because my parents would probably ban me from *Bebo*.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

However, some of focus group participants reported that they would talk to parents about a challenge. These participants, like Simon (Extract 63) and Sarah (Extract 64), said their parents were relaxed and easy to talk to about issues. Simon contrasted his father's laid back response to his mother's concerned response (earlier discussed as "talking a million miles an hour") and suggests that his father would just listen to him.

Extract 63

Simon: I always talk to my parents pretty much about everything, so if something like that comes up, even I like mock them back and they don't really say anything or I just ignore them they didn't reply, I'd probably just tell my parents, I'll tell my Dad because me and my dad talk about everything. I'd say to him, "Oh, these guys were being gay today", and he'd be like "Oh, yeah, blah, blah, whatever".

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

In the instances where young people talked positively about disclosing challenges to parents, such parents listened to the young person (like Simon's father) and did not take control of the situation (e.g., they did not demand that the issue was reported and/or remove ICT access) without consent. Parents (and other adults) who were perceived as attentive (though not quick to take control), sympathetic, and/or effective in managing a challenge, were more likely to be told about a range of cyber-challenges. For instance, after Sarah received unwanted sexual content from a stranger, her mother's non-dramatic response was viewed positively.

Extract 64

JF: When that kind of stuff happens or when those other, like those two things happened, did you guys – would you talk to anyone about that?

Sarah: I told my mum and she just started laughing. She just thinks it's just really funny and she's like "tell him to go away".

JF: And was that kind of good? Did you want her to kind of react like that?

Sarah: Yeah. My mum's cool; I like my mum.

JF: Yeah. What about you, did you talk to anyone about - - -

Kate: No, I just told my friends.

JF: You told your friends and stuff?

Kate: Yeah.

JF: And what did they sort of say?

Kate: They just laughed.

Sarah: Yeah.

Kate: Yeah, 'cause it's quite funny.

JF: And was it good like for them just to have that kind of reaction?

Kate: Yeah.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

Findings from the UKCGO study demonstrated that 61% of young people (aged 9–19 years of age) said they would tell their parents if something made them feel "uncomfortable" in cyberspace (although these proportions were larger for young women [70%] and participants aged 9–11 years [71%]) (Livingstone & Bober, 2004). Data from the YISS studies suggested that fewer American young people sought parental support (Finkelhor et al., 2000; Wolak et al., 2006), with only 12% of young people who were sexually harassed in the YISS2 study, reportedly telling a parent about that challenge (Wolak, et al., 2006).

#### 3.4.1.2. Peer support

Extract 64 above was extended to show the place of peers in providing social support to help manage challenge (recall Extract 61 also). In Extract 64, Kate highlights that for some participants, peer assistance was preferable to parental assistance. While parents may be recruited once an issue becomes very serious for some participants, some participants reported that they used peers in some way after a challenge, even those who also drew on parental support.

Cross et al. (2009) reported similar findings from Australian young people, with friends from school the most popular source of support (71%) following a covert bullying experience (cf. 56.5% of parents). Additionally, friends not from school were also approached by a quarter (24.5%) and a half (53.7%) of these Year 8 and 9 students respectively (Cross et al., 2009) (also demonstrating the increasing importance of peers as young people age). Similarly, more young people reported telling friends or siblings (29%) about sexual harassment challenges than parents (24%) in the first YISS study (Finkelhor et al., 2000). The UKCGO project replicated

this pattern with sexual content challenges, noting that young people, who used the Internet at least weekly, were more likely to talk to peers, than parents, about sexual content challenges (Livingstone & Bober, 2004).

Some participants also used peers to provide advice and structural support in solving a challenge (e.g., helping to rebuild a computer after a computer security incident). Research findings reflected this form of peer support in the UK, with half (47%) of the 12–15-year-old young people (*n* = 764) surveyed reporting preferring to learn about technology from peers rather than parents (23%) (Ofcom, 2006). Results averaged from eight countries across Europe (*N* = 6,534) also showed that young people preferred to learn about new things to do on the Internet from friends (75%) rather than parents (25%) (Kalmus, 2007).

The popularity of peer support following a challenge may reflect the multiple ways peers can provide assistance. For instance, Honor and Helen explain below in Extract 65 that peers may be useful simply for listening to accounts of challenge and/or for their ability to provide tangible support. Honor indicates that she would also most likely seek out peers to listen to her experience of challenge, and then use peers to help identify who may be producing the challenge, and gain support and advice (e.g., "we'll just go and talk to them or something").

Extract 65

Honor: I know all my friends, I'm quite close to my friends, I know them all, and it'll be, I'll probably tell a couple of people and if they didn't have the number I'll just be like, because people are – everyone's got random texts, and if they've – no, it's something or rather, if they know the person they'll kind of come with me and we'll just go and talk to them or something, but it wouldn't really be like I have to keep this to myself, no one else should know or whatever.

JF: Yeah, yeah, yeah, absolutely.

Helen: Yeah, I'd like tell my friends and I'll be like, like joking I'm like "Oh, this dumb person's texting me" and they'll look and then they'd be like "Oh, what a stalker" or something, and then we're just work it like that. It wouldn't – it's not like they go "Oh, are you okay, are you okay" like - - -

JF: Yeah, yeah, yeah.

Helen: - - - they'd just be understanding and stuff probably, yeah.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Unlike adults, peers were seen as not "out of touch" and likely to overreact. Peers were also perceived to have more expertise with cyber-challenges than adults. Additionally, peer preference may reflect the increased time young people spend among peers relative to parents (reflecting the action of developmental processes as young people individuate from families and peers become more important). Felix highlights these issues below in Extract 66 when he talks about a situation where he accidentally accessed sexual material on his home computer. His peers have also experienced these issues, and as they are the people he sees most in his life, he reports more "comfort" talking with them, than adults.

Extract 66

JF: Yeah. Would you talk to any of your friends about it and say, oh I saw this and …

Mike: Yeah, because it is more comfortable...

Felix: It is more comfortable talking to people that have the same problems or whatever and that you spend – because you spend more of your day with your mates than with your parents because obviously you are here for most of the day.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

#### 3.4.1.3. School and other adult support

For similar reasons to the low value ascribed to parental support, support from other adults (including school staff, extended whānau, and employers) was at times devalued by participants in the focus groups. Unfortunately, this may reflect recent findings from Australia (Cross et al., 2009), which found that in around half of covert bullying situations, school-adult intervention resulted in a worse or unchanged situation for young people in Year 8 and 9. While the Year 9 participants had slightly better experiences (only 43% reported that adult action left the situation the same or worse, versus 62.5% of Year 8 participants), the numbers approaching any adult following repeated covert bullying had dropped significantly from the Year 8 rate of 68% to 46.2% in Year 9. This may suggest that students learn that adult involvement is likely to be counter-productive and as such they may prefer to manage it themselves. The young men in Extract 67 below highlight that some young people may not prefer to talk to adults (including school adults) about cyber-challenges, because they fear overreaction and/or unhelpful responses.

Extract 67

JF: Yeah. Do you reckon there is like, in those kinds of like cyberbullying situations, would you ever talk to like a teacher or something about it and say …

Felix: The teachers always say they are there, but then …

Multi: [unable to distinguish]…

Felix: You talk to them and they don't help you at all.

Kevin: Sometimes teachers can be a bit like your parents and they overreact to things.

Felix: And then they want to do something and they like go to the headmaster and they want to fix it, and all you really want is just a little bit of advice of what you should do, but when you talk to someone you don't really want them to do anything, you just sort of want to talk about it, or you want to do something.

JF: Mmm.

Felix: But then they go all over the top and it is kind of annoying.

(Jack, 14, Male; Mike, 13, Male; Kevin, 13, Male; Felix, 14, Male; Neil, 14, Male; Paul, 14, Male, Focus Group 6).

However, as with parental assistance, some young people reported that they would talk to adults at school about an issue if it was very serious (e.g., involving their physical safety). Findings from the ACBPS also reflected this, with 43.5% of Year 8 students who were covertly bullied, reporting talking with school adults (although this figure drops to 28% by Year 9) (Cross, et al., p. 212). However, for some young people, like Tia in Extract 68, threats

of physical harm may not mandate such assistance. In the extract below, where harassment and threats were leveraged, she talked about how adults at school may only be told after the physical fight has taken place.

Extract 68

JF: But and so if – so I'm just trying to – when would something be, do you think – when do you think you would talk to like Mr, is it Mr Smith?

Tia: Yeah, our principal.

JF: When would you talk to him about something, like - - -

Lucy: When someone threatens you with something.

Tia: It's usually - -

JF: When they threaten you?

Girl: Mm.

Tia: - - -it's usually when it's, yeah. In a big situation.

Mana: Yeah.

Lucy: When it's like really serious - - -

Multi: Yeah.

Lucy: - - -then we go to Mr Smith.

JF: Yeah.

Mana: But also I think it happens after the fight, like once the fight happens then we go to see Mr Smith, but not before the fight.

Tia: Sometimes you think "Oh, I should go to the principal now", but then there's something that stops you - - -

JF: Yeah.

Tia: - - -yeah, you always have that in mind that wants to tell you "Oh, don't go, don't go" until you – the scene is finished, and then you know end up going - - -

(Lucy, 14, Female; Tia, 15, Female; Anne, 15, Female; Mana, 14, Male; Focus Group 3).

In other cyber-challenges, school and other adults fare little better. The first YISS study reported that only 10% of sexual harassment situations in the past year were reported to other adults like teachers, Internet service providers, or law enforcement agencies (Finkelhor et al., 2000). Even situations involving attempts for offline sexual harassment were only reported to such authorities 18% of the time (Finkelhor et al.). Five years on the numbers of YISS2 participants who told other adults about sexual harassment online, dropped even further, with only 2% and 5% reporting sexual harassment episodes to school adults, and authorities, respectively. UK research revealed that only a small proportion of the 12–15-year-olds surveyed ($n$ = 315) would complain about "inappropriate" online content to "teachers/school" (8%) or "other adults" (9%) (Ofcom, 2007b, p. 81).

### 3.4.2. Problem solving and self action

The range of findings reviewed so far demonstrates, by proxy, that a diverse range of cyber-challenges are often managed alone by a young person. Young people in this study said they often problem-solved, and took self-directed action, to manage situations by themselves.

#### 3.4.2.1. Confrontation and fighting

As noted at the beginning of this section, interpersonal conflict is one area that may require active intervention by young people to produce resiliency. When discussing cyberbullying, some participants said that they would confront, or had confronted, harassing individuals. In Extract 68 above, Tia demonstrates that some young people may fight back in response to harassment. Fighting over such challenges was also reported in other focus groups (e.g., Extract 55). Extract 69 highlights how this strategy can also intersect with peer support. Facing the challenge of continued mobile phone harassment, young people, like Tia, below, may solve the problem by recruiting peers to confront, and retaliate against, harassers.

Extract 69

Tia: Yeah, most likely, but like if they kept bugging you, like you give the number away, like their number and then your friends will start, you know, pranking them, it's like that, it's just – even though it's making it worse, it's better like 'cause then all your friends will text them, they will concentrate more on them, like you know, texting 'cause like your friend will be texting them and they'll be texting back. And they won't text you, so that's - - -

JF: So you kind of overwhelm them, like "woah" kind of bomb them with the texts and stuff and then they can't deal with it?

Tia: Yeah.

(Lucy, 14, Female; Tia, 15, Female; Anne, 15, Female; Mana, 14, Male; Focus Group 3).

Earlier, Section 3.2.3.4, discussed that some fighting and confrontation may be retaliatory. This is supported by the extract above and YISS2 findings that 81% of participants who self-reported cyber-harassing others, said they were retaliating to cyber-harassment done to them first (Ybarra & Mitchell, 2007). YISS2 data also showed that young people faced with sexual harassment may also confront harassers, with 16% reportedly confronting or warning them to stop (Wolak et al., 2006). Other instances of confrontation, retaliation, and fighting by young people were also reported by participants who reported being bullied in the ACBPS (Cross et al., 2009) and Growing up with Media (Ybarra, Espelage, et al., 2007) studies.

#### 3.4.2.2. Technical solutions

Extract 70

Helen: Yeah just delete them.

Honor: I add them and if, I talk to them and if I don't know who they are I just block them.

(Pete, 14, Male; Helen, 13, Female; Honor, 15, Female; Simon, 15, Male; Focus Group 1).

Like Helen and Honor in Extract 70, some other participants recommended using technical measures to solve challenges. Some participants said they blocked and filtered digital information to prevent them from having to experience unwanted content or communication. Blocking is a technological solution that enables someone to prevent another person from communicating with them online. Such techniques were also very popular strategies for Year 8 students in the ACBPS who reported being covertly bullied, with up to 83.5% of them reporting changing their "phone number, got a silent number, changed passwords/username" (35.2%) or turning off their "computer, mobile phone, or blocked messages or profiles" (48.3%) (Cross et al., p. 210).

Participants in the current study also discussed changing online account names or email addresses to avoid harassment or detection. Around half of the participants (49%) in YISS2 reported using technical measures to help solve cyber-harassment (Wolak et al., 2007a). These young people also utilised technology to help manage exposure to unwanted content, like pornography. Up to 92% of YISS2 participants who encountered unwanted sexual material said they "removed themselves from the situation by blocking or leaving the site or computer" (Wolak et al., p. 33). Pop-up blocking technology was also highly valued by most focus group participants for its ability to filter sexual or unwanted pop-ups from view. Privacy technologies of social networking services were another technical solution used by some focus group participants (Extract 71) to protect themselves from harassment by reducing what potential harassers could view about them.

Extract 71

Sarah: And plus we're just know [Indistinct], and like parents they're like "that's not that person" and you're "okay". Plus you can set your profile to private so like no one else can see it except for your friends and stuff.

(Kate, 15, Female; Tim, 15, Male; Sarah, 15, Female; Focus Group 5).

### 3.4.3. Ignoring

As suggested by the resiliency literature discussed earlier, some young people may try to ignore certain challenges. The literature suggests that some ignoring of issues may be associated with resilience—particularly when managing one-off instances of abuse. Wolak and colleagues (2006) found that some young people in YISS2 responded to some cyber-challenges in this way, with 11% of their participants who received an unwanted sexual advance, reporting that they ignored the request. Extract 72 below demonstrates that some NZ young people may use this strategy to block and ignore contacts that make unwanted sexual advances.

Extract 72

JF: So theoretically if you know say Rick, if this guy started to do one of those things, what would you sort of do, do you think?

Rick: I would take him off my *MSN* and ignore him.

Sean: I'd swear at him.

Rick: Yeah.

(Marty, 15, Male; Rick, 14, Male; Sean, 15, Male; Bob, 15, Male; Focus Group 7).

However, some participants also talked about ignoring interpersonal harassment, even when such harassment was ongoing. Cross and colleagues' (2009) found that a large proportion of young Australians may also respond in this way when faced with ongoing harassment, with nearly half (49.4%[21]) of the Year 8 students and three quarters (73.3%) of the Year 9 students involved in covert bullying situations, saying they had reacted by not responding "to the nasty or threatening emails/messages" (Cross et al., p. 210).

In situations of interpersonal harassment in the current study, participants' discussions suggested that ignoring bullying behaviour was important to show that the harassment was not "getting to them". This belief was even reflected by some parents (e.g., see Extract 63). Extract 73 below illustrates that peers also promoted ignoring as a strategy to other young people. Extract 73 also demonstrates that this strategy may have its genesis in theories of managing face-to-face harassment, particularly with Tony's comments at the end.

Extract 73

JF: Why would you not text them back?

Cindy: Because then if you text them back the first time it's like they've won, probably; I don't know.

JF: Yeah.

Stu: Then they'll know that you actually care about it and just keep doing it.

JF: Yeah.

Stu: I suppose you just ignore them they'll eventually go away.

Tony: Sort of like spam, if you reply to spam they'll send you a whole lot more.

JF: Yeah, absolutely. Is that where you think you get that idea from? Where do you think you get the idea of not to reply back from?

Cindy: Friends.

JF: Your friends?

Cindy: Just annoying people that I reply to.

JF: Yeah, absolutely.

Tony: Yeah, I guess just from like a normal, original bullies, ignore the person who's trying to bully you.

(Stu, 14 Male; Cindy, 15, Female; Tony, 15, Male; Sue, 14, Female; Focus Group 8).

Despite the universality of this advice, at least in some situations, ignoring was not an effective management strategy (this is particularly evident in Extract 69 where Tia talks about recruiting others to help her when her ignoring strategy does not solve her cyberbullying situation). This may also be reflected by the contradiction

[21] These findings in some ways conflict with the high proportion (up to 80% of Year 9 students) who also reported using technical measures to block bullies, however ignoring may be an initial reaction, that when proven ineffective, is then replaced with technical responses like blocking.

noted earlier in the ACBPS results (see footnote on page 119). For instance, while 80% of those who covertly bullied in the ACBPS (Cross et al., 2009), said they ignored the bullying, high rates of retaliating, responding with technical solutions, or talking with someone about the situation were also reported, suggesting that ignoring was not always an effective strategy on its own. These ACBPS data and the focus group findings also demonstrate that young people may also use multiple strategies to manage a single challenge.

### 3.4.4. Summary

Young people in the focus groups reported using various strategies to manage cyber-challenges. While young people are often exhorted to consult parents or other trusted adults following challenge, the results show that some were wary of adult overreaction. A significant worry for these young people were adult imposed technology-sanctions following experiences of challenge. This fear may reflect the increasing utility of ICT for many aspects of their development (as demonstrated in Chapter 2). As such, some young people reported that they would likely only seek adult support in very serious situations (usually involving physical threats). Instead, the data indicate that young people value peer support. Peers were often perceived to be more available, knowledgeable, and helpful, than adults.

Ironically the data demonstrate that parents and peers can both occupy positions of help and hindrance when it comes to challenges in cyberspace. For instance, parents can produce distress by "overreacting" to cyber-challenges while peers may distress young people by cyberbullying and harassing them. However, peers and parents may also help young people by offering a compassionate ear, advice, and support to manage cyber-challenges, like cyberbullying. This study highlights how parents and peers can either produce or exacerbate challenges for young people, or support them to manage the challenge.

Additionally, young people also reported using a variety of problem-solving activities and self-directed actions to manage challenges, including confronting, retaliating, and leveraging technological solutions. Ignoring challenges was also a popular strategy that was discussed across focus groups.

The data show that some challenges have been upsetting and disturbing. Of on-going interest to the thesis are the situations and scenarios where young people reported inadequate management of such distressing or upsetting challenges. This is further investigated in the second research phase of the thesis.

### 3.4.5. Limitations

Some limitations to the research were emphasised in the Methodology Section (2.1), including the potential action of social desirability biases during the interviews. Social desirability biases may have limited the data by constraining focus group talk that may have placed participants outside of perceived peer norms. For instance, conducting antisocial behaviour (e.g., harassing others), may have been underreported in focus groups because such activity may not be valued by group members. Equally, fearing others' judgement, or perceptions of weakness, following disclosure of bullying, may curtail participants' discussion that frames them as a victim. Hypothetically, these two examples may interact to reduce reports of experiences of harassment. Thus social desirability biases in these focus groups may have worked to imply that harassment is rarer than anonymous confidential data may suggest.

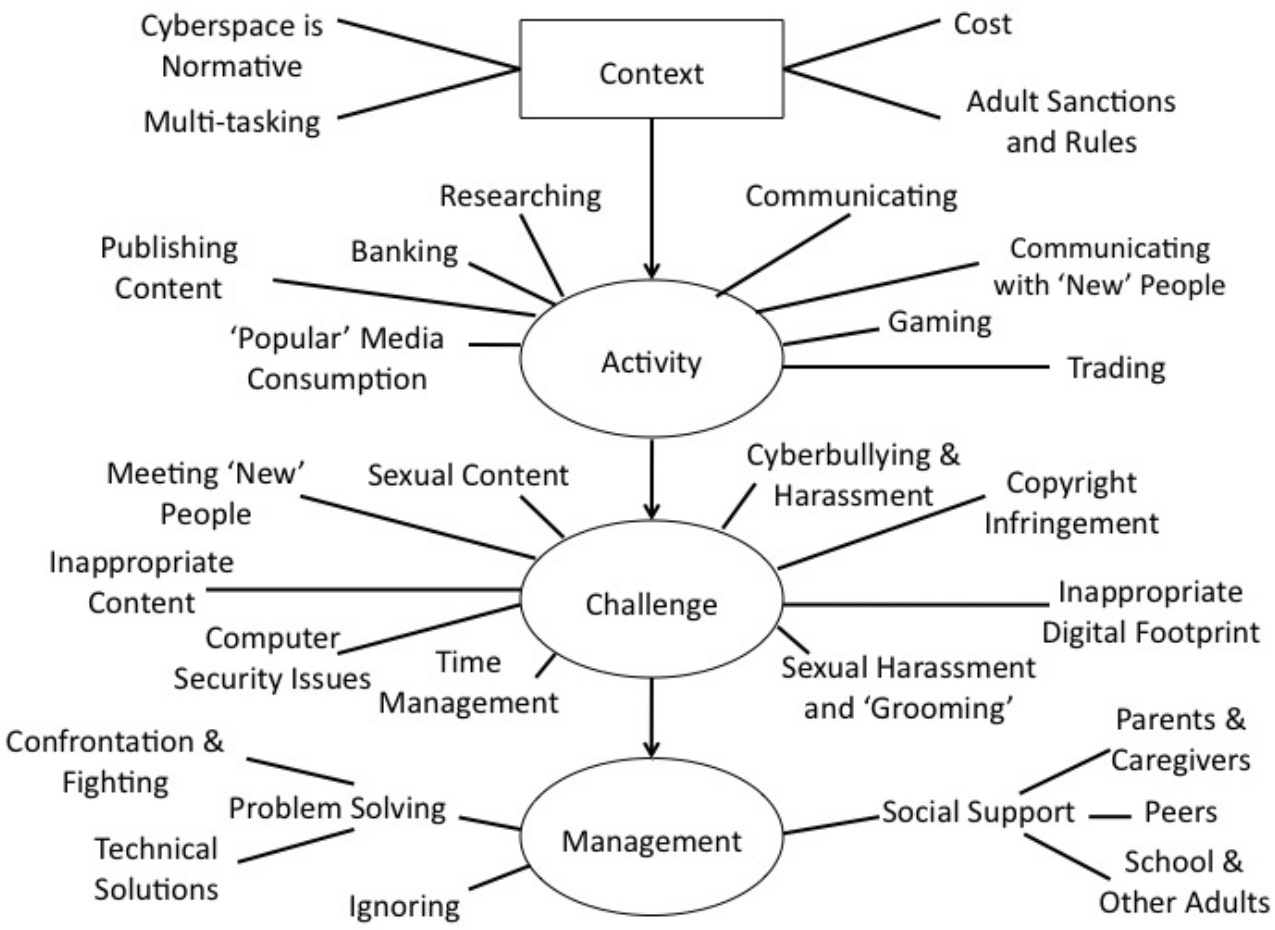
Underreporting of sensitive information may apply to other aspects of these data. For instance, the data on women's experiences of exposure to sexual content suggest that young women may feel uncomfortable disclosing wanted consumption of sexual material, while ironically, some young men may feel "weird" (see Extract 47) for not consuming sexual material. Social desirability biases may also limit the results by encouraging participants to over emphasise their ability to self-manage challenges, or rely on friends, as opposed to consulting and seeking assistance from adults. To the extent that young people may feel shame by seeking parental assistance in a time of life where they are expected to be developing their independence, participants may have underrepresented adult consultation.

While both limitations suggest that the focus group data should not be taken to be representative of the frequency of socially sensitive phenomena among participants, they nonetheless provide invaluable data on some of the circumstances, rationale, language, and thoughts that explain and describe these experiences amongst a variety of NZ young people.

## 3.5. A Framework for understanding the Production and Management of Challenge in Cyberspace

Despite the limitations listed above, Chapters 1 and 2 explored and described a range of themes that sit within the four meta-themes of the analytic framework discussed in Section 2.2.2. Figure 3 represents the results of the analysis. Together these meta-themes and sub-themes produce a detailed framework for understanding NZ young people's production and management of challenge in cyberspace.

Figure 3. Framework for Understanding the Production and Management of Challenge in Cyberspace.




### 3.5.1. Conclusion

The results of the focus group analyses have enabled the construction of a model for understanding challenge and resiliency for NZ high-school students in cyberspace. The data indicated that the overwhelming majority of young people, from a variety of demographics, access cyberspace and conduct a range of activities within it. The model demonstrates that these activities inevitably produce challenges. These challenges were reported to vary in their reception by young people, with some shrugged off, while others were associated with distress. Young people reported a variety of strategies to manage such challenges, including turning to others for social support and assistance, problem-solving the situation themselves (or with others), or ignoring some challenges.

This phase of the research facilitated qualitative understanding of NZ young people's experiences and language of cyberspace. The data revealed the significance of cyberspace to NZ young people, as well as the fact that some experienced distressing challenges within it. Recognising the social desirability bias limitations of focus group data, the next phase of the research will use anonymous quantitative methodologies to explore the extent of these experiences among a much larger and representative sample of NZ young people. The survey will explore the activities that young people undertake in cyberspace, assess how young people feel about experiences of challenges, and explore the strategies young people report use of, in managing challenge. Importantly the second phase of the research will assess whether or not young people feel their strategies were effective in managing distressing challenge situations successfully.

# Chapter 4. Quantitative Methodology

This chapter describes the methodological approach used to quantitatively assess activity, challenge, distress, and challenge management, in cyberspace, by a range of NZ young people. The chapter will begin by describing the pilot study. Next, the chapter will outline the details of the main study, beginning with a description of the sample, including recruitment, response rates, and demographic details of participants. The next section will describe the procedures for the main study. The last section will describe the questionnaire and its measures. Note that Chapter 5 will outline the analytic approach for these quantitative data.

## 4.1. The Pilot

### 4.1.1. Recruitment

The participants for the pilot phase of the research were recruited via friendship networks of a family known to my supervisor. Participants received the same information sheets, parent information sheets, and consent forms as participants in the main study (see below).

### 4.1.2. Participants

The eight participants who piloted the survey included three young women, and five young men. The women were aged 13, 15 and 16 years, and the men 13, 14, 14, 15, and 15 years. All identified as New Zealand Europeans.

### 4.1.3. Procedures

After construction and online testing of the pilot survey, participants were assembled at a private home, after school hours to pilot the survey. Once participants had arrived, and returned signed parental consent forms, I reiterated key points from the participant information sheets, emphasising that participation was voluntary and participants were not obligated to continue, or answer any questions, if they did not want to. As no participants withdrew at this point, I went on to explain the pilot's purpose was to ensure that young people of different ages could understand the survey questions, and to see how long it took to complete. I emphasised that the survey draft may have included items requiring further work. I then asked them to fill out the survey, as well as to write down the numbers for any questions that were confusing, did not make sense to them, or could be interpreted in more than one way. The time was noted when participants began the survey, and I asked them to indicate when they had finished, so I could record completion times.

Upon completion of the survey, and discussions about any problematic items, participants were invited to choose a pizza from the local pizza parlour (a small token of thanks for their participation). While participants waited for pizza, and then ate dinner, I individually addressed with them any wording issues that had come up in the pilot. After dinner I followed up with the relevant participants to check that my suggested re-wording was appropriate.

Following this process, three questions were worded slightly differently, a response option that appeared six times throughout the survey was changed, the response options for one question were reduced to remove unnecessary redundancy, and one, now redundant, question was removed. The original surveys took between

18 minutes and 47 minutes to complete, depending on young people's experiences of cyberspace and age (with participants reporting more cyber-experience and/or younger ages requiring more time). The eight pilot surveys were not included in the final sample.

## 4.2. The Main Sample

### 4.2.1. Recruitment

Participants in the main study were recruited from five high-schools around NZ (see Table 4). Participating schools were identified by me, or by colleagues and friends, and were selected to ensure that a diverse range of communities, and therefore, a diverse range of participants, would be sampled. Table 4 demonstrates that these schools were diverse, sampling participants from around the country, as well as from metropolitan, non-metropolitan, co-educational and single-sex schools with a range of decile ratings (4–10).

Following University of Auckland Human Participants Ethics Committee (UAHPEC) approval for this phase of the research, I contacted school contacts and invited them to ask their principal to consider the research. Following agreement, I talked with principals and sent a letter outlining the research (Appendix G) and a consent form for school participation (Appendix H). Participating schools then disseminated information sheets for students (e.g., Appendix I), parents (e.g., Appendix J), and consent forms (e.g., Appendix J). Consent forms needed to be returned to enable a student's participation. Note, that while these appendices represent the original research template, schools were able to specify various aspects of how they would run the survey (discussed below).

### 4.2.2. Response rates

Each school determined how many students would be approached for participation. Schools also decided on what (if any) UAHPEC-approved token reward (e.g., a 'healthy' biscuit, a 'mufti' day, a 'bbq' meal) would be provided to students who returned a signed consent forms (regardless of whether the form allowed or denied their actual participation). In order to stimulate participation, schools could select their desired consent-form return-rate, which would result in students receiving a reward (a rate of 75% was suggested). However, all participating schools requested (and received) student rewards, even when this rate was not achieved.

Table 4 describes the response rates for each school. Only Schools A and C administered the survey to the whole school. The other schools administered the survey to a subset of the school. For instance, School B requested 1,800 surveys, School D ran the survey with five Year 9 and 10 classes (with an assumed sample size of approximately 135), and School E requested 300 surveys for 10 classes (two classes each of Year 9, 10, 11, 12, and 13 students). Where the actual population of students in these schools did not match the number of surveys disseminated, the response rate is an approximation based on the numbers of surveys requested by the school (these numbers may therefore slightly underestimate response rates). Thus, the overall response rate was approximately 58.5% ($N$ = 1,821). After incomplete or suspicious surveys (e.g., where most answers had systematically been selected [$n$ = 148]) were removed, the final sample size was 1,673, representing an approximate response rate of 53.7%.

Table 4. Characteristics, Final Response Rates, and Sample Sizes, for Participating Schools.

| | | School Characteristics | | | Final Sample* | |
|---|---|---|---|---|---|---|
| School | Region | Co-Ed | Metropolitan | Decile Rating | Response Rate | Sample Size |
| A | Waikato | Yes | No | 5 | 53.7% | 175 |
| B | Auckland | Yes | Yes | 4 | 56.8% | 978 |
| C | Otago | Girls only | No | 5 | 51.2% | 241 |
| D | Wellington | Yes | Yes | 8 | 66.7% | 90 |
| E | Auckland | Girls only | Yes | 10 | 64.0% | 189 |
| Sample Total | | | | | 53.7% | 1,673 |

*Note.* * The final sample values represent the numbers of participants from each school after incomplete or suspicious surveys were removed from the data set.

### 4.2.3. Participants

Table 4 demonstrates that participants from school B made up 58.5% of the sample. This proportion, combined with the 416 participants from schools A and C, meant that the majority of participants (83.3%) were recruited from mid decile (e.g., decile 4–6) schools. Mid-decile schools may include a range of socio-economic backgrounds, including a number of students from lower socio-economic backgrounds. Thus, while no low (1–3) decile schools participated, it is likely that a number of lower socio-economic status students were sampled.

A gender skew was present in the data, with 62.3% of participants who provided gender information ($n$ = 1,668) reporting that they were female ($n$ = 1,039). The ages of participants ranged from 12 to 19, with a mean of 15.3 ($SD$ = 1.44). As discussed later in Chapter 5, dichotomous categories of [12- to 14-year-old] "younger" ($n$ = 553) and [15- to 19-year-old] "older" ($n$ = 1,100) students were constructed. A 2x2 Pearson Chi-Square analysis conducted with SPSS[22] (Version 18) found no significant differences in the gender proportions of these two age categories ($\chi^2(1) = .018$, $p = .89$), with gender proportions only differing by 0.4% across the age groups.

Participants were able to select any number of ethnicity descriptions (and/or describe "Other" ethnicities—see Appendix L), and 8.5% ($n$ = 141) selected more than one ethnicity description. The majority of the sample (38.9%, $n$ = 651) identified as 'NZ European or Pākehā', followed by 'Asian' (23.0%, $n$ = 385), 'Indian' (19.4%, $n$ = 324), 'Other Ethnicity' (10.1%, $n$ = 169), 'Pasifika' (9.1%, $n$ = 152), Māori (4.6%, $n$ = 77), and 'Other European' (4.4%, $n$ = 74). These figures indicate an ethnically diverse sample, which under-samples census proportions of Māori (14.6%) and NZ European Pākehā (77.6%) young people, whilst over-sampling 'Asian' (9.2%) and 'Other' (0.9%) (Ministry of Social Development). While these proportions may not necessarily mirror NZ society, they nonetheless reflect the diversity that this sampling framework sought to achieve (though, due to small sample sizes, particular caution is advised when considering Māori inferences).

[22] All of the following statistical analyses were also analysed with SPSS (Version 18).

## 4.3. Procedures

Recognising the importance of school staff for data collection, I travelled to each participating school and talked at staff meetings about the study (as well as young people's use of cyberspace). Four of these staff meetings included a standard *NetSafe* presentation about young people's experiences of challenge in cyberspace. Staff members were encouraged to attend these meetings by the provision of a free morning tea. During these presentations I also summarised the research aims, procedures, introduced the survey liaison person at the school, and answered any questions about the research. In these meetings I also described how the school had decided to run the survey, and clarified the teachers' roles in that process. Schools A, D, and E requested teachers to disseminate information and consent forms through form time, while Schools B and C disseminated information sheets and consent forms with their school newsletter. All schools asked form teachers to return students' signed consent forms to the school liaison person. The school liaison person then collated the list of authorised students and returned these to teachers so that only consented students could participate in the research. Schools A and C also asked me to introduce the research to students at school assemblies.

The data collection procedure also differed by schools. Three schools decided to administer the survey through a department common to most students (e.g., English) while two administered it through a period common to all students (e.g., Sustained Silent Reading). Schools A, C, and D decided to use the online survey and Schools B and E used pen-and-paper versions of the survey (Appendix M). While the survey was initially piloted and run via *Survey Monkey*, a website used to produce and host online surveys, School B's computer network problems prevented use of the online survey. School B delayed data collection for one week while I produced and printed paper versions of the survey. Upon completion of data collection, signed consent forms and surveys (where applicable) were couriered to me for secure storage and data entry. Data collection was staggered according to the desired times for the various schools and took place from the third week in August 2007 until the third week in March 2008. Other than School E, all schools requested, and received, tailored reports on the data collected from their school. In two instances, I met in-person with school staff to discuss these findings.

## 4.4. Survey Instrument and Measures

The questionnaire was explicitly based on the results and language of the focus group phase of the research. Unless otherwise noted, the language and examples used in the following questions draw from the focus group data. The 62 main items in the survey aimed to assess activity, challenge, distressing challenge, and the management of distressing challenges, in cyberspace.

The actual items were the same in the online and paper surveys; however the smart logic of the online survey (which would automatically skip future redundant questions based on the responses to previous questions) was obviously not a part of the paper surveys. Instead, paper surveys included instructions for participants about sections that they could skip, depending on their answer to a question (e.g., it did not seek details about challenge-management for challenges they did not experience). Unless otherwise noted, all questions in the survey were answered by mouse-clicking check boxes or by ticking boxes with a pen.

Due to low response rates and/or the fact that some items were deemed unimportant for the final research questions, 17 main items were not included in the analysis. This discussion addresses only those items that were used in the following quantitative analysis.

#### 4.4.1. Demographics

Three items assessed participant age (with options ranging from 12 to 19+ years), gender (female or male), and the term(s) used to describe participant ethnicity (e.g., see Section 4.1.2 above).

#### 4.4.2. Activity

The activity items explored the range and frequency of activity in cyberspace. In order to collect responses within a defined period whilst providing enough of a sampling frame to capture potentially rare events, participants were asked about their activity in cyberspace in the "past year (in the 12 months up till today)". This sampling frame was also used regarding participants' experiences of challenge. Other research, like the *Growing up with Media* survey (Ybarra, Diener-West, & Leaf, 2007) and the YISS2 (Wolak et al., 2007b), also used this time frame.

Frequencies of such activity (and most challenges) were measured with six items: *"*No*"*; *"*Yes, everyday or nearly every day*"*; *"*Yes, two or three times a week*"*; *"*Yes, once or twice a month*"*; *"*Yes, one time every few months*"*; and *"*Yes, this happened only once in the year*"*. The use of these response options, and time frame, across the survey facilitated comparison across and between the activity and challenge items. A very similar response framework was used in the Growing up with Media survey (Ybarra, Diener-West, et al., 2007, p. S44)

##### 4.4.2.1. Communicating on mobile phones and/or the Internet

The first main item consisted of two questions. The first collected information about whether participants had "communicated on **mobile phones/cell phones** (e.g., talking, texting, txting, pxting to others)", and the second, whether they had "used the **Internet** to **communicate online** (e.g., messaging, chatting, commenting, in-game chat, talking, webcam, emailing, or posting messages to others, etc.)". The range of examples in these (and future) questions, aimed to assist participants to recognise a range of potentially relevant experiences.

This particular item assessed communication on mobile phones separately to Internet communication. This represented findings from the focus groups, which suggested that the modality of communication was experienced differently by some young people (e.g., some young people reported that communication on mobile phones produced more time-management problems for them than communication on the Internet).

##### 4.4.2.2. Researching information

The second main item assessed other cyber-activities and included nine sub-questions. These activities, thought to be less modality-sensitive than the communication activity, were assessed across both "the Internet and mobile phones". Such activities included those identified in the first phase of the research such as, researching information, publishing content, banking, making new friends, finding a girlfriend/boyfriend, et cetera.

The researching information activity was described as: "**surf** the Web for information (e.g., getting information on things that interest you and/or information for school projects". The wording used the terms surf, information, and school projects to highlight the variety of information (including leisure topics) that young people may research. The "things that interest you" clause aimed to include hobbies, as well as the research of other information (e.g., health related research - see Ybarra & Suman, 2008, for recent USA survey results on this).

The explanation around this item was broad, to encourage participants to identify more than homework-related research.

#### 4.4.2.3. Publishing content

This item assessed if students had used mobile phones or the Internet to put their own "personal stuff (like personal pictures, videos, art work, music, etc.) **online** (like on *Bebo*, *YouTube*, etc.)". This question included a large number of examples to highlight not only the various types of content (e.g., not just photos of themselves and friends) that young people may place online, but also the various places where a range of content may be hosted (e.g., in social networking sites, on video-sharing sites, etc.).

#### 4.4.2.4. Banking

Banking was included as an activity in the survey because it acted both as an indicator of the use of cyberspace to develop and participate in economic activity, as well as a measure of information risk, should a participant's computer security be compromised. The example "looking at your bank account information online" was included in the survey as a basic example and precursor of other electronic banking activities (e.g., fund transfers).

#### 4.4.2.5. Making new friends

This item assessed whether participants had made **new** friends in cyberspace. The example included "like making new friends on *Bebo* or on *Instant Messenger* (etc.)" who they "had never met in 'real' life before". Within the context of convergence, the wording of this question was written to emphasis the multiple modalities for such friendship making, as well as acknowledging that "real" life is not necessarily simply the offline world.

#### 4.4.2.6. Communicating with new people

In addition to making new friends, the ability for cyberspace to enable communication with new people who may not necessarily be considered friends, was assessed with a question that asked if participants had "**ever** used the **Internet** or a **mobile phone** to chat, message, video, or web-cam (or communicate in another way) with anyone who you hadn't **first met face-to-face**". Additionally, to confirm that these persons were not already known in-person by the participant, the following note accompanied this question: "(For example – like communicating with new friends on *Bebo* or on *Instant Messenger* (etc.) who you have NEVER met in 'REAL' life)". The variety of forms of this activity, as well as popular locations for it, were included to highlight the variety of situations that may fit this activity.

#### 4.4.2.7. Finding new boyfriends and girlfriends

The development of intimate relationships in cyberspace was assessed by asking if participants had got "a **NEW** girlfriend or boyfriend **online** or with a **mobile**". This question sought to provide data to explicitly highlight the role of cyberspace in the production of new relationships, rather than its potential role in existing relationships (where the communication items at the beginning of this section may be more relevant).

#### 4.4.2.8. Trading

Like the banking item, this question also provided indication about the degree to which cyberspace played a role in young people's economic activity. In order to embrace the ability of cyberspace to facilitate the trading and bartering of virtual goods, as well as real money, this question elaborated that such trading could include "buying, selling, or swapping **real** or **virtual** things online using Internet shops, trading sites (like *TradeMe*, etc.) or games (like *Habbo Hotel*, *Runescape*, etc.)".

#### 4.4.2.9. Gaming

Online gaming differs from offline gaming in its ability to easily facilitate interaction with 'strangers'. In order to distinguish offline from online gaming, this item assessed "games that **use the Internet**" like online games that "may play inside a **web browser** (like *Runescape*, *Club Penguin*, and other games on *Miniclips* etc.) or use their own programmes to go online (like *World of Warcraft*, *Second Life*, etc.)", or "some *PlayStation*, *Nintendo*, and *Xbox* games" that also "use the Internet". These high profile games, games' sites, and gaming consoles were given as examples, so participants would be able to recognise similar, though less common online gaming situations, and answer this question accurately.

#### 4.4.2.10. Consuming media

This question focused on media forms (other than games) that young people reported consuming during the focus group research. The place of popular media within adolescent development has been heavily emphasised in earlier chapters of the thesis. This question asked about **listening to music**, and whether participants looked at "**video** clips, movies, and photos (*YouTube*, *iTunes*, *LimeWire*, etc.)".

### 4.4.3. Psychometrics

The next two main items included three scales assessing adult help seeking efficacy, social self-efficacy, and family support.

#### 4.4.3.1. Adult Help Seeking Efficacy scale

As noted through the thesis, adults have frequently been suggested as a source of social support for young people facing [cyber] challenges. However, the qualitative data indicated that many young people may seek adult support. For this reason, a four-item Adult Help Seeking Efficacy scale was included to assess whether efficacy in this domain affected the amount of adult support sought. These four items were previously developed and tested by Moore (2005) and then deployed in a Ministry of Social Development evaluation of a youth development programme that promoted efficacy across a range of domains (including social self-efficacy—see below) (Qiao & McNaught, 2007). Each Likert item used a six-point scale (1. *Not well at all* to 6. *Very well*) for the following four questions:

- "How well can you get adults to help you with a problem?"
- "How well can you get school staff to help you, when you have a problem at school?"
- "How well can you get teachers to help you when you get stuck on school work?"

- "How well can you get the information you need from adults?"

An inter-item analysis of these four items resulted in an acceptable Cronbach's alpha of .80, indicating support for the reliability of these summated items.

#### 4.4.3.2. Social Self-efficacy scale

Similarly, a social self-efficacy scale developed and tested by Moore (2005) was used to assess participants' "perceived ability to form and maintain peer relationships and social assertiveness in the classroom" (Qiao & McNaught, 2007, p. 6) and then assess whether this was associated with challenge and challenge management. These eight Likert items enabled assessment of peer social support and peer social self-efficacy, and asked:

- "How well can you have a chat with an unfamiliar (new) person of your age?"
- "How well can you cooperate with your classmates?"
- "How well can you express your opinions when your classmates disagree with you?"
- "How well can you become friends with other people?"
- "How well can you take part in class discussions?"
- "How well can you succeed in staying friends with other people?
- "How well can you work in a group?"
- "How well can you participate in class activities?"

These items used the same response scale as above (i.e., 1. *Not well at all*; 6. *Very well*). An inter-item analysis of these eight items resulted in an acceptable Cronbach's alpha of .87, supporting the reliability of these summated items.

#### 4.4.3.3. Family Support scale

Six Likert items assessed the perceived level of emotional and practical support provided by participants' families. Summated results from these items formed a family support score. These items were taken from the *Multi Dimensional Support Scale* (MDSS) (Winefield, Winefield, & Tiggemann, 1992). The questions replicated the original scale nearly exactly, except that they did not include a response timeframe. After a preamble ("For this question, please **think of your family**, especially the **2–3 members** who are **most important** to you…") these six items assessed:

- "How often could you use them as examples of how to deal with your problems?"
- "How often did they really listen to you when you talked about your concerns or problems?"
- "How often did you feel that they were really trying to understand your problems?"
- "How often did they really make you feel loved?"
- "How often did they answer your questions or give you advice about how to solve your problems?"
- "How often did they help you in **practical ways**, like doing things for you or lending you money?"

An inter-item analysis produced a Cronbach's alpha of .87, supporting the reliability of these summated items

#### 4.4.4. Challenges

Twelve items assessed whether (and how often) participants experienced particular cyber-challenges in the prior year. These challenges were identified in the first phase of the research and included:

- Being cyberbullied on a mobile phone.
- Being cyberbullied on the Internet.
- Cyberbullying others on a mobile phone.
- Cyberbullying others on the Internet.
- Purposeful and/or unwanted exposure to sexual content.
- Unwanted sexual solicitation.
- Exposure to disturbing content (that was not necessarily sexual).
- Copyright infringement.
- Time-management problems.
- The production of inappropriate digital footprints.
- Meeting in person with strangers (as opposed to new people already known to a participant's offline network).

These items are discussed in detail in the sections below.

While the majority of these challenges were assessed as occurring "online or on a mobile phone", the cyberbullying questions were assessed separately by Internet and mobile phone modality. This point is discussed in Section 4.4.4.1 below. Also, while most of the 12 main challenge items used the same 12 month timeframe and response options as in the Activity section, two main challenge items (e.g., ever meeting with a stranger and ever producing an inappropriate digital footprint) were not measured with these response options. The response options for these items are discussed in these respective sections (4.4.4.9 and 4.4.4.8).

##### 4.4.4.1. Cyberbullying

The preceding chapters highlighted the seriousness of cyberbullying. The survey was expanded to include four items to explore cyberbullying in more depth. These items assessed the forms and producers of cyberbullying in mobile phone and Internet situations. Of key interest here was the assessment of whether these factors were associated with more or less distressing cyberbullying experiences.

The survey assessed cyberbullying on mobile phones separately to cyberbullying on the Internet, as the phase one analysis indicated that bullying on mobile phones may be more distressing than bullying via Internet. The questionnaire was written to enable aspects of this challenge to be assessed separately for both modalities (while also enabling both modalities to be combined for a "global" response of cyberbullying).

The cyberbullying items were introduced with a question that asked if, in the past year, "someone ever tried to use [a mobile phone] [the Internet] to bully or be mean and hurtful to you". The question did not include examples of what these forms of bullying could look like, as the interest was on any self-defined experiences that young people themselves decided were bullying, mean, or hurtful. In order to underscore the serious nature of the phenomenon of interest, the terms "mean" and "hurtful", as well as intention of the bullying producer(s) (i.e.,

"tried to"), were included in the question. As noted in Chapter 3 (e.g., see Table 3 on page 87), a number of other cyberbullying studies have also used these terms when framing cyberbullying (also see Ybarra, Diener-West, et al., 2007 for an almost identical definition).

Following an affirmative response, participants were then asked to think about "the most serious time in the past year" when someone tried to bully them on that modality, and answer the following two items with reference to that situation. The reason for choosing the "most serious time" was to ensure that participants who had experienced more than one bullying situation all referenced a common characteristic. The reason for assessing the "most serious" situation and not some other situation (e.g., the "latest" incident), reflected the belief that the "most serious" incidents would be more likely to be associated with distress, and were therefore particularly important to assess (e.g., see Section 4.4.5). The other challenge items also used this criterion to consistently enable comparison within and across the range of challenges.

The following items assessed the forms of cyberbullying, including direct aggression forms, like when mobile phones or the Internet were used to 1. Say, message, write, and/or text mean, hurtful, or nasty things; 2. Send "scary or disgusting pictures or videos" to the target; 3. Threaten physical harm, like "texting to say they were going to get you"; 4. "Threaten to tell others embarrassing things" about the target; and 5. "Threaten to damage and hurt someone or something" the target cared about. Indirect aggressive cyberbullying forms were also included, like when mobile phones or the Internet were used to 6. "Spread rumours about" the target, even if untrue; 7. Not let the target talk, text, comment, message, or be friends with those who were bullying them (like they ignored them); 8. Send "mean or embarrassing pictures or videos" of the target to other people.

The cyberbullying questions above were similar to other items from other studies. For instance, the Growing Up with Media questionnaire included similar questions to items 1, 3, 6 above (Ybarra, Diener-West, et al., 2007) and the ACBPS included questions similar to items 1, 3, 4, 6, 7, and 8 above (Cross et al., 2009).

"Other" bullying experiences were assessed with two additional questions. The first asked about other bullying forms on that technology (acknowledging that not all cyberbullying behaviours were likely to be covered by the eight responses above). The second question assessed bullying experiences not on that technology, and was designed to include cyberbullying on the opposite cyber-modality or in-person bullying.

The next item collected data on who participants thought had targeted them with cyberbullying. This item assessed the age, gender, shared school attendance of bullying producers and whether people were part of a group, [ex-]friends, and/or [ex-]boyfriends/girlfriends. Gender was assessed to explore cross-gender cyberbullying experiences and distress. Older bullying producers were assessed to explore concerns about [adult] stranger danger in cyber-harassment. The presence of school-based bullying producers was assessed as this raised issues for school policy as well as potential for face-to-face bullying situations. The presence of multiple cyberbullying producers was assessed to see whether this was a feature of cyberbullying. Four response items assessed friends' involvement in bullying the participant. The assessment of friends reflected my work responding to young people's calls to *NetSafe's* helpline, where many cyberbullying situations involved [ex-]friends and [ex-]girlfriend/boyfriends. Finally, noting that cyberspace can enable a certain level of anonymity, this relatively unique characteristic of cyberbullying producers was also assessed as a response option.

#### 4.4.4.2. Sexual content exposure (on purpose)

As noted in the previous chapter, many young men reported sexual content exposure in cyberspace. This item assessed purposive exposure. A preamble aimed to reduce social desirability biases that may have prevented participants from responding accurately. The preamble explained that "sometimes when people are curious about sex they look at x-rated (adults only) websites, or search for pictures, videos, or stories of naked people or of people having sex". The question then went on to ask if participants had, "on purpose", searched for such material "either on your own or with others". The variety of sexual materials exemplified in this item aimed to highlight the potential range of sexual contents that young people may consume. Additionally, such material was further denoted by using the common "x-rated" term. The question included a reference to purposeful consumption of sexual contents whilst in the presence of others, as focus group discussions indicated that many people had seen such content whilst with their friends. Parts of this question (i.e., "on purpose", "together with friends", "x-rated", "…of naked people or of people having sex") were also replicated from the YISS2 questionnaire (Wolak et al., 2007b, pp. 249-250).

As this item assessed purposeful engagement with a challenge that many young people talked about as normal and not necessarily challenging, distress and response were not assessed for this challenge.

#### 4.4.4.3. Sexual content exposure (unwanted)

Reflecting the variety of ways in which unwanted sexual content exposures were produced for focus group participants, this question assessed such exposures with a preamble describing that such situations could occur when "**surfing the Web**, **receiving messages** on a **mobile phone** or **messenger program** (like receiving emails, instant messages, opening a link in a message, txt messages, pxt messages, etc.). The form of content ("pictures, videos, or stories of naked people or of people having sex") was worded identically to the purposeful sexual content definition to facilitate comparison with that item. The final part of the question stressed "when you did not want to see" such content, to emphasise that this question was about unwanted content exposure.

#### 4.4.4.4. Unwanted sexual solicitation

Noting the various types of unwanted sexual solicitation that young people in focus groups faced in cyberspace, this question also included examples like whether the participant had been asked "about private sexual things", "to do sexual things", "to take naked or sexual pictures" of oneself, "or try to get you to talk about sex". The question ended with bold lettering "**when you did not want to**" to emphasise that such experiences were not consensual. The variety of sexual behaviours assessed by this item sought to produce an inclusive definition of this challenge, rather than just focusing on whether or not they had been sexually propositioned. These questions were adapted from similar items in the YISS2 survey (e.g., Wolak et al., 2006).

#### 4.4.4.5. Other inappropriate content exposure (non-sexual)

This item assessed exposure to unwanted content that was not [necessarily] sexual, asking if participants had "seen **anything** else (other than sexual material)" that made them "feel uncomfortable or upset". The qualifiers "uncomfortable" and "upset" were used to assess more serious forms of inappropriate content. The next question asked participants to describe the content. These responses were coded into themes (described in

Section 5.3.10). Another researcher independently cross-checked every third coding and an inter-rater reliability analysis using the Kappa statistic was used to access consistency across raters.

#### 4.4.4.6. Time-management problems

In order to address time-management problems, this question asked whether time "**spent online** or on a **mobile**" had meant that a participant could not do things they "**had** to do, or would have **preferred** to do". Assessing "had to" and "preferred to" activities reflected a desire to include displaced work activities and desired activities (that were not necessarily imperative) that had been displaced. Like the other items, this question was designed to encompass a range of potential time-management issues.

#### 4.4.4.7. Copyright infringement

The prominence of media consumption and copyright infringement in the focus groups required this item to distinguish between legal and illegal consumption of copyrighted media. To address copyright infringement, this item assessed whether participants had "got music, movies, or videos **without paying for them** by downloading them by **file sharing** (some people use software like *LimeWire*, *KaZzA*, *BitTorrent*, etc. to do this)". In order to distinguish this content from legally purchased material or material streamed within a web browser (e.g., music videos on *YouTube*), the following note accompanied this question: "Note: This does **not include** music, movies, or videos that were **paid for** (e.g., from *iTunes*, Vodafone, Telecom, etc.) or **streamed** online". The bolding of the "file-sharing" term was used because this term was used by focus group participants to describe this form of copyright infringement. Equally, the *LimeWire*, *KaZzA*, and *BitTorrent* examples, represented common file-sharing applications and were also thought to effectively reference this challenge.

#### 4.4.4.8. Production of inappropriate digital footprints

The rise of inappropriate digital footprint challenges with Web 2.0 required a question to assess whether particular forms of sensitive information were published publically. To emphasise the diversity of public places in cyberspace, this item asked if participants had "ever **posted** any of the following things on a **public website** or **mobile phone chatroom**" where someone they "**didn't already know** face to face, or **someone who didn't like**" them, could find it. An additional note followed "(like posting it on 'open' blog sites, an 'open' page on *Bebo*, *YouTube*, web forums, chat rooms, etc.)". The wording of this question stressed "open" and "public" locations to ensure that participants were not responding about privately shared material, or material on closed social networking profiles (i.e., where privacy settings did not make these profiles available to the public). In order to emphasis public access, the qualifiers of people not known to them face-to-face and potential "enemies" were introduced to concretise the potential public that could view such material.

The response items included whether the following sensitive information had been published in a public cyberspace: 1. Their mobile phone number; 2. The address of their home; 3. Their first and last name, or their "first name and a recognisable picture of themselves, AND anything (like pictures, stories, or comments) that" they would want someone who did not like them, to find. This information was assessed because its publication could potentially produce a range of [future] problems. The first two items were included as they could facilitate contact by 'strangers' either via phone or face-to-face. The third item assessed to what extent an inappropriate character footprint may have been produced that may be used to get the participant into trouble or embarrass

them. This content, if unsuitable for an enemy, was deemed likely to be unfavourable in the context of one's longer term digital footprint.

This challenge differs in form to the other challenges because it may not necessarily be a discrete event. A one-off production of an inappropriate digital footprint could enable multiple viewings (the actual challenge). As such, reporting the frequency of inappropriate content publication was deemed to not effectively qualify the production of more challenge for this dimension. For this reason, the frequent production of this challenge is not meaningfully able to be measured and compared against the frequent experiences of the other challenges.

Additionally, this challenge may not necessarily be associated with recognisable negative events for the participant, even when a negative outcome occurred as a result of it. For instance, while a participant's inappropriate footprint may result in them missing out on a job after a potential employer does a search on their name, the employer may not necessarily tell them this is the reason for their rejection. Assessing distress associated with this challenge was deemed unlikely to produce consistent results and was not assessed.

#### 4.4.4.9. Met in person with a stranger

Given the media profile attached to face-to-face meetings with 'strangers' from cyberspace, and the finding from the focus groups that both new people and 'strangers' had been met, this item assessed how many of these meetings occurred, and how many actually involved 'strangers'. Participants who responded in the affirmative to the communication with new people item (discussed earlier in Section 4.4.2.6), were asked if they had met up with any of these new people "FACE TO FACE for the first time", and how many of them they met up with. If a participant had met with more than one person, the following question asked how many of these meetings involved people who were "**NOT KNOWN** FACE TO FACE" to their "OFFLINE friends, family, or trusted adults". These items enabled the survey to assess how many participants had met new people already known to their offline social network, and how many had face to face meetings with 'strangers' with no connection to their offline social network. As these items assessed how many 'new people' or 'strangers' participants had met up with, these challenge responses were also not comparable to the frequency response framework common to most of the other challenges above.

### 4.4.5. Distress

Having responded in the affirmative to the above challenges (except for purposeful sexual content exposure and the production of inappropriate digital footprint challenges), participants were then asked about how they felt about the challenge on a five point scale: "Extremely upset", "Very Upset", "Upset", "Just a little bit upset", "Not at all upset". Participants were asked about their level of "upset" as a measure of distress because the word upset seemed to measure distress but was more commonly used and less emotionally loaded as a term. The YISS2 questionnaire also used "upset" as a measure of distress (Wolak et al., 2007b). Measuring distress was important to assess how many "serious" challenges were actually distressing, and to explore how young people responded to distressing challenges.

The decision to focus on how serious distressing challenges were managed reflected focus group discussions, which demonstrated that non-upsetting challenges seemed to be shrugged off or disregarded by some young people. This finding was supported by Hasebrink, Livingstone, and Haddon's (2008) EUKO review of more than

200 European studies on 'risk' in cyberspace. Of the existing research that assessed distress, they found that cyber-challenges were usually "brushed off, or disregarded, by the majority of young people" (p. 34). They also noted that young people who reported feeling distressed, uncomfortable or threatened by a challenge, perhaps represented those "for whom risk poses a degree of harm" (p. 24).

#### 4.4.6. Distressing challenge management

These items focussed on responses to the challenges that young people said made them feel “extremely upset”, “very upset” or “upset”. The specific wording of the responses varied depending on the type of challenge (see Table 11 on page 158 for more details) however, these themes were consistent across most challenges and included seeking social support from parents and caregivers, other adults, and peers, and self-directed actions, including technical and confronting/fighting solutions, and/or ignoring a distressing challenge.

Participants were able to choose any number of responses which described actions that they had taken for each type of distressing challenge. An “other” option was provided to measure alternative responses. Where “other” responses fitted a response category listed above, they were recoded into such categories.

#### 4.4.7. Resolution

A key aim of the project was to assess whether or not young people had successfully resolved distressing challenges. All participants who reported a distressing challenge were asked if that “issue or experience” was “**sorted out**”. The response options for this Likert item, on a five-point scale, included: 1. No, it was not sorted out at all; 2.; 3. It was kind of sorted out but there’s still some issues; ‘4.; 5. Yes, it was sorted out. Note no text was supplied for the second and fourth points on the scale (only the numerical value was provided). The language “sorted out” was selected as it was a common phrase that implied positive resolution. The five-point Likert scale was used so that participants could indicate the degree to which a situation had been resolved. Table 5 (on page 138) explains how these items were used in the quantitative analysis.

# Chapter 5. Quantitative Results

The quantitative analysis assesses three of the research themes, including:

- Activity on the Internet and on mobile phones
- Challenge on the Internet and mobile phones
- Management of distressing cyber-challenges

The chapter will first outline the organisation of this analysis before addressing the research questions above. The chapter format will address each research theme by presenting descriptive statistics, and relevant age, gender, and inferential results for each section. Following these analyses, the results of two relevant post hoc analyses will conclude this chapter.

## 5.1. Organisation of the Analysis

This section briefly outlines how some of the key variables in this analysis were constructed and then analysed.

### 5.1.1. Key variables

While the survey was originally constructed to measure key variables in an interval fashion, the majority of variables were strongly skewed or binomially distributed, and the analysis constructed dichotomous variables for use in the analysis (Table 5 describes these dichotomous variables).

### 5.1.2. Analysis

The dichotomous variables described above mandated non-parametric and categorical statistical analysis. As such, the analysis drew on Pearson's Chi-Square test, Fisher's exact test, and logistic regression analysis (including, in some instances, the sole use of categorical predictors for logistic regression—as discussed by Agresti, 2007). In all cases, the assumption of normality of the data is not assumed, [2-tailed] significance of at least $p < .05$ must be achieved, independence of variables is required, and sample size assumptions of these categorical tests must be met (i.e., five or more cases per cell in Pearson's Chi-Square test, and no less than one per cell in 20% of the logistic regression cells) (Field, 2009). Additional assumptions (e.g., see Field) for logistic regression regarding the lack of significant co-linearity and the linear distribution of scale variables, at least 15 cases per explanatory variable, as well as passing the Hosmer-Lemeshow goodness-of-fit test were also tested, and met for these analyses.

Odds ratios, their confidence intervals (CIs), and Nagelkerke's values (for logistic regression), were included to indicate effect size. Where Nagelkerke's value, noted as more sensitive than other tests (Field, 2009), was deemed insignificant (below .1), the full results were not reported.

Table 5. Descriptions of Dichotomous Variables and their Constituent Parts and Rationale

| Dichotomous Variable | Survey Responses included in Variable | Rationale |
|---|---|---|
| Ever [Activity or Challenge] | Yes, every day or nearly every day; Yes, two or three times a week; Yes, once or twice a month; Yes, one time every few months; Yes, this happened only once in the last year. | To produce a simple split for "ever" experiencing activities or challenges vs. not ever. |
| Or Not Ever | No. | |
| Frequent [Activity or Challenge] | Yes, every day or nearly every day; Yes, two or three times a week. | To assess frequent occurrences, including those not always experienced at least every second day, but at least a few times a week, vs. infrequent responses. |
| Or Not Frequently | Yes, once or twice a month; Yes, one time every few months; Yes, this happened only once in the last year; No. | |
| Distressed | Extremely Upset; Very Upset; Upset. | To assess self-reported upsetting situations vs. a minimal (or absent) level of upset. |
| Or Not Distressed | Just a little bit upset, Not at all upset. | |
| Resolved [Challenge] | 5.) Yes, it was sorted out; 4.) [Tick Box on Scale]*. | To assess situations that were self-reported as *mainly* sorted out vs. unresolved or only half-resolved situations. |
| Or Not Resolved | 3.) It was kind of sorted out but there's still some issues; 2.) [Tick Box on Scale]*; 1.) No, it was not sorted out at all. | |
| Age (Younger) | 12–14 Years of Age. | To reflect and assess age differences in common high-school distinctions of 'junior' and 'senior' students and their varying development. |
| Or Age (Older) | 15–19 Years of Age. | |

*Note.* * These tick boxes did not include textual labels like their direct neighbours, but relied on numerical Likert-like labelling for meaning.

## 5.2. Activity in Cyberspace

The data exploring whether participants ever, and/or frequently, participated in specific types of cyber-activity is presented in Table 6 and Table 7 and includes gender and age categorical analysis. These tables, along with the following three tables, include 4x2 Pearson's Chi-Square results, which assessed whether the proportion of a particular activity (or challenge) engaged in by participants varied significantly by gender or age category. Following Field's (2009) advice, significant results were followed with 2x2 Chi-Square post hoc analyses to determine the nature of the significance. These results are included in the sections following the tables.

The data in Table 6 show that the majority of participants reported participating in seven specific activities in cyberspace in the prior year to the survey. More than 90% of participants reported that they had communicated on mobile phones, communicated on the Internet, communicated on mobile phones and/or the Internet, as well as having researched/surfed for information and having consumed popular media in cyberspace. Around three quarters reported publishing content and gaming in cyberspace in the prior year. The majority (i.e., around, or over, 50%) of participants also reported communicating with new people, having made new friends, and trading in cyberspace. While around a third said they had banked online, a minority (around a seventh) reported having used cyberspace in the prior year to find a new boyfriend or girlfriend. The Chi-Square results also highlighted the existence of significant differences within these activities, except "ever communicating in cyberspace" (due to a ceiling effect), and these are discussed below.

Table 6. Age and Gender Analysis of Proportion of Participants who Participated in Specific Cyber-Activities at Least Once in the Prior Year ($n$ = 1,665[a])

| | Proportion Reporting Activity at Least Once in Prior Year | | | | | |
|---|---|---|---|---|---|---|
| | Female | | Male | | | |
| Category of Cyber-Activity | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Total ($n$) | $\chi^2$ (3) Statistic on Age & Gender Differences |
| Communication (Mobile Phone) | 90.9% (339) | 97.2% (679) | 82.0% (206) | 93.7% (412) | 93.1% (1,655) | 59.84*** |
| Communication (Internet) | 95.0% (339) | 97.6% (679) | 86.1% (208) | 94.4% (411) | 94.8% (1,657) | 43.60*** |
| Communication (Mobile Phone and/or Internet) | 98.8% (336) | 99.9% (675) | 95.6% (205) | 98.5% (409) | 98.7% (1,644) | N/A[c] |
| Communicating with new People | 53.1% (339) | 58.8% (673) | 43.8% (203) | 52.2% (391) | 54.0% (1,626) | 15.41*** |
| Making new Friends | 57.2% (339) | 57.4% (680) | 49.8% (209) | 61.9% (412) | 57.3% (1,659) | 8.39* |
| Finding New Boyfriends/Girlfriends | 15.1% (338) | 13.8% (676) | 17.1% (205) | 20.2% (405) | 16.0% (1,643) | 8.31* |
| Researching/Surfing for Information | 96.2% (327) | 97.9% (680) | 92.8% (208) | 97.6% (412) | 96.7% (1,659) | 15.01** |
| Consuming Media | 91.4% (337) | 94.1% (682) | 89.8% (206) | 95.8% (404) | 93.2% (1,648) | 10.91* |
| Publishing | 74.3% (342) | 79.7% (681) | 58.6% (210) | 71.2% (413) | 73.9% (1,665) | 39.05 *** |
| Gaming | 73.4% (338) | 58.1% (677) | 88.6% (210) | 83.2% (410) | 71.3% (1,654) | 117.96*** |
| Trading | 29.1% (340) | 44.8% (681) | 53.3% (210) | 62.0% (413) | 46.8% (1,663) | 85.61*** |
| Banking | 16.0% (338) | 34.8% (672) | 27.7% (206) | 43.9% (410) | 32.2% (1,645) | 70.41*** |

*Note.* *** $p < .001$; ** $p < .01$; $p < .05$; [a] The sub-analyses only report on the results from 1,646 participants who provided gender and age information, and responses to the relevant question for this analysis; [b] The cat. $n$ figure is the *total* number of responses in each age, gender, and activity category. [c] Pearson's Chi Square analysis could not be conducted as the number of cases was below five in one of the cells of the analysis.

The data in Table 7 show that the majority of participants reported frequently participating in five specific activities in cyberspace in the prior year to the survey. For instance, nearly all (i.e., over 90%) reported that they had frequently communicated on mobile phones and/or the Internet. Additionally, around three quarters also reported frequently communicating on mobiles, communicating on the Internet, researching/surfing for information, and consuming media in cyberspace. Around a third reported frequently gaming and frequently publishing content in cyberspace in the year prior to the survey. Just under a quarter of reported frequently

communicating with new people and making new friends in cyberspace. While around a tenth reported frequent banking and trading activity in cyberspace, only a tiny number said they used cyberspace to frequently find a new boyfriend or girlfriend. Chi-Square results indicate the presence of differences for each of these categories of frequent activity.

Table 7. Age and Gender Analysis of Proportion of Participants who Participated in Specific Cyber-Activities Frequently in the Prior Year ($n$ = 1,665[a])

| | Proportion Reporting Frequent Participation in an Activity in Prior Year | | | | | |
|---|---|---|---|---|---|---|
| | Female | | Male | | | |
| Category of Cyber-Activity | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Total ($n$) | $\chi^2(3)$ Statistic on Age & Gender Differences |
| Communication (Mobile Phone) | 81.7% (339) | 92.5% (679) | 59.2% (206) | 81.6% (412) | 83.4% (1,655) | 128.65*** |
| Communication (Internet) | 84.7% (339) | 83.9% (679) | 70.2 (208) | 85.6% (411) | 82.8% (1,657) | 26.97*** |
| Communication (Mobile Phone and/or Internet) | 95.8% (336) | 97.3% (675) | 83.9% (205) | 94.6% (409) | 94.6% (1,644) | 57.25*** |
| Communicating with new People | 17.7% (339) | 14.0% (673) | 16.3% (203) | 21.2% (391) | 16.8% (1,626) | 9.581* |
| Making new Friends | 22.1% (339) | 17.4% (680) | 20.6% (209) | 27.4% (412) | 21.1% (1,659) | 15.76*** |
| Finding New Boyfriends/Girlfriends | 1.2% (338) | 1.3% (676) | 7.3% (205) | 6.9% (405) | 3.4% (1,643) | 38.13*** |
| Researching/Surfing for Information | 73.2% (340) | 73.2% (680) | 75.5% (208) | 85.2% (412) | 76.6% (1,659) | 23.51*** |
| Consuming Media | 73.0% (337) | 69.4% (682) | 73.3% (206) | 80.0% (404) | 73.2% (1,648) | 14.54** |
| Publishing | 39.8% (342) | 36.1% (681) | 27.1% (210) | 34.9% (413) | 35.5% (1,665) | 9.32* |
| Gaming | 35.8% (338) | 21.9% (677) | 62.9% (210) | 56.1% (410) | 38.5% (1,654) | 186.27*** |
| Trading | 5.6% (340) | 6.9% (681) | 15.7% (210) | 20.1% (413) | 11.0% (1,663) | 61.18*** |
| Banking | 2.1% (338) | 13.4% (672) | 9.2% (206) | 20.0% (410) | 12.2% (1,645) | 58.53*** |

*Note.* *** $p < .001$; ** $p < .01$; $p < .05$; [a] The sub-analyses only report on the results from 1,646 participants who provided gender and age information, and responses to the relevant question for this analysis; [b] The cat. $n$ figure is the *total* number of responses in each age, gender, and activity category.

The following section will detail how these significant chi-square results manifested in 2x2 analyses. Unless otherwise noted, all of the differences highlighted in these sections are statistically significant and include odds ratios to indicate effect size.

### 5.2.1. Communicating on mobile

Nearly all participants (93.1%) in the full sample said they had communicated on mobile phones at least once in the prior year. Post hoc analyses showed that older females were more likely to report communicating on mobiles (by 6.3%) compared to younger females ($\chi^2(1) = 19.50$, $p < .001$; *OR* = 3.50; 95% CI = 1.94–6.29). Similarly, older males were also more likely (by 11.7%) to report this activity than younger males ($\chi^2(1) = 20.36$, $p < .001$; *OR* = 3.25; 95% CI = 1.91–5.54). The analyses also revealed gender differences within age categories, with more of the younger (by 8.9%) and older (by 3.5%) females reporting this activity than younger ($\chi^2(1) = 9.12$, $p < .01$; *OR* = 2.18; 95% CI = 1.30–3.63), and older, males ($\chi^2(1) = 8.00$, $p < .01$; *OR* = 2.34; 95% 1.28–4.28), respectively. These figures highlight that younger males are significantly less likely to report this activity than older males and females of any age.

While still very high at 83.4%, approximately 10% fewer of the entire sample said that they had frequently communicated on mobile phones in the prior year. Like the data on ever communicating on mobile phones, Table 6 shows that older females and males were more likely (by 10.8% and 22.4% respectively) to report frequently communicating on mobiles than younger females ($\chi^2(1) = 26.62$, $p < .001$; *OR* = 2.76; 95% CI = 1.85-4.10), and males ($\chi^2(1) = 35.69$, $p < .001$; *OR* = 3.04; 95% CI = 2.10–4.42), respectively. These differences show that the difference between younger and older males was twice as large as that observed among females. Despite the large increase in reports of mobile phone communication by older males, still more (by 10.9%) older females reported this activity ($\chi^2(1) = 29.81$, $p < .001$; *OR* = 2.79; 95% CI = 1.91–4.07) compared to older males. However, 22.5% more younger females ($\chi^2(1) = 33.04$, $p < .001$; *OR* = 3.08; 95% CI = 2.08–4.55) reported frequent mobile phone communication compared to similar-aged males.

Together these findings highlight the overall popularity of mobile phone communication among participants. Older participants and women are both more likely to report communicating on mobile phones, and communicating more frequently with them, than younger participants and males.

### 5.2.2. Communicating on the Internet

Compared to mobile phones, slightly more participants said they had communicated on the Internet (94.8%) in the past year. Within the two gender categories, older females and males were again more likely (by 2.6% and 8.3% respectively) to report this activity than younger females ($\chi^2(1) = 5.09$, $p < .05$; *OR* = 2.19; 95% CI = 1.09–4.39) and males ($\chi^2(1) = 12.50$, $p < .001$; *OR* = 2.73; 95% CI = 1.54–4.86) respectively. Gender differences were also found within age categories, with more of the younger (8.9% more) and older (3.2% more) females ever reporting this activity than younger ($\chi^2(1) = 13.34$, $p < .001$; *OR* = 3.07; 95% CI = 1.64–5.74) and older males ($\chi^2(1) = 7.79$, $p < .01$; *OR* = 2.46; 95% CI = 1.28–4.71) respectively.

While more participants said they had communicated on the Internet than on mobile phones, slightly fewer (85.6%) reported doing this activity frequently. However, communicating on the Internet was still the second most popular frequent activity among the full sample. When assessed by frequency, the popularity of the

Internet for communication was not different between younger and older females, or between older males and older females. However, older males ($\chi^2(1) = 20.97$, $p < .001$; *OR* = 2.53; 95% CI = 1.69–3.80) and younger females ($\chi^2(1) = 16.36$, $p < .001$; *OR* = 2.34; 95% CI = 1.54–3.56) were more likely (by 15.4% and 14.5% respectively) to report frequent use of the Internet for communication when compared to younger males.

Like mobile phone communication, these data highlight the popularity of this activity amongst the whole sample, both as an activity and as a frequently conducted activity. Like mobile phone use, female and older participants were more likely to report participating in this activity. However, younger male participants reported less frequent Internet communication, when compared to the rest of the sample.

### 5.2.3. Communicating on mobile phones and/or the Internet

A composite analysis of the "communicating" items found that communication in cyberspace is almost universal across the entire sample, with only 1.3% reporting never having done this at least once in the prior year.

The proportion who frequently reported using mobiles and/or the Internet to communicate was also high, with only 5.4% of the entire sample saying they had not engaged in this activity frequently in the prior year. While there were no differences in proportions of younger and older females who engaged in this activity frequently, 10.7% more of the older males reported this activity than younger males ($\chi^2(1) = 19.24$, $p < .001$; *OR* = 3.38; 95% CI = 1.91–5.96). Younger females were also more likely to report (by 11.9%) frequently communicating in cyberspace relative to younger males ($\chi^2(1) = 22.85$, $p < .001$; *OR* = 4.41; 95% CI = 2.30–8.47). Slightly more (2.7%) of the older females also reported this activity compared to older males ($\chi^2(1) = 5.27$, $p < .05$; *OR* = 2.08; 95% CI = 1.10–3.92)

These composite data demonstrate that communicating was the most popular, and frequently conducted, activity in cyberspace. Females, and older males, were more likely to report frequent use of cyberspace for communicating, than younger males.

### 5.2.4. Communicating with new people

Communication with new people was also reported by half of participants (54.0%) at least once in the prior year. More of the younger and older females (i.e., 9.3% and 6.6% respectively) reported communicating with new people, compared to younger ($\chi^2(1) = 4.35$, $p < .05$; *OR* = 1.45; 95% CI = 1.01–1.57), and older ($\chi^2(1) = 4.47$, $p < .05$; *OR* = 1.31; 95% CI = 1.02–1.68), males, respectively. However, within the gender categories, similar proportions of younger and older participants reported communicating with new people.

The popularity of such communication was not reflected in frequency data, with only 16.8% of participants reporting frequent communication with new people in cyberspace in the prior year. Nonetheless, post hoc Chi-square analyses (where possible) revealed that older males were more likely (by 7.2%) to report communicating with new people ($\chi^2(1) = 9.40$, $p < 0.01$; *OR* = 1.67; 95% CI = 1.19–2.72), compared to older females. No other significant differences across age and gender were found.

These data highlight that while the majority of participants have communicated with new people in cyberspace, most do so infrequently. Slightly more females have ever communicated with new people in cyberspace than

males, although older males were more likely to report frequently participating in this activity when compared with older females.

### 5.2.5. Making new friends

Over half (57.3%) of participants reported making new friends in cyberspace in the prior year. Interestingly, the pattern of findings for this activity differed from that observed for the "communication with new people" item. No differences across age and gender were found, but slightly more (12.1%) of the older males reported making new friends in cyberspace compared to younger males ($\chi^2(1) = 8.37$, $p < .01$; *OR* = 1.64; 95% CI = 1.17–2.30).

Only 21.1% of participants said they frequently made new friends in cyberspace in the prior year. As with "communication with new people", only older males were significantly more likely (by 10%) to report frequently making new friends compared to older females ($\chi^2(1) = 15.61$, $p < .001$; *OR* = 1.79; 95% CI = 1.33–2.44). No other differences were observed.

While the majority of participants reported making new friends in cyberspace, the post hoc analyses indicated that this activity differs to "communicating with new people", in that more of the older male participants reported making new friends than younger males and females of all ages.

### 5.2.6. Getting boyfriends and girlfriends

Only 16.0% of participants said they used cyberspace to make new boyfriends and girlfriends in the prior year. More of the older male participants (6.4%) reported using cyberspace to get a new boyfriend or girlfriend than older female participants ($\chi^2(1) = 7.86$, $p < .01$; *OR* = 1.59; 95% CI = 1.15–2.22), but no differences were apparent among younger females and males in this regard.

The proportion of participants who reported using cyberspace frequently to get a new boyfriend or girlfriend dropped to 3.4%. Nonetheless, post hoc Chi-square analyses (where possible) revealed that younger and older males were more likely (by 6.1% and 6% respectively) to report frequently getting new boyfriends or girlfriends in cyberspace compared to younger ($\chi^2(1) = 14.22$, $p < .001$; *OR* = 6.58; 95% CI = 2.17–20.0) and older ($\chi^2(1) = 23.88$, $p < .001$; *OR* = 5.56; 95% CI = 2.56–11.11) females, respectively.

These data highlight that while the majority of participants have communicated and "friended" new people in cyberspace, only an eighth reported having used cyberspace to get boyfriends or girlfriends. This suggests that the majority of "friending", and communication with new people, in cyberspace, is not romantically orientated. Interestingly, slightly more male participants of both age categories reported frequently using cyberspace to get a new boyfriend/girlfriend than similar-aged females, who rarely reported this activity.

### 5.2.7. Researching and surfing for information

Researching or surfing cyberspace for information (96.7%) was the second most popular activity conducted by the sample in the prior year. Post hoc analyses showed that slightly more of the older males (by 4.8%) reported this activity than younger males ($\chi^2(1) = 8.18$, $p < .01$; *OR* = 3.12; 95% CI = 1.38–7.08), but there were no differences between men and women within the same age range.

The data assessing frequent researching and surfing in cyberspace revealed a different pattern. While still popular among three quarters of the entire sample (76.6%), older males were significantly more likely to report this activity frequently than any other group. For instance, older males were 9.7% more likely to report frequently researching and surfing for information than younger males ($\chi^2(1) = 8.81$, $p < .01$; *OR* = 1.87; 95% CI = 1.23–2.84), and 12% more likely to report this than comparably-aged females ($\chi^2(1) = 21.21$, $p < .001$; *OR* = 2.08; 95% CI = 1.52–2.86).

Researching and surfing for information was the second most popular activity conducted by participants, and remained popular as a frequent activity. Older males were more likely to report frequent participation in this activity compared to the other age and gender categories.

### 5.2.8. Consuming media

This was the final activity reported by nearly all of the participants (93.2%). Reflecting a similar pattern to the data on surfing and researching in cyberspace, the only significant post hoc result here showed that older males were slightly more likely (by 6.0%) to report having participated in this activity than younger males ($\chi^2(1) = 8.37$, $p < .01$; *OR* = 2.58; 95% CI = 1.33–5.02).

Consuming media remained popular as a frequently conducted activity in cyberspace (reported by 73.2% of participants) and slightly more of the older males (by 10.6%) reported frequently consuming media in cyberspace compared to older females ($\chi^2(1) = 14.55$, $p < .001$; *OR* = 1.75; 95% CI = 1.32–2.38).

The data highlight the popularity of media consumption in cyberspace. Older males were more likely to report ever participating in media consumption in cyberspace when compared to younger males. Older males were more likely to report frequently conducting this activity when compared to females in the same age range.

### 5.2.9. Publishing

Around three quarters (73.9%) of the sample had published content in cyberspace in the prior year. Both younger and older females (by 15.7% and 8.5% respectively) were more likely to report publishing content in cyberspace than matched younger ($\chi^2(1) = 14.81$, $p < .001$; *OR* = 2.04; 95% CI = 1.42–2.95) and older ($\chi^2(1) = 10.46$, $p < .01$; *OR* = 1.60; 95% CI = 1.20–2.11) males, respectively. Despite being superseded by older females, older males were still more likely (by 12.6%) to report publishing content than younger males ($\chi^2(1) = 10.01$, $p < .01$; *OR* = 1.75; 95% CI = 1.24–2.48).

However, most of these differences (and the popularity of this activity—down to 35.5% of the full sample) were absent when the data were assessed by frequent publishing in cyberspace, although post hoc tests found that younger females were more likely (by 12.7%) to report this activity compared to younger males ($\chi^2(1) = 9.12$, $p < .01$; *OR* = 1.77; 95% CI = 1.22–2.57).

Whilst the majority of participants had published content in cyberspace, under half as many reported doing so frequently. Compared to the rest, younger males were significantly less likely to participate in this activity.

### 5.2.10. Gaming

The data collected from the gaming item (reported by 71.3% of the full sample) produced the largest variations in the proportions of participants in the four age and gender categories. Specifically, younger and older males were more likely (by 15.2% and 25.1%) to report ever gaming in cyberspace when compared to younger ($\chi^2(1) = 18.16$, $p < .001$; *OR* = 2.78; 95% CI = 1.72–4.55) and older ($\chi^2(1) = 73.48$, $p < .001$; *OR* = 3.57; 95% CI = 2.63–4.76) females respectively. The particularly low rate of gaming reported by older females was also reflected in the finding that significantly more (by 15.3%) of the younger females reported this activity compared to older females ($\chi^2(1) = 22.75$, $p < .001$; *OR* = 2.0; 95% CI = 1.49–2.63).

Most of these differences were magnified when the data around frequent gaming in cyberspace were analysed. Although just over a third (38.5%) of all participants reported this activity frequently, around twice as many males reported frequent gaming in cyberspace in the prior year, compared to age-matched females. Younger and older males were more likely (by 27.1% and 34.2%) to report this activity than younger ($\chi^2(1) = 38.16$, $p < .001$; *OR* = 3.03; 95% CI = 2.13–4.35), and older ($\chi^2(1) = 131.96$, $p < .001$; *OR* = 4.55; 95% CI = 3.44–5.88), females, respectively. Despite being eclipsed by younger males' frequent gaming activity, younger females were still more likely (by 13.9%) to have reported frequent gaming than older females ($\chi^2(1) = 22.48$, $p < .001$; *OR* = 2.00; 95% CI = 1.49–2.63).

These data demonstrate the popularity (and relative homogeneity) of gaming among younger and older males, with well over three quarters of them reporting ever gaming in the past year, and over half gaming frequently. While younger females reported more experiences of gaming than older females, around twice as many age-matched males reported frequent gaming compared to females.

### 5.2.11. Trading

Nearly a half (46.8%) of the full sample reported trading in cyberspace in the prior year. Like gaming, trading was more likely to be reported by males compared to females. Younger and older males were more likely (by 24.2% and 17.2% respectively) to report trading in the prior year than age-matched younger ($\chi^2(1) = 32.19$, $p < .001$; *OR* = 2.50; 95% CI = 1.96–4.00), and older ($\chi^2(1) = 30.44$, $p < .001$; *OR* = 2.00; 95% CI = 1.56–2.56), females, respectively. Within the gender groups, both older females and males were more likely (by 15.7% and 8.7% respectively) to report trading than younger gender-matched female ($\chi^2(1) = 23.29$, $p < .001$; *OR* = 1.98; 95% CI = 1.50–2.61), and male ($\chi^2(1) = 4.31$, $p < .05$; *OR* = 1.43; 95% CI = 1.02–2.00), participants, respectively.

Around a tenth of participants (11.0%) reported frequent trading in cyberspace in the prior year, although significant gender differences remained. Well over twice as many males reported frequent trading when compared to females. Specifically, younger and older males were more likely (by 10.1% and 13.2% respectively) to report frequently trading in cyberspace than similar-aged younger ($\chi^2(1) = 15.55$, $p < .001$; *OR* = 3.13; 95% CI 1.72–5.56), and older ($\chi^2(1) = 42.75$, $p < .001$; *OR* = 3.33; 95% CI = 2.33–5.00), females, respectively.

While the near majority of participants reported at least one instance of trading in cyberspace, only around a tenth of them reported doing so frequently. Older participants were more likely to report trading, and males were consistently more likely to report frequent trading compared to similarly aged females.

### 5.2.12. Banking

Around a third (32.2%) of all participants reported banking in cyberspace in the prior year. Younger and older males were more likely (by 11.7% and 9.1% respectively) to report cyber-banking in the prior year than similarly aged younger ($\chi^2(1) = 10.78$, $p < .001$; *OR* = 2.00; 95% CI = 1.32–3.03), and older ($\chi^2(1) = 8.89$, $p < .01$; *OR* = 1.47; 95% CI = 1.14–1.89), females, respectively. Within the gender groups, both older females and males were more likely (by 18.8% and 16.2% respectively) to report banking in cyberspace than younger gender-matched female ($\chi^2(1) = 39.18$, $p < .001$; *OR* = 2.81; 95% CI = 2.02–3.91), and male ($\chi^2(1) = 15.26$, $p < .001$; *OR* = 2.05; 95% CI = 1.42–2.94), participants, respectively.

Similar to the trading data, only around a tenth of participants (12.2%) reported frequently banking in cyberspace. However, the proportions doing so differed across all dimensions of age and gender. For instance, around twice as many males reported frequent banking when compared to females. Younger and older males were more likely (by 7.1% and 6.6% respectively) to report frequently banking in cyberspace than similar-aged younger ($\chi^2(1) = 14.39$, $p < .001$; *OR* = 4.76; 95% CI = 2.00–11.11) and older ($\chi^2(1) = 8.32$, $p < .01$; *OR* = 1.61; 95% CI = 1.16–2.22) females respectively. Additionally, older females and males were also more likely (by 11.3% and 10.8% respectively) to report frequent banking in cyberspace than younger gender-matched female ($\chi^2(1) = 33.21$, $p < .001$; *OR* = 7.31; 95% CI = 3.35–15.96) and male ($\chi^2(1) = 11.61$, $p < .001$; *OR* = 2.46; 95% CI = 1.49–4.18) participants, respectively.

The data highlight that while not common, around a third of young people have banked in cyberspace at least once, and a tenth of them do so regularly. The findings reflect greater involvement of males in banking in cyberspace and the increased activity in proportion to increased age.

### 5.2.13. Summary

The data reported here highlight that cyberspace is a prevalent developmental setting for these participants. Further analysis revealed that only 0.2% of participants had not participated in any activity in cyberspace in the past year, while only 1.6% of participants reported not conducting any cyber-activity frequently in the past year. On average participants reported engaging in 7.29 cyber-activities (*SD* = 1.93) at least once, and 4.52 (*SD* = 1.97) of those activities frequently, in the past year. These data underscore the significance of this developmental setting, whilst spotlighting a minority who are not participating in this context.

Various age and gender effects peppered these results. At times female participants were overrepresented in particular activities (e.g., communicating, publishing content), while in other activities males were in the majority (e.g., gaming, banking, and trading). Age differences were also apparent, with older participants reporting more communication, banking, and trading in cyberspace than younger participants of the same gender.

## 5.3. Challenge in Cyberspace

The data exploring whether participants ever, and frequently, experienced specific types of cyber-challenge are presented in Table 8 and Table 9. The data examining distressing challenges are then described in Table 10. Around two thirds (67.5%) of participants reported experiencing at least one of the challenges listed in Table 8 (with 55.0% reporting at least two or more challenges). The following sections will discuss these challenges in more detail, referencing age and gender differences.

Table 8 shows that participants reported a number of different challenges at least once in the prior year. Around half have infringed copyright or published an "inappropriate" digital footprint. Approximately a third reported experiencing cyberbullying on the Internet and/or mobile, unwanted sexual content exposure, and time-management problems. Around a quarter of the full sample reported experiencing cyberbullying on mobile phones. Around a tenth to a quarter of all participants reported being bullied on the Internet, exposed to unwanted sexual solicitation, disturbing inappropriate content, bullying others on the Internet, bullying others on a mobile phone, bullying others on the Internet and/or a mobile phone, and meeting a stranger in person. The data assessing purposeful exposure to sexual contact revealed strong age and gender differences, with a third more older males reporting these activities than older female participants.

Table 9 shows that very few participants reported experiencing specific challenges frequently. Other than copyright infringement (reported by around a third of participants), time-management problems were frequently experienced by only around 10% of participants. The majority of other cyber-challenges were only experienced frequently by around, or under, 5% of the full sample.

Table 10 shows that some participants, who reported at least one category of challenge, also experienced distress associated with that challenge. The challenge associated with the highest proportion of distressed participants was exposure to inappropriate (non-sexual) content. Half also reported distress associated with cyberbullying on mobile phones. The data also show significant age and gender interactions for most forms of cyberbullying challenge distress, indicating that around a third to over a half of participants who experience any particular bullying challenge face distress. Unwanted sexual solicitation was associated with slightly less distress. Time-management problems were only distressing for around a quarter to a third of those who had experienced this challenge. Only 10% reported distress associated with meeting up with a stranger.

Table 8. Age and Gender Analysis of Proportion of Participants who Reported Ever Experiencing Specific Challenges in the Prior Year ($n$ = 1,665[a])

| | Proportion Reporting at Least One Challenge in Prior Year | | | | | |
|---|---|---|---|---|---|---|
| | Female | | Male | | | |
| Category of Cyber-Challenge | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Total ($n$) | $\chi^2(3)$ Statistic on Age and Gender Differences |
| Target of Cyberbullying (Mobile Phone) | 24.6% (342) | 30.5% (682) | 16.8% (208) | 19.3% (410) | 24.5% (1,662) | 25.75*** |
| Target of Cyberbullying (Internet) | 21.2% (339) | 15.6% (675) | 19.4% (206) | 16.8% (392) | 17.5% (1,631) | 5.68 |
| Target of Cyberbullying (Internet and/or Mobile) | 34.8% (339) | 36.9% (672) | 31.2% (205) | 27.2% (389) | 33.2% (1,624) | 11.07* |
| Producer of Cyberbullying (Mobile Phone) | 11.8% (338) | 13.7% (671) | 10.8% (204) | 11.8% (391) | 12.3% (1,624) | 1.78 |
| Producer of Cyberbullying (Internet) | 9.0% (333) | 5.6% (665) | 12.9% (202) | 10.9% (384) | 8.4% (1,604) | 15.34** |
| Producer of Cyberbullying (Internet and/or Mobile) | 16.1% (330) | 16.6% (661) | 18.6% (199) | 15.9% (378) | 16.4% (1,588) | .79 |
| Sexual Content Exposure (On Purpose) | 12.0% (334) | 12.3% (666) | 32.3% (201) | 48.2% (390) | 23.5% (1,611) | 211.74*** |
| Sexual Content Exposure (Unwanted) | 23.7% (334) | 28.5% (664) | 30.8% (201) | 34.8% (388) | 29.3% (1,607) | 11.25** |
| Experienced Unwanted Sexual Solicitation | 21.0% (328) | 21.9% (662) | 11.5% (200) | 12.2% (385) | 18.0% (1,595) | 23.33*** |
| Other Unwanted Inappropriate Content Exposure (Non-Sexual) | 12.9% (326) | 10.9% (658) | 14.6% (198) | 14.5% (379) | 12.7% (1,581) | 3.65 |
| Copyright Infringement | 49.7% (324) | 62.1% (649) | 54.7% (192) | 67.5% (366) | 60.0% (1,551) | 26.28*** |
| Time-Management Problems | 26.6% (327) | 36.2% (647) | 21.8% (188) | 36.4% (365) | 32.5% (1,546) | 21.55*** |
| Produced Inappropriate Digital Footprint | 51.0% (286) | 52.0% (590) | 42.0% (143) | 47.4% (310) | 49.7% (1,346) | 5.57 |
| Met in Person with a Stranger | 12.1% (339) | 11.1% (673) | 6.9% (203) | 13.8% (391) | 11.4% (1,626) | 6.50 |

*Note.* *** $p < .001$; ** $p < .01$; $p < .05$; [a] The sub-analyses only report on the results from participants who provided gender and age information, and responses to the relevant question for this analysis; [b] The cat. $n$ figure is the *total* number of responses in each age, gender, and challenge category.

Table 9. Age and Gender Analysis of Proportion of Participants who Reported Frequent Experiences of Specific Challenges in the Prior Year ($n$ = 1,665[a])

| | Proportion Reporting a Specific Challenge Frequently in the Prior Year | | | | | |
|---|---|---|---|---|---|---|
| | Female | | Male | | | |
| Category of Cyber-Challenge | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Total ($n$) | $\chi^2(3)$ Statistic on Age and Gender Differences |
| Target of Cyberbullying (Mobile Phone) | 2.0% (342) | 1.9% (682) | 4.3% (208) | 3.7% (410) | 2.6% (1,662) | 5.76 |
| Target of Cyberbullying (Internet) | 1.2% (339) | 0.6% (675) | 3.4% (206) | 3.6% (392) | 1.8% (1,631) | ***;[c] |
| Target of Cyberbullying (Internet and/or Mobile) | 2.4% (339) | 2.1% (672) | 6.8% (205) | 5.7% (389) | 3.6% (1,624) | 16.79*** |
| Producer of Cyberbullying (Mobile Phone) | 0.6% (338) | 0.9% (671) | 3.9% (204) | 4.1% (391) | 2.0% (1,624) | ***;[c] |
| Producer of Cyberbullying (Internet) | 0.9% (333) | 0.5% (665) | 3.5% (202) | 3.9% (384) | 1.7% (1,604) | ***;[c] |
| Producer of Cyberbullying (Internet and/or Mobile) | 0.9% (330) | 1.1% (661) | 5.0% (199) | 6.3% (378) | 2.8% (1,588) | 32.74*** |
| Sexual Content Exposure (On Purpose) | 3.0% (334) | 1.8% (666) | 10.9% (201) | 18.2% (390) | 7.3% (1,611) | 112.40*** |
| Sexual Content Exposure (Unwanted) | 2.7% (334) | 2.0% (664) | 6.0% (201) | 8.0% (388) | 4.2% (1,607) | 26.17*** |
| Unwanted Sexual Solicitation | 3.4% (328) | 3.8% (662) | 3.0% (200) | 5.7% (385) | 4.0% (1,595) | 3.84 |
| Other Unwanted Inappropriate Content Exposure (Non-Sexual) | 0.6% (326) | 1.4% (658) | 4.0% (198) | 4.7% (379) | 2.5% (1,581) | ***;[c] |
| Copyright Infringement | 22.8% (324) | 30.4% (649) | 28.1% (192) | 39.6% (366) | 30.8% (1,551) | 23.73*** |
| Time-Management Problems | 11.3% (327) | 18.5% (647) | 6.9% (188) | 19.2% (365) | 15.9% (1,546) | 22.99*** |

*Note.* *** $p < .001$; ** $p < .01$; $p < .05$; [a] The sub-analyses only report on the results from participants who provided gender and age information, and responses to the relevant question for this analysis; [b] The cat. $n$ figure is the *total* number of responses in each age, gender, and challenge category. [c] Pearson's Chi Square analysis could not be conducted as the number of cases was below five in one of the cells of the analysis; however significant Fisher's Exact Test results are denoted by the relevant number of 'probability' asterisks.

Table 10. Age and Gender Analysis of Participants who Reported at Least One of Eight Specific Challenges ($n$ = 1,093) and Distress Associated with at Least One of These Challenges ($n$ = 528[a])

| | Proportion Reporting Distress within Those who Experienced Challenge Ever in the Prior Year | | | | | |
|---|---|---|---|---|---|---|
| | Female | | Male | | | |
| Category of Cyber-Challenge | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Young (12–14 Years) (cat. $n$)[b] | Older (15–19 Years) (cat. $n$)[b] | Total ($n$) | $\chi^2(3)$ Statistic on Age and Gender Differences |
| Target of Cyberbullying (Mobile Phone) | 53.1% (81) | 59.9% (202) | 45.2% (31) | 38.7% (62) | 53.7% (378) | 9.65* |
| Target of Cyberbullying (Internet) | 52.9% (70) | 57.3% (103) | 28.2% (39) | 39.0% (59) | 48.0% (273) | 12.26** |
| Target of Cyberbullying (Internet and/or Mobile) | 55.3% (114) | 62.0% (152) | 36.1% (61) | 38.6% (101) | 52.9% (524) | 23.69*** |
| Sexual Content Exposure (Unwanted) | 52.0% (75) | 37.8% (185) | 43.1% (58) | 28.9% (128) | 38.5% (452) | 11.32** |
| Unwanted Sexual Solicitation | 38.5% (65) | 41.4% (140) | 45.0% (20) | 29.7% (37) | 39.2% (265) | 1.98 |
| Other Unwanted Inappropriate Content Exposure (Non-Sexual) | 60.5% (38) | 68.6% (70) | 56.5% (23) | 60.9% (46) | 63.1% (179) | 1.54 |
| Time-Management Problems | 20.3% (79) | 21.0% (233) | 34.3% (35) | 32.8% (119) | 25.2% (473) | 8.37* |
| Met in Person with a Stranger | 5.4% (37) | 6.9% (72) | 7.7% (13) | 8.5% (47) | 7.0% (171) | N/A[c] |

*Note.* *** $p < .001$; ** $p < .01$; $p < .05$; [a] The sub-analyses only report on the results from participants who provided gender and age information, and responses to the relevant question for this analysis; [b] The cat. $n$ figure is the *total* number of responses in each age, gender, and challenge category. [c] Pearson's Chi Square analysis could not be conducted as the number of cases was below five in one of the cells of the analysis; however a Fisher's Exact Test found no significant difference.

Table 8, Table 9, and Table 10 reveal age and gender differences in challenge and challenge-distress. Where relevant, the following sections will utilise post hoc analyses to detail these differences for the categories of challenge.

#### 5.3.1. Cyberbullying on mobile

A quarter (24.5%) of the entire sample said they had been cyberbullied on mobile phones at least once in the prior year. Post hoc 2x2 Chi-Square analyses revealed that younger and older females were more likely (by 7.8% and 11.2% respectively) to report being cyberbullied on mobile phones than age-matched younger ($\chi^2(1) = 4.56$, $p < .05$; $OR = 1.61$; 95% CI = 1.04–2.50), and older ($\chi^2(1) = 16.67$, $p < .001$; $OR = 1.84$; 95% CI = 1.37–2.47), males, respectively. Additionally, older females were more likely (by 5.9%) to report mobile bullying than younger females ($\chi^2(1) = 3.94$, $p < .05$; $OR = 1.35$; 95% CI = 1.00–1.81).

With only a handful (2.6%) of the sample reporting frequent mobile phone cyberbullying in the prior year, no 4x2 significant age/gender differences were observed for frequent reports of mobile phone cyberbullying.

Just over half (53.7%) of those who had ever been cyberbullied by mobile phone said that at least one of these experiences was distressing, making this challenge the second most distressing for the sample. Older females were more likely (by 21.2%) to report distress from mobile cyberbullying than older males ($\chi^2(1) = 8.61$, $p < .01$; *OR* = 2.37; 95% CI = 1.32–4.24).

These data highlight that while not usually a frequent event, at least one instance of cyberbullying on mobile phones produced distress among half of those who were bullied in the prior year. Females, and older females particularly (especially in regard to distress), were more likely to report encountering this challenge, than males.

### 5.3.2. Cyberbullying on the Internet

A slightly smaller proportion (17.5%) of participants reported being cyberbullied on the Internet. There were no significant differences across age and gender.

Even fewer participants (only 1.8% in total) reported frequent Internet cyberbullying when compared to frequent mobile phone bullying. In addition, older males were six times more likely (i.e., 3.6% compared to 0.6%) to report frequently being cyberbullied on the Internet than older females ($\chi^2(1) = 13.27$, $p < .001$; *OR* = 6.25; 95% CI = 2.04–20.00). There were no other significant differences across age and gender.

Around half (48.0%) of those participants who reported at least one instance of Internet cyberbullying indicated that at least one of those experiences was distressing. Both younger and older females were more likely (by 24.7% and 18.3% respectively) to report that at least one of these experiences was distressing than age-matched younger ($\chi^2(1) = 6.18$, $p < .05$; *OR* = 2.85; 95% CI = 1.23–6.62) and older ($\chi^2(1) = 5.03$, $p < .05$; *OR* = 2.10; 95% CI = 1.09–4.03) males.

Although only a fifth of participants reported this challenge, half of them reported distress from at least one of these instances. In contrast to mobile bullying, older males were significantly more likely to report encountering this challenge than older females. Interestingly, despite the disproportionate involvement of older males in Internet bullying, both older and younger females were more likely than older and younger males to report that their experiences of Internet bullying were distressing.

### 5.3.3. Cyberbullying on mobile phones and/or the Internet

Combining the items on mobile and Internet cyberbullying revealed that a third (33.2%) of all participants had experienced either Internet and/or mobile cyberbullying in the prior year. This analysis demonstrated that this was the third most common cyber-challenge to face the full sample. Older females were more likely (by 9.7%) to report being cyberbullied on either technology than older males ($\chi^2(1) = 10.33$, $p < .001$; *OR* = 1.56; 95% CI = 1.19–2.05).

Frequent cyberbullying experiences on either mobile phones or the Internet were reported by 3.6% of the full sample. Post hoc analyses revealed that younger and older males were more likely (by 4.4% and 3.6%) to report such cyberbullying experiences compared to age-matched younger ($\chi^2(1) = 6.58$, $p < .05$; *OR* = 3.03;

95% CI = 1.25–7.14) and older ($\chi^2(1) = 9.60$, $p < .01$; *OR* = 2.82; 95% CI = 1.42–5.56) females respectively. No other age and gender differences were identified.

Half (52.9%) of young people who reported at least one experience of cyberbullying on mobile phones and/or the Internet said that at least one of those experiences was distressing. Females were significantly more likely to report one of these distressing situations than similar aged males. For instance, older and younger females were more likely (by 19.2% and 23.4% respectively) to report distress associated with an experience of cyberbullying than similarly aged younger ($\chi^2(1) = 5.86$, $p < .05$; *OR* = 2.19; 95% CI = 1.16–4.15), and older ($\chi^2(1) = 15.87$, $p < .001$; *OR* = 2.60; 95% CI = 1.61–4.18), males, respectively.

These data acutely highlight the issue of cyberbullying for the current participants. A third reported at least one experience of cyberbullying in the prior year, and around half of those said that at least one of those experiences was associated with distress. While older females were more likely to experience cyberbullying in the past year, males were more likely to report frequent experiences of cyberbullying. However, females were significantly more likely to report that an experience of cyberbullying was associated with distress, when compared to males.

#### 5.3.4. Producing cyberbullying on mobile phones

Around one in ten (12.3%) of the sample said they had cyberbullied others on mobile phones at least once in the prior year. No significant age and gender differences were found for having produced cyberbullying on mobile phones in the prior year.

Conversely, while only 2% of participants reported frequently cyberbullying others on a mobile phone, younger and older males were more likely to report this behaviour (by 3.3% and 3.2% respectively) than age-matched younger ($p < .01$, Fisher's exact test), and older ($\chi^2(1) = 12.45$, $p < .001$; *OR* = 4.76; 95% CI = 1.82–12.50), females, respectively.

#### 5.3.5. Producing cyberbullying on the Internet

Cyberbullying others on the Internet was the rarest challenge reported by the sample (8.4%). Older males were more likely (by 5.3%) to report producing cyberbullying in the past year compared to older females ($\chi^2(1) = 10.09$, $p < .01$; *OR* = 2.08; 95% CI = 1.32–3.33). Younger females were also slightly more likely (by 3.4%) to report cyberbullying others on the Internet compared to older females ($\chi^2(1) = 4.21$, $p < .05$; *OR* = 1.67; 95% CI = 1.02–2.78).

Only a handful (1.7%) of participants reported frequently cyberbullying others on the Internet. Younger and older males were nonetheless more likely (by 2.6% and 3.4% respectively) to report this than younger ($p < .05$, Fisher's exact test), and older ($\chi^2(1) = 17.23$, $p < .001$; *OR* = 9.01; 2.56–31.25), females, respectively.

These data highlight the rarity of participants' reports of their own cyberbullying behaviour on the Internet. Despite this the findings showed that males were more likely to report this behaviour than females, and that older females were least likely out of all the groups to report cyberbullying others on the Internet.

### 5.3.6. Producing cyberbullying on the Internet and/or mobile phone

When combined, a sixth (16.4%) of the sample reported cyberbullying someone on the Internet and/or a mobile phone. There were no significant differences across age and gender for cyberbullying others.

The proportion (2.8%) of participants reporting frequent cyberbullying was, however, over represented with male participants. Younger and older males were more likely (by 4.1% and 5.2% respectively) to report frequent cyberbullying of others than similarly aged younger ($p < .01$, Fisher's exact test), and older ($\chi^2(1) = 23.25$, $p < .001$; $OR = 6.25$; 95% CI = 2.70–14.29), females, respectively.

While uncommon, the composite item assessing Internet and/or mobile phone cyberbullying, nonetheless highlighted that around one in six participants reported cyberbullying others in the prior year. In addition, the data suggest that males are overrepresented in frequent reports of cyberbullying others compared to females (especially, older females).

### 5.3.7. Sexual content exposure (on purpose)

Exposure to sexual content challenges was reported by a quarter (23.5%) of the full sample, and significant differences between the age and gender categories were identified by post hoc analyses. For instance, nearly four times as many older males reported purposeful sexual content exposure in the prior year, compared to older females. Both younger and older males were significantly more likely (by 20.3% and 35.9% respectively) to report purposeful exposure to sexual content in cyberspace compared to age-matched younger ($\chi^2(1) = 32.98$, $p < .001$; $OR = 3.45$; 95% CI = 2.72–5.56), and older ($\chi^2(1) = 166.51$, $p < .001$; $OR = 6.67$; 95% CI = 4.76–9.09), females. Older males were also more likely (by 15.9%) to report purposeful sexual content exposure, than younger males ($\chi^2(1) = 13.64$, $p < .001$; $OR = 1.95$; 95% CI = 1.36–2.78).

While only 7.3% of the sample said they frequently consumed sexual content on purpose, most of these participants were also male. Younger and older males were significantly more likely (by 7.9% and 16.4% respectively) to report frequent consumption compared with similarly aged younger ($\chi^2(1) = 14.11$, $p < .001$; $OR = 4.00$; 95% CI = 1.85–8.33), and older ($\chi^2(1) = 91.39$, $p < .001$; $OR = 12.5$; 95% CI = 6.67–25.00), females, respectively. In fact, older males were ten times more likely to frequently report this challenge compared to older females. Older males were also more likely (by 7.3%) to report frequently consuming sexual content in cyberspace than younger males ($\chi^2(1) = 5.27$, $p < .05$; $OR = 1.81$; 95% CI = 1.09–3.02).

Analysis of purposeful sexual content exposure revealed the largest disparities across age and gender for all the challenge categories. While very few females reported ever or frequently purposefully consuming sexual content in cyberspace, the near majority of older males (and a third of younger males) reported such experiences at least once a year.

### 5.3.8. Unwanted sexual content exposure

Compared to wanted sexual content, slightly more of the full sample (29.3%) reported experiencing *unwanted* exposure to sexual content in the prior year. In stark contrast to the prior section, only one significant post hoc result demonstrated a difference between and within the age and gender categories for this challenge; older

males were 6.3% more likely to report this challenge than older females ($\chi^2(1) = 4.60$, $p < .05$; *OR* = 1.33; 95% CI = 1.02–1.75).

Frequent exposure to unwanted sexual content was reported by 4.2% of the full sample. Reflecting the findings above, older males reported a greater likelihood (by 6.0%) of frequently encountering unwanted sexual content compared to older females ($\chi^2(1) = 22.23$, $p < .001$; *OR* = 4.35; 95% CI = 2.22–8.33).

Just over a third (38.5%) of participants who experienced this challenge reported that it was distressing. While females reported increased distress relative to males, post hoc analyses found that younger females were more likely (by 14.2%) to report distress when compared to older females ($\chi^2(1) = 4.40$, $p < .05$; *OR* = 1.79; 95% CI = 1.03–3.03).

These results indicate that between a quarter and a third of most participants had experienced exposure to unwanted sexual content exposure in the prior year. While frequent exposure was relatively rare, older males were slightly more likely to report ever, and frequently, experiencing this challenge when compared with older females. The data suggest that around a third of participants reported distress following such experiences, except for younger females (of whom, half reported distress following unwanted sexual content exposure).

#### 5.3.9. Unwanted sexual solicitation

Around one in five (18%) of the participants reported experiencing an unwanted sexual solicitation in the prior year. Post hoc analysis revealed that younger and older females were nearly twice as likely to report experience of this challenge (by 9.5% and 9.7% respectively) compared to age-matched younger ($\chi^2(1) = 7.85$, $p < .01$; *OR* = 2.05; 95% CI = 1.23–3.41), and older ($\chi^2(1) = 15.28$, $p < .001$; *OR* = 2.02; 95% CI = 1.41–2.88), males, respectively.

Frequent reports of sexual solicitation were relatively uncommon (4%) and were not more or less common for any of the age and gender categories in the initial analysis.

Of those who reported unwanted sexual solicitation experiences, 39.2% said that at least one of these experiences was associated with distress, and this did not differ across age and gender.

While very few participants reported this challenge overall, females were nonetheless significantly overrepresented in such experiences. Interestingly, despite this gender difference, there were no age and gender differences for frequent experiences of solicitation or distress associated with unwanted solicitation.

#### 5.3.10. Other unwanted inappropriate content exposure (non-sexual)

Relatively few participants (12.7%) reported being exposed to ['non-sexual'] inappropriate content, in cyberspace in the prior year and this did not differ by age and gender.

Given the relative rarity of this challenge, it is unsurprising that only 2.5% of the sample reported frequent exposure to unwanted inappropriate content. Nevertheless, younger and older males were more likely (by 3.4% and 3.3% respectively) to report this frequent inappropriate content exposure than younger ($p < .01$, Fisher's exact test), and older ($\chi^2(1) = 10.84$; $p < .001$; *OR* = 3.57; 95% CI = 1.59–8.33), females, respectively.

While relatively rare, this challenge was associated with the highest proportion (63.1%) of distressed participants compared to the other challenges, and no differences were apparent across the age and gender categories.

The findings in this section highlight the relative rarity of exposure to [non-sexual] unwanted inappropriate content for most participants. Although male participants were slightly more likely to report experiencing this challenge frequently, no gender (or age) differences were observed for distress associated with this challenge. Nearly two thirds of participants reported that this experience was associated with distress.

Appendix N catalogues open-ended participant responses (and coding categories) for the "most serious time" in the prior year when inappropriate content made them uncomfortable or upset. The data were coded into eight themes with "near perfect" inter-rater reliability (Kappa = .95; $p < .001$) (Landis & Koch, 1977, p. 165). Despite asking about non-sexual items, the most commonly reported inappropriate content included some sexual material ($n = 29$; see Table 20 on page 261). The "sexual material" theme catalogued exposures to sexual content, including generic descriptions of sexual material and nudity (e.g., "rude images") or specific content (e.g., "pictures of naked girl on a cell phone"). Other sexual themes were also indentified as most significant for some participants, including "'objectionable' sexual content" ($n = 5$) and "sexual solicitations/harassment" ($n = 8$). "Objectionable" content, as defined by legislation in NZ, includes violent (e.g., "a girl being raped") and bestial (e.g., "Cow rape") sexual content (see Table 21). The "sexual solicitations/harassment theme" included responses which highlighted exposure to sexual content produced through sexual solicitations and harassment (e.g., "I saw pictures of dicks sent by an unknown person") (see Table 22).

The other most common theme included "human violence and injury" content ($n = 28$). Such content included images of human death, torture, and harm (e.g., "a decapitated body") (see Table 23). Additional violent themes nominated by some participants as most serious, included "self-harm" ($n = 5$), "bullying and intimidation" ($n = 13$), "animal harm" ($n = 20$), and "scary/horror" ($n = 10$) content themes. "Self harm" content included suicide content as well as pro-anorexia material promoting anorexic body management practices (e.g., "a person commit suicide [*sic*], dead people, animals" and "Pro Anorexic people") (see Table 24). Some participants ($n = 13$) also elaborated on instances of "bullying and intimidation" (see Table 25) as the most serious upsetting or uncomfortable content they had seen in the prior year (e.g., "Hate sites about me, and fake *bebo* pages [*sic*] (people pretending to be me)" and "kids getting punched on *u tube* [*sic*]"). "Animal harm", including news material about animal harm, was nominated by 20 of these participants as the most serious content to cause them upset and discomfort (e.g., "I saw animal cruelty") (see Table 26 ). Other serious violent content included "scary/horror" themes that included paranormal references (e.g., "blood, ghosts, dead bodies") (see Table 27).

While sexual content and violent content made up the majority of the most serious content seen by these participants in the prior year, 25 diverse responses were also coded as "miscellaneous" (see Table 28) while 16 unintelligible responses were removed from the analysis.

#### 5.3.11. Copyright infringement

The most common challenge reported by participants was copyright infringement (by 60% of the full sample). Post hoc analyses revealed that while the proportions reporting this challenge did not differ between the genders, older females and males were more likely (by 12.4% and 12.8% respectively) to report ever infringing

copyright in cyberspace in the prior year compared to younger females ($\chi^2(1) = 13.65$, $p < .001$; *OR* = 1.66; 95% CI = 1.27–2.17), and younger males ($\chi^2(1) = 8.86$, $p < .01$;*OR* = 1.72; 95% CI = 1.20–2.46), respectively.

Half of those who reported ever infringing copyright, also reported doing so frequently, making this the most common frequent challenge (30.8%) reported by the full sample. Older females and males were again more likely (by 5.3% and 11.5% respectively) to report frequent experience of this challenge compared to younger females ($\chi^2(1) = 6.07$, $p < .05$; *OR* = 1.47; 95% CI = 1.08–2.01), and males ($\chi^2(1) = 7.23$, $p < .01$; *OR* = 1.68; 95% CI = 1.15–2.45), respectively. Older males were also more likely (by 9.2%) to report frequent copyright infringement than older females ($\chi^2(1) = 8.99$, $p < .01$; *OR* = 1.52; 95% CI = 1.15–1.96).

The majority of participants reported copyright infringement and nearly a third reported it frequently. More of the older participants reported copyright infringement; younger females were least likely to report infringement, whereas older males were most likely.

#### 5.3.12. Time-management problems

A third of the sample (32.5%) reported time-management challenges in cyberspace in the prior year. Older females and males were more likely (by 9.6% and 14.6% respectively) to report experiencing a time-management problem in the prior year compared to younger females ($\chi^2(1) = 8.99$, $p < .01$; *OR* = 1.56; 95% CI = 1.17–2.10) and males ($\chi^2(1) = 12.31$, $p < .001$; *OR* = 2.06; 95% CI = 1.37–3.09) respectively.

Around half of those who had ever experienced time-management problems in cyberspace, also reported frequent experiences of this challenge (15.9% of the full sample). This was the second most commonly reported frequent challenge. Older females and males were more likely (by 7.2% and 12.3% respectively) to report frequent time-management problems compared to younger females ($\chi^2(1) = 8.40$, $p < .01$; *OR* = 1.79; 95% CI = 1.20–2.65), and males ($\chi^2(1) = 14.63$, $p < .001$; *OR* = 3.19; 95% CI = 1.20–2.65), respectively.

While time-management problems were not necessarily rare, only a quarter (25.2%) of participants reporting such experiences reported distress. However, older males were more likely (by 11.8%) to report distress compared to older females ($\chi^2(1) = 5.79$, $p < .05$; *OR* = 1.82; 95% CI = 1.11–3.03). Interestingly, younger males' rates for distress from time-management problems were slightly higher than older males, suggesting that males on the whole may experience more distress associated with time-management problems.

These findings suggest that time-management problems were relatively common (ranked fourth amongst these challenges), often frequently experienced, and more of an issue for older participants. Although, this was one of the least distressing challenges overall, males were more likely to be distressed by this challenge.

#### 5.3.13. Inappropriate digital footprint

This was the second most common challenge, reported by half (49.7%) of the sample as occurring at least once in the prior year. This challenge was assessed by self-reported publication of sensitive information like home address details (by 3.5%), phone numbers (by 14.0%), and/or sensitive information combined with participants' first and last names, or with their first name and a recognisable picture of themselves (33.4%). There were no significant differences across age and gender for the production of this type of challenge.

Separate post hoc analyses of participants who had reported publishing at least one of these three items publically in cyberspace ($n$ = 666) revealed significant gender differences. Males (51.2%) were nearly twice as likely as females (28.0%) to report publishing their phone numbers in cyberspace publically in the past year ($\chi^2(1) = 33.77$, $p < .001$; $OR$ = 2.70, 95% CI = 1.92–3.79). Males were four times more likely to report posting their home address publically (18.2%) compared to females (4.4%) ($\chi^2(1) = 34.38$, $p < .001$; $OR$ = 4.85, 95% CI = 2.75–8.55). Conversely, 17.5% more females said they had published sensitive information in cyberspace with recognisable identity information about themselves compared to 71.3% of males who had done so ($\chi^2(1) = 31.80$, $p < .001$; $OR$ = 3.21, 95% CI = 2.11–4.87).

While these data highlight that this type of challenge is equally common across all the age and gender categories, the detailed descriptive data highlight significant gender differences, with males posting significantly more sensitive contact information and females posting more sensitive personal information.

#### 5.3.14. Meeting in person with a stranger

A tenth (11.4%) of participants reported meeting a stranger in person, at least once, in the prior year, and no age and gender differences were apparent for such meetings.

Of the already small proportion of young people who reported experiencing this challenge, an even smaller proportion (7.0%) reported that the challenge was distressing. The small number of participants reporting this challenge precluded meaningful analysis across all the age and gender categories; however, the data seem to show little difference in reported distress by the age or gender categories.

These data suggest that the number of young people who meet with strangers is very low and the proportion that experience distress from such situations is even lower. The rarity of this challenge is contrasted with the proportion who reported face-to-face meetings with any new people from cyberspace (20.6%, $n$ = 345). Excluding the 11.4% who met with strangers, 9.5% of participants reported meeting with new people who were already connected to their offline friends' and families' networks. These data show that without assessing the differences between new people and strangers, results that just focus on new people are likely to be an over-estimate (by a factor of 2) of how many young people meet up in person with strangers.

## 5.4. Managing Distressing Challenge in Cyberspace

Participants used a range of *meta-strategies* to manage (or ignore) distressing challenges. Table 11 details which items in the questionnaire were coded into these meta-strategies. Table 12 then details how these strategies were deployed in response to seven types of distressing challenges.

Table 11. Description of Some of the Challenge Management Categories.

| Dichotomous Variable* | Survey Responses Included in Variable | Rationale |
|---|---|---|
| Ignoring | Nothing - it stopped by itself<br>Nothing - I didn't know what to do about it and it is still happening<br>Nothing - it's still happening, but I don't care about it<br>Nothing - I don't care about it<br>Nothing - I didn't know what to do about it<br>Nothing, I decided **not** to meet them AGAIN but we're **still** friends<br>Nothing, I decided **not** to meet them AGAIN and we're **not** friends anymore<br>I ignored them to make them go away<br>I ignored it to make it go away | These items all described non-action, either actively chosen, or passively produced. The point of the analysis was to assess action vs. non-action, so these items were combined. |
| Social Support (Other Adults) | I talked to an adult at school about it<br>I talked to another adult about it<br>I talked to someone at a help-line about it<br>I reported it to the Police<br>I reported it to my mobile phone company<br>I talked to another adult I trusted about it<br>I talked to an adult about it | These items all involved communicating with other adults, usually via voice technologies (or face-to-face). The numbers in each of these categories were too small to analyse separately. |
| Self Action (Technical Solutions) | I electronically "blocked" or "banned" that person<br>I turned my phone off, or put it on silent, until I had time to use it<br>I **removed** some programmes off the computer (like messenger and games programmes, etc.)<br>I **closed** some programmes until I had time to use them later on (like messenger and games programmes, etc.)<br>I banned myself from certain websites<br>Used other technical means to manage particular challenge<br>I reported it to the **host** of the website or web-service<br>I reported it to my Internet Service Provider **(ISP)** | These technical actions involved things that the young person could do themselves and did not necessarily involve communicating with an adult (i.e., often reporting someone to web host) is achieved by pressing a 'report abuse' button. |
| Self Action (Non-Technical Solutions—for time-management) | I made sure I did the things I **had to**, before I did **other** stuff online or on a mobile<br>I stopped going online for a while | These solutions did not directly involve technical measures but were nonetheless self-actions. |
| Self Action (Confrontation and Fighting) | I told <u>them</u> to stop doing it (I confronted or warned them)<br>I fought back online or on a mobile phone (e.g., sending them mean messages, etc.)<br>I fought back physically<br>I told them to stop contacting me (I warned or confronted them)<br>I told the sender to stop (I confronted or warned them)<br>I told them to stop doing it (I confronted or warned them) | These items variously assessed confrontation or fighting back and were grouped together. |

*Note.* *All of these dichotomous variables were coded as present or absent, for instance a participant could either have responded by ignoring or not ignoring a particular distressing challenge.

Table 12. Challenge Management by Participants who Ever Reported Distress Associated with a Specific Category of Challenge (*n* = 528)

| | Proportion Reporting Use of Management Strategy | | | | | | Proportion Reporting Resolution |
|---|---|---|---|---|---|---|---|
| | Social Support | | | Self Action | | Ignore | |
| Category of Distressing Cyber-Challenge (*n*) [a] | Parent | Other Adults | Peers | Technical Solutions | Confron-tation & Fighting | | |
| Target of Cyberbullying (Mobile Phone) (*n* = 203) | 23.2% | 22.7% | 29.6% | 7.9% | 51.2% | 69.5% | 54.3% (*n* = 198) |
| Target of Cyberbullying (Internet) (*n* = 131) | 16.8% | 20.6% | 29.8% | 27.5% | 43.5% | 75.6% | 55.4% (*n* = 130) |
| Sexual Content Exposure (Unwanted) (*n* = 174) | 8.6% | 12.6% | 10.3% | 42.0% | 15.5% | 56.3% | 56.2% (*n* = 169) |
| Unwanted Sexual Solicitation (*n* = 104) | 7.7% | 20.2% | 21.2% | 51.9% | 51.9% | 31.7% | 58.4% (*n* = 101) |
| Other Unwanted Inappropriate Content Exposure (Non-Sexual) (*n* = 113) | 15.0% | 15.9% | 33.6% | 27.4% | 1.8% | 46.9% | 47.7% (*n* = 107) |
| Met in Person with Stranger (*n* = 12) | 25.0% | 50.0% | 50.0% | 33.3% | 16.7% | 25.0% | 55.5% (*n* = 11) |
| Time-Management Problems (*n* = 119) | 16.0%[c] | | 16.0% | 61.3%[b] | N/A | 36.1% | 43.0% (*n* = 114) |

*Note* [a] The n value is the number of participants who reported distress associated with an experience of this challenge. [b] This figure also includes self-actions that were non-technical (but did not involve confrontation or fighting), like delaying ICT-use (e.g. see Table 11 for a description of 'non-technical solutions'). [c] As the questionnaire did not distinguish between parents and caregivers and other adults in this section, this value may reflect both types of adult social support.

On the whole, "ignoring" was the most common strategy used to manage more than half of the distressing challenges surveyed. Fighting and confrontation responses were also frequently reported by participants who had experienced a distressing bullying and/or sexual solicitation challenge. Technical solutions, and other forms of self-action, were also relatively popular to help manage distressing sexual solicitations, as well as exposure to unwanted sexual content, and time-management problems. With the exception of distressing stranger meetings, the data demonstrate relatively little use of specific social supports for managing most distressing challenges. Within these figures, peers were usually preferred to other adults, who were in turn slightly more preferred to parent and caregiver sources of social support. The following sections will discuss these management strategies in more detail and detail any significant post hoc analyses assessing gender differences (the smaller sample sizes at this level of analysis precluded analysis by age within gender).

### 5.4.1. Social support: Parents

Parents and caregivers were usually the least popular form of social support used by participants to help manage a distressing challenge. Even at their peak, only a quarter of participants who experienced distressing mobile phone cyberbullying and in-person meetings with strangers reported talking with parents about their experiences. Only a very small amount talked to parents following distressing challenges of unwanted sexual solicitation and exposure to unwanted sexual content.

Interestingly, post hoc analyses by gender and by age revealed that males (23.8%) were over six times more likely than females (3.6%) to report telling parents and caregivers about distressing sexual solicitations ($p < .01$, Fisher's exact test). Males (26.2%) were also around three times more likely to discuss distressing disturbing content exposure experiences with parents compared to females (8.5%) ($\chi^2(1) = 6.50$, $p < .05$; $OR = 3.85$, 95% CI = 1.30–11.36).

Post hoc analyses revealed no significant differences between younger and older participants for this, or for any of the other management strategies that follow.

Although the data indicate that more males reported getting social support from parents and caregivers for two types of distressing challenges, the overall numbers of young people talking to parents about distressing challenges was low.

### 5.4.2. Social support: Other adults

In most domains, "other adults" were only slightly more popular than parents and caregivers as a source of social support following an experience of a distressing challenge. However, young people were twice as likely to contact other adults (compared to parents) about distressing unwanted sexual solicitations and distressing stranger meetings. Interestingly, the one area where this trend was reversed was in regards to mobile phone bullying where near equal numbers of young people approached parents as well as other adults.

Post hoc analyses also revealed significant gender differences for this management strategy, with males (39.5%) twice as likely as females (18.8%) to report telling other adults about a distressing cyberbullying incident on a mobile phone ($\chi^2(1) = 7.54$, $p < .01$; $OR = 2.82$, 95% CI = 1.32–6.02). Males (28.6%) were also around three times more likely to discuss distressing disturbing content exposure experiences with other adults compared to females (8.5%) ($\chi^2(1) = 7.98$, $p < .01$; $OR = 4.33$, 95% CI = 1.47–12.66). Males (61.9%) were also over six times more likely than females (9.6%) to report telling other adults about distressing sexual solicitations ($p < .001$, Fisher's exact test). Finally, nearly eight times more males (28.6%) reported telling other adults about exposure to distressing unwanted sexual content than females (3.6%) ($p < .001$, Fisher's exact test).

These post hoc analyses highlight significant differences between males and females in their reported use of this management strategy. The data indicate that social support from other adults is more popular for males and particularly unpopular with female participants. An additional perusal of the descriptive items that make up this item (as listed in Table 11) does not seem to reveal any particular trend around which "other adults" males engaged with; with relatively equal proportions of males (relative to females) reporting engagement with school adults, other adults, police, and help-line services.

### 5.4.3. Social support: Peers

Overall, peers were most often used as a source of support following a distressing challenge. Peers were twice as likely as parents, to be consulted about distressing stranger meetings, exposures to inappropriate (non-sexual) content, unwanted sexual solicitations, and Internet cyberbullying. In around a third of instances where participants were distressed by mobile phone cyberbullying, Internet cyberbullying, and unwanted sexual content exposures, they contacted their peers. Interestingly, comparatively small amounts of participants reported contacting peers about distressing time-management problems.

Post hoc analyses only revealed one gender difference for this management strategy. Females (37.1%) were four times as likely as males (8.8%) to report talking with peers about distressing cyberbullying on the Internet ($p < .01$, Fisher's exact test).

Peers are an important source of support for both genders, though they are slightly more important for females facing Internet cyberbullying. The findings show that peers are consulted for a number of distressing challenges.

Note that participants could report more than one form of social support in the survey. On average, 38.3% of participants who experienced one of these six distressing challenges, used one of these three forms (i.e., parental, 'other' adult, and peer) of social support.

### 5.4.4. Self action: Technical solutions

The use of technical solutions as a management strategy for distressing challenges varied depending on the type of distressing challenge. Technical strategies were used by the majority to help manage distressing sexual solicitations. Such blocking measures, as well as other technical solutions (like changing profile names, and using privacy settings), were also used to manage a third of distressing stranger meetings. Sexual content exposure was also frequently (42%) managed by similar technical measures.

Interestingly, despite the ability many online applications provide for blocking abusive senders, only a quarter of participants who reported distressing Internet cyberbullying said they used technology to manage this. This may represent the failure of the survey to explicitly mention blocking in this item (however, five participants wrote this into the "other" space on the survey and these responses have been included with the other technical measures here).

Time-management problems were also managed by a range of self-actions, including technical solutions (e.g., removing "some programmes off the computer") as well as practice-led solutions ("I did the things I had to, before I did other stuff online or on a mobile"). The findings demonstrated that this was the most common distressing challenge to be managed by self-action, with nearly (61.3%) two thirds of participants attempting to manage distressing time-management problems in this way.

Only one post hoc analysis was significant for this management strategy, with males being more likely (by 12.9%) to report using technical solutions to manage distressing cyberbullying on a mobile phone than females (5.5%) ($\chi^2(1) = 7.15$, $p < .05$; $OR = 3.92$, 95% CI = 1.36–11.36).

The popularity of this strategy, in managing a range of challenges, is clear for both genders. However, slightly more males appear to use technical solutions in managing mobile phone bullying than females.

#### 5.4.5. Self action: Confrontation and fighting

The data for confrontation and fighting responses was very mixed across the challenges. This likely reflects the fact that such responses are more likely for those particular challenges that involved interpersonal activity. For instance, around half of the participants who experienced distressing harassment (either cyberbullying or sexual solicitation) reported confronting and/or fighting those responsible. Conversely, few (15.5%) participants reported using fighting or confronting as strategies to manage distressing exposure to sexual content.

Post hoc analyses revealed no differences between male and females for reports of this management strategy.

#### 5.4.6. Ignoring

Ignoring distressing challenges was another common response to interpersonal harassment challenges. Around three quarters of cyberbullying targets said they ignored distressing cyberbullying situations. Around half of participants also reported ignoring distressing exposures to unwanted sexual and non-sexual content. Participants were least likely to report ignoring distressing meetings with strangers and distressing time-management problems. While, the majority of participants attempted to ignore many challenges, the data demonstrated that in most instances other actions were also taken to manage these situations. The fact that ignoring was often accompanied with other actions suggested that it was often a temporary, secondary, or ineffective response to a range of distressing challenges (this is particularly evident in the data around distressing cyberbullying and fighting responses).

Post hoc analyses revealed that neither females nor males were more or less likely to deploy this management strategy in response to experiences of distressing challenges.

## 5.5. Resolving Distressing Challenges

The characteristics of specific categories of challenge that were either resolved or unresolved are presented in the following three tables. Table 13 describes the management strategies that were associated with resolved or unresolved challenges. Table 14 describes some of the personal attributes associated with resolved or unresolved challenges. Table 15 then presents the results of post hoc logistic regression analyses, which examined whether any of these management strategies and personal characteristics that were significant univariate predictors of challenge resolution, were predictive of challenge resolution in a multivariate analysis involving all such univariate predictors. The models provided represent the best fit of the data utilising forced entry model construction. All insignificant variables to the models were excluded from Table 15. Bolded values in the following three tables indicate management strategies and characteristics that were significantly associated with resolution of a distressing challenge by the multivariate logistic regressions of the significant univariate predictors in Table 15.

Table 13. Management Strategies Associated with the Successful Resolution of Specific Distressing Challenges.

| | | Proportion Reporting Use of Management Strategy | | | | | |
|---|---|---|---|---|---|---|---|
| | | Social Support | | | Self-Action | | Ignoring |
| Category of Distressing Cyber-Challenge | Resolution of Challenge | Parents | Other Adults | Peers | Technical Solutions | Confrontation & Fighting | |
| Target of Cyberbullying (Mobile Phone) | Resolved (*n* = 107) | 18.7% | 21.5% | 30.8% | 6.5% | 51.4% | **61.7%** |
| | Unresolved (*n* = 91) | 27.5% | 25.3% | 27.5% | 11.0% | 50.5% | **78.0%** |
| Target of Cyberbullying (Internet) | Resolved (*n* = 72) | 12.5% | **11.1%** | 27.8% | 23.6% | 36.1% | 77.8% |
| | Unresolved (*n* = 58) | 22.4% | **32.8%** | 32.8% | 32.8% | 53.4% | 74.1% |
| Sexual Content Exposure (Unwanted) | Resolved (*n* = 95) | 11.6% | 11.6% | 10.5% | **54.7%** | 16.8% | 66.2% |
| | Unresolved (*n* = 74) | 5.4% | 14.9% | 8.1% | **27.0%** | 14.9% | 48.4% |
| Unwanted Sexual Solicitation | Resolved (*n* = 59) | 8.5% | 16.9% | 18.6% | 54.2% | **67.8%** | 28.8% |
| | Unresolved (*n* = 42) | 7.1% | 26.2% | 23.8% | 50.0% | **31.0%** | 38.1% |
| Other Unwanted Inappropriate Content Exposure (Non-Sexual) | Resolved (*n* = 51) | 15.7% | 9.8% | 37.3% | 31.4%† | *50.0% (n = 1)* | **33.3%** |
| | Unresolved (*n* = 56) | 14.3% | 21.4% | 32.1% | 25.0%† | *50.0% (n = 1)* | **62.5%** |
| Met in Person with a Stranger | Resolved (*n* = 6) | 0% (*n* = 0) | 33.3% (*n* = 2) | 50.0% (*n* = 3) | 33.3% (*n* = 2) | 16.7% (*n* = 1) | 66.7% (*n* = 4) |
| | Unresolved (*n* = 5) | 60.0% (*n* = 3) | 60.0% (*n* = 3) | 40.0% (*n* = 2) | 40.0% (*n* = 2) | 20.0% (*n* = 1) | 100.0% (*n* = 5) |
| Time-Management Problems | Resolved (*n* = 49) | 12.2% | | 12.2% | 76.1% | N/A | 20.4% |
| | Unresolved (*n* = 65) | 18.5% | | 20.0% | 53.8% | N/A | 50.8% |

*Note.* Bolded items were significant predictors of successful resolution of the corresponding distressing challenge after controlling for the action of the other significant univariate predictors in this Table and in Table 14 (see Table 15 for these multivariate analyses);† This figure also includes self-actions that were non-technical (but did not involve confrontation or fighting), like rationing ICT-use (see Table 11).

Table 14. Personal Characteristics Associated with the Successful Resolution of Specific Distressing Challenges.

| | | Age | | Gender | | Psychometrics | | |
|---|---|---|---|---|---|---|---|---|
| Category of Distressing Cyber-Challenge | | Young | Old | Female | Male | Mean Adult Help Seeking Score | Mean Social Self-Efficacy Score | Mean Family Support Score |
| Target of Cyberbullying (Mobile Phone) | Resolved (*n* = 107) | 52.6% | 55.0% | 56.5% | 43.2% | **4.11** | 4.68 | 3.00 |
| | Unresolved (*n* = 91) | 47.4% | 45.0% | 43.5% | 56.8% | **3.60** | 4.54 | 2.71 (*n* = 90) |
| Target of Cyberbullying (Internet) | Resolved (*n* = 72) | 57.4% | 53.7% | 59.4% | 44.1% | **3.99** | 4.53 | 2.74 |
| | Unresolved (*n* = 58) | 42.6% | 46.3% | 40.6% | 55.9% | **3.41** | 4.30 | 2.74 |
| Sexual Content Exposure (Unwanted) | Resolved (*n* = 95) | 61.3% | 53.8% | **62.0%** | **45.9%** | 3.80 | 4.53 | 2.90 |
| | Unresolved (*n* = 74) | 38.7% | 46.2% | **38.0%** | **54.1%** | 3.64 | 4.40 | 2.80 (*n* = 94) |
| Unwanted Sexual Solicitation (58.5%) | Resolved (*n* = 59) | 51.6% | 62.3% | 68.8% | 19.0% | 4.09* | 4.62 | 2.96 |
| | Unresolved (*n* = 42) | 48.4% | 37.7% | 31.3% | 81.0% | 3.40* | 4.31 | 2.67 (*n* = 41) |
| Other Unwanted Inappropriate Content Exposure (Non-Sexual) | Resolved (*n* = 51) | 42.4% | 50.7% | 49.3% | 45.0% | **4.12** | 4.54* | 2.91 |
| | Unresolved (*n* = 56) | 57.6% | 49.3% | 50.7% | 55.0% | **3.58** | 4.34* | 2.72 |
| Met in Person with a Stranger | Resolved (*n* = 6) | *66.7% (n = 2)* | *50.0% (n = 4)* | *57.1% (n = 4)* | *50.0% (n = 2)* | N/A | N/A | N/A |
| | Unresolved (*n* = 5) | *33.3% (n = 1)* | *50.0% (n = 4)* | *42.9% (n = 3)* | *50.0% (n = 2)* | N/A | N/A | N/A |
| Time-Management Problems | Resolved (*n* = 49) | **61.5%** | **36.5%** | 47.0% | 37.5% | **4.40** | 4.57 | 3.08 |
| | Unresolved (*n* = 65) | **38.5%** | **63.5%** | 53.0% | 62.5% | **3.70** | 4.39 | 2.77 |

*Note*. Bolded items were significant predictors of successful resolution of the corresponding distressing challenge after controlling for the action of the other significant univariate predictors in this Table and in Table 13 (see Table 15 for these multivariate analyses); * The requirement for linearity of this item in the multivariate logistic regression model was not met which precluded this item from association analysis.

Table 15. Multivariate Logistic Regression Results of Significant Univariate Predictors Associated with Solving Specific Distressing Challenges.

| Category of Distressing Cyber-Challenge | Model Predictors and Constant | B (*SE*) | 95% CI for Odds Ratio Lower | Odds Ratio | Upper | Model $\chi^2(df)$ | $R^2$ (Nagelkerke) |
|---|---|---|---|---|---|---|---|
| Target of Cyberbullying (Mobile Phone) | **Ignoring** | **-.74* (0.33)** | **.25** | **.48** | **.92** | | |
| | **Adult Help Seeking** | **.34* (0.16)** | **1.03** | **1.41** | **1.93** | | |
| | Family Support | .36 (0.23) | .91 | 1.43 | 2.25 | | |
| | Constant | -1.64 (0.74) | | | | 18.50 (3)*** | .12 |
| Target of Cyberbullying (Internet) | **Adult Help Seeking** | **.49** (0.17)** | **1.17** | **1.63** | **2.26** | | |
| | **Other Adult Support** | **-1.49** (0.49)** | **.09** | **.26** | **.58** | | |
| | Constant | -1.28 (0.63) | | | | 18.45 (2)*** | .18 |
| Sexual Content Exposure (Unwanted) | Gender (Females vs. Males) | .55 (0.34) | .30 | .58 | 1.12 | | |
| | Ignoring | .31 (0.36) | .67 | 1.36 | 2.75 | | |
| | **Technical Solutions** | **-1.01** (0.36)** | **1.35** | **2.75** | **5.62** | | |
| | Constant | -.17 (0.66) | | | | 16.82 (3)*** | .13 |
| Unwanted Sexual Solicitation† | **Gender (Females vs. Males)** | **-2.03** (0.66)** | **.04** | **.13** | **.47** | | |
| | **Confrontation/Fighting** | **-1.71*** (0.50)** | **2.08** | **5.56** | **14.29** | | |
| | Family Support | .65 (0.34) | .98 | 1.92 | 3.76 | | |
| | Constant | -.19 (0.98) | | | | 31.56 (3)*** | .37 |
| Other Unwanted Inappropriate Content Exposure (non-sexual)‡ | **Ignoring** | **1.13** (0.42)** | **.14** | **.32** | **.73** | | |
| | **Adult Help Seeking** | **.40* (0.19)** | **1.02** | **1.49** | **2.17** | | |
| | Constant | -2.22 (0.80) | | | | 13.83 (2)*** | .16 |
| Time-management Problems | **Age (Younger vs. Older)** | **1.30* (0.54)** | **.09** | **.27** | **.79** | | |
| | Ignoring | 1.05 (0.57) | .12 | .35 | 1.06 | | |
| | Technical Solutions | -.46 (0.56) | .53 | 1.57 | 4.72 | | |
| | **Adult Help Seeking** | **.63** (0.24)** | **1.17** | **1.87** | **2.99** | | |
| | Family Support | .38 (0.39) | .68 | 1.47 | 3.14 | | |
| | Constant | -4.92 (1.37) | | | | 28.80 (5)*** | .32 |

*Note.* *** $p < .001$; ** $p < .01$; * $p < .05$; Bolded predictors indicate those which significantly predicted successful resolution of the distressing challenge in the multivariate analysis; † As the assumption of linearity was not met for the Adult Help Seeking variable, this item was not able to be included in this particular logistic regression model. ‡ As the assumption of linearity was not met for the Social Self-Efficacy scale variable, this item was not able to be included in this particular logistic regression model.

### 5.5.1. Notes for these logistic regression results

The data in the three tables above introduce some problems in identifying predictors for the successful resolution of distressing challenges. The often small $R^2$ Nagelkerke values displayed in Table 15 caution readers that these multivariate models are often only accounting for a small amount of the variance in the odds of resolution of distressing challenges. This means that although the items that will be discussed in this section are significant, they do not represent a "silver bullet" to understanding the factors associated with resolving a particular challenge. By way of guidance, where $R^2$ values approach .3, the model is expected to account for a small to medium amount of the variance in the odds of an outcome (Field, 2009).

As noted earlier in Section 5.1.2, logistic regression results rely on particular assumptions concerning independence of variables, linearity of scale variables and management of co-linearity. The following analyses met all of these assumptions. In two of the sub-analyses (i.e., management of unwanted sexual solicitation, and management of other unwanted inappropriate content [non-sexual]) the linearity of a scale item (adult help seeking and social self-efficacy, respectively) was not met. In practice this means that scores on the adult help seeking scale were not able to be included in logistic regressions assessing the successful resolution of unwanted sexual solicitation. Similarly, scores on social self-efficacy were not able to be assessed in logistic regressions on the successful resolution of resolving distressing situations involving exposure to unwanted inappropriate content (non-sexual). Thus while these items are not in the models discussed below this reflects the limitations of statistical modelling, not their significance to the issue.

The low sample sizes for distressing in-person meetings with 'strangers' from cyberspace precluded this challenge from logistic regression analysis.

The tables above indicate that resolution of particular challenges seems to be associated with different strategies and characteristics. As such, the analysis will describe the resolution results by each particular challenge. Each logistic regression analysis first tested the predictor variables described in Table 13 (the five management strategies discussed in Section 5.4) and Table 14 (age, gender, and scores on Psychometric/support scales) to see if they were significant at a univariate level for resolutions of a challenge. Significant univariate predictors were then included in multivariate analyses, which used logistic regression analysis to predict characteristics associated with the probability that a participant successfully resolved the challenge.

### 5.5.2. Resolving cyberbullying (mobile phone)

Overall, 54% of participants who had experienced distressing cyberbullying on mobile phones reported successfully resolving the challenge. While higher scores on the family support scale were associated with successful resolution in univariate analysis, the results in Table 15 demonstrated that this variable was no longer a significant predictor in the full multivariate regression model (significant at $p < .001$). Instead participants who did not ignore cyberbullying, or who scored higher on the adult help seeking scale, were significantly more likely to report successfully resolving this challenge.

When holding the variables in the model constant, participants who did not ignore the cyberbullying situation were 2.08 times more likely to say they had resolved this challenge than those who ignored it. The odds of successfully resolving this challenge increased 1.4-fold (or 40%) with each one-point increase on the adult help

seeking scale. While the other management strategies and personal characteristics were not significant in this model, it is important to note that the model's low $R^2$ value (.12) nonetheless accounts for a small amount of the reasons for increased odds of successful resolution.

### 5.5.3. Resolving cyberbullying (Internet)

Overall, 55.4% of participants who had experienced distressing cyberbullying on the Internet reported successfully resolving the challenge. Only two variables, adult help seeking score and seeking other adult assistance, were found to be significant predictors of successfully resolving this challenge in univariate analyses. The results in Table 15 demonstrated both variables were significant predictors in the full model (significant at $p < .001$).

When holding the variables in the model constant, the odds of successfully resolving this challenge increased 1.63-fold (or 63%) with each one-point increase on the adult help seeking scale. Conversely, participants who used other adults to help manage the situation were 3.85 times more likely to report *not* solving this challenge, compared to participants who did not use other adults in this situation (i.e., the odds of resolving the situation was 74% lower for young people who used other adults than those who did not). Like the model above, this model's $R^2$ value (.18) nonetheless only accounts for a small amount of the variation in odds of successful resolutions.

### 5.5.4. Resolving sexual content exposure (unwanted)

Overall, 56.2% of participants who were distressed by exposure to unwanted sexual content successfully resolved the challenge. Univariate analyses revealed that ignoring and technical solutions, as well as gender, were all associated with successful resolution of this challenge. However, once entered into the full model (significant at $p < .001$), only the use of technical solutions remained a significant predictor.

When holding the variables in the model constant, participants who reported using technical solutions to manage this challenge were 2.75 times more likely to report resolving this challenge than those who did not. Again, like the models discussed above, the low $R^2$ value (.13) signifies that this model is only able to account for a small amount of the reported odds of resolution.

### 5.5.5. Resolving unwanted sexual solicitation

Overall, 58.4% of participants who were distressed by unwanted sexual solicitation reported successfully resolving the challenge. Univariate analyses revealed that gender, scores on the family support scale, and confrontation/fighting responses were associated with successful resolution of the challenge. When entered into the full model (significant at $p < .001$), family support scores were no longer a significant predictor.

When holding the variables in the model constant, female participants were 7.69 times more likely to report resolving this challenge than male participants, whose odds of success were 87% lower than females. Participants who responded with confronting and fighting responses were 5.56 times more likely to report solving this challenge than those who did not respond in this way. The higher $R^2$ value (.37) for this item suggests that this model is describing significantly more variation in the odds of successful resolution of this challenge.

#### 5.5.6. Resolving other unwanted inappropriate content exposure (non-sexual)

Overall, 47.7% of participants who were distressed by exposure to other inappropriate (non-sexual) content reported successfully resolving the challenge. Univariate analyses only found ignoring strategies and scores on the adult help seeking scale to be associated with resolving this challenge. Both these variables were found to be significant in the full multivariate regression model (significant at $p < .001$).

When holding the variables in the model constant, the odds of successfully resolving this challenge increased 1.49-fold (or 49%) with each one-point increase on the adult help seeking scale. Conversely, participants who reported ignoring this challenge were 68% less likely to resolve this challenge, than participants who did not use ignoring strategies. Again, the low $R^2$ value (.16) for this model indicates that these variables account for a small, but significant, amount of variation in the odds of resolution of this challenge.

#### 5.5.7. Resolving time-management problems

Overall, 43% of participants who were distressed by time-management problems reported successfully resolving the challenge. Univariate analyses found five variables were associated with successful resolution of this challenge, including age, the use of ignoring, and technical solution strategies, as well as scores on the adult help seeking and family support scales. However, the final model (significant at $p < .001$) only found that age and adult help seeking were significant predictors of successful resolution of the challenge.

When holding the variables in the model constant, the odds of successfully resolving this challenge increased 1.87-fold (or 87%) with each one-point increase on the adult help seeking scale. Similarly, younger participants (aged 12–14 years) were 3.70 times more likely to report resolving this challenge compared to older (15–19-year-old) participants. The higher $R^2$ value (.32) for the model suggests more confidence in the utility of these variables in accounting for the increased odds of resolution of this challenge.

#### 5.5.8. The relationship between the number of interventions and challenge resolution

Given the requirement for independence of the variables in logistic regression, separate analyses were conducted to assess whether the numbers of interventions used by a participant to manage a distressing challenge was associated with resolution (e.g., were young people who used three management strategies more likely to solve that challenge compared to those who used fewer). The results of these six analyses were either insignificant or had Nagelkerke $R^2$ values below .1, suggesting that they did not significantly predict the odds of resolution of the any of the challenges in Table 15.

## 5.6. Post Hoc Exploration of Challenge

#### 5.6.1. Associations

There were significant ($p < .001$) correlations between the number of activities participants said they had engaged in and the number of challenges participants reported experiencing at least once in the past year, $r_s$ = .46, and frequently, $r_s$ = .34. However, there were no significant correlations between the number of activities engaged in and the numbers of distressing challenges that were experienced.

There were significant ($p < .001$) correlations between the number of activities participants said they had frequently engaged in and the number of challenges participants reported at least once in the past year, $r_s = .32$, and frequently, $r_s = .36$, experiencing. A small negative relationship was indentified between the numbers of activities frequently engaged in and young people's reports of distressing challenges, $r_s = -.07$ ($p < .05$).

Preliminary logistic regression analyses were undertaken to explore whether certain factors (e.g., scores on adult help seeking, social self-efficacy, specific activity use, etc.) were associated with an experience of challenge and an experience of distressing challenge. While a number of significant univariate predictors were identified, none of the full models could produce $R^2$ values above .1. Given the strong lack of any predictive ability, these analyses are not reported here.

### 5.6.2. Cyberbullying

Given the relatively high levels of distress reported in association to cyberbullying, post hoc analyses were conducted to explore which factors were associated with distressing cyberbullying challenges. Specifically, the following logistic regression analyses assess whether the form(s) of cyberbullying experienced (see Table 16) and the identity of the person(s) who conducted the bullying (see Table 17), were associated with reported distress. Secondly, an analysis was conducted to assess whether the number of forms of cyberbullying were associated with reports of distress.

#### 5.6.2.1. Distressing mobile phone cyberbullying

Overall, 53.7% of participants who experienced mobile phone bullying in the prior year ($n = 378$) said that at least one of these instances of bullying produced distress. Univariate analyses revealed that a number of factors were significantly associated with distress (e.g., see Table 18), including the gender of the participant and the forms and producers of the bullying. Forms of bullying that were associated with distress included receiving mean, nasty, and hurtful communications, socially ostracising the target by not letting them communicate with or befriend others, threatening damage to something or someone of value to the target, and bullying the target in other ways that did not involve mobile phones. Particular producers of bullying that were associated with distress included people at school, situations where more than one person bullied the target, and bullying produced by a good friend (at the time). However, once entered into the full multivariate regression model (significant at $p < .001$), only participant gender, the reception of mean, nasty, and hurtful communications, and the experience of other mean and hurtful actions not via mobile phones, were significant predictors of distress.

Table 16. Forms of Bullying Associated with Distressing Internet and Mobile Phone Cyberbullying.

| | | Proportion of Cyberbullied Participants ($n$ = 524)* | | | | | |
|---|---|---|---|---|---|---|---|
| | | Mobile Phone Bullying ($n$ = 378) | | | Internet Bullying ($n$ = 273) | | |
| Form of Bullying | Distressed | Females | Males | Total | Females | Males | Total |
| Direct Aggression | | | | | | | |
| Said, texted, messaged, wrote, mean, nasty, hurtful things to target | Yes | 85.5%*[a] | 68.4%*[c] | **82.3%***[e] | 88.7%*[g] | 70.6%*[i] | 84.0%*[k] |
| | No | 75.0%*[b] | 60.0%*[d] | **70.3%***[f] | 81.8%*[h] | 85.9%*[j] | 83.3%*[l] |
| Sent scary or disgusting pictures or videos to target | Yes | 3.0% | 18.4% | 5.9% | 11.3% | 35.3% | 17.6% |
| | No | 5.8% | 12.7% | 8.0% | 10.4% | 12.5% | 11.3% |
| Threatened to hurt target physically | Yes | 33.3% | 42.1% | 35.0% | 22.7% | 32.4% | 25.2% |
| | No | 23.3% | 32.7% | 26.3% | 16.9% | 10.9% | 14.1% |
| Threatened to tell other people embarrassing things about the target | Yes | 19.4% | 23.7% | 20.2% | 16.5% | 32.4% | 20.6% |
| | No | 17.5% | 12.7% | 16.0% | 7.8% | 6.3% | 7.0% |
| Threatened to damage someone or something of value to target | Yes | 16.4% | 42.1% | 21.2% | 21.6% | 29.4% | 23.7% |
| | No | 12.5% | 14.5% | 13.1% | 10.4% | 6.3% | 8.5% |
| Ever experienced a form of direct cyberbullying aggression | Yes | 90.3% | 81.6% | 88.7% | 94.8% | 82.4% | 91.6% |
| | No | 88.3% | 76.4% | 84.6% | 89.6% | 90.6% | 90.1% |
| Indirect aggression | | | | | | | |
| Spread rumours about target | Yes | 43.0% | 34.2% | 41.4% | 40.2% | 41.2% | **40.5%** |
| | No | 40.0% | 45.5% | 41.3% | 19.5% | 17.2% | **18.3%** |
| Did not let target talk, text, comment, message, or be friends with them | Yes | 29.1% | 47.4% | 32.5% | 26.8% | 26.5% | 26.7% |
| | No | 25.8% | 16.4% | 22.9% | 14.3% | 15.6% | 14.8% |
| Sent mean or embarrassing pictures or videos of target to others | Yes | 1.2% | 28.9% | 6.4% | 7.2% | 26.5% | 12.2% |
| | No | 3.3% | 16.4% | 7.4% | 5.2% | 7.8% | 6.3% |
| Ever experienced a form of indirect cyberbullying aggression | Yes | 53.9% | 71.1% | 57.1% | 54.6% | 47.1% | 54.2% |
| | No | 52.5% | 50.9% | 52.0% | 35.1% | 31.3% | 33.1% |
| Other Bullying | | | | | | | |
| Did something else mean or hurtful on that technology | Yes | 23.0% | 34.2% | 25.1% | 26.8% | 35.3% | **29.0%** |
| | No | 15.8% | 20.0% | 17.1% | 11.7% | 14.1% | **12.7%** |
| Did other mean and hurtful things not using that technology | Yes | 35.8% | 42.1% | **36.9%** | 15.5% | 23.5% | 17.6% |
| | No | 20.0% | 16.4% | **18.9%** | 14.3% | 7.8% | 11.3% |

*Note.* * The sample sizes differ by three levels: gender, distress, and bullying modality (mobile phone vs. Internet) however these sample sizes remain constant across the corresponding and ensuing rows of the table: *[a] $n$ = 165, *[b] $n$ = 120, *[c] $n$ = 38, *[d] $n$ = 55, *[e] $n$ = 203, *[f] $n$ = 175, *[g] $n$ = 97, *[h] $n$ = 77, *[i] $n$ = 34, *[j] $n$ = 64, *[k] $n$ = 131 , *[l] $n$ = 142. Bolded items were significant predictors of cyberbullying distress after controlling for the action of the other predictors in this Table and in Table 17 (see Table 18 for these multivariate analyses).

Table 17. Producers of Bullying Associated with Distressing Internet and Mobile Phone Cyberbullying.

| | | Proportion of Cyberbullied Participants (*n* = 524)* | | | | | |
|---|---|---|---|---|---|---|---|
| | | Mobile Phone Bullying (*n* = 378) | | | Internet Bullying (*n* = 273) | | |
| Producer of Bullying | Distressed | Females | Males | Total | Females | Males | Total |
| Male | Yes | 40.0%*[a] | 71.1%*[c] | 45.8%*[e] | 41.2%*[g] | 58.8%*[i] | 45.8%*[k] |
| | No | 41.7%*[b] | 70.9%*[d] | 50.9%*[f] | 42.9%*[h] | 76.6%*[j] | 57.7%*[l] |
| Female | Yes | 69.7% | 31.6% | 62.6% | 62.9% | 38.2% | 56.5% |
| | No | 68.3% | 40.0% | 59.4% | 70.1% | 25.0% | 50.0% |
| At target's school | Yes | 58.2% | 73.7% | 61.1% | 44.3% | 41.2% | 43.5% |
| | No | 48.3% | 50.9% | 49.1% | 37.7% | 40.6% | 39.4% |
| Around target's age | Yes | 82.4% | 65.8% | 79.3% | 78.4% | 55.9% | 72.5% |
| | No | 75.8% | 65.5% | 72.6% | 67.5% | 68.8% | 68.3% |
| More than one person bullied the target | Yes | 35.8% | 47.4% | 37.9% | 30.9% | 32.4% | 31.3% |
| | No | 25.0% | 18.2% | 22.9% | 22.1% | 26.6% | 23.9% |
| A boyfriend/girlfriend (when it happened) | Yes | 11.5% | 21.1% | 13.3% | 8.2% | 26.5% | 13.0% |
| | No | 9.2% | 7.3% | 8.6% | 5.2% | 6.3% | 5.6% |
| Already an ex-boyfriend/girlfriend (when it happened) | Yes | 20.6% | 31.6% | 22.7% | 11.3% | 17.6% | 13.0% |
| | No | 21.7% | 10.9% | 18.3% | 3.9% | 3.1% | 3.5% |
| A good friend (when it happened) | Yes | 36.4% | 44.7% | 37.9% | 29.9% | 17.6% | 26.7% |
| | No | 27.5% | 27.3% | 27.4% | 16.9% | 20.3% | 18.3% |
| Already an ex-friend (when it happened) | Yes | 27.9% | 28.9% | 28.1% | 21.6% | 17.6% | 20.6% |
| | No | 33.3% | 25.5% | 30.9% | 19.5% | 20.3% | 20.4% |
| Anonymous | Yes | 23.0% | 42.1% | 26.6% | 33.0% | 52.9% | 38.2% |
| | No | 26.7% | 30.9% | 28.0% | 36.4% | 43.8% | 39.4% |

*Note.* * The sample sizes differ by three levels: gender, distress, and bullying modality (mobile phone vs. Internet) however these sample sizes remain constant across the corresponding and ensuing rows of the table: *[a] *n* = 165, *[b] *n* = 120, *[c] *n* = 38, *[d] *n* = 55, *[e] *n* = 203, *[f] *n* = 175, *[g] *n* = 97, *[h] *n* = 77, *[i] *n* = 34, *[j] *n* = 64, *[k] *n* = 131 , *[l] *n* = 142; Bolded items were significant predictors of cyberbullying distress after controlling for the action of the other predictors in this Table and in Table 16 (see Table 18 for these multivariate analyses).

Table 18. Multivariate Logistic Regression Results of Significant Univariate Predictors Associated with Distressing Cyberbullying.

| Model Predictors and Constant | B (*SE*) | 95% CI for Odds Ratio Lower | Odds Ratio | Upper | Model $\chi^2$(*df*) | $R^2$ (Nagelkerke) |
|---|---|---|---|---|---|---|
| Cyberbullying (Mobile Phone) | | | | | | |
| **Gender (Female vs. Male)** | **-.73** (0.27)** | **1.23** | **2.07** | **3.47** | | |
| **Said, texted, messaged, wrote, mean, nasty, hurtful things to target** | **-.52* (0.26)** | **1.00** | **1.68** | **2.82** | | |
| Did not let target talk, text, comment, message, or be friends with them | -.28 (0.25) | .81 | 1.32 | 2.16 | | |
| Threatened to damage someone or something of value to target | -.41 (0.31) | .83 | 1.51 | 2.78 | | |
| **Experienced other mean and hurtful things not via that technology** | **-.61* (0.27)** | **1.09** | **1.85** | **3.13** | | |
| Producer of bullying was at same school as the target | -.35 (0.23) | .91 | 1.42 | 2.22 | | |
| Bullying was produced by more than one person (a group) | -.39 (0.26) | .90 | 1.48 | 2.44 | | |
| Bullying produced by a good friend (when it happened) | -.38 (0.24) | .91 | 1.46 | 2.34 | | |
| Constant | 2.13 (0.40) | | | | 41.67*** (8) | .14 |
| Cyberbullying (Internet) | | | | | | |
| **Gender (Female vs. Male)** | **-.85** (0.30)** | **1.31** | **2.33** | **4.17** | | |
| **Rumours spread about target** | **-.72* (0.33)** | **1.08** | **2.06** | **3.92** | | |
| Did not let target talk, text, comment, message, or be friends with them | -.34 (0.36) | .70 | 1.41 | 2.83 | | |
| Threatened to hurt target physically | .27 (0.41) | .34 | .76 | 1.70 | | |
| Threatened to tell other people embarrassing things about the target | -.25 (0.50) | .48 | 1.28 | 3.42 | | |
| Threatened to damage someone or something of value to target | -.67 (0.49) | .81 | 1.96 | 4.72 | | |
| **Was targeted by something else mean or hurtful via that technology** | **-.73* (0.37)** | **1.00** | **2.08** | **4.33** | | |
| Bullying was produced by a male | .48 (0.28) | .36 | .62 | 1.07 | | |
| Bullying was produced by a boyfriend/girlfriend (when it happened) | -.48 (0.53) | .58 | 1.62 | 4.55 | | |
| Bullying was produced by an ex- boyfriend/girlfriend (when it happened) | -1.06 (0.61) | .88 | 2.89 | 9.52 | | |
| Constant | 3.37 (0.77) | | | | 47.99*** (10) | .22 |

*Note.* *** $p < .001$; ** $p < .01$; * $p < .05$; Bolded predictors indicate those which significantly predicted cyberbullying distress in the multivariate analysis.

When holding the variables in the model constant, female participants were 2.07 times more likely to report distress from cyberbullying on mobile phones, than males. Equally, controlling for gender and the other factors in the model, participants who reported receiving mean, nasty, and hurtful communications via mobile phones were 1.68 times more likely to report distressing cyberbullying than those who did not receive this form of cyberbullying. Finally, the experience of other mean and hurtful bullying situations not via mobile phones (e.g., perhaps in-person and/or via Internet bullying) was associated with 1.85 times greater probability of distress compared to participants who had not experienced such bullying. While these items were significant to at least $p < .05$, the low $R^2$ value (.14) in Table 18 cautions that the model only accounted for a small amount of distress.

While a significant logistic regression result was produced by assessing the impact of the frequency of forms of mobile bullying, the very low $R^2$ value (below .1) suggested that this factor was not able to be identified to be a significant predictor of cyberbullying distress.

#### 5.6.2.2. Distressing Internet cyberbullying

Overall, 48% of participants who experienced Internet bullying in the prior year ($n = 273$) said that at least one of these instances produced distress. Univariate analyses revealed that 10 independent factors were significantly associated with distress (e.g., see Table 18), including the female gender of the participant, particular forms of bullying, and particular producers of bullying behaviour. Forms of bullying associated with distress included rumours being spread about the target, socially ostracising the target by not letting them communicate with or befriend others, threatening the target with physical harm, threatening the target with the dissemination of embarrassing information, threatening damage to something or someone of value to the target, and bullying the target in other ways involving the Internet. Particular producers of bullying behaviour associated with distress included males, bullying produced by a boyfriend or girlfriend (at the time), and bullying from an ex-girlfriend or boyfriend (at the time). However, the full model (significant at $p < .001$) only found participant gender, rumour spreading, and bullying the target in other ways involving the Internet, to be significant predictors of distress.

When holding the variables in the model constant, female participants were 2.33 times more likely to report distress from cyberbullying on the Internet, than males. Controlling for gender and the other factors, those who reported that rumours had been spread about them on the Internet were 2.06 times more likely to report distress than targets that had not experienced this form of Internet bullying. Similarly, whilst controlling for gender and rumour spreading, participants who had been bullied in some other way on the Internet were 2.08 times more likely to report distress compared to participants who had not experienced this form of bullying. Whilst stronger than the mobile phone model, the low $R^2$ value (.14) in Table 18 indicates that this model is only able to account for a small amount of distress.

A logistic regression assessing the impact of multiple forms of Internet cyberbullying on distress (whilst controlling for gender effects) was found to be significant ($\chi^2(2) = 35.46$, $p < .001$, $n = 272$) and associated with a small, but significant, $R^2$ value (.16). The logistic regression model, where B (gender) = .95 ($SE = 0.28$), B (number of bullying forms) = .37 ($SE = .08$), and B (constant) = -2.46 ($SE = 0.53$), produced the following odds ratio (and 95% confidence interval) for distress: 1.45 (1.23–1.70). Controlling for gender effects, the model suggests that each additional form of bullying experienced is associated with a 1.45 times increase in the likelihood of distress. Essentially, this means that each additional form of Internet cyberbullying experienced by a participant increases their likelihood of distress by 45.5%.

# Chapter 6. Discussion

## 6.1. Introduction

The thesis aimed to explore how contemporary cyberspace, characterised by convergence and wide-scale technological diffusion, produced a range of contexts, activities, challenges, and challenge management strategies, among a diverse group of young people in NZ. The project, using a community psychology perspective, collected and analysed two successive datasets, as well as relevant literature and research. The first phase of data collection, analysis, and discussion, produced a framework for understanding context, activity, challenge, and challenge management, in cyberspace. The second phase of the project assessed aspects of this model with a broad sample of young people.

The findings demonstrate the multitude of ways in which cyberspace, and activity, challenge, and resiliency, within it, reflect normative features of adolescent development. Both data sets and analysis show how cyberspace offers young people the ability to meet many of the biological, cognitive, and social aspects of adolescent development that were previously met off-line and/or via other media. For instance, participants' consumption of sexual advice and material, as well as finding sexual partners, in cyberspace, reflects biological development in adolescence. Cognitive development witnesses increased research and information gathering, as well as the ability and desire to attend to increasing amounts of complex media and games, in cyberspace. Finally, social development is reflected in the extensive ways young people use cyberspace to communicate with others, make new friends, use media and games to build cultural currency and social connection, and explore identity via social connection and self-presentation in virtual environments.

Referencing such features of adolescent development, the chapter will explore how the research findings and published literature support, refute, or clarify aspects of the model proposed earlier (see page 122). The chapter will do this by referencing the four meta-themes of the model, beginning with the issues raised in relation to the context meta-theme. The following sections will repeat this approach focussing on activity, challenge, distressing challenge, and the management of distressing challenges. Having explored the most salient issues raised by the research, the chapter will address some of the limitations of these findings. The next section will then summarise the key issues and explore implications for practice and future research. Concluding statements will finish the chapter.

## 6.2. Context

As discussed earlier, the context meta-theme describes the environment, settings, and circumstances of cyberspace access and use. Context sits above the other meta-themes because it determines how (if at all) young people access cyberspace (and hence conduct activity and face challenge within it). The findings from the qualitative research, as well as other studies, indicated that a number of aspects played a role in context, including how convergence, multitasking, cost, and adult sanctions/rules affect access and activity.

The qualitative results and discussion, as well as the research discussed in Chapter 2, highlighted that while cost of access produced barriers to cyberspace activity for a small amount of young people, these barriers did not prevent access, but changed what young people had to do to gain access. The qualitative analysis and

discussion indicated that young people without (and even with) home Internet access reported accessing cyberspace from other locations (including schools, libraries, friend's homes, and commercial Internet venues like cyber-cafés). The quantitative findings demonstrated that 98.4% of participants reported frequent activity in cyberspace, despite the fact that a number of participants from lower social economic, and/or rural, backgrounds were likely included in the sample. These results confirm the qualitative findings, demonstrating that a lack of home Internet access, or adult sanctions on cyberspace use, will not prevent access.

Most focus group participants conducted activity within technologies, or environments, characterised by the phenomenon of convergence (e.g., *TradeMe*, *YouTube*, *and World of Warcraft*). Additionally, some discussed mobile phone use that involved convergence (e.g., downloading songs on phones). The qualitative data, combined with the published research on the popularity of Web 2.0 websites, indicated that the majority of NZ young people likely conduct cyber-activity that involves convergence.

As noted earlier, convergence, by its very nature, enables users to conduct more categories of activity, from more places, more often. The qualitative data, appended with research findings on young people's levels of multitasking internationally, suggest that convergence and multitasking will interact to produce even more activity in cyberspace. Combined with the increased diffusion of technology, fore grounded in Chapters 1 and 2 (e.g., increased mobile phone and home broadband penetration), contemporary cyberspace activity is likely to be more frequent and diverse compared to the Web 1.0 era.

The relative ubiquity of activity in cyberspace for nearly all young people in NZ is underscored by the quantitative findings, which demonstrated that 99.8% of participants had conducted at least one of 12 cyber activities in the prior year. The equally high number who reported frequent activity (98.4%), and the average of 7.29 cyber-activities undertaken in the prior year, highlighted that cyberspace use in NZ is normative and frequent for young people. Together these findings confirm that cyberspace, characterised by convergence, is now a normative developmental context for nearly all NZ young people.

## 6.3. Activity

The prominence of normative cyberspace activity, as well as gender and age differences in particular activities, may reflect the role that adolescent development takes in producing such activity. The qualitative findings (Chapter 2) suggested that the 11 categories of activity profiled in the model are intimately associated with biopsychosocial factors of adolescent development (reviewed in Chapter 1). The following sub-sections will reference these biopsychosocial analyses to address the quantitative findings.

### 6.3.1. Biological development and activity in cyberspace

Nearly all survey participants (96.7%) reported researching activity in cyberspace in the past year. Biological development in adolescence, including puberty and brain development may produce a range of cyber-activity, including researching activity. For instance, puberty results in body growth and sexual maturation (Susman & Dorn, 2009). Faced with such changes, cyberspace may be a key channel for some young people to research information about their bodies, puberty, and sexuality (Roberts et al., 2009; Sutton et al., 2002; Ybarra & Suman, 2008).

Around an eighth (16%) of participants reported looking for boyfriends or girlfriends in cyberspace. While this activity may reflect the action of sexual development in adolescence (Diamond & Savin-Williams, 2009), significantly more males reported such activity than females. This gender differential stands in contrast to Subrahmanyam, Greenfield, and Tynes' (2004) textual analysis of a USA "teen" chat room, where the anonymity provided by online communication may mean that some young [heterosexual] women "…may be to initiate online relationships with the opposite sex without much of the weight of traditional gender roles and without possible stigmatization for being too forward" (p. 662).

Despite the anonymity that cyberspace offers, the gender differential in dating was nonetheless reproduced by the current participants. However, this may represent that young men may be more comfortable [admitting to] looking for sexual/romantic partners than young women. To the extent that discourses framing young men as sexually agentic, and young women as passive, affect young people (e.g., see Tolman, Striepe, & Harmon, 2003, for a review) in cyberspace, such discourses may partly explain this gender differential in cyber-dating. The action of such discourses is supported by the sexual policing of young women evident in the focus groups, where "slut" identity positions (which described sexually agentic women) were not welcomed.

Conversely, other, perhaps more "socially acceptable", ways of participating in the development of sexual/romantic relationships may appeal to young women participants. For instance, Tolman and colleagues' review (2003) suggested that many young women may find the development of sexual and romantic relationships more socially acceptable when their role is less obviously agentic and purposeful. Communicating with others, and the production of new friendships, may produce situations that enable young females to meet others, whilst minimising accusations of actively seeking such relationships.

In point of fact, communicating with others, and communicating with new people in cyberspace (at least once in the prior year), were more often carried by young women, than young men, in the current research. Such activity, whilst representing normative communication and friendship making, may also present young women with "acceptable" ways to flirt and meet romantic partners, whilst offering some protecting from "slut" accusations of trying to "get" or "find" a boyfriend/girlfriend.

The data from both phases of the research supports the contention that some communication in cyberspace is linked to romantic and sexual development. Rates of communication, and friendship making in cyberspace were significantly lower among younger males relative to older males. The qualitative data indicated that some males communicated online expressly so they could flirt with or meet girls. The desire for romantic partners among older adolescents may partly explain the increases in communication of older males, in cyberspace, relative to younger males, who due to their developmental stage may not be so interested in such activity at that time. Interview data (Ofcom, 2007a) and survey findings (Livingstone & Bober, 2005), also reflect the use and popularity of cyberspace for flirting among young people in the UK and the USA (Lenhart & Madden, 2007a).

To the degree that such flirting occurs in social networking sites, this developmental feature may also underpin another activity: publication of content in cyberspace (reported by 73.9% at least once in the prior year). As indicated in the focus groups, significant amounts of communication (and some flirting) occur on social networking sites. In order to be on these sites one must have a profile, which requires the publication of content, thus such biological development aspects may also underpin some of the popularity of this content publication activity. This point is further supported by the fact that fewer younger males reported conducting both communication and content publication activities, compared to the other age and gender groups in the research.

### 6.3.2. Cognitive development and activity in cyberspace

Cognitive development in adolescence is associated with improved reasoning, planning, metacognition, working memory, and cognitive processing skills (Blakemore, 2008; Luna et al., 2004; Miller & Cohen, 2001). As noted in the first chapter, all of these skills facilitate the development of abstraction, which can enable young people to think hypothetically about various courses of action, the future, and the possibility of various perspectives on the same topic (Kuhn, 2009). Such conditions may then produce experimentation and rule and limit testing. These developmental changes, along with other aspects of one's ecology, can enable, and produce, a range of outcomes, including: the ability (and expectation) to conduct larger and more complex cognitive tasks, and solve more complex problems; the ability to understand and appreciate more complex media; and the desire to seek information and role models to broaden one's perspectives.

Three quarters (76.6%) of survey participants reported frequent use of cyberspace for researching. The popularity of this activity may also reflect the ability (and expectation) for cognitively developing adolescents to conduct larger and more complex tasks. Such tasks, especially academic work, may require increased research and information gathering. As indicated in the qualitative research, cyberspace offers young people many opportunities to gather such information, and this may underpin some of this activity.

Additionally, as noted in phase one, academic tasks may also involve a level of peer collaboration (e.g., see Extract 2 on page 54). To the extent that schools encourage collaboration, and/or that peers use each other for assistance, this will motivate young people to communicate with others. Given that cyberspace, which is nearly ubiquitously available, offers young people relatively easy and cheap ways to conduct such communication, such motivations will also drive some of the popularity of this activity.

Cognitive development may also underpin some of the popularity of gaming activity in cyberspace (reported by 71.3% of survey participants), by furnishing ability and skills for solving complex tasks and problems, including those offered by games (Johnson, 2008). Gee (2003) argues that many games capitalise on stretching these developing skills of working memory, impulse control, micro-coordination, forward planning, and problem-solving. To the extent that gaming enables young people to exercise and master developing such skills, including multitasking skills (Greenfield, 2009), it is likely to be attractive to some young people. Additionally, to the extent that collaboration is a part of online gaming (Pearce & Artemesia, 2009), gaming activity will in turn require young people to communicate with others in cyberspace (including new people) and explain some of the motivation for communication, and new friendship formation, as well.

The survey data, and studies from NZ (Reddington, 2005; Wylie & Hipkins, 2006) and overseas (Media Awareness Network, 2005; Ofcom, 2006; Roberts et al., 2005; Yee, 2006) indicate strong gender differences for gaming (in favour of males), suggesting that more females, than males, find other ways to exercise these skills (or have already mastered them), or that other features of gaming are more attractive to males. In their ethnographic qualitative work and review of female gaming, Beavis and Charles (2007) demonstrated that female gaming could be counter-cultural to dominant discourses of female identity in Australia. In particular, embracing one's competence and pleasure at successful violent and competitive game play, may require significant amounts of "work" to maintain a positive female identity. As young women have to negotiate complex gender politics to game in this way, while young men are conversely welcomed into such activity, this may also underscore gender differences in gaming, in nations like Australia (and NZ).

Games that require extended, or successive periods, of game play, problem-solving, improved working memory, and plot-negotiation skills, also represent examples of complex media. Complex media can be thought of that which capitalises on certain knowledge (e.g., cultural, vocabulary, and empathy), requires the ability to attend to the extended time that complex media may require, and relies on working memory skills to understand and appreciate complex plot narratives (e.g., see Fisch, 2000, for a review of the role of working memory within children's comprehension of televised narratives). The development of such abilities during adolescence may also underpin desires, and appreciation, for complex media forms from this age onwards. Thus, such developments may also partly underpin the large proportions of participants who reported gaming and consuming media in the quantitative phase of the thesis.

The cognitive development of abstraction in adolescence affords the ability to recognise other perspectives on a given topic (Kuhn, 2009). With the increasing realisation that other perspectives exist, and that the "black and white" thinking, characteristic of earlier development, may be limited, young people may seek out other perspectives. Seeking out other perspectives may in turn underpin a range of cyber-activities. For instance, young people may use cyberspace to conduct research on alternative perspectives on key issues (Roberts et al., 2009). As a media form, cyberspace may also be used by young people to find alternative role models to offer new perspectives (J. D. Brown, 2000; Fenaughty & Harré, 2003). Communication, and friendship formation (including with new people), in cyberspace, may also enable such information gathering. To the extent that cognitive development is associated with the realisation that multiple perspectives exist, this development may underpin some of the motivation for researching, information gathering, media consumption, communication, and friendship formation, in cyberspace, during adolescence.

### 6.3.3. Social development and activity in cyberspace

As noted in Chapter 1, the cognitive development, which enables adolescents to recognise multiple perspectives, also underscores the realisation that people are different. This recognition is associated with the task of "identity development", which is arguably the key hallmark of adolescent development (Elkind, 1967; Erikson, 1968; Steinberg & Morris, 2001). Such identity development during adolescence is predicated on separation and individuation from primary supports, the strengthening of peer relationships, and the development of one's own opinions, preferences, and ways of responding to/being in the world. Such development is mediated through access to new knowledge, new ways of being, as well as through social [dis]connection (Roberts et al., 2009).

The data produced in the thesis, along with the reviewed literature, demonstrated that a range of activities in cyberspace may be used to produce this social [dis]connection. For instance, the high levels of research, media consumption, gaming, and communication, reported by participants in the second phase of the research (as well as in the first phase, e.g., see Extract 8 on Page 58), may partly reflect the opportunities such activities afford adolescents searching for space from family members.

Such cyber-activities, especially communication and friendship formation, also enable social connection with others. At the same time as enabling young people to learn new ways of being in the world, these social connections can facilitate participation in new friendships, and enable developing young people to try out new [group] identities (B. B. Brown et al., 1994). Thus, these aspects of social and identity development may also be

associated with the popularity of cyberspace, and activities associated with communication and friendship formation (e.g., publishing content, meeting new people, gaming, and media consumption [see below]).

Given the requirement of social connection for identity development, acquiring cultural currency (necessary for social connection [e.g., see Section 1.2.3]) also underscores a range of activity in cyberspace. Media consumption, gaming, communication, and content publication activities in cyberspace, can all produce cultural currency. Furthermore, to the extent that certain cyber-activities are now normative in and of themselves (i.e., communicating, researching and consuming media in cyberspace), developing a working-knowledge of these activities may also produce cultural currency, and this may underscore part of the popularity of these activities.

Additionally, as noted throughout the focus groups and by other research (Kalmus, 2007; Roberts et al., 2009), significant amounts of cyber-activity may be undertaken whilst simply sharing the physical society of one's peers (e.g., consuming media, gaming). In this way, significant and various forms of activity in cyberspace may be underscored by the fact that such activity promotes, or is simply associated with, social connection.

To the extent that such social connection, in addition to information provision and media consumption, enables young people to determine what is "hot or not", activities of media consumption, communication with others, making new friends, and publishing content in cyberspace will be popular for developing young people as they negotiate identity development. This reflects findings from Chapters 1 and 2, which demonstrated the role of these four activities for facilitating various aspects of identity exploration, performance, feedback, and learning (Baker, 2001; boyd, 2007; S. Stern, 2008).

The social development and separation of adolescents from families, also interacts with the development of romantic/sexual relationships at this age (Diamond & Savin-Williams, 2009; Wolak, Finkelhor, Mitchell, & Ybarra, 2008). To the extent that developing intimacy, exploring self, and accruing cultural currency about relationships, is associated with entering sexual and romantic peer relationships, cyberspace activities that promote such relationships are also likely to be popular. The development of relationships at this stage could then explain some of the social motivations for certain activities in cyberspace, like communication, publishing content, friendship formation, media consumption, and dating.

#### 6.3.4. Summary

The current findings, along with the published research, highlight the many opportunities cyberspace offers to fulfil one or more aspects of adolescent development. The popularity of certain categories of activity (e.g., communication, researching/surfing, media consumption, and to a lesser [and gendered] extent, gaming and publishing content, in cyberspace) may represent the multiple developmental tasks that these activities meet. The ability to address many adolescent development needs, likely underpins both the normativity of this cyberspace, and the popularity of certain activities within it. Unless other developmental settings significantly displace or disrupt these affordances, cyberspace will remain a key context of adolescent development.

## 6.4. Challenge

The challenge meta-theme described experiences in cyberspace that were potentially associated with harm and/or distress. The model explained that to experience challenge in cyberspace young people necessarily had

to conduct activity in cyberspace. This reflects Livingstone & Bober's (2005) earlier conclusion that "[o]pportunities and risks go hand in hand...The more children experience one, the more they also experience the other" (p. 3). The qualitative data indicated how various activities in cyberspace could be associated with challenge. The quantitative analysis demonstrated that the range, and frequency of activity in cyberspace, were both positively related to increased reports of challenge, highlighting that understanding challenge in cyberspace requires an appreciation of the activity that cyberspace enables, produces, and increasingly mandates.

The second aim of the thesis was to explore the prevalence and characteristics of such challenge. Various studies were reviewed, which highlighted [national] differences in a range of challenges. The published findings suggest that the prevalence of certain challenges varied depending on the country and/or the research methodology. The quantitative phase of this project offered the opportunity to assess and compare challenge in NZ within a context of convergence. In the sections that follow, the quantitative results are discussed to explore how the data compare, while qualitative findings will be used to point to some reasons for these results.

While challenge is intimately related to activity, its genesis cannot solely be explained by activity (if that were true then activity and challenge would be perfectly correlated). While the following sections will discuss potential reasons for experiences of particular challenges, it is important to recall some of the generic features of challenge in adolescence (e.g., see Section 3.1).

Biopsychosocial developmental features may [interact to] produce increased unsafe and challenging experiences in adolescence. Biological development, like neural development, may limit effective adolescent decision making, increasing the chance of challenge (Galvan et al., 2006). Psychosocial development may see young people reject the rules and boundaries associated with childhood (Kuhn, 2009) to also increase challenge. Ironically, such challenges may further be valued by young people for the opportunities they present to prove one's self as mature and "adult", and the opportunities they offer to learn the skills to understand and manage future challenges (Lightfoot, 1997).

Additionally, the desire for social connection, and the move towards peers as key socialisers, during adolescence (Larson et al., 1996), means that peers are often present when young people conduct activity (Kalmus, 2007; Livingstone & Bober, 2004; Reddington, 2005) and when they face challenge (as indicated by the phase one findings and Wolak et al., 2006) in cyberspace. While the following analysis will focus on specific features and rationales for particular challenges, these features also contextualise challenge in cyberspace.

#### 6.4.1. Cyberbullying and harassment

Around a third of participants reported at least one experience of cyberbullying on mobile phones and/or the Internet, in the prior year. This figure is within 5% of that seen in other studies (Livingstone & Bober, 2004; Ybarra, Diener-West, et al., 2007), or is 5% or greater than others (Clark et al., 2009; Cross et al., 2009; Ybarra et al., 2006). The slightly higher amounts of cyberbullying reported in the current study (compared to some research) may reflect that older female participants were more likely to report a cyberbullying experience (*OR* = 1.56, $p < .001$; 95% CI = 1.19–2.05) and the project had an older female skew (41.4% of all participants).

The gender differential in cyberbullying has been reported elsewhere, with some studies finding no gender differences (Slonje & Smith, 2008; Ybarra et al., 2006), and others reflecting the current finding that female participants were overrepresented (Clark et al., 2009; Cross et al., 2009; M. Jackson, Cassidy, & Brown, 2009;

Ybarra, Diener-West, et al., 2007). Jackson, Cassidy, and Brown's study of 365 Canadian young people's experiences, proposed that the disproportionate involvement of female targets, reflected the fact that cyberbullying can be effective for indirect and relational aggression. Quoting Leckie's (1997) Australian research, which demonstrated that young women usually used relational aggression tactics to bully others, Jackson and colleagues hypothesised that the increased amount of cyberbullying experiences reported by females may reflect their increased exposure to relational aggression, relative to males. The disproportionate amount of cyberbullying reported by young women in the current study may simply reflect that cyberspace is overrepresented in relational aggression relative to direct aggression, and this difference may in turn explain the lower amounts of cyberbullying reported by males, who are more likely to face direct aggression.

The current study's definition of cyberbullying may also account for the increased reports of bullying. As noted earlier, this study used a broad definition, that did not rely on repeated instances of abuse (cf. ACBPS), or definitions limiting bullying to the reception of mean and nasty comments (cf. Youth '07, UKCGO), and that measured both Internet and mobile bullying (cf. Growing up with Media and YISS2, which did not include phone modalities). This meant that the current study may have sampled a larger range of cyberbullying behaviours, and this may explain the larger figure.

For example, the cyberbullying figure of 18.1% in the Youth '07 study was generated from participants' reports of others saying, writing, texting, or messaging "nasty and unpleasant things" to them (Clark et al., 2009, p. 12). This particular form of bullying represented around 75% of the cyberbullying experiences (e.g., see Table 16 on page 170) in the current study. Thus, extrapolating these results, constrained definitions of cyberbullying that only focus the transmission of nasty comments, may miss around a quarter of all cyberbullying or harassment experiences (especially those which are indirect and covert). When the older female data skew and the comprehensive definition are taken into account, the current results approximate the Youth '07 figure and highlight the various forms such cyberbullying experiences may take.

Female participants were overrepresented in cyberbullying via mobile phones. However, the activity data indicated that while nearly all older females (97.2%) reported using mobile phones in the prior year, only 93.7% of older males, 90.9% of younger females, and 82% of younger males did so. The higher rates of communication on mobile phones by older females may also underlie the increased reports of female mobile phone (and general) cyberbullying.

Conversely, cyberbullying of others on the Internet was more often reported by young men, than young women. This may reflect gendered aspects of young men's activity in cyberspace. For instance, young men's higher rates of online gaming, particularly in competitive gaming environments, may be an activity that promotes and encourages them to demean other players. Such activity may increase their reports of bullying of others on the Internet, relative to young women (who do not participate in such activities as frequently as young men).

### 6.4.2. Sexual content exposure

Like the cyberbullying data, purposeful exposure to sexual content was also disproportionately distributed by age and gender. Around half of older males reporting purposeful sexual content exposure, compared to only around one in ten females, and a third of younger males. As noted in Chapter 3, similar gender patterns were reported in the YISS2 (Wolak et al., 2007b), EUKO (Livingstone & Haddon, 2009) and the current study's focus group

findings. The fact that male focus group participants were so willing to discuss such activity, even in front of the peers, highlighted the normativity of this activity. In comparison with males, none of the female focus group participants mentioned purposeful consumption of sexual content. These gender differences may again reflect the action of gendered sexual discourses in adolescence, where purposeful sexual activity is not as positively viewed for young women as for young men (Tolman et al., 2003).

Around two out of ten participants reported unwanted exposure to sexual content. This figure was smaller than the 34% who reported this in YISS2 (Wolak et al., 2007b) and also did not reflect the significant age differences seen in YISS2. While this suggests that fewer gendered developmental issues are evident for this challenge in NZ, it is important to note that older males were nonetheless overrepresented. This may reflect that older males were more likely to report purposively consuming sexual content. The qualitative data indicated that unwanted sexual content exposure was often produced by pop-ups. The slightly higher amount of unwanted sexual content reported by older males may represent the fact that such pop-ups may be more common on sexually themed websites visited by these participants. Additionally, Greenfield (2004) noted that many peer-to-peer file-sharing services included sexual banner advertisements. The increase in unwanted sexual content exposure reported by older males may also reflect their increased engagement with peer-to-peer file-sharing applications, relative to the other age and gender groups in the research.

While the majority of young people in the focus groups reported an instance of encountering unwanted sexual content in their lifetimes, the fact that such experiences did not decline by age suggests that learning and education alone will not prevent this challenge. The qualitative findings demonstrated that this challenge may arise within any one, of a range of, common cyber-activities (e.g., accounts of encountering such content within SPAM, whilst researching online for homework, conducting image searches for school projects, or from exposure through others' social networking profiles or messages, and sexual messages on messenger services, etc.), and may thus be particularly hard to avoid.

#### 6.4.3. Unwanted sexual solicitation

Around two out of ten (18%) survey participants reported unwanted sexual solicitation in cyberspace. While this annual rate was around 5% larger than the YISS2 findings (Wolak et al., 2006), the UKCGO project reported that 31% of their sample had ever experienced such experiences (Livingstone & Bober, 2005). These findings suggest one of two things: 1. either that fewer young people in the UK encounter such experiences every year, so that even year after year upon using cyberspace, this number only rises a small amount to eventually total 31% for the 12–19-year-old sample in that study; or 2. that a number of young people who experience this challenge in the UK, experience it again in the following years. Further research is required to establish to what extent this is the case in NZ.

Like the YISS2 research (Wolak et al., 2006), the current analysis found that female participants were more likely (i.e., twice as likely) to report unwanted sexual solicitation, compared to male participants. However, this may not necessarily reflect that young women conduct behaviours that put them at disproportionate risk compared to young men, but that young women may more likely be targeted by unwanted sexual solicitation compared to males (Meyer & Cukier, 2006). For instance, Meyer and Cukier reported that naming oneself with a common female name was associated with receiving 25 times more malicious chat messages than when a male name was used. Alternatively (or additionally), to the extent that young women in NZ are disproportionately targeted

by sexual harassment offline (Clark et al., 2009), the increased reports of this challenge in cyberspace may reflect the migration of this gendered challenge to cyberspace.

Unlike Wolak and colleagues' (2006) results, this challenge was not disproportionately reported by older participants. Wolak et al. offered a range of suggestions for the observed age differences, including that it may reflect the increased time and responsibility older teenagers may have had for unsupervised Internet activity. To the extent that opportunities for independent cyberspace access had evolved from the time of the 2005 YISS2 data collection, to the 2007 data collection in NZ, these opportunities for independent use may already have been realised by younger participants, and thus explain the fact that age differences were not evident.

Interestingly, when comparing frequent experiences of this challenge, gender differences disappeared, suggesting that factors other than one-off opportunistic harassment may play a role in the frequent experience of this unwanted sexual solicitation. The frequent experience of this challenge is rare, and may be associated with problematic use of cyberspace (e.g., exploring areas where such solicitations are more likely, like chat-rooms – see Wolak, Finkelhor, Mitchell, et al., 2008, for further discussion on this point), however more targeted research is required to ascertain this in NZ.

#### 6.4.4. Other inappropriate content exposure (non-sexual)

Around one in ten young people reported encountering (non-sexual) inappropriate content in cyberspace. This figure sits between the findings of 19% in the Ofcom (2006) study and 8% in the NZ Broadcasting Standards Authority (2008) study. While over half of this content included sexual themes, descriptions reflected the qualitative findings, demonstrating that such content was often marked by violent and gory themes (as was also reported by 22% of the UKCGO participants – see Livingstone & Bober, 2005). To the extent that particular forms of sexual content in cyberspace are conflated with violent content, distress from exposure to sexual content may reflect these elements as well.

Interestingly, while there were no significant differences among age and gender for experiencing this challenge at least once, more than three times as many males reported frequent experiences of this challenge compared to females. Returning to discourses of masculinity, the disproportionate experience of this challenge by males may reflect gendered expressions of bravado. This challenge may be more common for males whose peer groups may test how well one can "handle" such content, and this may see some young men seek out such content or dare one another to seek out such material, whereas more female participants may not have experienced such desires or pressures. Alternatively, female participants may have simply possessed better skills for avoiding such exposures, or may not be as disturbed by some of these contents, as males.

#### 6.4.5. Copyright infringement

With 60% of the full sample reporting copyright infringement, this finding is around 10% higher than comparable results from the UK (Millwood Hargrave et al., 2007) and the USA (Lenhart & Madden, 2005). However, like these studies, the current data also showed that males and older participants were more likely to report such experiences than females and younger participants. The qualitative data indicated that infringed media forms included music, videos, and computer games. To the extent that gaming is more popular among male

participants, and copyright infringement may deliver such games, then this may partly reflect males' higher rates of copyright infringement relative to female participants.

The fact that this challenge was the most common is likely underpinned by the fact that it enabled the popular activities of media consumption and gaming. To the extent that consuming media and gaming, meets a number of developmental goals, this challenge will likely remain popular among young people without the financial resources (or desires) to purchase these media. The increased infringement reported by older participants may also reflect that, over the years, more of them have developed the cognitive and technical skills to enable infringement (compared to younger and more novice users).

#### 6.4.6. Time-management problems

The time-management issues discussed in the qualitative phase were also very much in evidence in the quantitative data, with around a third of participants reporting this challenge. I have been unable to identify contemporary published research that has investigated this prevalence of this challenge among populations of young people in English speaking nations (cf., Taiwanese research by Li & Chung, 2006).

Interestingly, the current results revealed no significant gender differences for this challenge, despite the differences previously discussed regarding differential cyberspace activity by males and females (e.g., within gaming and communicating activity). Together, these findings suggest that different and/or multiple activities in cyberspace may be associated with time-management challenges for males and females. This is supported by the qualitative analysis, which demonstrated time-management problems associated with a number of activities, including gaming, communicating, and surfing/researching information.

The data does, however, demonstrate significant differences among age groups for this challenge. Time-management problems were more frequent among older participants than younger ones. While this finding could be interpreted to suggest that as adolescents age, their ability to manage time resources, decreases, this seems counter-intuitive given the cognitive gains of this period. Ironically, the increased reports of this challenge by older participants could instead reflect gains in cognitive development, which may enable older participants to take a different perspective, and think critically about their behaviour, and acknowledge time-management issues that they may not have been able to identify at an earlier age.

Additionally, this age-related challenge could reflect the fact that as young people age, time-management may simply become more complex and more challenging. Such complexity may arise from the increased work, school, and family responsibilities and tasks, as well as more qualitatively complex tasks that older young people need to juggle. Such increases in task complexity and volume still occur within a developmental period, which also demands time for the normative developmental tasks (e.g., identity and autonomy development). Thus, the increased work-load experienced by young people, in addition to the general time requirements of adolescent development, may cause more time-management problems for older participants relative to younger participants. Additionally, to the extent that time-management generally becomes an issue in older adolescence offline, cyber-related time-management problems may also simply represent a further dimension in which these problems may manifest.

### 6.4.7. Production of inappropriate digital footprints

Reported by half of the sample, this was the second most common challenge reported by participants. This matches the figure in the EUKO review (Livingstone & Haddon, 2009) and the UKCGO study (Livingstone & Bober, 2004), though it is around 16% higher than the 2005 YISS2 result (Wolak et al., 2006). The current data however demonstrated that within these digital footprints, twice as many NZ participants (compared to UK participants) reported having posted their phone numbers publically in cyberspace. To the extent however that the NZ data was collected three years after the UKCGO study, this increase may partly reflect the rise of Web 2.0 and social networking technologies (as well as mobile phone ownership) over that period. Web 2.0 environments ease users to produce profiles and publish content, including personal information (which may include their mobile phone number now that they finally have one).

While UK (e.g., Livingstone & Bober, 2004) and USA (e.g., Lenhart & Madden, 2007b) data demonstrated gender differences in this challenge, with slightly more males reporting such activity than females, the current data revealed no age or gender differences in NZ for this activity. However, detailed analysis revealed that male participants in the current study were significantly more likely to report having posted their phone numbers and home addresses publically, compared to female participants. Conversely, female participants were more likely to report posting sensitive information, that they would not want someone who did not like them to find, along with identifying information about themselves.

The gendered specifics of this challenge raise significant issues. Young men in NZ seem more willing to post their contact details, while young women seem more likely to publish sensitive information about themselves. The reasons for these differences may be multiple. Young women may be more cognisant of safety messages, about their vulnerability to sexual assault, that tie the provision of contact details online to abusive situations (Cassell & Cramer, 2007). Males conversely, who may not be targeted as frequently by such concerns (relative to females), may not believe they are likely to face sexual harassment challenges (Scarce, 1997). Conversely the increased publication of sensitive information and identifying information by females, may not necessarily represent that they are less fearful of such information, or that they are not as constrained about publishing it, as males, but may instead simply be a function of their increased communication in cyberspace relative to males. With more females reporting publishing more content, and communicating more often, than males in cyberspace, the chances that they may publish sensitive information may be increased, and to some extent this may also underpin their increased reports of this challenge.

Although this challenge was not amenable to the distress measures used in the second phase of the research, it may be viewed as a factor that can contribute to distress (i.e., a challenge that may produce [distressing] cyberbullying, harassment, sexual solicitation, and even unwanted face-to-face encounters).

It is also important to note Mitchell, Wolak, and Finkelhor's (2008) YISS2 findings, which demonstrated that the publication of contact information may not necessarily be associated with challenge. Instead, Mitchell et al. argued that it depended on how that information was received, and how young people interacted with those who receive it. Thus, while they cautioned that prevention programmes "…need to alert youth to the fact that displaying their feelings and activities online may open them up for receiving nasty and sometimes threatening actions from others, even their friends" (Mitchell et al., 2008, p. 292), they pointed out that other factors (e.g.,

communicating with strangers) were much more predictive of aggressive sexual solicitations, than the simple provision of contact information, as it is the interaction with such personal information that produces challenge:

> Although posting personal information could play a role by, for example, giving offenders knowledge about a potential victim's interests that can be used to begin an interaction, it is the interaction that creates the environment that enables the crime to unfold. (Mitchell et al., 2008, p. 291)

### 6.4.8. Meeting strangers

As was suggested by the qualitative analysis and discussion, the numbers of young people who reported meeting up with 'strangers', in the quantitative phase, were small in number (11.4% in total). The quantitative findings supported the qualitative analysis to show that around half of new people met by participants were already known to their offline social networks. These findings mirror similar figures from the UKCGO (7%) and EUKO (9%) studies (Livingstone & Bober, 2004; Livingstone & Haddon, 2009) to show that only around one in ten young participants reported meeting up with a stranger in the prior year.

The small number of young people reporting this challenge stands in stark contrast to the primacy of this issue in some parents' accounts of Internet concerns (e.g., see Valentine & Holloway, 2001, whose analysis examines such fears among UK parents). Such fears may be fuelled by media accounts of cyber-stranger danger that situate this challenge as a primary Internet safety concern (Potter & Potter, 2001; Wolak, Finkelhor, Mitchell, et al., 2008). Unlike the YISS2 study, which found that older participants were more likely to encounter this challenge (Wolak, Finkelhor, Mitchell, et al.), the current study found no age differences. This may mean that developmental tasks associated with older adolescence (like sexual intimacy and exploration – e.g., Wolak, Finkelhor, Mitchell, et al.) did not produce more of this challenge than did the desires for social connection and friendship, experienced by younger participants.

### 6.4.9. Summary

These findings demonstrate that young people experience a range of challenges in cyberspace. The fact that two thirds (67.5%) of young people reported at least one experience of one of these challenges, and just over half (54.6%) experienced two or more of these challenges, highlights that such challenge experiences are normal. Even an experience of one of the "high-profile" challenges associated with mainstream media concern (i.e., cyberbullying, exposure to [unwanted] sexual content or disturbing content, unwanted sexual solicitation, or meeting up with 'strangers'), was reported at least once by two thirds of participants (64%). Young people are, on average, likely to experience at least one high-profile challenge in cyberspace in an average year.

The findings highlight some age and gender differences. Such patterns likely reflect aspects of adolescent development. For instance, biopsychosocial development that enables sexual activity and produces sexual curiosity, desire, and intimate relationships, may to varying degrees be associated with experiences of some of the sexually-themed challenges above (e.g., exposure to sexual content). Similarly, the increased time socialising with peers that adolescence is associated with, requires friendships, communication to maintain and develop such friendships, and the cultural currency with which to produce and maintain such friendships. These normative activities however also produce opportunities for challenge. For instance, communication in cyberspace enables young people to potentially experience cyberbullying, as well as the opportunity to meet strangers, and publish sensitive information, in cyberspace. Similarly, as adolescence is a time of increasing

responsibility and task-management, it is also not surprising that time-management issues may arise at this period. The normativity of challenge in cyberspace is likely to be driven by these normative aspects of adolescent development as well as by those motivations listed at the beginning of this challenge section.

## 6.5. Distress

As was noted in Section 4.4.5, distress is important to the extent that it serves as a proxy measure of harm from challenge (Hasebrink et al., 2008). While experiences of challenge in cyberspace were reported by the majority of survey participants, experiences of distressing challenges were not. Only around half of particular challenge experiences (i.e., being targeted with cyberbullying, unwanted sexual content exposure, unwanted sexual solicitation, other inappropriate unwanted content exposure, and time-management problems) were associated with distress. In total only 31.7% of the full survey sample reported at least one experience of a distressing challenge, and only 12.2% reported two or more distressing challenges, in the past year.

Post hoc analysis revealed that while increased activity in cyberspace was related to increased challenge, it was not related to increased reports of distressing challenge. While activity in cyberspace necessarily presents challenge (Livingstone & Haddon, 2009), increased usage may well equip young people with skills to manage this environment better. This point was also raised by Mitchell, Wolak and Finklehor (2007) who postulated:

> On the one hand, one might expect that as youth use the Internet environment more frequently and intensively, exposure to perils in that environment would inexorably rise. The increasing media attention to Internet dangers certainly conveys the impression of a growing menace [1–3]. On the other hand, the dangers of new technologies are sometimes exaggerated. It may be that as youth grow more familiar and educated about the Internet and its problems, they become less vulnerable. (p. 116)

The current data support this contention, highlighting that young people who conducted many frequent cyber-activities were slightly less likely to report distressing challenges than those who did not. Higher users of cyberspace may have developed skills from their increased use, which enabled them to avoid distressing challenges, or not be distressed by such challenges. While the association is too small to be significant (-.07) it nonetheless indicates that increasing activity in cyberspace is not associated with more distress.

The following parts of this section will discuss the six forms of distressing cyber-challenge assessed in the quantitative research, beginning with cyberbullying.

### 6.5.1. Cyberbullying

With 524 participants reporting an experience of cyberbullying (on either the Internet and/or mobile phones) and 52.9% of them, reporting that it was associated with distress, this was the most significant distressing challenge by volume.

As noted in Chapter 3, the YISS2 study reported that around a third of participants who had been cyberbullied on the Internet, said that the experience caused significant distress (Wolak et al., 2006). This figure was significantly smaller than the 48% of the current sample who reported that their experience of cyberbullying on the Internet was distressing. However, the YISS2 study used a slightly stricter criterion for distress. Interestingly, YISS2 also showed that female participants were twice as likely to report distress from such

cyberbullying as were males (at 68% vs. 32% respectively). The analysis revealed similar findings for the current study, with odds ratios demonstrating that female participants were twice as likely to report experiencing distressing Internet cyberbullying compared to males. To the extent then that the current sample included more females than males, and as such females may be more likely to report distress from this challenge, this may also explain some of the higher level of distress reported by the current study.

Interestingly, although the qualitative research participants suggested that cyberbullying via mobile phones would be more distressing, the total levels for cyberbullying-distress on this modality were only around 5% higher than cyberbullying via the Internet. The data then did not support the supposition that mobile phone cyberbullying distress would be significantly worse than Internet cyberbullying distress. However, odds ratios demonstrated that older females were still twice as likely to report distress from cyberbullying on mobile phones compared to older males. Conversely, no gender difference was revealed among younger participants for this distressing challenge. Features associated with female aging and development may therefore play a role producing disproportionate distress, in older females, for this challenge, relative to the other study groupings.

As Leckie (1997) reported in her study of girls' bullying behaviour, the presence of female gender differences in distress could also represent the fact that female bullying may often involve the divulgence of secrets by former friends. To the extent that bullying situations among older girls may involve more years of shared-secrets, and increasingly very sensitive secrets (e.g., about romantic relationships and sex), compared to much fewer, and potentially less socially meaningful secrets of younger females, bullying among older females may be more distressing when such serious confidences are betrayed. This feature may account for the high level of distress associated with forms of cyberbullying that involve rumours being spread about participants. Additionally, to the extent that older females know their friends better and know their weaknesses better, such knowledge, and the high proportion of friends reported to be involved in mobile phone bullying experiences, may combine to make mobile phone bullying among older females particularly more painful (and therefore more distressing) than bullying for males and younger females.

Alternatively, to the extent that certain discourses prevent males from occupying victim identity positions (e.g., see Connell, 1995, for discussion about hegemonic masculinity), it may be very difficult for some males to report that they were a victim of distressing cyberbullying. Instead, it may be more palatable to say that they experienced bullying but shrugged it off because they were too tough to be affected by it. Conversely, females, in contemporary Western society may have more opportunity to occupy victim positions (though, such identities may not necessarily be desirable for many women either). To the extent that males are unable to report distress, compared to females, such gender differences may explain some of the differences described here.

The current study also investigated a range of factors that had previously been identified, or hypothesised, to be associated with cyberbullying distress (Cross et al., 2009; Shariff, 2008). The findings confirmed that cyberbullying can involve a diverse range of bullying forms. Although the power of the quantitative multivariate results were limited, the final models demonstrated that factors associated with distress on mobile phone and Internet cyberbullying were different, supporting the earlier supposition that these phenomena are distinct.

While female gender was significantly associated with distress over both Internet and mobile phone modalities of cyberbullying, distress on mobile phones was predicted by reports of receiving mean and nasty comments and by experiencing other mean and hurtful things "not via that technology" (e.g., potentially being harassed face-to-face or via the Internet). Conversely, distress associated with Internet cyberbullying was more likely to be

associated with indirect aggression in the form of rumours being spread about the target, and the experience of other mean and hurtful bullying experiences via that technology (that did not include the range of direct and indirect aggressive bullying forms listed in the question). The experience of multiple forms of Internet cyberbullying was also found to be associated with distress, which reflected a similar finding from YISS2 demonstrating that increased frequency of bullying predicting distress (Ybarra et al., 2006). Conversely, the analysis was not able to identify a relationship between multiple forms of mobile phone bullying and distress.

The differential forms of distressing cyberbullying may partly reflect aspects of the various cyber-modalities. The utility of mobile phones for direct communication may make them more effective as a tool for direct verbal aggression rather as a tool for indirect aggression. Conversely, the Internet, which easily enables public sharing of information (compared to the one-to-one nature of mobile phones), may enable more effective indirect aggressive opportunities and make such forms of bullying more distressing in Internet bullying situations.

This contention is supported by the fact that mean comments were not even a significant univariate predictor in Internet cyberbullying distress. This finding may represent the fact that many mean and nasty comments online can be blocked. Conversely, in order to harm someone on the Internet, where blocking bullying messages is easy, the bullying producer may need to go to extra efforts to effect harassment. For instance, such efforts may include employing a range of aggressive strategies, including indirect aggressive tactics, to harm the target.

The identity features of bullying producers has been hypothesised to be associated with distress (Shariff, 2008). The fact that around half of mobile cyberbullying producers, and 40% of Internet cyberbullying producers, were at the same school as the target, shows that nearly half of the participants who were cyberbullied could also experience face-to-face bullying from these people at school. This finding has significant implications for NZ schools especially concerning the fifth National Administrative Guideline, which states that all students should expect their school environment to be safe and supportive (see Section 6.8.2 below).

Around 60% of cyberbullying producers on mobile phones, and 40% of the cyberbullying producers on the Internet, were friends or ex-friends with the target, at the time of the bullying experience. Wolak et al., (2006) reported that 44% of Internet-based harassers in the YISS2 were also “offline friends or acquaintances of youth”. As noted earlier, these findings suggest that nearly half of all cyberbullying situations involve bullying from people who have some (or significant) knowledge of the target. The high level of such friend involvement in bullying may reflect aspects of normative adolescent development, which sees young people developing tight social connections amongst peers as they separate from family. Given that adolescence will see young people spend significant time with peers (Larson et al., 1996), and given that adolescence is a time of exploring and testing opinions, ideas, morals, and values, such development may test, strengthen, weaken, and even end, existing friendships. Some of these friendship breakups may become bullying situations and explain the high proportion of friends as producers of bullying.

As adolescence often involves exploring sexuality and intimacy (Diamond & Savin-Williams, 2009), the disproportionate involvement of “friends” in bullying situations may also represent the consequences of relationship transitions where friends begin relationships with others in their peer groups (including friends’ former boyfriends or girlfriends). Anecdotally, around a third of calls I answer on *NetSafe*’s helpline have been from young people whose ex-partners, ex-partner’s friends, or friends of their ex-partner’s new partner, are involved in harassing them (or their new partner) about [aspects of] the previous relationship. Thus while the

results only showed that around 10% of young people were harassed by a current or ex-partner, the large amount of "friend" harassment may represent these issues as well.

One of the unique concerns associated with cyberbullying, articulated by a recent handbook and review for schools on the topic (Shariff, 2008), is that its potentially anonymous nature can make it more distressing. This assumption rests on the idea that the anonymity of the bullying producer can be used to further inflate their power and thus make the experience even more disempowering and distressing for the target. However, the survey findings do not support the hypothesis that anonymous bullying is associated with more distress.

Instead, this may reflect that a large amount of bullying was conducted by [ex-] friends or [ex-] boyfriends/girlfriends, and/or people at the target's school. When bullying is about exercising one's power [to produce hurt, harm, and control] over another (e.g., see Rigby, 2007, who explores bullying motivation), the lack of association of anonymity with distress may reflect that some people who bully others want their targets to know who is in control/responsible for this abuse. This would explain why anonymity per se is not necessarily associated with disproportionate distress. It would also explain why campaigns of bullying involving multiple forms of bullying (and thus multiple attempts at harm) were more likely to be associated with distress.

#### 6.5.2. Unwanted sexual content

Just over a third (38.5%) of all participants who experienced unwanted sexual content exposure ($n$ = 452) reported distress. This was higher than the quarter (or so) of participants in the UKCGO and YISS2 studies who reported distress, in response to this challenge. The qualitative data indicated that this distress may represent a range of aspects. Distress may be associated with the actual content itself (e.g., particularly graphic material), and/or the fact that the content is often unexpected, and the shock of exposure can produce distress. Such exposures can also be produced when young people are targeted with harassment, and such harassment may also be responsible for some distress. Additionally, the focus groups highlighted that adult anger, and sanctions, about sexual content exposures, may also produce distress. Finally, a number of phase two participants said that particular types of sexual content were disturbing (in response to the "other inappropriate content" question). This suggests that for some participants, unwanted sexual exposure may not mean exposure to unwanted sexual content per se, but exposure to forms of unwanted sexual content (e.g., bestiality, sexual violence).

Younger participants were more likely to report distress, than older participants, for this challenge. The lower levels of distress reported by older participants may represent the fact that by the time such students were older, they had skills to manage such content and minimise their distress. The qualitative findings demonstrated that most participants could name historical experiences where they had experienced such exposures. As this survey was a snap shot over a 12 month period, and as a third had already seen such content in this year, it is logical that by the time they are older, more young people may have seen such content, and may be relatively less shocked and/or distressed by it, thus accounting for age differentials in distress. Alternatively, if distress was produced because of fear of negative adult reaction, the decreased distress reported by older participants may reflect their increased ability to address problematic adult reactions to such content exposures, and/or their ability to source ICT access elsewhere, and avoid negative effects from sanctions.

### 6.5.3. Unwanted sexual solicitation

Four out of ten participants (39.2%), who reported unwanted sexual solicitation (*n* = 265), said that the experience was distressing. This proportion of distress is just higher than the third reported in YISS2 (Wolak et al., 2006). The qualitative data indicated that distress here may be associated with a range of things, including shock around unwanted exposure to sexual content, the fact that the act of unwanted solicitation may conceptualised as harassment by the participant, and/or distress that such solicitations may incorrectly imply that the participant is sexually interested in the producer of the sexual solicitation (e.g., see Extract 72 on page 118).

These reasons for distress reflect those seen for cyberbullying and for unwanted sexual content exposure, with post hoc analyses revealing the distinctiveness of this challenge compared to these two challenges. In contrast to distress from unwanted exposure to sexual content, this challenge did not become less distressing as participants aged, suggesting those who faced this challenge were not necessarily able to learn skills to avoid serious incidents of this challenge and/or were not less shocked or distressed by such incidents as they aged.

Secondly, the fact that no gender differences in distress were identified highlights that this challenge is very different to cyberbullying challenges, which were heavily predictive of female distress relative to male distress. Male participants who reported this challenge were equally as likely as female participants to report distress. This may represent that this challenge is equally distressing for males as females, and/or that it is more socially acceptable for males to be distressed by cyber-sexual solicitations, in comparison to cyberbullying. Unlike cyberbullying, such solicitations, which are usually produced by other males (Wolak, Finkelhor, Mitchell, et al., 2008), will, by their very nature, involve homosexual solicitation. To the extent that homosexuality is viewed negatively by young men in Australasia (Fenaughty, 2000; Hillier, Turner, & Mitchell, 2005), the very implication of homosexuality, may be enough to produce distress for some males (and/or enable them to claim distress).

### 6.5.4. Exposure to inappropriate [non-sexual] content

While not necessarily a common challenge (with around one in ten participants reporting it), this was the challenge associated with the highest proportion of distress (63.1%). However, this relatively high proportion of distress may reflect the nature of the item to begin with (i.e., content that had made them feel “uncomfortable or upset”). The data indicated that around 6.8% of the full sample reported such distress, mirroring results from the BSA study of 12- and 13- year-olds, quoted in Chapter 3, which reported that 8% of participants with Internet access reported seeing similar content (The Broadcasting Standards Authority, 2008).

The data from both phases of the research highlight that such disturbing content could include a range of material. Themes of violence and gore were prominent, as were sexual themes within such violence, highlighting that content, other than sexual content, may be distressing. Furthermore, while some focus group participants could clearly recall historical incidents when they had seen inappropriate content, the fact that the level of reported distress associated with this challenge, did not diminish with age, suggests that experience, maturity, and any age-related increases in critiquing the authenticity or purpose of such media contents, did not correspond to a decrease in distress. This suggests that this challenge may remain disturbing as young people age—and judging by the content mentioned in Sections 3.2.7 and 5.3.10, such material may also produce distress in adults as well.

The fact that this challenge remains equally distressing, as young people age, may also reflect a qualitative change, in the nature of this challenge, as young people age. The focus group data indicated that historical inappropriate content often involved accidental exposures to images of death and destruction, whereas later inappropriate content also involved communications with people who practiced self-harm (e.g., see Whitlock, Powers, & Eckenrode, 2006, for a fuller account of this phenomenon) and prejudice (e.g., racism—see B. Tynes, Reynolds, & Greenfield, 2004, B. M. Tynes, 2007 for USA accounts of racism within chat rooms presumed to include young people). While forms of inappropriate content involving exposure to [fake] violence and gore may become less distressing, as young people age, this drop off in distress may nonetheless be obscured by other forms of inappropriate content. Further research into the specific nature of inappropriate content across the lifespan could assess this.

#### 6.5.5. Time-management problems

While time-management problems were the third most common challenge, only a quarter of these reports were associated with distress. Post hoc analyses found that older males were more likely than older females to report that this challenge was distressing. However, larger numbers of younger males found this challenge distressing compared with younger females. The gender differences in this challenge may be explained by the activity findings, as time-management problems are likely to be linked to the activities that young people reported undertaking. The gender differences in distress from this challenge may reflect the different value accorded to the activities disproportionately undertaken by each gender.

As discussed in phase one, female time-management problems may involve problems time-limiting communicating activities. However, by producing social connection, and the range of positive developmental aspects that flow from it, time-management problems associated with this activity may not be viewed as negatively as time-management problems associated with other activities. Conversely, male time-management issues may be produced by the activities that they conducted frequently, which included gaming and sexual content consumption. Such activities, which may not be as beneficial for development as communication, may also be viewed negatively by male participants (or adults), and thus be associated with distress for “wasting time” on such pursuits. Further research, exploring which specific activities are viewed as distressing, within this challenge, would address this.

#### 6.5.6. Meetings in person with strangers

Not only was this the rarest challenge reported by participants (at only 11.4% of the full sample), but with only 7% of those (i.e., 12 participants) reporting distress, this was overwhelmingly the smallest distressing challenge by volume. As noted earlier, the small numbers of young people reporting this challenge make it impossible to explore significant age and gender difference here. However, these small numbers in themselves highlight the rarity of this as a distressing challenge. A number of factors could explain this finding. It may well be that years of stranger danger and Internet safety messages about not meeting up with ‘strangers’ has resulted in the prevention of distressing meetings for young people. However, the fact that one in ten of the sample met up with a stranger in the past year, suggests that there are still a sizable minority who meet ‘strangers’ and are not distressed as a result of such meetings. It may also reflect the fact that such meetings may be a lot safer than was previously thought. While such meetings can enable physical abuse, the rarity of this challenge, and the

rarity of distress associated with it, underscores other researchers' pleas that this issue be framed as potentially serious but rare (Wolak, Finkelhor, Mitchell, et al., 2008).

### 6.5.7. Summary

Whereas challenge is normative, the above sections highlight that distressing challenges are not. In fact, in only around half of all cases are most challenges experienced as distressing. The analysis indicated that cyberbullying is the most significant distressing challenge by volume, and that certain forms, and producers, of cyberbullying may be more distressing. Distress from unwanted exposure to sexual content was the second most distressing challenge by volume. Such distress may represent different things for different people, and the responses to the inappropriate content question suggest that only particular forms of sexual content may be unwanted for some participants. Interestingly, while little research to date explored time-management problems, this was the third most distressing challenge in this sample by volume. Inappropriate [non-sexual] content challenges and sexual solicitation challenges were reported by around 10% of the full sample, while distressing in-person meetings with 'strangers' were exceedingly rare. These findings, build on the previous sections, to suggest a range of implications for theory, practice and future that will be discussed in Section 6.8.

## 6.6. Managing Distressing Challenge

The prior sections synthesised findings from both research phases and relevant literature to explore the nature of a range of cyber-challenges. Many challenges varied in their distribution by age, gender, prevalence, and distress. Table 12, Table 13, and Table 14 in Chapter 5 demonstrated further differences (and similarities) in how such distressing challenges were managed and resolved by participants, revealing no "silver bullet" associated with the successful resolution of all these challenges. This no doubt reflects the fact that these challenges are unique and that young people use multiple, and various, strategies to manage them. This section will discuss this management and focus on features that distinguished the resolution of distressing challenges from those that were not resolved. This section begins by discussing adult-help seeking, before addressing the other personal characteristics and management strategies associated with distressing challenge resolution.

### 6.6.1. Adult help seeking and support from family, other adults, and parents and caregivers

Higher scores on the Adult Help Seeking Efficacy scale were, out of all the management strategies and personal characteristics, the most likely to be associated with resolution of the most categories of distressing challenges. A higher score on this scale was associated with resolving distressing cyberbullying, exposures to disturbing content, and time-management problems. Fascinatingly, reports of actual adult support were not positively associated with resolution of these challenges.

This finding may reflect that young people who were adept at adult help seeking have previously used adult help seeking skills, to learn from adults about managing distressing challenges. This knowledge may have improved their future management of challenge situations, and enabled them to resolve challenges better, whilst not requiring adult support. This may mean that adult help seeking ability is significant because it is correlated with their ability to manage challenges (that they have developed in conjunction with prior adult assistance), while their current use of adult support remains insignificant.

Alternatively, as the adult help seeking scale measured the competence with which young people were able to engage adults (to get the specific help they need), the findings may represent that young people who were low in adult help seeking ability, may still seek out adults for help, but not get the help they need from them. Conversely, those high in adult help seeking ability may be more able to get the desired help they need from adults, thus making adult help seeking the significant variable and the actual social support from adults insignificant.

This second point is strongly supported by the qualitative research, which demonstrated differences in how adults supported young people, with some young people positive about such support and others significantly less so. For instance, participants could talk to an adult about a challenge and receive desired responses (e.g., attentive listening and support) or undesired responses (e.g., "drama" and technology sanctions). The findings suggest that it is not adult support per se that is critical, but the quality of the adult support that is most predictive of resolution. This contention is further supported by the finding that social support from other adults, actually decreased the likelihood of resolving distressing Internet cyberbullying challenges, and was not predictive of any resolution of other distressing cyber challenges. Thus while resolution of Internet cyberbullying was predicted by higher adult help seeking scores, actual other adult support was, in this case, preventative of resolution.

While this finding may reflect the action of third variables (e.g., a complex bullying situation, which may be harder to resolve, and may be associated with young people turning to other adults for support), it may also reflect that other adults are often unhelpful in managing distressing Internet bullying experiences. Section 3.4.1.3 supports this finding, and quotes ACBPS results showing that around half of all school interventions in covert bullying for Year 8 and 9 students results in a worse or unchanged situations for them (Cross et al., 2009). In sum, the evidence indicates that the range of adult support, including other adults, parents, and family supports, are likely to be heavily mediated by the quality of such support and not necessarily associated with resolution (especially in the case of other adults).

### 6.6.2. Social self-efficacy and support from peers

In contrast to adult help seeking, peer social self-efficacy was not associated with resolution of a distressing challenge. This result dovetails with the fact that actual levels of peer support were also unrelated to distressing challenge resolution. These findings suggest that a high level of peer social self-efficacy is unrelated to resolution, because peer support per se is unrelated to resolution. The fact that this factor is unrelated likely reflects that it, like the other forms of social support, is mediated by the quality of peer support. For instance, the qualitative data found that peers advised friends to ignore bullying, however Section 6.6.4 (below) demonstrates that such advice will be largely unhelpful (or will potentially hinder) successful resolution of some challenges. To the extent that some peers offer problematic advice or support, while others provide helpful assistance, the quality of this support, rather than the presence of the support, may be the significant feature and explain the insignificance of peer support findings.

Additionally, the high levels of support from peers, relative to the level of support from other sources, may simply represent the fact that peers are often present when challenges are produced in cyberspace. The popularity of peer support as a management strategy may reflect that peers may not necessarily be explicitly sought out and consulted with following a challenge, but rather may simply be present when a challenge occurs (and offer incidental support). If knowledgeable peers are sought out for advice, while less knowledgeable peers are

simply present when a distressing challenge happens, these varying peers may explain why peer support per se would be unrelated to resolution and why the quality of peer advice would be more significant.

### 6.6.3. Family support and support from parents and caregivers

The results for family support and actual support from parents and caregivers reference both discussions above. Neither family support, nor actual support from parents and caregivers, was associated with resolution. This finding may reflect that while adult help seeking is useful, around half of parental reactions are not associated with resolution. Similarly, siblings, like other peers, seem as likely to provide helpful, as unhelpful support. These reasons may explain why results from family support scale measures, as well as actual support from caregivers and peers, were unrelated to challenge resolution. Combined with the insights above, this finding again highlights the significance of the quality of such support, rather than the presence of such support per se.

### 6.6.4. Self action: Ignoring

Ignoring was the most popular management strategy reported over the range of distressing challenges. However, in the two instances where it was significantly predictive of resolution outcomes, it was a negative predictor (i.e., it was associated with less likelihood of resolution). This reflects the findings and discussion from Section 3.4.3, which demonstrated that ignoring, while promoted by young people, was often insufficient as an effective management strategy, for a range of challenges (especially cyberbullying). Reflecting these findings, the current data found that young people, who reported ignoring cyberbullying on mobile phones, were half as likely to report resolving this distressing challenge, than young people who took some action. While third variables (e.g., the complexity of the bullying situation) may play a role in explaining this relationship (i.e., complex bullying situations may be difficult to resolve and become overwhelming, leading to an ignoring response), this situation could also represent the fact that by ignoring the bullying, the harassment continues and potentially escalates to eventually exacerbate the seriousness and complexity of the issue and precipitate subsequent reaction (e.g., physical confrontation) anyway.

While ignoring was unrelated to the resolution of Internet cyberbullying, it was negatively associated with the resolution of distressing exposures to inappropriate content. Participants who reported ignoring distressing inappropriate content challenges were only a third as likely to report resolving this issue compared to those who did not ignore it. These findings, combined with the qualitative data and review, indicate that ignoring is a problematic response for both mobile phone cyberbullying and exposure to inappropriate content, and is not positively associated with resolution for any other types of distressing challenges.

### 6.6.5. Self action: Technical solutions

Although self-action via technical solutions was often mentioned in the qualitative research, this strategy was only predictive for the resolution of unwanted sexual content exposures. Banning and blocking such content (and people), as well as reporting such experiences to online services, was associated with a more than two-fold chance of resolving this issue. The qualitative research phase and discussion highlighted that pop-up blockers were favourably viewed by participants, because they blocked unwanted sexual content produced via unwanted pop-ups, encountered whilst surfing the Internet. Pop-up/spam blockers were also associated with a 59% lower odds of reporting unwanted sexual content exposures from home computers in the YISS2 study (Ybarra,

Finkelhor, Mitchell, & Wolak, 2009). Additionally, at other points in the focus groups, participants talked about unwanted exposures to sexual content via instant messenger conversations. The ease of blocking on most instant messenger applications presents participants with a management strategy for this challenge, and a way to prevent further distressing exchanges with the producers of unwanted sexual content.

#### 6.6.6. Self action: Confrontation and fighting

Confrontation and fighting responses were only predictive of resolving distressing sexual solicitation challenges. By responding in this way to sexual solicitation, participants were over five times as likely to report resolving the situation, compared to those who did not confront and fight back against their harassers. The reason why such confrontation and fighting may be helpful for resolving this challenge (and not the others) may partly reflect that it is an interpersonal challenge, which makes it amenable to such interactions.

Interestingly, this strategy was not predictive of resolution of the other interpersonal challenges of cyberbullying on mobile phones and the Internet. However, confronting and fighting others was also not associated with exacerbating cyberbullying situations. The lack of cyberbullying resolution associated with this strategy may again reflect the quality of confrontation and fighting engaged in by participants. Confrontation could include telling someone that their behaviour was bullying and that they would seek assistance if it continued, or it could include physically fighting to resolve the issue. Potential differences in the form of this management strategy for cyberbullying may be associated with alternative outcomes, and explain why it is not associated with resolution (or not) of distressing cyberbullying.

#### 6.6.7. Gender

Female gender was heavily predictive (by a ratio of 7.7:1.0) of the odds of resolving distressing sexual solicitation. Controlling for confrontation and fighting, young women were significantly more likely to report resolution of unwanted sexual solicitations, than young men. A number of factors may account for this; as young women were more likely to be targeted by sexual solicitation (Wolak et al., 2006), they may have more historical experience at managing this challenge, and thus may be more effective at managing it. Additionally, to the extent that males are not enculturated with the suggestion that they (as opposed to women) may be targeted with sexual harassment (Scarce, 1997), such experiences may be particularly shocking and therefore distressing for them. Young men's lack of knowledge about managing such situations, and/or shame at being solicited, may make this issue particularly distressing and explain these observed gender differences.

#### 6.6.8. Age

Despite the increased cognitive ability and problem-solving skills that maturation can bring, increasing age was not associated with increased resolution of distressing challenges. In fact, for time-management problems, the only challenge where age was significant, increasing age was associated with a nearly fourfold decrease in likelihood of resolving time-management problems. The fact that age was not at all predictive of distressing challenge resolution, and that it was negatively associated with time-management problem resolution, may instead reflect the increasing opportunities, responsibilities, and freedoms that age can bring (Larson et al., 1996; Steinberg et al., 1993).

The developmental and opportunity changes that age can provide can enable young people to do more, and more complex, things (Kuhn, 2009). Such factors can enable older adolescents to become engaged with more complex, and therefore qualitatively different, challenges, to those faced when they were younger. Thus while they may have learnt how to manage previous challenges, the challenges faced when they are older may be different or more complex. Such novel challenges may produce similar levels of reported distress to previous challenges and obscure increased efficacy in challenge management.

Older young people's decreased resolution of distressing time-management problems may reflect that, as noted earlier, increased age may be associated with increased responsibilities and complex tasks. The increase in importance of this challenge, for older participants, relative to younger participants, may reflect the differential level of negative outcomes facing older students from this challenge. For instance, older participants probably face increasing academic demands compared to younger participants, and such demands often have increased consequences for older participants (e.g., externally moderated school examinations with significant implications for future opportunities), which may in turn exacerbate distress associated with this challenge.

#### 6.6.9. Summary

The findings highlight that the management of a range of distressing challenges often involves multiple strategies. The psychometric and social support findings indicate that quality of support, rather than presence of support, is likely to be a key factor in understanding the resolution of distressing challenges. The fact that age and gender differences were largely absent indicates that young people do not "grow out" of their potential to face distressing challenges, and that both males and females may face a range of distressing challenges.

## 6.7. Limitations

Section 3.4.5 summarised the key limitations of the qualitative phase of the research, including the action of social desirability biases. The second phase of the research shares these limitations, as well as additional limitations peculiar to quantitative social science analysis.

Survey research depends on the ability for the research process to sample the correct variables accurately. This process is influenced by the selection of participants for the research process. For pragmatic reasons (including costs, time-frames, and school resources) the current project sampled students in five diverse schools where there were staff members who could facilitate the research. It is unknown to what extent these schools represent the population of young people in NZ (e.g., concerning the place of ICT within school culture, the effectiveness of anti-bullying campaigns and policies in these schools, and non-school based young people, etc.). Therefore it is unknown to what extent these results accurately represent the prevalence and frequency of activity, challenge, distress, and resolution, relative to the population. However, by purposefully selecting diverse school communities, the project tried to reduce any systematic bias.

The current research, like most contemporary social science survey research, also relied on volunteers (and parents' and caregivers' permission for young people under the age of 16). If the characteristics of non-volunteers, differed significantly from volunteers, the results of the research may also face some bias. Similarly, given that around 8% ($n$ = 148) of the initial sample did not [fully or accurately] complete the survey, the results may also be limited if such participants had significantly different experiences to participants who did complete.

However, the current findings nonetheless compared well with those from around NZ and the world, and suggest that the sample is comparable to other surveyed populations of young people. Additionally, the use of mixed methods in the current study enhanced the contextualisation, understanding, and triangulation of the current quantitative results. Any results which were significantly at odds to the phase one findings could be identified and more carefully scrutinised.

As noted earlier, as the focus group data was produced within a group interview situation, it was particularly prone to social desirability bias. While the current survey was anonymous and confidential, participants may nonetheless have been wary about volunteering non-desirable information in the survey due to the impact such acknowledgements may have for aspects of their self-identity. To the extent that participants were unwilling to acknowledge their experiences of victimisation (either as a target [being "vulnerable"] or as a producer of harassment [being "mean"]), the current findings may underrepresent the proportion of young people reporting such challenges (Cross et al., 2009). Wolak, et al. (2007b) also noted that such social desirability biases may have limited disclosures of sexual content consumption in their phone interviews with young people. However, a recent USA review of this field advocated double blind and anonymous methodologies to minimise the action of such biases (Internet Safety Technical Task Force [ISTFF], 2008). This phase of research deployed such anonymous methods to minimise social desirability and maximise possible reports of sensitive information, however such biases may still have power, and the current results may underrepresent factors perceived by participants as socially undesirable.

Accurate analysis also depends on the quality of the survey tool and the data it can produce. The results of the current study may be limited by aspects of the survey questions. Similar to the first YISS (Mitchell et al., 2003), the current survey assessed the "most serious" challenge experiences. Therefore, the current survey may have underreported distressing challenges. For instance, if a participant experienced two instances of sexual solicitation in the past year and found both to be extremely upsetting, the current data only focused on one of these instances (i.e., the most serious one). To the extent then that participants experienced more than one of each form of distressing challenge, the current research is unable to indicate how many distressing experiences any particular participant may have had (although it can indicate which forms of challenges were distressing at least once). The implication of this is that some unknown number of the 528 participants who reported at least one type of challenge (that was measured for distress) may have experienced multiple distressing incidents of the same type of challenge. This suggests that the current analysis will underestimate repeated distress from a challenge, and thus underestimate total distressing experiences over the survey period, by an unknown degree.

The cross-sectional nature of the research means that it cannot determine causal relationships. Thus while it can demonstrate associations between key factors it cannot determine that one necessarily causes the other. This point was raised earlier, when considering the negative influence other adult support has on the resolution of distressing cyberbullying on the Internet. Correlational findings cannot determine if other adult support caused further problems or if such unresolvable challenges eventually mandated other adult support. To identify the reasons for such associations, the discussion has focused upon insights from the qualitative and other published findings. However, while such triangulation can offer plausible explanations, it is not definitive. Longitudinal research has significantly more power to determine the direction of significant relationships.

The small sample sizes produced for some of the relatively rare phenomena in the research reduced the ability to conduct particular statistical tests or to generate enough power to determine significance for some analyses.

The current analysis often used conservative statistical techniques to compensate for the non-normal distribution or small sample sizes. To the extent that these factors may have reduced the power to identify statistically significant relationships, a minority of significant relationships may not have been identified in the current analysis. Additionally, the limited ability for logistic regression analyses to predict strong $R^2$ values when faced with small sample sizes, meant that the current analysis may have underestimated the strength of the significant logistic regression results identified above. Future research may look to target some of these rarer phenomena (e.g., face-to-face meetings, male sexual solicitations, etc.) in detail.

While some topics did not produce enough analysable data, other constraints meant that some cyber-challenges were not assessed in the current project, including:

- Physical public health issues like exposure to radiation from ICT (e.g., as dismissed by Findlay & Dimbylow, 2010; van Rongen et al., 2004), problems from the physical use of ICT, such as repetitive strain injury (e.g., as moderately supported by Zapata, Pantoja Moraes, Leone, Doria-Filho, & Almeida Silva, 2006), or obesity concerns (e.g., as unsupported by Janssen, Katzmarzyk, Boyce, King, & Pickett, 2004).

- The significant and complex issues associated with exposure to hate material (e.g., as described by Millwood Hargrave & Livingstone, 2006; Tynes, 2007).

- Experiences of financial risks (e.g., Blinn-Pike, Worthy, & Jonkman, 2010; Griffiths & Parke, 2002, review the issues associated with adolescent gambling in cyberspace).

- The commercialisation of young people's cyber-media (e.g., as recently reviewed by the UK government - see DSCF & DCMS, 2009).

Additionally, as noted earlier, because the current research focuses on young people's experiences of cyberspace, it does not examine young people who did not participate in this setting. Given the many benefits and opportunities cyberspace can offer, notwithstanding its now normative status in the lives of nearly all NZ young people, such a project would likely reveal very important information about the factors associated with non-use of cyberspace (H. Green & Hannon, 2007).

## 6.8. Implications

The limitations above outline areas where some conclusions may be limited, or highlight the need for caution in interpreting the results. However, as noted, the analysis produced in the thesis, triangulated with reference to the qualitative and published findings, nonetheless calls for an assessment of the implications of these findings. In order to discuss these implications, this section will summarise the key findings as they apply to the model discussed earlier. The following sub-section will then outline the practice implications produced from these findings. This section will end by discussing the implications these insights raise for future research in this area.

### 6.8.1. Summary

The quantitative data and analysis supports the overall conceptualisation of the model proposed in the first phase of the research. Specifically, the quantitative analysis confirmed that:

- Challenge is associated with cyber-activity, with more categories of activity, and increased frequency of activity, positively associated with challenge.
- A range of cyber-challenges can produce distress.
- Distress is not necessarily associated with challenge.
- A high level of activity in cyberspace is not associated with increased likelihood of distressing cyber-challenges. High levels of activity are instead associated with a slightly smaller proportion of distressing challenges overall, supporting the contention that increased cyberspace experience increases the skills to avoid distressing challenges.
- Young people utilise a range of strategies to manage distressing challenges. Resolution of challenges depends on the quality of such strategies, not the presence of such strategies per se.

The developmental context of cyberspace, characterised by convergence, is normative for NZ young people:

- Nearly all NZ young people frequently participate in at least one category of cyber-activity.
- Aspects of convergence characterise the majority of participants' experiences of cyberspace.
- The "digital divide" for young people is more significant for quality access, rather than access per se.
- Ease of access to cyberspace, in addition to the ability to conduct such access outside of adult supervision, means that adult rules and sanctions have limited value.

Normative aspects of adolescent development intersect with the opportunities cyberspace provides to make cyberspace of critical importance to the overwhelming majority of young people:

- Popular activities in cyberspace are popular because of their ability to assist in aspects of adolescent development.
- Particular aspects of adolescent biopsychosocial development underscore the normativity of communication, research, and media consumption activities, in cyberspace, for all young people, as well as gaming for males, and the publication of online content for females and older males.
- The place of social connection within successful adolescent development combined with the ability for various activities in cyberspace to produce such social connection, underpins the popularity of these activities, as well as production of new friendships and relationships in cyberspace.

As much as experiences of challenge are a natural consequence of normative adolescent development, many challenges in cyberspace, are also normative:

- Around two thirds of young people experience at least one such challenge in cyberspace annually.
- Young people may face a range of challenges in cyberspace. All the challenges identified in the model were supported by the quantitative findings.
- Challenges associated with popular activities will be more common.
- Aspects of adolescent development that make particular activities more common also play a role in making challenges associated with those activities, more common.
    - For instance, the most common challenge, copyright infringement, is tied to various aspects of adolescent development, including social connection, cultural currency, and the collection of information, perspectives, and role models, et cetera.

- Age and gender differences in the prevalence of challenges reflect aspects of biopsychosocial development.
    - For instance, the increased sexual content exposure reported by males relative to females not only reflects adolescent biological sexual development but is likely to be mediated by social (cultural currency) and cultural (active male sexuality discourses) factors.
- Challenge is experienced by older as well as younger high-school aged people. Increasing maturity or experience does not result in an overall decline in challenge experiences.
- Some challenges may produce other challenges. For instance, the particularly common challenge of publishing inappropriate content publically in cyberspace may enable others to use such information in ways that may harm that person (e.g., cyberbullying).

Around half of the most serious challenge experiences are associated with distress. Such distress is likely to measure the extent to which a challenge is important, meaningful, and harmful:

- The most common challenges are not necessarily the most distressing.
- The most distressing challenges are not necessarily the most common.
- Cyberbullying and harassment is the most distressing challenge by volume.
    - The cyber-modality of cyberbullying is largely unrelated to distress.
    - The particular forms of cyberbullying are diverse, however only four predict distress.
    - Females are more likely to report experiencing cyberbullying. This may reflect the extent to which cyberbullying can involve indirect and relational aggression, which is overrepresented among young women.
    - Despite the ability for cyberspace to make the producer of cyberbullying anonymous, the overwhelming majority of young people are bullied by people they know. Significant amounts are bullied by other people at school, and/or [ex-] friends.
    - Females are more likely to be distressed by cyberbullying. This may reflect that indirect and relational aggression may produce more distress for females compared to males.
    - The experience of multiple forms of Internet cyberbullying is more likely to be associated with distress.
- Exposure to unwanted sexual content is the second most distressing challenge by volume. Distress from this challenge resulted from shock at discovering such material, the violent or offensive nature of some of this material, and/or fear of negative adult reaction to the presence/discovery of such material.
- Similar reasons account for the distress of other unwanted inappropriate content exposures, however the increased levels of distress associated with this content likely referenced the preponderance of violence and self harm themes that such material frequently contained.
- Time-management problems, though relatively more widely experienced, are not necessarily distressing for most young people.
    - The increased distress associated with males' time-management problems, may represent the devalued nature of the activities associated with males' time-management problems (e.g., gaming or sexual content consumption).
    - The increased distress older students report may reflect the increasing demands on their time and the increased importance of time-management for their success.

- The current analysis reflects other findings demonstrating that distressing face-to-face meetings with strangers are exceedingly rare (reported by only 0.7% of the full sample).

Young people use a range of strategies to manage, and resolve, distressing challenges. The quality of such interventions seems critical for successful resolution:

- The majority of young people use more than one management strategy to manage a challenge.
- Just under half report using social support to manage a distressing cyber-challenge.
- Peer support is the most popular social support for a variety of cyber-challenges. However, actual reports of peer support are not predictive of a distressing challenge resolution.
- Parental support is often only half as popular as peer support.
- Even for forms of distressing challenges where reports of parental support approach peers levels of support, actual parental support does not predict successful challenge resolution.
- Similarly, while other adult support is sometimes more popular than parental support, and for one challenge higher than peer support, it does not predict distressing challenge resolution.
    - Other adult support is associated with decreased resolution of cyberbullying on the Internet.
- Despite the findings demonstrating that actual adult support does not predict challenge resolution, high adult help seeking self-efficacy does predict challenge resolution.
    - The constellation of findings suggests that it is not adult support per se that is important for challenge resolution, but the quality of such support. Thus the ability for young people to solicit the form of support they need from adults emerges as the significant factor, rather than whether or not they receive any support from adults.
    - This implies a need to up skill young people to request effective assistance from adults, and to up skill adults to respond effectively to young people's requests for assistance.
    - The qualitative data and other findings highlight that adult responses that involve technology sanctions, "drama", and punishment, are not likely to be valued by young people.
- Similar quality issues are likely to underscore why the popularity of peer support for distressing challenges is not necessarily related to positive resolution—in some instances such support is likely to be counter-productive.
- Many distressing challenge management strategies involve a range of self-directed actions. This likely references the feature, and development, of independence, which characterises adolescence.
- Some distressing challenges are particularly amenable to technical solutions, which involve blocking websites, content, or abusive people.
    - However, some challenges are not amenable to such solutions because the technology does not enable such blocking (e.g., cyberbullying on mobile phones) or because forms of the challenge cannot be blocked (e.g., indirect cyberbullying on the Internet, where harassing comments are posted on someone else's [e.g., the bullying producer's] social networking site).
    - Current technical solutions only predict the resolution of distressing exposures to unwanted sexual content.
- Challenges involving interpersonal harassment (e.g., cyberbullying and unwanted sexual solicitation) are associated with young people fighting back and confronting the producer of harassment. Around half of young people fight back to distressing interpersonal harassment.

    - While fighting back does not affect the resolution of cyberbullying situations, it does predict the resolution of distressing unwanted sexual solicitation experiences.
- While ignoring a challenge is a common strategy used to manage a range of distressing challenges, this strategy is not associated with (or negatively predicts) challenge resolution.
- The quality of support and the quality of other intervention strategies, rather than the simple presence of either, is critical in producing resolution.

### 6.8.2. Practice implications

The following practice implications are produced with reference to the theoretical and empirical insights above. Consistent with the community psychology approach discussed in Chapter 1, these practice implications are aimed at a primary prevention level and focus on systemic changes rather than individualised approaches. As such, these practice implications target cybersafety organisations, practitioners, and policy makers.

The normative nature of challenge in cyberspace indicates that cybersafety organisations and practitioners need to continue to address the range of challenges (and distressing challenges in particular) that face young people. Given that preventing challenges is likely to be largely impossible in the unregulated and interpersonal environment of cyberspace, supporting young people's ability to manage such challenges is a key strategic approach to promoting confidence and safety in cyberspace.

Although increasing activity in cyberspace is associated with challenge, it is not associated with increased experiences of distress (i.e., the challenges that really matter). In fact, the slight negative relationship between increased activity and distressing challenge, suggests that limiting activity in cyberspace is counter-productive to equipping young people with the skills needed to manage distressing challenges. This means that cybersafety organisations should:

- Acknowledge that nearly all young people are using cyberspace and using it frequently.
    - The phenomenon of convergence has changed this context. Young people can do more things, from more places, more often.
    - The rapid diffusion of mobile wireless Internet devices (e.g., mobile phones that can web browse very cheaply) means that young people can conduct multiple activities in cyberspace, away from adult supervision or knowledge, at any time.
    - Because young people of high-school age can, and do, access cyberspace from a range of locations, limiting their activity at home or school will not prevent their access to cyberspace, but rather limit the amount of activity they can undertake within it.
    - Limiting opportunities to access cyberspace means that some will miss opportunities to "play" around with the technology and encounter some of these challenges in potentially supportive situations at home or at school. Such young people may be disadvantaged when they encounter such challenges later on. On the rare chance that they manage to avoid a challenge experience, young people with little knowledge of managing such challenges will be poorly equipped to assist friends and peers who encounter similar challenges.
- Normalise challenge in cyberspace and not consistently frame challenge as negative and necessarily distressing. Challenges are a normative part of development and bring with them critical opportunities for growth and learning (as well as harm and distress).

- As parents and caregivers and school adults affect the *quality* of cyberspace access, these adults need to be targeted to understand the value of cyberspace for development as well as the impossible task facing those who seek to effectively control young people's access to such diffuse technologies.
    - Traditional media outlets often focus on negative media accounts of young people's experiences of cyberspace. Promoting positive stories about cyberspace is important to redress this imbalance that potentially scares adults into limiting access to ICT.
    - Explain to adults (as well as young people) that distressing challenges are relatively rare and unresolvable distress even more so.
    - Educating adults on the importance of cyberspace to young people is critical. The myriad of developmental tasks met by activity in cyberspace are not widely different to the developmental tasks met by previous contexts of development. Metaphor may be useful to convey the importance of cyberspace to the current generation of adults. For instance, for the activity of communicating with peers, adults could be asked how they would have reacted if parents had said they could not use a landline phone, or go to the milk bar, but all their friends could. Similarly, on consuming media, how would they have felt if they were told they could not watch television, buy records, or read a book that their friends had all accessed?
- Intervention programmes need to include schools, school adults, and parents and caregivers, as well as young people.
    - As adults (and parents particularly) are not often perceived as ICT experts, their skills at problem-solving, listening, and empathising become more important to emphasise. Adults can acknowledge young people's knowledge of ICT and work collaboratively with them to resolve distressing challenges.
    - Given the growing independence of young people in adolescence, and the inability for adults to effectively control young people's access and activity in cyberspace, intervention programmes need to directly address young people as well as adults.
    - Intervention programmes should leverage the resiliencies and competencies that young people already evidence in this area (e.g., a number of current participants successfully resolved distressing challenges), to help their peers.
    - While the current project did not assess the role of other psychosocial stressors on challenge in cyberspace, compelling research from the YISS projects, indicates that young people facing a range of offline psychosocial stressors (including offline victimisation as well as rule breaking behaviour, aggression, and social problems), as well as those reporting numerous online challenges, are more likely to report challenge and require additional support and attention.
- Young people can only operate safely when their environment is safe. If cyberspace is lawless and deregulated (as it is), this will hinder young people's aspirations for safety.
    - This means that interventions increasing awareness of challenges will only help to prevent some, though not all, of the undesired challenge experiences (underscoring the normative nature of challenge) in cyberspace.
    - Comparisons of cybersafety with other safety issues and their interventions are problematic. For instance, road safety interventions occur within a context where roads are regulated (we drive on one side), controlled (by traffic lights), and monitored (by law enforcement) (Livingstone & Haddon, 2009). Cyberspace does not share such [consistent] characteristics.

- However, to the extent that regulation can identify what safer environments in cyberspace may look like, they may have value for cybersafety (e.g., see the principles for safe social networking produced by the European Commission, 2009).
- Regulation that overly restricts access or activity in cyberspace, or creates a negative perception of it in the minds of adults, may work against improving young people's resilience to cyber-challenge. This is because such regulation may prevent young people's access and activity, and thus prevent them from learning and responding a range to cyber-challenges.

While challenge experiences are not always distressing and harmful, in some situations they may be associated with harm. A range of advice and support can also be targeted directly at young people, schools, and parents and carers, about preventing, and/or managing, distressing challenges effectively:

- The fact that cyberbullying was found to be the most common distressing challenge makes it a priority for intervention programmes.
  - Nearly half (40%) of those reporting a cyberbullying experience said that the bullying producers were at their school. These findings, in addition to the fifth *National Administrative Guideline* for NZ schools (Ministry of Education), highlight the opportunity for schools to take a lead in preventing such distress, as well as promoting resilience and resolution to cyberbullying.
  - While cyberbullying affects all categories of young people, young women seem to be particularly vulnerable to cyberbullying and cyberbullying distress. Additional resources are required to address this challenge among young women. Schools with sizable proportions of young women may need to consider increased attention to this issue.
  - School interventions need to target older students as well as younger students, and not assume that this is only an issue only for the "junior" school.
  - The high levels of cyberbullying reported by younger high-school students indicate that interventions for younger students are still important. Additionally, these findings suggest that cyberbullying interventions are required for pre-high-school students to ensure that they are prepared for this challenge when they get to high-school.
  - Schools that acknowledge covert bullying and take steps to intervene in it (as highlighted by Cross et al., 2009) will address the many forms of indirect and relational aggression that cyberbullying can take and thus play a key role in decreasing young people's distress.
  - Young people need to have quality knowledge (and support) so they can assist friends (and themselves) to manage distressing cyberbullying experiences effectively.
  - The findings indicate that young people who score higher in adult help seeking self-efficacy are more likely to report resolving cyberbullying, as well as other challenges. Interventions should also focus on improving this skill set among young people.
  - However, young people who turn to adults for assistance for cyberbullying also require quality adult support. Programmes that directly target up-skilling adults on supporting young people to effectively manage [this] challenge, are critical. Such adults have significant power to be able to successfully intervene to produce positive resolution to bullying.
  - Programmes for peers need to include information about not dismissing cyberbullying as unimportant and/or advocating ignoring strategies. Instead such programmes could encourage them to identify "useful" adults who will realistically be able to effect resolution. In the case that

such adults are not able to be identified, or until such time as the bullying stops/intervention is taken, these young people need to know that as bystanders they can offer their friends critical support by affirming their value and self-worth as well as recognising the unfair, difficult, and/or hard situation they currently face.

- Programmes for adults need to make sure that adults receive the same information as peers, but also include additional actions that they can undertake to support young people. For instance, focus group findings suggest that positive adult support will include listening to and empathising with the young person, getting a sense of their level of distress, and asking them if there is anything they want them to do (including whether they would like them to offer options for resolving the issue). Of key importance is that adults do not "overreact" to disclosures of cyberbullying, disempowering young people by taking control of the challenge, and/or removing ICT access in the hope of protecting that young person. As noted earlier, removing such access is likely to reduce many positive opportunities for young people (including access to supportive friends) and may be a punishment rather than a support. Such suggestions could result in young people avoiding adult support for fear of losing such a valuable developmental tool/context.
- Adults should be aware that young people who face particular forms of cyberbullying (e.g., bullying comments on mobile phones and rumour spreading on the Internet) are more likely to be distressed. These particular forms of cyberbullying would also be useful for cyberbullying strategies to target.
- Similarly, young people who experience multiple forms of Internet cyberbullying are also more likely to be distressed. These findings suggest that participants who are targeted with cyberbullying on mobile phones and the Internet may also be more likely to report distress than those targeted on just one modality. People who work with young people who are consulted about an experience of cyberbullying should explore the extent of multiple forms of cyberbullying.

- Unwanted [sexual] content exposures were reported less frequently than cyberbullying, though they were slightly more likely to be associated with distress. These challenges also require attention.
  - Evidence suggests that such challenges may first occur before high-school age.
  - The lack of age-related decline in distress associated with these challenges, suggests that interventions need to include older students as well as younger students. The quality and type of distressing contents may evolve as young people age, suggesting that more research is required to identify what may be associated with distress among older students.
  - The success of technical measures in successfully resolving this challenge, combined with the finding that a number of participants did not use technical measures to manage this challenge, suggests that educating young people about the use and utility of such measures (e.g., pop-up blockers) may be an effective way to reduce, or prevent further, distressing exposures.
  - The data indicated the range of violent, harming, and hate content that some unwanted exposures can include. These aspects highlight the need for media literacy among young people. Such media literacy programmes can help young people ascertain the legitimacy of the media contents (for instance, many gory images may well be fake), consider the techniques and

purpose of the media message (to instil racial discrimination, etc.), and provide young people with resources to critique such messages and be more resilient to them.

- Jenkins et al., (2006) highlight that such media literacy in the era of convergence must heed the social and interactive nature of the Web 2.0 media landscape and be expanded to involve the "new literacies" required for participation, including the "…social skills developed through collaboration and networking. These skills build on the foundation of traditional literacy, research skills, technical skills, and critical analysis skills taught in the class room" (p. 4).
- Buckingham (2007) further clarifies that media literacy programmes should extend past simple analysis of the media products, and consider the place of media across the various aspects of the ecology of our/young people's lives.

- Exposure to unwanted sexual content will also expose young people to various messages and discourses about sex, sexuality, and intimacy. Purposeful exposure to sexual content was reported by nearly half the male participants.
  - Given that adults are unable to prevent young people from consuming such content, fostering media literacy may be useful to address this challenge (as would the provision of information about sexuality from a range of sources).
  - Such literacy may explore the place of sex and sexuality within marketing, media, and popular culture, as well as addressing some of the other messages that pornography can convey. For instance, such discussion could include considering whether and how pornography objectifies human bodies and their sexuality, privileges physical attractiveness over other attributes of attraction, frames the place and power of men and women in [hetero]sex, produces pressure to perform particular sexual acts, produces pressure to produce certain "sexually attractive" bodies and genitals (including appropriate displays [or lack thereof] of pubic hair), and frames sexual health and sexual health practices (including contraception [or lack thereof]).
- Unwanted sexual solicitation challenges share similar characteristics with the challenge of unwanted exposure to sexual content and the challenge of cyberbullying.
  - Sexual solicitation challenges would benefit from a mix of the interventions described for unwanted sexual content exposures and cyberbullying challenges.
  - However, the particularly high rate of male distress associated with this challenge, and males' decreased reports of resolution of this challenge, suggest that particular work needs to be done to address males' solicitation experiences.
  - Programmes that address unwanted sexual solicitation therefore may need to explicitly address the fact that males can also be targeted in this way, and that such targeting does not necessarily mean that they "asked for it" (in the same way such targeting does not suggest that women necessarily "asked for it" either). To the extent that heteronormativity (i.e., the prejudice and assumption that heterosexuality is the only natural, normal and appropriate way to be) influences peer environments, such admissions of sexual solicitation by males may risk them [falsely] being targeted with homosexual insinuations. Intervention with young men needs to address such beliefs and create a supportive environment where peers and adults can be consulted about such a challenge, should a young man wish to.
  - Young men (and women) may feel guilty when such solicitations arise from conversations with new people. Given that some families may have rules about not talking with new people,

families may need to be encouraged to think about how realistic such rules are likely to be in the face of the current findings. If young people fear technology sanctions for breaking a rule, they may not disclose this challenge and thus may miss out on useful support.

- The rarity of distressing face-to-face meetings with 'strangers' highlights that the majority of young people avoid distressing instances of this challenge.
    - While information about conducting safe face-to-face meetings with strangers should continue to be discussed with young people, it is a rare challenge that is superseded in frequency and reported distress by the majority of other challenges discussed here.
    - Programmes need to avoid focusing on this challenge at the expense of other challenges.
- Time-management challenges were frequently mentioned by participants in both phases of the research, though this challenge was largely absent in the quantitative cybersafety literature.
    - While this challenge was experienced by all categories of young people, males and older students were more likely to report distress and increased experience of this challenge. Such young people require additional resources to manage this challenge well.
    - Activities that males engage in frequently may be associated with this challenge (and their increased distress about this challenge). To the extent that males game, and consume sexual content, more than females, gender-specific advice regarding time-management of these activities may be particularly useful.
    - To the extent that this is a relatively unspoken challenge, young people may not know of options for managing time-management issues. This may well be one area where awareness raising campaigns, in addition to peer support and discussion, could be effective.
    - Given time-management issues may be less consequential in junior years, this age group could also be targeted to give them time to learn and practice such habits in preparation for the increased time-commitments and pressures that they will face as they grow older and face more complex tasks and responsibilities.
- As noted earlier, a number of the challenges discussed here (e.g., cyberbullying and unwanted sexual solicitation) may be associated with the publication of sensitive information in public cyberspaces. The results demonstrate that around half of participants post such information publically.
    - The current environment, characterised by social networking participation, mandates a degree of publication of identifying information online. Suggestions that young people do not publish names or pictures are unrealistic in the era of convergence and Web 2.0, and such interventions would benefit from the harm reduction approach advocated by Ybarra and Mitchell et al. (2007).
    - Interventions should encourage young people to reflect on what sort of information they would like others to find out about them, what information they would share with their friends, and how they would manage the sharing of particularly sensitive information with friends (particularly given the finding that a significant proportion of cyberbullying involved [ex-] friends as producers of the bullying behaviour).
    - Programmes to address this challenge need to address the increased propensity of young men to publish their contact details.
    - Such programmes need to target young women with interventions to address the fact, that sensitive information extends beyond contact details, and includes interpersonal comments or pictures that may be used against them, or cause them some harm, in some way.

### 6.8.3. Future research

The discussion and analysis has highlighted a range of areas for future research, including exploring [age and gender differences within]:

- Which types of inappropriate content are experienced as uncomfortable or disturbing, and how did such encounters occur?
- Which types of hate-material were consumed, and how did young people encounter such contents?
- Which specific activities are associated with time-management problems?
- Which forms (if any) of sexual content exposure were unwanted, and how did such encounters occur?
- How many distressing challenges, including repeated instances of a particular challenge, do young people face in cyberspace?
- When young people react to distressing challenges, what characteristics of their reactions were associated with resolution?
    - What characteristics of peer, parental, and other adult support were associated with resolution?
    - What characteristics of their self-actions were associated with resolution?

In order to achieve such research objectives, future research could consider a media diary approach. Media diary methodologies would enable participants to record events as they happened, which would also remove any potential memory recall bias. Such an approach would be very effective for helping to identify the actual details of each specific challenge (not just whether or not they experienced a challenge). Spread over a longer time period, this approach would mean that the challenges discussed above could be probed in greater detail, with questions assessing the activity, place, and form, of each challenge. More importantly, this approach would record a timeline of challenge management strategies, and explore when, and how, young people responded to various challenges. Of key interest for the current project would be participant reflections on the quality of the interventions, and whether such quality was related with the resolution of a distressing challenge.

Such media diary research could be conducted with an online template that participants completed about their experiences over the past 24 hours. In order to incentivise and facilitate participation participants could receive a Internet enabled tablet device (like the *Apple iPad*), which could be used to record whether they had faced any of the challenges above in the previous 24 hours. The ensuing questions could then detail the issues raised by the bullet points above. To address the points raised in the final two paragraphs of this section, such research could consider assessing to what extent participants may be vulnerable to a range of offline challenges and stressors (i.e., to what extent they face a range of offline or acute stressors, including mental health problems; and to what extent young people who are transgendered, lesbian, bisexual, gay, gender-questioning, or sexuality-questioning, face differential rates of challenge in cyberspace).

As noted earlier, the current project was unable to address other topics related to challenge in cyberspace, including financial risks, gambling, and the commercialisation of this cyberspace. Such topics, in addition to exploring which factors are associated with the minority of young people who report no activity in cyberspace, are all important avenues for future research.

Additionally, research findings quoted previously from the USA, highlighting correlations of poor wellbeing indicators (e.g., depression) with particular types of cyber-challenges, like unwanted sexual solicitation (Wolak et al., 2007b), and the publication of personal information in cyberspace, and communication with new people or

'strangers' (Ybarra et al., 2005), called for local research to assess how vulnerable populations of young people in NZ experience challenge in cyberspace. Such research would be well suited to large scale projects that measure a variety of wellbeing issues for young people, such as the Youth '07 project (Adolescent Health Research Group, 2008). If such research found similar findings to the USA, this would suggest that interventions targeting vulnerable NZ young people would also benefit by increasing their resiliency to cyber-challenges.

Wolak et al., (2008) highlighted that young people who are not exclusively heterosexual may also be represented in such vulnerable populations. Recent Youth '07 research findings highlighted that around 10% more of same- or both-sex attracted young people reported bullying at school (Rossen, Lucassen, Denny, & Robinson, 2009). Wolak et al., suggest that the sexuality exploration that some young gay men may conduct in cyberspace may also expose them to increased rates of sexual solicitation. If the rates of these challenges were increased in cyberspace for these young people, as well as for transgendered, lesbian, bisexual, and/or gender/sexuality questioning young people, this would suggest that services targeting these populations may need to promote cyber-resiliency. To the extent that such young people are at increased risk for a range of stressors and negative health outcomes (D'augelli, 2002; Rossen et al.), including suicidality (e.g., among young gay men, see Fenaughty, 2000), this would also be a very important direction for further study.

## 6.9. Conclusion

Cyberspace is now a major developmental context for nearly all young people in NZ. The phenomenon of convergence combined with the widespread diffusion of ICT means that nearly all young people conduct a range of activities frequently in cyberspace. The popularity of such activity is underscored by the multitude of ways in which this developmental setting meets so many of the normative requirements and tasks of adolescent development. This popularity likely reflects the inability for adults to prevent young people's access to, and therefore activity in, cyberspace. The popularity of cyberspace likely begets more use. To the extent that social connection requires knowledge about [peer-] culturally valued institutions and practices, cyberspace becomes even more popular as its importance for young people increases.

In addition to exploring the contemporary context and activity of cyberspace among young people in NZ, the thesis also explored the challenges that such activity can produce. Cyberspace, along with other contexts of adolescent development, can provide challenging opportunities: At least two challenge experiences were reported by the majority of participants in the past year. However, only around half of the most serious challenges were actually reported as distressing by these young people. Thus, while challenge is normative, distressing challenge (and unresolved distressing challenge even more so) was not normative. The majority of young people conduct significant amounts of activity in cyberspace and avoid distressing challenges.

However, around a third of young people experience a distressing challenge, and only half of them reported that such challenges were resolved. Rather than focusing on particular activities that young people can do to resolve challenges, the findings from both phases of the research indicate that the quality of response to the challenge is likely to be of critical importance to resolving distressing challenges. Thus, it is not enough to encourage young people to turn to others for support, or to apply technical solutions to problems, when such reports or technical measures either leave the situation unchanged or make it worse. The findings therefore suggest that young people will benefit from interventions to help them manage a range of challenges, including improving the actions they can undertake themselves, as well as increasing their ability to solicit effective support. Peers and

adults can also support young people to resolve and avoid distressing challenges by becoming skilled on effective information and practices to support young people to manage such situations well. The benefits of cyberspace need not be tarnished by challenge, but complimented by the resiliency and confidence that the successful management of challenge can produce.

# Appendices

# Appendix A

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**Cybersafety Issues for School-aged People in NZ: Focus Groups**

Information for the Principal and the Board of Trustees.

My name is John Fenaughty and I am a postgraduate student at the University of Auckland and the Research Manager at NetSafe – The Internet Safety Group. NetSafe, a non-profit organisation, is the Ministry of Education's preferred provider of cybersafety education for all New Zealanders. I am currently conducting research as part of a Doctor of Philosophy in the Department of Psychology. The aim of my research is to investigate Internet and Communication Technology (ICT) use and the associated cybersafety issues for school-aged New Zealanders. ICT is now an important part of the day-to-day lives of young people, and it brings with it a range of advantages (e.g., access to information) and disadvantages (e.g., text and cyber bullying). The purpose of this research is to examine these advantages and disadvantages. The findings will be used to help promote safe use of ICT, and NetSafe is funding this research. I would like to invite your school to consider participation in this project.

Participation in this phase of the research would involve two groups of 3-5 students participating in a one-off group interview about ICT use. Participants will need to be over 12 years of age and fluent speakers of English. The interviews will be semi-structured, and may cover all (or some) of the following issues: use of ICT devices; when, and how long, such ICT is used; what is ICT used for; what is liked/disliked about ICT; how ICT is used at home for school-related activities; how ICT is used in friendships or relationships; finding sexual content or information online (either on purpose or accidentally); finding disturbing material online (either on purpose or accidentally); students' safety and security concerns about ICT use; text bullying and cyber harassment; social networking sites (e.g., MySpace, Bebo.); and posting, or accessing, images via ICT. The benefits for students participating in the interview include the opportunity to increase knowledge on, and gain some tools for dealing with, ICT issues such as; security, bullying and harassment, meeting up with online friends, and managing inappropriate online content.

Recruitment for participants will be discussed with you and will be tailored to be as convenient as possible for you and your school. Some options include John Fenaughty organising a brief notice about the research project to be delivered to students in form time or at assembly. Alternatively, or additionally, the school may wish to distribute information to students directly by distributing information sheets (provided by John Fenaughty). School staff members may also identify specific students who may be particularly well suited to participation to receive an information sheet. These options and others will be discussed with you to make recruitment as simple and effective as possible.

Each group will take between 60 to 90 minutes, and will be scheduled at a time and place that is convenient for the school and the students. Ideally, it would be best if the interview could take place on school grounds during school hours. This may mean that the interview would take place in class time. Food and drink will be provided for the focus group participants. The interview will be audio taped and transcribed by myself, or by someone bound by confidentiality. The transcript will also be available to my supervisors Dr Niki Harré and Dr Nickola Overall. Confidentiality of the focus group information will be respected by all parties involved, except in situations where the interviewer has concerns for the personal safety of a focus group participant. The interview data will be retained for six years after the research, and publication resulting from it, has been concluded. ***Any personally identifying information will be changed to protect the identity of participants.***

Due to the nature of focus group interviews, audio copies of the interview will not be provided to the participants or to the school. Participants will be informed in the information sheet and verbally at the beginning of the interview that the discussion must remain confidential to group members. The consent forms also require that participants respect the confidentiality of the group discussions. However, participants will be informed that if they are disturbed by anything in the focus group, they may discuss this with the research team, a support service (details for support services will be provided at the beginning of the interview), a school guidance counsellor, and/or an adult they trust.

In order to identify a range of activities the interview examines both positive and negative uses of ICT. Some participants may find it stressful to talk about some negative situations or experiences. Participants may through the course of the interview also recognise risky situations that they themselves, and/or their friends or family may face. These factors may present psychological risk to participants if they find these issues stressful. For this reason, these risks are discussed in the parents' and students' information sheets, and potential participants who may be distressed by such situations are asked to carefully consider their involvement. Additionally, as the interview may raise issues for participants that they might like support for, we will provide a take-home sheet detailing potential support sources for participants, including the school's guidance counsellor and NetSafe's helpline.

**Participation in the interview is completely voluntary and a participant may decide to withdraw any time (without giving a reason) up to four weeks after the interview has occurred**. However, if the participant withdraws after the interview has taken place, it may not be possible to remove all of their comments from the group transcript (i.e., where it is unclear who was actually speaking). Participants will be able to record their contact details on the consent form if they would like to receive a report based on this research (which will also be available to the school). ***Neither the school nor individual participants will be able to be identified in written reports based on this research.***

We welcome any questions you may have about this research before choosing whether to allow members of your school community to participate. We also welcome any preference you have towards student recruitment (i.e., whether through staff-identification, school newsletter, or assembly time). You can contact me or my research supervisors using the contact details provided below.

*Thank you very much for your time and interest in this research.*

**If you would like more information about this study or have any concerns, please contact:**


**John Fenaughty,**
NetSafe,
PO Box 105-817, Auckland.
Ph. (09) 353 0624
Email: johnf@netsafe.org.nz

**Nikki Harré,**
Department of Psychology,
University of Auckland,
Private Bag 92019, Auckland
Ph. (09) 373 7599 ext. 88512
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**Nickola Overall,**
Department of Psychology,
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Ph. (09) 373 7599 ext. 89120

**Fred Seymour,** Head of Department,
Department of Psychology,
University of Auckland,
Private Bag 92019, Auckland
Ph. (09) 373 7599 ext. 88557


**If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (09) 373-7599 extn. 87830**


APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 8/11/06 for 3 years from 8/11/06 to 8/11/09 Reference Number 2006/362

# Appendix B

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

Human Sciences Building
Level 6, 10 Symonds Street
Auckland, New Zealand
Telephone 64 9 373 7599
Facsimile 64 9 373 7450
www.psych.auckland.ac.nz

**Cybersafety Issues for School-aged People in NZ: Focus Groups**
Researchers: John Fenaughty, Niki Harré, Nickola Overall.

Consent Form for Principals and Board of Trustees.

THIS FORM WILL BE RETAINED FOR SIX YEARS AFTER RESEARCH PUBLICATION

Thank you for considering the participation of your school in this focus group research. Before we can begin this research, we require written consent. If you sign this form, you agree that you understand and agree to the following:

- I understand that this consent form will be stored in a locked filing cabinet in the Psychology Department, at the University of Auckland.
- I understand that the focus groups will be audio-taped, and the tapes will be stored in a locked filing cabinet in the Psychology Department at the University of Auckland.
- I understand that this form, and the tapes and transcripts of the interview, will be kept until they are no longer required for research purposes (which will be six years after publishing any reports using information from the focus group); after that the transcript and the audio tapes will be destroyed.
- I understand that the audio-tapes will be typed out by a person who has signed a confidentiality agreement.
- I understand that any personally identifying information will be changed so my school, its students, and its community, will not be identifiable in any reports produced from this research.
- I understand that in group discussions other group members will usually hear the comments of group participants. If there is something a student would prefer other members not to know, they will be reminded not to say it.
- I understand that students are required to agree that they will not discuss any of the group members' comments with anyone other than the focus group participants. However, if they are concerned or worried about anything said in the group, the students will be informed that they can talk with an adult they trust (including guidance counsellors or other staff at school), the researchers, or a support source (details of some support services will be provided at the interview).
- I understand that the students are free to withdraw from the research at any time (even during the interview itself) without giving a reason.
- I understand that, due to the nature of focus group discussion, students may not withdraw their interview material after the interview has taken place.

**I agree that my school may take part in this research:**

Name: …… Date ……

Position/Role and School: ……..

Signature: ……..

Address (if you want a copy of the written report based on this research):
……

**APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 8/11/06 for 3 years from 8/11/06 to 8/11/09 Reference Number 2006/362**

# Appendix C

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
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Human Sciences Building
Level 6, 10 Symonds Street
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www.psych.auckland.ac.nz

**Cybersafety Issues for School-aged People in NZ: Focus Groups**

Information for Students.

Hi, my name is John Fenaughty. I am a student at the University of Auckland and the Research Manager and Help Line Coordinator at NetSafe – The Internet Safety Group. I am currently doing some research as part of my Doctorate in the Psychology Department.

The aim of my research is to look at how school-aged people use the Internet and other communication devices (like mobile phones). The Internet and mobile phones are now an important part of many people's lives. Using the Internet and mobiles can have lots of plusses (like catching up with friends, accessing information) but they can also have disadvantages (like text and cyber bullying). The aim of this research is to examine what some of the advantages and disadvantages are when school-aged people use the Internet and other communication devices. This will help us to identify if there are any cybersafety issues we need to find out more about and teach people about. NetSafe is funding the research project, and I'd like to invite you to help out by coming along to a group interview.

The interview would involve getting together with 2 to 4 other students to talk about using the Internet and communication devices. If there is a group of friends who want to participate in an interview together we can try to arrange this. To participate, you will need to be over 12 years of age and be able to speak fluent English. If you are under the age of 16, your parent or caregiver will need to give permission for you to participate. You can give them the "Information for Parents and Caregivers" form attached to this one and talk with them about taking part in an interview. If you are 16 or over, you can sign a consent form yourself.

The group discussion will touch on a range of things, and may cover all (or some) of the following topics:

- What Internet and communication devices you use.
- When, and for how long, you use Internet and communication devices.
- What you use Internet and communication devices to do.
- If you have any likes or dislikes about using Internet and communication devices.
- If you use Internet and communication devices for school activities.
- If you use Internet and communication devices within friendships or relationships.
- If you have seen (either on purpose or by accident) sexual material or sexual information online.
- If you have seen (either on purpose or by accident) anything else online that was disturbing.
- If you have any safety and security concerns about using Internet and communication devices.
- Text bullying and cyber bullying.
- Posting or sending pictures and video using the Internet or communication devices.
- Social networking sites (like MySpace, Bebo.com)

The benefits to taking part in the interview include the opportunity to increase your skills and knowledge about managing online issues, like computer security, bullying and harassment online, meeting up with online friends, and material online. The interview will take between 60 to 90 minutes, and will be scheduled at a time and place that is handy for you and your school (hopefully on school grounds during school hours). This means the interview may take place during class time. Food and drink will be provided. To make sure that the information from the discussion is correctly recorded, I need to audiotape the interview and get it typed out. The only people who will hear the interview, or read the interview transcript, will be myself, the person who types out the interview, and my university supervisors. All of us are bound by confidentiality and will not disclose any personally identifying information about you to someone else, unless we have concerns for your personal safety. We will keep the interview transcript until it is no longer required (six years after publishing any reports using information from the focus group); after that the transcript and the audio tapes will be destroyed. When the interview is typed out we will change any personally identifying information to protect your identity.

To get a good view of what school-aged people are using the Internet and communications devices for, the group interview will cover both positive and negative uses of the Internet and other communications devices. It may be stressful for some people to talk about negative situations or experiences involving the Internet and other communications devices. If you think it might be stressful to talk about negative experiences involving the Internet and communications devices, you should not participate in the group discussion. If something in the group makes you upset or uncomfortable, you can talk with an adult you trust and/or contact someone listed on the support sheet we'll provide you at the start of the interview.

To protect the identity of the other people in the group, audio copies of the interview will not be given to group members. If you agree to participate you will also need to agree on your consent form that the discussion must remain confidential to group members. This means that you cannot talk to people outside the group about anything said in the group. If you are worried about anyone in the group, or by anything said in the group you can contact me, or one of my supervisors (our contact details are listed below), a support service (you will receive details of some support services at the interview), and/or an adult you trust.

In a group interview, it can be helpful to remember that if there something that you would not like other people in the group to know about you, it is best not to say it. ***Participation in the interview is completely voluntary, and you do not have to answer any question if you do not want to.*** You can also decide to stop the interview, or withdraw from the research at any time (without giving a reason), including the withdrawal of your interview comments, up to four weeks after the interview has occurred. However, if you withdraw during or after the interview, it will not be possible to remove your comments from the group transcript. If you would like to receive a report based on this research, you can write down on the consent form where you would like this posted to. ***Your school, yourself, and anyone else, will NOT be able to be identified in any reports based on this research.***

We welcome any questions you may have about this study before (or after) you decide if you'd like to participate. You can contact me or my research supervisors using the contact details provided below.

***Thank you very much for your time and interest in this research!***

If you would like more information about this study or have any concerns, please contact:

**John Fenaughty,**
NetSafe,
PO Box 105-817, Auckland.
Ph. (09) 353 0624
Email: johnf@netsafe.org.nz

**Nikki Harré,**
Department of Psychology,
University of Auckland,
Private Bag 92019, Auckland
Ph. (09) 373 7599 ext. 88512
Email: n.harre@auckland.ac.nz

**Nickola Overall,**
Department of Psychology,
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Private Bag 92019, Auckland
Email: n.overall@auckland.ac.nz
Ph. (09) 373 7599 ext. 89120

**Fred Seymour,** Head of Department,
Department of Psychology,
University of Auckland,
Private Bag 92019, Auckland
Ph. (09) 373 7599 ext. 88557

If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (09) 373-7599 extn. 87830

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 8/11/06 for 3 years from 8/11/06 to 8/11/09 Reference Number 2006/362

# Appendix D

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
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**Cybersafety Issues for School-aged People in NZ: Focus Groups**

Information for Parents and Caregivers.

My name is John Fenaughty and I am a postgraduate student at the University of Auckland and the Research Manager and Help Line Coordinator at NetSafe – The Internet Safety Group. NetSafe, a non-profit organisation, is the Ministry of Education's 'agent of choice' for cybersafety education for New Zealand schools. I am currently conducting research as part of a Doctor of Philosophy in the Department of Psychology. The aim of my research is to look at how school-aged people use the Internet and other communication devices (like mobile phones).

The Internet and mobile phones are now an important part of many young people's day-to-day lives. The aim of this research is to examine some of the advantages and disadvantages when school-aged people use the Internet and other communication devices. This will help us to identify if there are any cybersafety issues about which we need more information. NetSafe is funding the research project, and I'd like you to consider if your child could participate in a group interview on this topic.

The interview would involve getting together with between 2 and 4 other students to talk about using the Internet and communication devices (like mobile phones, etc.). Participants need to be over 12 years of age and fluent speakers of English. The group discussion will touch on a range of things, and may cover all (or some) of the following topics:

- What Internet and communication devices are used.
- When, and for how long, the Internet and communication devices are used.
- What the Internet and communication devices are used for.
- Likes or dislikes about using the Internet and communication devices.
- Using the Internet and communication devices for school activities.
- Using the Internet and communication devices within friendships or relationships.
- Finding (either on purpose or by accident) sexual material or sexual information online.
- Finding (either on purpose or by accident) any thing else online that was disturbing.
- Students' safety and security concerns about using the Internet and communication devices.
- Text bullying and cyber bullying.
- Posting or sending pictures and video using the Internet or communication devices.
- Social networking sites (like., MySpace, Bebo.com)

The benefits to taking part in the interview include the opportunity for your child to increase their skills and knowledge about managing online issues, like computer security, bullying and harassment online, meeting up with online friends, and material online. The interview will take 60 to 90 minutes, and will be scheduled at a time and place that is convenient for the school and the students. Ideally, it would be best if the interview could take place on school grounds during school hours. This means that the interview may take place during class time. Food and drink will be provided. The interview will be audio taped and transcribed. The contents of the transcript will also be available to my research supervisors. Myself, the transcriber, and my supervisors, are bound by confidentiality not to disclose any personally identifying information about your child to someone else, unless we have concerns for your child's personal safety. We will retain the interview transcript (and the audiotape) for a period of six years after the research, and publication resulting from it, has been concluded. After this point the transcripts and tapes will be destroyed. ***When the interview is typed out we will change any personally identifying details to protect your child's identity.***

To get a good view of what school-aged people are using the Internet and communications devices for, the group interview will cover both positive and negative uses of the Internet and other communications devices. It may be stressful for some people to talk about negative situations or experiences involving the Internet and other communications devices. If you think your child might find it stressful to talk about

negative experiences involving the Internet and communications devices, it may be best for you to carefully consider if participation is appropriate. If something said or raised in the group discussion makes your child upset or uncomfortable, we will be providing a list of support services (including the school guidance counsellor and the NetSafe helpline) for your child (and/or yourself) to consult with (if this is desired).

To protect the identity of those in the group, audio copies of the interview will not be given to group members. If you agree to your child's participation in this research, your child will also need to agree on the consent form that the discussion will remain confidential to group members. This means that your child cannot talk to people outside the group about anything said in the group discussion by any other person. However, we will tell participants that if they are worried about anyone in the group, or by anything said in the group, they can contact me, one of my supervisors (our contact details are provided on the next page), or an adult they trust. Should your child participate, we will also remind them that in a group discussion, it can be helpful to remember that if there is something that you would not like other people in the group to hear, it is best not to say it. ***Participation in the interview is completely voluntary, and your child does not have to answer any question if they do not want to.*** Your child can also decide to stop the interview, or withdraw from the research at any time (no reason must be stated). However, it will not be possible to remove your child comments from a group transcript (i.e., where it is unclear who was actually speaking) if they do withdraw (they will however still remain un-identifiable). If your child would like to receive a report based on this research, they are invited to write down on the consent form where they would like this delivered. ***The school or individual students will NOT be able to be identified in any reports based on this research.***

We welcome any questions you may have about this study before (or after) you decide if your child would like to participate. You can contact me or my research supervisors using the contact details provided below.

*Thank you very much for your time and interest in this research!*

**If you would like more information about this study or have any concerns, please contact:**


**John Fenaughty,**
NetSafe,
PO Box 105-817, Auckland.
Ph. (09) 353 0624
Email: johnf@netsafe.org.nz

**Nikki Harré,**
Department of Psychology,
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**Nickola Overall,**
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**Fred Seymour,** Head of Department,
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**If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (09) 373-7599 extn. 87830**


APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 8/11/06 for 3 years from 8/11/06 to 8/11/09 Reference Number 2006/362

# Appendix E

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

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www.psych.auckland.ac.nz

**Cybersafety Issues for School-aged People in NZ: Focus Groups**
Researchers: John Fenaughty, Niki Harré, Nickola Overall.

Consent Form for Parents and Caregivers of Students Under 16 Years of Age.

THIS FORM WILL BE RETAINED FOR SIX YEARS AFTER RESEARCH PUBLICATION

Thank you for considering the participation of your son or daughter in this focus group research. For participation to occur your written consent is required and we need you to sign this consent form. If you sign this form, you understand and agree to the following:

- I Understand that this consent form will be stored in a locked filing cabinet in the Psychology Department, at the University of Auckland.
- I Understand that this focus group will be audio-taped, and the tapes will be stored in a locked filing cabinet in the Psychology Department at the University of Auckland.
- I Understand that this form, and the tapes and transcripts of the interview, will be kept until they are no longer required for research purposes (which will be six years after publishing any reports using information from the focus group); after that the transcript and the audio tapes will be destroyed.
- I Understand that the audio-tapes will be typed out by a person who has signed a confidentiality agreement.
- I Understand that any personally identifying information will be changed so my daughter or son will not be identifiable in any reports produced from this research.
- I understand that in group discussions, other group members will hear the comments of my son or daughter - if there is something she/he would prefer other members not to know, he/she will be reminded not to say this.
- I Understand that my son or daughter agrees that they will not discuss any of the group members' comments with anyone other than the focus group participants. However, if my daughter or son is concerned or worried about anything said in the group, they can talk with an adult they trust (including guidance counsellors or other staff at school), the researchers, or a support source (details of some support services will be provided at the interview).
- I understand that my daughter or son is free to withdraw from the research at any time (even during the interview itself) without giving a reason.
- I understand that, due to the nature of group discussions, my son or daughter is not able to withdraw their interview material from the transcript after the interview has taken place.

**I agree that my son, daughter, or the young person in my care, may take part in this research:**

Parent or Caregiver's Name: …… Date ……

Signature: ……..

Name of daughter, son, or young person in your care: ……..

Address (if you want a copy of the written report based on this research):
……

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 8/11/06 for 3 years from 8/11/06 to 8/11/09 Reference Number 2006/362

# Appendix F

Focus Group Topics, Questions, and Introduction.

Introduction:

Thanks for helping out today. Food and drink provided. Before we start there's just a few things to get through. X is going through getting some information from you and giving you a sheet of support services. While that's happening I just need to check that everyone has seen the information sheet? Before we begin I just want to remind you about three important things from that information sheet.

1.) You don't have to answer any question if you don't want to. If something becomes stressful in the group, or for some reason you don't want to continue with the group interview, it's important to know that you can leave the focus group at any time and you don't have to provide any reason. You do need to tell me though, so we can sort out getting you back to class!
2.) The other thing that's important to remember is that everything that is said in the group is confidential. That means you cannot talk to anyone else about what gets said in this conversation. So that means not talking to your other mates about what we talk about here. The only exception to this is if for some reason you find yourself upset and want to talk to an adult you trust or one of the places on the support sheet. That's okay. You're always welcome to call me or the NetSafe helpline if you want to as well.
3.) The last thing I want to say is if you are worried that something you might say will put you in a bad light with your friends, it's okay not to say it. If you think you might say something that will make you look stupid or something to your friends, it's good to think about if you want to say it. It might not be a big deal, or it might be, it's up to you, but it's just something to be aware of!

Okay! So are there any questions after all that? So now we're going to get into the discussion. It's good if you can try and not talk over each other too much. I'll try and run the conversation as best as I can. It's great if you can be as honest as you can (if you feel comfortable saying things among the group) and just give me your opinions and everything. The important thing to know is that there is ABSOLUTELY no right or wrong answer, I'm just really interested in what you think and what your experiences are! Cool? Okay… so to start off then…

Do you use any Internet or other electronic communications devices? What devices do you use? Do you think most people your age use those devices?

Personal Computers

What do you like about using the computer? The Internet?

What do you dislike about using the computer? The Internet?

What do you think most people your age use the computer for?

What do you MOST use your computer for? Researching? Socialising? Games?

On average how long do you use the Internet for each day/week? Are there any days when you use it a lot more than other days? When will you use it more? When will you use it less?

Do you ever stay up late on your computer? What are you usually doing when you stay up late? Are you often tired the next day?

Do you go online in places other than school? What reasons are there for using it elsewhere?

What are the activities you most enjoy doing online (regardless of how long you actually do it – i.e., the most time-intensive activities may not be the most enjoyable)? (Some people have reported they enjoy researching things just out of personal interest).

Do you chat online? Do you communicate with people differently online to offline? What are the major differences? Are there any rules (spoken or unspoken) about chatting online? Does chatting online differ to chatting in real life?

Which websites do you spend most of your time on? What are your main reasons for using the computer in these ways? What are your favourite websites? Favourite games? Where do you get those games from?

What proportion of time do you spend online doing homework/research projects and what proportion do you spend doing non-school/research related activities?

How would you rate your skills at using computers and the Internet? What is a beginner, intermediate, and advanced net user likely to be? Where do you think you are compared to your parents on a scale of beginner vs. expert at using the net?

Are there any safety worries or risks that you think people your age should know about when they use the computer/Internet? What are these safety worries or risks?

If someone your age for some reason had never used the Internet before, and you were asked to keep them safe online, what would you do? Would you tell them anything?

How much time do you need on average to finish your homework each night?

Do you use the Internet to help with homework sometimes?

Do you think people your age might tell parents or caregivers that they are doing their homework online when actually they are usually doing other online things instead?

Do you use the Internet to stay in touch with your friends? Who do you stay in touch with? What do you talk about? Is it important to you being able to do that (staying in touch with your friends online)? How much of your online time do you think is involved in communicating with your mates? How big a part of your social life is it?

Do you think young people's use of the net changes with their age?

Do you think you should be supervised by an adult when you go into cyberspace? When should someone be supervised (if ever)?

What does supervision mean to you?

Is anyone you know supervised?

Do you think you should be supervised?

Would you do things differently if you were supervised?

Do you want to be supervised?

What if you could only use the computer at home if you were supervised?

Would you go elsewhere to use it?

Is your Internet use monitored by software? Filtered Internet provided? Is filtering effective for young people? Are you aware of people your age who can get around filtering and blocking software?

Are there likely to be any differences in how girls vs. guys use ICT?

Do you chat online with people? Who do you spend most of your time chatting to online?

Do you think people your age meet new people on the computer/Internet?

Have you chatted to anyone you didn't know previously on your computer (in text chat?)

Do you think people your age do online dating?

Do many people you've never met before try and chat to you online? How do they contact you? How do you manage these contact requests? How do these contact requests make you feel? Have you ever been contacted by someone who asked you something to do about having sex?

Do you think people your age meet new people face to face after getting to know them only online or only on the phone? What would the reasons be for getting to meet someone face to face?

Are you aware of any risks in meeting someone face to face who you only know from the Internet?

Are you aware of ways to manage that risk? To make that meeting safer? Who would you take? What would make you tell or not tell your parents/caregiver?

Some young people like to use webcams online. How common do you think it is for people your age to use cameras on the computer? When do you think people are likely to use a webcam?

If I said "Simon was being cyber bullied", would that mean anything to you? What do you think that means? (maybe go around the room – no right/wrong answer).

What do you think a good definition of "cyber bullying" would be?

Words that have been used to describe cyber bullying – mean, nasty, harassing, abusive, threatening, obscene, sexual, pornographic? Do these work for you? What doesn't make sense?

Do you think most people your age would know what cyber bullying is?

Have you heard of any other types of cyber bullying? (identity theft, photo morphing, ostracism, rumours)?

Is cyber bullying a big deal? What makes it [not] a big deal?

Do you know of anyone who has cyber bullied someone else?

What reasons do you think someone might give for cyberbullying someone?

Do you know anyone who has been cyberbullied?

If you got cyber bullied what do you think you would do? (ostracised, identity theft, hate page, photo morphed)

Would you talk to anyone about the cyber bullying? When would you talk to them? Who would you talk to?

If someone you knew was being cyber bullied what would you say to them?

Do you think many people your age see stuff online that is disturbing? Have you heard of anyone seeing disturbing stuff online? What is a good way to describe material that you don't want to see because it's disturbing/makes you uncomfortable?

What would you do if you saw something that you didn't want to see because it was uncomfortable? Who would you talk to (if anyone)? Would you change anything in the future? Would you change search habits or p2p habits?

How easy do you find it to find the online information you want for your homework/projects?

Do you think some people your age use a mobile phone or the Internet to organise something that they didn't ever want their parents or caregivers to know about?

Do you think some people ever download something they would never want their parents/caregivers to know about?

In your opinion, do you think people your age see very sexual images (like full frontal nudity or people doing sexual activities) online or on their mobile phones? Do you think many people, your age, see this kind of thing? Have you seen this kind of stuff before? How do you feel about seeing this stuff? Do you ever find yourself very upset by what you've seen? Would you talk with someone if you saw this kind of stuff? Who? Why?

Do you know anyone your age who has used a credit card online? What would you use it for? Is it hard to get a credit card? Where do you think most people your age get a credit card to use online?

Do you think many people your age have to lie about their age to get onto a web site? Is it common?

How do you manage deciding what information you'll put online?

Have you put your photo online? A picture of your face? Why do you put your photo online? Is it important to have your photo online? Do you put your name online? first and last name? Your address? Is it there so that people can contact you? Do you ever see profiles where you think people have put too much information or the wrong information up? Are you worried that someone might use that information to try and contact you? Bully you?

Do you think many people your age put videos up online?

REVISIT Are there any safety worries or risks that you think people your age should know about when they use the computer/Internet? What are these safety worries or risks?

What do you think the best way to support people your age to change how they are so they can prevent these risks/safety worries? You had a magic wand/million dollars.

How bad do you think text or cyberbullying is compared to other non-electronic forms of bullying?

What do you think your parents/caregivers think about your use of your ICT? What do you think most parents and caregivers think about young peoples' use of ICT? Do your parents and caregivers have any rules or guidelines about how you should use ICT? Do you stick to these rules/guidelines? What happens if you don't stick to those rules?

Do you use the Internet at school? What do you use it for at school? Do you think many people your age use the Internet at school in a way that is against the rules? Do you have rules at your school for how the Internet should be used? Have you heard of people your age using computer or mobile phones to cheat on tests or assignments?

Do you think downloading music or videos is popular among people your age? What are the reasons for doing it? Is it illegal?

Do you think gaming is popular with people your age? What makes it popular? What do you like about gaming? Do you chat to people in games? Is it hard to stop playing games? Do you find that games cause problems in your day-to-day life?

What do you think are the best ways for young people to be safe using ICT? What should be done? You have a magic wand? A million dollars?

Mobile Phones

What do you like about having a mobile phone?

What do you dislike about having a mobile?

Are there any safety worries or risks that people your age should know about when they use mobile phones? What are these safety worries or risks?

How many mobiles or SIM cards do you have? Do you think most people your age have that many? Do your parents or caregivers know how many phones you have? What reasons are for having that number?

What do MOST often you use your phone for? Socialising? Games? What else do you use your phone for?

What do you think most young people use their phone for? What's the most common reason for having a phone?

Is a mobile phone important for your social life? How important is it?

Some people say they have a mobile phone for 'safety' reasons. What does this mean to you?

When do you use your phone?

Do you think many students use their phone at school? Do you? Are you allowed too?

How long do you use it for each day/week?

When do you think people your age use their phone the most?

Why text? Why not call?

How common do you think it is for people your age to use cameras on mobile phones? When do you think young people use cameras on mobile phones?

If I said “Simon was being text bullied”, what do you think that means? (maybe go around the room – no right/wrong answer).

Do you think most people your age would know what text bullying is?

Words that have been used to describe text bullying – mean, nasty, harassing, abusive, threatening, obscene, sexual, pornographic, “someone texting you who you didn’t want to hear from’? Are these good descriptions? What doesn’t work?

What do you think the best definition of “text bullying” would be?

Have you heard of any other types of text bullying?

Is text bullying a big deal? What makes it [not] a big deal?

Do you know anyone personally who sent abusive messages to someone else? What reasons do you think someone might give for sending harassing messages to people?

Would text bullying be difficult for the person getting the messages? Do you personally know anyone who has received these kinds of messages on a mobile phone?

If you got harassing messages what do you think you would do?

Would you talk to anyone about the messages? When would you talk to them? Who would you talk to?

If someone you knew was being text bullied what would you say to them?

Would someone keep using their phone if they were being text bullied on it?

Have you chatted to anyone you didn’t know previously on your mobile (in text chat?)

Are their reasons why someone might not have a mobile phone or use a mobile phone? Is that common?

Do you think people your age send sexual pictures of other people, or themselves, to other people using their mobile phones? Have you heard of this? Is it common do you think? Is it risky to do this?

Do you know someone your age who doesn’t have a phone? Do they have use of someone else’s phone? What do you think the reasons are why they do not have a phone?

REVISIT: Are there any safety worries or risks that you think people your age should know about when they use mobile phones? What are these safety worries or risks?

What do you think the best way to support people your age to change how they are so they can watch out for these risks/safety worries?

# Appendix G

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

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www.psych.auckland.ac.nz

**Internet and Mobile Phone Use**
**by High School Students in New Zealand**

Information for the Principal and the Board of Trustees.

My name is John Fenaughty and I am a postgraduate student at the University of Auckland and the Research Manager at NetSafe – The Internet Safety Group. NetSafe, a non-profit organisation, is the Ministry of Education's preferred provider of cybersafety education for all New Zealanders. I am currently conducting research as part of a PhD in Psychology. The aim of my research is to investigate Internet and Communication Technology (ICT) use and the associated cybersafety issues for high school students. ICT is now an important part of the day-to-day lives of young people, and it brings with it a range of advantages (e.g., access to information) and disadvantages (e.g., text and cyber bullying).

Following on from focus group research with students from schools around NZ, we are now entering the second phase of this research project. The purpose of this phase of the research is to examine the extent to which a broad range of high-school students in NZ experience specific cybersafety issues. We will also be examining what strategies (if any) young people use to manage risk online or on mobile phones. The findings will be used to help promote safe use of ICT, and NetSafe is funding this research. I would like to invite your school to consider participation in this project.

The questionnaire
Participation in this phase of the research would involve Year 9 and older students completing an anonymous online questionnaire. In order to get a broad range of students, we are asking schools to allow all students who use school computers over the survey period (a school week) to complete the questionnaire during class time. Students will need to speak English to participate.

The questionnaire is designed to be as efficient as possible. It employs 'smart logic' to skip unnecessary questions, and most students will finish the survey within 15 minutes. For a small number of students who have experienced a lot of cybersafety issues the survey may take 20 minutes to complete.

The questionnaire will cover the following issues: Friendships and relationships with new online friends; Meeting new online friends face to face; Putting personal details on websites; Text bullying and cyber bullying; Unwanted material seen online or on a mobile; Sexual material online or on a mobile; Unwanted sexual chats or questions online or on a mobile; Downloading music and videos for free; Betting and gambling online; Mobile phone or internet scams; and Pop-ups, viruses, and computer security problems.

In order to identify cybersafety issues facing kiwi students the survey must unfortunately assess negative uses of ICT. Some participants may find it stressful to talk about some of these negative situations or experiences. Participants may recognise risky situations that they themselves, and/or their friends or family may face. These factors may present risk if participants find these issues stressful. For this reason, these risks are discussed in the parents' and students' information sheets, and *potential* participants who may be distressed by such situations are asked to carefully consider their involvement. Additionally, as in case the questionnaire does raise issues for some participants, we will also provide a take-home sheet detailing potential support sources, including helplines, the school's guidance team and NetSafe.

The questionnaire data will be retained for six years after the research. No personal information will be collected (even the internet address information of the computers used to complete the survey will not be collected) by the research team. The online survey will be electronically encrypted to make it more secure. Electronic encryption in this survey uses Secure Socket Layer (SSL) technology. **Participation in the questionnaire is completely voluntary for the school and each individual student. Participant**

**may decide to withdraw any time (without giving a reason) and close the online survey application window**.

The questionnaire will require parental consent for participants under the age of 16. In order to encourage students to return consent forms, we are hoping to work with your school to offer a mufti day reward should 75% of a form class return signed consent forms (regardless of the consent form assenting or dissenting to participation).

NetSafe have a lot of experience working with schools and we will implement the survey in the most convenient way for you. After talking with senior administrative representatives and deciding on the best course of action we will organise a timetable to facilitate the survey in your school. We aim to ensure that the process is **no work** for senior administration, and requires **absolute minimum effort from class room teachers and administrative staff**. A suggested course of action for implementing the survey in your school is:

<u>One week out from the survey:</u>
In order to explain more about the survey and the aims of the research, a week out from doing the survey NetSafe will come to your school. We will offer a NetSafe school-staff presentation on "Cybersafety and Students" at no cost to the school (should this be desired). We will also offer a morning tea for all staff where we will go over the research, it aims, and delivery (on school computers in and out of class time), and the *minimal* role for school staff (collecting consent forms and allowing students to do the survey within class time). We will also present to school assemblies about the research and use this opportunity to hand out participant information and consent forms. We will install the survey link on the school computers or list this link on a poster by school computers. We will also put up posters around school computers reminding students about the survey. We will troubleshoot any issue with the survey and will avoid using school IT personnel's time (the posters include a free phone number should there be any problem with an online survey for students or teaching staff to call).

At the morning tea, form teachers will be given envelopes to collect consent forms from students under the age of 16. These will be deposited with someone in the school administration (to be decided with you). Consent forms permitting involvement in the research will be returned to John Fenaughty at NetSafe and collated into a "Eligible Students to Participate in the NetSafe Research" list. This list will be distributed to all teaching staff during the survey week.

At the morning tea form teachers will also be given generic plastic tokens to give to students who return a signed consent form agreeing that they can participate in the research. For students who return a signed consent form denying them participation in the research, this consent form is also collected by the form teacher, however those students will not receive a survey token. For students over 16 years of age, who do not need signed parental consent forms, they will instead need to return a "I have read the Student Information Sheet" form to the form teacher.

The reason for requesting signed consent forms, even ones which deny participation, is to determine if 75% of a form class has returned a signed consent form or "I have read the Student Information Sheet" forms, so that class will have earned a mufti day (to be awarded at a date decided by you).

If a student is eligible to participate in the research, their form teacher will then provide them with a plastic token. This token is then used by the student to hand to any teacher taking a class using school computers. The teacher in question need only briefly check that the student is on the "Eligible Students for the NetSafe Research Project" list. Having confirmed that the student is on the list, the teacher will hand out a Support Information sheet and then allow the student to participate in the online questionnaire during part of that lesson. At the end of the survey week, all teachers will destroy their "Eligible Students for the NetSafe Research Project" list.

The "Eligible Students for the NetSafe Research Project" list is required to make sure that a student with parental consent does not give their research participation token to a student without parental consent. The

list enables a two factor check by any teacher using a computer room to ensure that a student is in fact allowed to do the questionnaire, and has not done it already. Also, the list is only a list of eligible students, not a list of actual participants. As the list is used in conjunction with the tokens (which mean that no one is 'ticked' on or off a list), the list does not identify actual participants.

The survey period:
During the survey we will be on hand to trouble shoot any issues that may arise in the online survey delivery via our free-phone help line number (0508 NETSAFE). The only tasks for staff over this period would be to collect consent forms from students, hand out tokens, and receive tokens to allow students to complete the survey during class time on school computers (if the student and teacher so desire).

The first task is for form teachers to collect the consent forms and for those to be handed to the administrative person in your school (decided by your school). At the end of the consent form collection week, these forms will be sent to John Fenaughty at NetSafe to be compiled into the eligible students for participation list (postage for this is pre-paid). This list will be sent back to the school for teaching staff to use during the survey week.

The second task is for teaching staff, to hand to any student who returns a signed consent form, allowing them to participate in the research (for students under 16), a generic plastic token (received from the NetSafe staff meeting). Students over the age of 16 who return a "I have read about the NetSafe research" form are also eligible to receive a plastic token.

The third task is for teaching staff using school computers over the survey week, to allow students to participate in the online survey. This requires that a student hands over their plastic token and the teacher checks that they are on the "Eligible Students to Participate in the NetSafe Research" list[1]. If the student is on the list then the teacher needs only to give the student a "Support Services" sheet and allow them to complete the online survey. At the end of the survey week, all teachers will destroy their "Eligible Students for the NetSafe Research Project" list, as will NetSafe (for each particular school).

After completion of the survey, the student can return to other lesson tasks. For classes where a large number of students wish to do the survey, we can also offer alternative activities for teachers to suggest for non-participating remaining students.

After the survey:
After analysis of the school data we will return to the school to discuss the results from the survey from your school. Your school will receive a presentation of the research findings, however ***neither the school nor individual participants will be able to be identified in any written reports based on this research.*** NetSafe will then partner with your school to deliver a customised expert programme to address any Cybersafety issues that may emerge from the analysis of the school's data. In order for this to be effective as possible the data from the school need to be as complete as possible, for this reason we have looked at encouraging students to participate by way of a mufti-day reward. We recognise that such days are often challenging for schools, however the benefits of a comprehensive risk assessment that this research enables, coupled with a customised Cybersafety programme for your school, places this in context.

We welcome any questions you may have about this research before choosing whether to allow members of your school community to participate. We also welcome any preference you have towards student recruitment (i.e., whether through staff-identification, school newsletter, or assembly time). You can

[1] The "Eligible Students for the NetSafe Research Project" list is required to make sure that a student with parental consent does not give their research participation token to a student without parental consent. The list enables a two factor check by any teacher using a computer room to ensure that a student is in fact allowed to do the questionnaire, and has not done it already. Also, the list is only a list of *eligible students*, not a list of *actual participants*, in conjunction with the tokens (which mean that no one is 'ticked' on or off a list), the list does not identify actual participants.

contact me or my research supervisors using the contact details provided on the next page. I would like to thank you for taking the time to read this information.

*Thank you very much for your time and interest in this research.*

**If you would like more information about this study or have any concerns, please contact:**


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**If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (09) 373-7599 extn. 87830**


APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON **12/07/07 for 3 years from 12/07/07 to 12/07/10 Reference Number 2007/Q/021**

# Appendix H

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

Human Sciences Building
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www.psych.auckland.ac.nz

**Internet and Mobile Phone Use by High School Students in New Zealand**

Researchers: John Fenaughty, Niki Harré, Nickola Overall.

Consent Form for Principals and Board of Trustees.

THIS FORM WILL BE RETAINED FOR SIX YEARS

Thank you for considering the participation of your school in this focus group research. Before we can begin this research, we require written consent. If you sign this form, you agree that you understand and agree to the following:

- I understand that this consent form will be stored in a locked filing cabinet in the Psychology Department, at the University of Auckland.
- I understand that this form will be retained for six years and after that it will be destroyed.
- I understand that any personally identifying information will be changed so my school, its students, and its community, will not be identifiable in any reports produced from this research.
- I understand that the survey is anonymous and no identifying personal details will be collected (including the internet address) about the students, by the research team.
- I understand that parent or caregiver consent is required to allow students under the age 16 to participate in the research.
- I understand that the students are free to withdraw from the research at any time (even during the interview itself) without giving a reason.

**I agree that my school may take part in this research:**

Name: …… Date ……

Position/Role and School: ……...

Signature: ……...

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON **12/07/07 for 3 years from 12/07/07 to 12/07/10 Reference Number 2007/Q/021**

# Appendix I

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

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**Internet and Mobile Phone Use**
**by High School Students in New Zealand**

Information for Students.

Hi, my name is John Fenaughty. I am the Research Manager at NetSafe (a non profit cybersafety organisation sponsored by the Ministry of Education) and I'm doing a doctorate degree in Psychology at the University of Auckland.

For part of my research I am asking NZ high school students about your views and experiences with the internet and mobile phones.

Using the Internet and mobiles can have lots of advantages (like catching up with friends, accessing information) but they can also have disadvantages (like text and cyber bullying). This research uses an online survey to find out your opinions. The survey will be run over a period of a week at your school. During this week you can do the survey in class time (during any subject using a school computer).

The aim of the online-survey is to find out what you like to do online and on mobile phones. We're also interested in certain experiences you may have had with the internet and mobile phones in the last 12 months. The survey will include questions about:

- What you use the internet and mobile phones to do.
- Friendships and relationships with **new** online friends.
- Meeting new online friends face to face.
- What personal details you've put on a website.
- Text bullying and cyber bullying (including sending other people mean messages).
- Violent, scary, or unwanted stuff that you may have seen online or on a mobile.
- Seeing sexual material (like pictures, videos, stories, etc.) online or on a mobile.
- Unwanted sexual chats or questions online or on a mobile.
- Downloading music and videos for free.
- Betting and gambling online.
- Mobile phone or internet scams.
- Pop-ups, viruses, and computer security problems.

These questions are important so we can find out which issues face high-school students in NZ today. This information will help us to continue to make Cyberspace a more positive experience for kiwi high school students. NetSafe is funding the research and I'd like to invite you to help out by filling out an online survey.

***Participation in the survey is completely voluntary,*** *and* ***you do not have to answer any question if you do not want to.*** Even if you begin, you can quit the survey at any time, and nothing will be recorded.

No personal information will be collected by the survey. ***Your school, yourself, and anyone else, will not be able to be identified in any reports based on this research.*** Even the internet location information of your computer will not be collected by the research team. The online survey will be electronically encrypted to make it more secure. Electronic encryption in this survey uses Secure Socket Layer (SSL) technology to turn the information from this questionnaire into a code

(encrypt), send it as code, and then decode (decrypt) it at the other end for use. Encryption means that if someone gets hold of information while it is being sent, it is very difficult to use (unlike un-encrypted information).

The online survey will usually take between 5 minutes and 15 minutes to finish. For some people, who have experienced a lot online or on mobile phones, the survey may take 20 minutes. To participate, you will need to be in Year 9 or older. You'll also need to be able to speak English. If you are under the age of 16, your parent or caregiver will need to give permission for you to participate. You can give them the "Information for Parents and Caregivers" form attached to this one and talk with them about participating. If you are 16 or over, you can sign the consent form yourself.

If 75% of your form class returns a signed "consent form" from your parent or caregiver, your class will **earn a mufti day**! It doesn't matter if your parent or caregiver, or you yourself, decide you won't be doing the survey, all you need to do is return the signed "consent form" (saying "yes" you will do it, or "no" you won't be doing it). If you are over 16 years of age you don't need a signed consent form, all you need to do is return the form to your form teacher saying that you've read the "students information" sheet (this form is attached to the sheet).

It's important to note that it may be stressful for some people to talk about negative experiences on the internet and mobile phones. If you think it might be stressful to respond to questions about negative experiences on the internet and mobile phones, you should not participate in the survey. If something in the survey makes you upset or uncomfortable, you can stop the survey at any time (by closing the survey window). If you become upset or uncomfortable during or after the survey, you may wish to talk with an adult you trust. Other helpful people to talk to are listed on the support sheet you'll be given at school. You can also contact me or the other members of the research team if you have any questions or would like some advice about anything in the survey.

We will keep the survey responses for six years. We will store them securely. After six years they will be destroyed. The first report from the research will be out by the end of 2007. If you would like to see the report based on this research, you can download it from www.netsafe.org.nz or call 0508 NETSAFE to get it sent out or emailed to you.

***Thank you very much for your time and interest in this research!***

If you would like more information about this study or have questions or concerns, please contact:


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If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (09) 373-7599 extn. 87830


**APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 12/07/07 for 3 years from 12/07/07 to 12/07/10 Reference Number 2007/Q/021**

# Appendix J

DEPARTMENT OF PSYCHOLOGY
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**Internet and Mobile Phone Use**
**by High School Students in New Zealand**

Information for Parents and Caregivers.

Hi, my name is John Fenaughty. I am the Research Manager at NetSafe – The Internet Safety Group. NetSafe, a non-profit organisation, is the Ministry of Education's preferred provider of cybersafety education for all New Zealanders. I am also doing a doctorate in Psychology at the University of Auckland. For this part of our research project I am asking NZ high school students about their views and experiences with the internet and mobile phones.

Using the Internet and mobile phones can have lots of advantages (like catching up with friends, accessing information) but they can also have disadvantages (like text and cyber bullying). This research uses an anonymous online survey to find out about how the young person in your care feels about their use of the internet and mobile phones. The survey will be run over a period of a week at their school. During this week the survey can be completed in class time (during any subject using a school computer).

The aim of the online-survey is to find out what high-school aged people like to do online and on mobile phones. We're also interested in certain experiences with the internet and mobile phones in the last 12 months. The survey will cover the following issues: Friendships and relationships with new online friends; Meeting new online friends face to face; Putting personal details on websites; Text bullying and cyber bullying; Unwanted material seen online or on a mobile; Sexual material online or on a mobile; Unwanted sexual chats or questions online or on a mobile; Downloading music and videos for free; Betting and gambling online; Mobile phone or internet scams; and Pop-ups, viruses, and computer security problems.

These questions are important so we can find out which issues face high-school students in NZ today. This information will help us to continue to make Cyberspace a more positive experience for kiwi high school students. NetSafe is funding the research and I'd like to invite the young person in your care to help out by filling out one of these online surveys. ***Participation in the survey is completely voluntary,*** *and* ***the young person in your care does not have to answer any question if they do not want to.*** They can also decide to stop the survey at any time (without giving a reason).

No personal information will be collected by the survey. As the survey is **anonymous**, neither ***the school, the young person in your care, or anyone else, will be able to be identified in any reports based on this research.*** Even the internet location information of computers will not be collected by the research team. The online survey will be electronically encrypted to make it more secure. Electronic encryption in this survey uses Secure Socket Layer (SSL) technology to turn the information from this questionnaire into a code (encryption), send it as code, and then decode (decryption) it at the other end, for use. This means that responses from **any particular** participant will **not be** traced or identifiable, which means that **no one will be able to request information on a particular student's response**. However, a summary of general findings from the full project will available from the NetSafe website (www.netsafe.org.nz) near the end of 2007.

The online survey will usually take between 5 minutes and 15 minutes to finish. For some people, who have experienced a lot online or on mobile phones, the survey may take 20 minutes. To participate, students need to be in School Year 9 and older. As the survey is written in English, the

person in your care will need to be able to speak fluent English. If the person in your care is under the age of 16, you will need to give permission for them to participate. If you agree that they may participate you will need to sign the "Consent Form for Parents and Caregivers" attached to this sheet and for the young person in your care to return to the school. If the young person in your care is 16 years or over, they do not require parental/caregiver consent (they may sign the different "I have read the Student Information Sheet" form instead).

If 75% of the class returns signed "consent forms", the class will **earn a mufty day**! It doesn't matter if you, or the young person in your care, decide that they will not be doing the survey, all they need to do is return the signed "consent form" (saying "yes" they will do it or "no" they won't) to help the class achieve a mufti day. If they *are* allowed to participate they will be included in the *eligible participants* list held by teachers during the survey week. This list will ensure that no (under 16 years) who hasn't received consent to participate will be able to do the survey at school.

It is important to note that it may be stressful for some people to talk about negative experiences on the internet and mobile phones. If you think it might be psychologically distressing for the young person in your care to respond to questions about negative experiences on the internet and mobile phones, you should talk with them about whether or not it is a good idea to participate in the survey. If something in the survey makes the young person in your care upset or uncomfortable, they can stop the survey at any time (by closing the survey window). They will also be told this when they start the questionnaire. In case anyone does become upset by the survey, before the survey begins all students will given a support service sheet to use to access support should it be required. The sheet lists helpful sources of support (like parents/caregivers, other trusted adults, the school guidance team, helplines, and our free-phone helpline, etc).

We will keep the survey responses for six years. We will store them securely. After six years they will be destroyed. The first report from the research will be out by the end of 2007. If you would like to see the report based on this research, you can download it from www.netsafe.org.nz or call 0508 NETSAFE to get it sent out or emailed to you.

We welcome any questions you may have about this survey before you decide if you'd like the young person in your care to participate.

***Thank you very much for your time and interest in this research!***

If you would like more information about this study or have any concerns, please contact:

**John Fenaughty,**
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If you have any concerns of an ethical nature you can contact the Chair of the University of Auckland Human Participants Ethics Committee at (09) 373-7599 extn. 87830

**APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 12/07/07 for 3 years from 12/07/07 to 12/07/10 Reference Number 2007/Q/021**

# Appendix K

DEPARTMENT OF PSYCHOLOGY
Faculty of Science

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

Human Sciences Building
Level 6, 10 Symonds Street
Auckland, New Zealand
Telephone 64 9 373 7599
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**Internet and Mobile Phone Use by High School Students in New Zealand**

Researchers: John Fenaughty, Niki Harré, Nickola Overall.

Consent Form for Parents and Caregivers of Students Under 16 Years of Age.

THIS FORM WILL BE RETAINED FOR SIX YEARS

Thank you for considering the participation of your son or daughter in this survey. For participation to occur your written consent is required and we need you to sign this consent form.

If you sign this form AND you tick the box "Yes, my son, daughter, or the young person in my care, may participate in the survey", you understand and agree to the following:

- I understand that this consent form will be stored in a locked filing cabinet in the Psychology Department, at the University of Auckland.
- I have read the Information Sheet for Parents and Caregivers about this research (see attached).
- I understand that this form will be kept for six years and after that it will be destroyed.
- I understand that by signing this form (and ticking either yes, or no, that my daughter, son, or the young person in my care) will be able to give this form to their form teacher. If 75% of their form class returns a signed form, then the class will earn a mufti day. To earn a mufti day, the form does not need to say "yes" they will do the survey, **it just has to be signed either Yes, or No, by me.**
- I understand that the survey is anonymous and no identifying personal details will be collected (including the internet address) about my daughter, son, or young person in my care, by the research team.
- I understand that due to the anonymous nature of the survey, I will not be able to request any specific information about the responses of my daughter, son, or the young person in my care.
- I understand that my daughter or son is free to withdraw from the research at any time before, or during the survey, without giving a reason.

☐ **Yes, I agree** that my son, daughter, or the young person in my care, **may take part in this research:**

☐ **No, I do not agree** that my son, daughter, or the young person in my care, **may take part in this research:**

Parent or Caregiver's Name: …… Date ……

Signature: ……..

Name of daughter, son, or young person in your care: ……..

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON **13/06/07 for 3 years from 14/06/07 to 14/06/10. Reference Number 2007/Q/021.**

# Appendix L

Table 19. Frequency and Descriptions of Self-Labels for 'Other' Ethnicity Category (*n* = 178).

| Self-Labelled Ethnicity | n | Self-Labelled Ethnicity | n |
|---|---|---|---|
| Afghani | 11 | Jedi | 1 |
| African | 6 | Kiwi | 8 |
| African, white | 1 | Korean | 5 |
| American | 2 | Kurdish | 1 |
| American Samoan | 1 | Latin American/South American | 2 |
| American Samoan | 1 | Latino | 1 |
| American/Latino | 1 | Lebanese | 1 |
| American/Norwegian | 1 | Malaysian | 4 |
| American/White | 1 | Mexican | 1 |
| Arulohian | 1 | Middle Eastern | 2 |
| Australian | 2 | Mixed race | 1 |
| Australian , Irish | 1 | More | 1 |
| Bangladesh | 10 | Namibia | 1 |
| Black | 1 | Native American Indian | 1 |
| Bosnian | 1 | Nepali | 1 |
| British | 1 | New Zealand Chinese | 1 |
| Canadian | 2 | New Zealand Dutch | 1 |
| Canadian Japanese | 1 | New Zealander | 9 |
| Celtic | 1 | Niuean | 1 |
| Cook Island | 1 | NZ kiwi | 1 |
| Croatian | 2 | NZ/Dutch | 1 |
| Dutch | 2 | Pakistani | 6 |
| Egyptian | 1 | Palestinian | 1 |
| English | 5 | Pasifika/European | 1 |
| Estonian | 1 | Portuguese | 2 |
| Fijian | 2 | Romanian | 1 |
| Fijian Indian | 12 | S E Asian | 1 |
| Fijian-Indian/Kiwi | 1 | Samoan European | 1 |
| Filipino | 2 | Serbian | 1 |
| Finnish | 1 | Somalian | 5 |
| HongKongnian | 1 | South African | 10 |
| India | 1 | South African Indian | 1 |
| Indo-Fijian | 1 | Sri Lankan | 11 |
| Indonesian | 1 | Sri Lankan/Fiji Indian | 1 |
| Iraq | 1 | Taiwanese | 2 |
| Irish | 2 | Tamil Sri Lankan | 1 |
| Italian | 1 | Tongan | 2 |
| Jamaican | 1 | Turkish | 1 |

## Appendix M

netsafe Cyber Survey

PAGE 1.

### Thanks for doing the netsafe survey!

This survey will ask about your experiences using the internet and mobile phones. The results of this research will be used to see how we can help high school students in NZ have a positive experience in Cyberspace.

Please answer the questions honestly – we really want to hear about **you think**! If you tick the wrong box, that's fine, just cross out the mistake and tick the correct box.

All your answers are **anonymous - no one will be able to know anything you said**. Also, any identifying information about your school, or other people, will be changed to protect their identities.

***IMPORTANT:*** Depending on your answers, this survey may ask you to jump to a particular question. These instructions will be in a black boxes like this one. Please follow these instructions carefully ☺

**Q.1)** How many years old are you? *(Please tick ONE box below)*:

☐12yrs ☐13 yrs ☐14 yrs ☐15 yrs ☐16 yrs ☐17 yrs ☐18 yrs ☐19 yrs+

**Q.2)** Are you female or male? *(Please tick a box):* ☐ Male ☐ Female

**Q.3)** What terms do you use to describe your ethnicity? *(Please tick ALL of the answers that apply)*

☐ Asian ☐ Māori ☐ Indian ☐ NZ European or Pakeha ☐ Pasifika ☐ Other European

☐ Other Ethnicity *(please write here)* .....

---

**Q.4)** In the **past year** (in the 12 months up till today) have YOU...
*(Please tick ONE answer for each question).*

| | No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|---|
| Communicated on **mobile phones/ cellphones** (e.g., talking, texting, txting, and pxting to others)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Used the **internet** to **communicate online** (e.g., messaging, chatting, commenting, in-game chat, talking, webcam, emailing, or posting messages to others, etc.)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Page 2. **Q.5)** In the **past year** (in the 12 months up till today) have YOU used the **internet** or **mobile phones to...**

*(Please tick ONE answer for each question).*

| | No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|---|
| **Surf** the web for information (e.g., getting information on things that interest you and/or information for school projects)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **Put** your **own** personal stuff (like personal pictures, videos, art work, music, etc.) **online** (like on Bebo, YouTube, etc.)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Do **online banking** (e.g., looking at your bank account information online)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Make **new** friends that you first met on the **internet** or **mobile phones**? (For example - like making new friends on Bebo or on Instant Messenger (etc.) who you had NEVER met in 'REAL' life before) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Get a **NEW** girlfriend or boyfriend **online** or with a **mobile**? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Do **online trading** - like buying, selling, or swapping **real** or **virtual** things online using internet shops, trading sites (like trademe, etc.), or games (like Habbo Hotel, Runescape, etc.)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Do **file sharing**? ... (File sharing is when you download files directly from someone else's computer to your computer. Some share music or video files (like MP3s or AVI files). Often people use file-sharing programmes (like LimeWire and KaZaA, etc.) to do file sharing.) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Play ANY games that **use the internet**? ...(**Online games** may play inside a **web browser** (like Runescape, Club Penguin, and other games on Miniclips etc.) or use their own programmes to go online (like World of Warcraft, Second Life, etc.). Some PlayStation, Nintendo, and Xbox games also use the internet.) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **Listen to music** and/or **look at video** clips, movies, & photos (YouTube, iTunes, LimeWire etc)? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Page 3. **Q.6)** Please rate **how well** you can do the things below. Please tick ONE of the answers for each question. **'6'** means you can do it **very well** and **'1'** means you **cannot do it well** at all.

We are interested in your honest response.

There are no right or wrong answers.

*(Please choose ONE answer for EACH of the questions below.)*

| | ( 1 ) Not well at all | ( 2 ) Not well | ( 3 ) Sort of well | ( 4 ) Quite well | ( 5 ) Well | ( 6 ) Very well |
|---|---|---|---|---|---|---|
| How well can you get adults to help you with a problem? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you get school staff to help you, when you have a problem at school? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you get teachers to help you when you get stuck on school work? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you have a chat with an unfamiliar (new) person of your age? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you get the information you need from adults? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you cooperate with your classmates? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you express your opinions when your classmates disagree with you? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you become friends with other people? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you take part in class discussions? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you succeed in staying friends with other people? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you work in a group? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| How well can you participate in class activities? | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Page 4. **Q.7)** For this question, please **think of your family**, especially the **2 – 3 family members** who are **most important** to you…

We are interested in your honest response. There are no right or wrong answers.

*(Please choose ONE answer for EACH of the questions below.)*

| | Never | Sometimes | Often | Usually or Always |
|---|---|---|---|---|
| How often could you use them as examples of how to deal with your problems? | ☐ | ☐ | ☐ | ☐ |
| How often did they really listen to you when you talked about your concerns or problems? | ☐ | ☐ | ☐ | ☐ |
| How often did you feel that they were really trying to understand your problems? | ☐ | ☐ | ☐ | ☐ |
| How often did they really make you feel loved? | ☐ | ☐ | ☐ | ☐ |
| How often did they answer your questions or give you advice about how to solve your problems? | ☐ | ☐ | ☐ | ☐ |
| How often did they help you in **practical ways**, like doing things for you, showing you how to do things, or lending you money, (etc.)? | ☐ | ☐ | ☐ | ☐ |

**Q.8)** Thinking about **how often** they **helped** you in **practical ways**...

| | More Often | Less Often | It was just right |
|---|---|---|---|
| Would you have liked them to do this... | ☐ | ☐ | ☐ |

**Q.9)** In the past year has someone ever tried to use a **mobile phone** to bully or be mean and hurtful to you?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 15 (**Q.15** on **page 7**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (**Q.10**).

Page 5. **Q.10)** Thinking of the **most serious** time in the past year that someone tried to bully, or be mean, or hurtful to you, on a **mobile phone**,

**What did they do?**
*(Please tick ALL the answers that apply)*

| **They used a mobile phone to:** | Please tick if this happened |
|---|---|
| ...say or text mean, hurtful, or nasty things to you | ☐ |
| ...to spread rumors about you (even if they were untrue) | ☐ |
| ...not let you talk, text, or be friends with them (like they ignored you) | ☐ |
| ...send you scary or disgusting pictures and videos | ☐ |
| ...send mean or embarrassing pictures or videos of you to other people | ☐ |
| ...threaten to hurt you physically (like txting to say they were going to get you) | ☐ |
| ...threaten to tell other people embarrassing things about you | ☐ |
| ...threaten to damage and hurt someone or something that you cared about | ☐ |
| ...do something else mean or hurtful on a mobile phone | ☐ |
| And...they did OTHER mean and hurtful things NOT USING a mobile phone | ☐ |

**Q.11)** Thinking about the **most serious time** in the past year when someone tried to bully you, or be hurtful, or mean to you, on a **mobile phone**,

| **Were they...?**<br>*(Please tick ALL the answers that apply)* | No | Yes |
|---|---|---|
| Male | ☐ | ☐ |
| Female | ☐ | ☐ |
| At your school | ☐ | ☐ |
| Around your age | ☐ | ☐ |
| More than one person (like two or more people, or even a gang of people) | ☐ | ☐ |
| A boyfriend or girlfriend (when it happened) | ☐ | ☐ |
| Already an ex-boyfriend or ex-girlfriend (when it happened) | ☐ | ☐ |
| A good friend (when it happened) | ☐ | ☐ |
| Already an ex-friend (when it happened) | ☐ | ☐ |
| And/or... you did you not know who they REALLY were (in other words, they were anonymous) | ☐ | ☐ |

**Page 6. Q.12)** Thinking about the **most serious time** in the past year when someone tried to **bully you**, or be hurtful, or mean to you, on a **mobile phone**...

| **How did you feel about it...?** *(Please tick ONE of the answers below)* |
|---|
| ☐ Extremely upset |
| ☐ Very upset |
| ☐ Upset |
| ☐ Just a little bit upset |
| ☐ Not at all upset |

| **I thought it was:** *(Please tick ONE of the answers below)* |
|---|
| ☐ Very unacceptable |
| ☐ Unacceptable |
| ☐ Sort of acceptable |
| ☐ Acceptable |
| ☐ Very acceptable |

**Q.13)** Thinking about the **most serious time** in the past year when someone tried to **bully you**, or be hurtful, or mean to you, on a **mobile phone**...

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing – it stopped by itself | ☐ |
| Nothing – I didn't know what to do about it and it is still happening | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I told them to stop doing it (I confronted or warned them) | ☐ |
| I fought back online/on mobile phone (e.g., sending them mean messages, etc.) | ☐ |
| I fought back physically | ☐ |
| I ignored it to make it go away | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I changed my screen name, profile, or email address | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I looked up information about it | ☐ |
| I reported it to the Police | ☐ |
| I reported it to my mobile phone company | ☐ |
| And/or... I did something else (please write here) ..... | |
| ..... | |
| ..... | |

**Q.14)** Please rate if THAT issue or experience (of mobile phone bullying) was **"sorted out"** by ticking ONE answers below. (*'1' means it was not sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Page 7. Q.15)** In the past year has someone ever tried to use the **internet** to bully or be mean and hurtful to you?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 21 (**Q.21** on **page 9**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.16).

**Q.16)** Thinking of the **most serious** time in the past year that someone tried to bully, or be mean, or hurtful to you, on the **internet...**

**What did they do?**
*(Please tick ALL the answers that apply)*

| **They used the internet to:** | Please tick if this happened |
|---|---|
| ... message, write, or say mean, hurtful, or nasty things to you | ☐ |
| ...to spread rumors about you (even if they were untrue) | ☐ |
| ...not let you talk, comment, message, or be friends with them (like they ignored you) | ☐ |
| ...send you scary or disgusting pictures and videos | ☐ |
| ...send mean or embarrassing pictures or videos of you to other people | ☐ |
| ...threaten to hurt you physically (like txting to say they were going to get you) | ☐ |
| ...threaten to tell other people embarrassing things about you | ☐ |
| ...threaten to damage and hurt someone or something that you cared about | ☐ |
| ...do something else mean or hurtful to you on the internet | ☐ |
| And...they did OTHER mean and hurtful things NOT USING the internet | ☐ |

**Q.17)** Thinking about the **most serious time** in the past year when someone tried to **bully you**, or be hurtful, or mean to you, on the **internet**...

**How did you feel about it...?**
*(Please tick ONE of the answers below)*
- ☐ Extremely upset
- ☐ Very upset
- ☐ Upset
- ☐ Just a little bit upset
- ☐ Not at all upset

**I thought it was:**
*(Please tick ONE of the answers below)*
- ☐ Very unacceptable
- ☐ Unacceptable
- ☐ Sort of acceptable
- ☐ Acceptable
- ☐ Very acceptable

Page 8. **Q.18)** Thinking about the **most serious time** in the past year when someone tried to bully you, or be hurtful, or mean to you, on **the internet**

| **Were they…?** *(Please tick ALL the answers that apply)* | No | Yes |
|---|---|---|
| Male | ☐ | ☐ |
| Female | ☐ | ☐ |
| At your school | ☐ | ☐ |
| Around your age | ☐ | ☐ |
| More than one person (like two or more people, or even a gang of people) | ☐ | ☐ |
| A boyfriend or girlfriend (when it happened) | ☐ | ☐ |
| Already an ex-boyfriend or ex-girlfriend (when it happened) | ☐ | ☐ |
| A good friend (when it happened) | ☐ | ☐ |
| Already an ex-friend (when it happened) | ☐ | ☐ |
| And/or… you did you not know who they REALLY were (in other words, they were anonymous) | ☐ | ☐ |

**Q.19)** Thinking about the **most serious time** in the past year when someone tried to **bully you**, or be hurtful, or mean to you, on the **internet**…

| **What happened…?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing – it stopped by itself | ☐ |
| Nothing – I didn't know what to do about it and it is still happening | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I told them to stop doing it (I confronted or warned them) | ☐ |
| I fought back online/on mobile phone (e.g., sending them mean messages, etc.) | ☐ |
| I fought back physically | ☐ |
| I ignored it to make it go away | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I changed my screen name, profile, or email address | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I looked up information about it | ☐ |
| I reported it to the Police | ☐ |
| I reported it to the host of the website or web-service | ☐ |
| I reported it to my Internet Service Provider (ISP) | ☐ |
| And/or… I did something else (please write here) …… | |

**Page 9. Q.20)** Please rate if THAT issue or experience (of internet bullying) was **"sorted out"** by ticking ONE answers below. *('1' means it was not sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.21)** In the past year have **you** ever tried to use a **mobile phone** to bully or be mean and hurtful to someone?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 24 (**Q.24** on **page 10**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.22).

**Q.22)** Thinking of the **most serious** time in the past year when **you** were mean or hurtful to someone on a **mobile phone**, did **you...?**

| **Use a mobile phone to...** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| ...text or say mean or hurtful things to **them** | ☐ |
| ...spread rumours about **them** (even if they were untrue) | ☐ |
| ...threaten to tell others embarrassing things about **them** | ☐ |
| ...not let **them** talk or text or be friends with you (like you ignored them) | ☐ |
| ...send **them** scary or disgusting pictures and videos | ☐ |
| ...threaten to hurt **them** physically | ☐ |
| ...threaten to hurt someone else **they** knew physically | ☐ |
| ...Do other mean things to **them** on a mobile phone | ☐ |
| And/or... you did OTHER mean things to them NOT on a mobile phone | ☐ |
| ...text or say mean or hurtful things to **them** | ☐ |

**Page 10. Q.23)** Thinking about the **most serious time** in the past year when **you** were mean and hurtful to someone on a **mobile phone,**

| **Was the person you were mean and nasty to...?** *(Please tick ALL the answers that apply)* | No | Yes |
|---|---|---|
| Male | ☐ | ☐ |
| Female | ☐ | ☐ |
| At your school | ☐ | ☐ |
| Around your age | ☐ | ☐ |
| More than one person (like two or more people, or even a gang of people) | ☐ | ☐ |
| A boyfriend or girlfriend (when it happened) | ☐ | ☐ |
| Already an ex-boyfriend or ex-girlfriend (when it happened) | ☐ | ☐ |
| A good friend (when it happened) | ☐ | ☐ |
| Already an ex-friend (when it happened) | ☐ | ☐ |
| And/or... you did you not know who they REALLY were (in other words, they were anonymous) | ☐ | ☐ |

**Q.24)** In the past year have **you** ever tried to use the **internet** to bully or be mean and hurtful to someone?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 27 (**Q.27** on **page 11**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.25).

**Q.25)** Thinking of the **most serious** time in the past year that **you** were mean or hurtful to someone on the **internet**, did **you...?**

| **Use the internet to...** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| ...say mean or nasty things to **them** | ☐ |
| ...spread rumours about **them** (even if they were untrue) | ☐ |
| ...threaten to tell others embarrassing things about **them** | ☐ |
| ...not let **them** email, message or be friends with you (like you ignored them) | ☐ |
| ...send **them** scary or disgusting pictures and videos | ☐ |
| ...threaten to hurt **them** physically | ☐ |
| ...threaten to hurt someone else **they** knew physically | ☐ |
| ...do other mean things to **them** on the internet | ☐ |
| ...say mean or nasty things to **them** | ☐ |
| ...spread rumours about **them** (even if they were untrue) | ☐ |

**Page 11. Q.26)** Thinking of the **most serious** time in the past year that **you** were mean or hurtful to someone on the **internet**,

| **Was the person you were mean and nasty to...?** *(Please tick ALL the answers that apply)* | No | Yes |
|---|---|---|
| Male | ☐ | ☐ |
| Female | ☐ | ☐ |
| At your school | ☐ | ☐ |
| Around your age | ☐ | ☐ |
| More than one person (like two or more people, or even a gang of people) | ☐ | ☐ |
| A boyfriend or girlfriend (when it happened) | ☐ | ☐ |
| Already an ex-boyfriend or ex-girlfriend (when it happened) | ☐ | ☐ |
| A good friend (when it happened) | ☐ | ☐ |
| Already an ex-friend (when it happened) | ☐ | ☐ |
| And/or... you did you not know who they REALLY were (in other words, they were anonymous) | ☐ | ☐ |

**Q.27)** In the past year have **you ever** used the **internet** or a **mobile phone** to chat, message, video, or web-cam (or communicate in another way) with anyone who you hadn't **first met face-to-face**.

(For example - like communicating with new friends on Bebo or on Instant Messenger (etc.) who you have NEVER met in 'REAL' life).

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 35 (**Q.35** on **page 14**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.28).

**Q.28)** People sometimes **meet face to face** with people they **FIRST met online** or on a **mobile phone**.

Think about all the people you FIRST met online or on a mobile phone in the past year.

Out of those people, did you **meet up with any of them** FACE TO FACE for the **FIRST TIME** in the past year?

(Like by arranging to meet up somewhere, or by meeting up at a party, etc.)

*(Please tick ONE of the answers below)*

| No | **Yes, I met** 1 new online contact **face to face** | **Yes, I met** 2 new online contacts **face to face** | **Yes, I met** 3 - 5 new online contacts **face to face** | **Yes, I met** 5 - 10 new online contacts **face to face** | **Yes, I met** more than 10 new online contacts **face to face** |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 35 (**Q.35** on **page 14**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.29).

**Page 12. Q.29)** Out of the online contacts who you FIRST met FACE TO FACE in the past year,

How many of them were **NOT KNOWN** FACE TO FACE to your OFFLINE friends, family or trusted adults?
*(Please tick ONE of the answers below)*

| **ALL** of these people were already known by offline friends, family, or trusted adults, face to face...or | **Yes, 1** person was **NOT** known by offline friends, family, or trusted adults, face to face | **Yes, 2** of these people were **NOT** known by offline friends, family, or trusted adults, face to face | **Yes, 3 to 5** of these people were **NOT** known by offline friends, family, or trusted adults, face to face | **Yes, 5 to 10** of the people were **NOT** known by offline friends, family, or trusted adults, face to face | **Yes. more than 10** were **NOT** known by offline friends, family, or trusted adults, face to face |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"All known"** to this question **go to** Question 35 (**Q.35** on **page 14**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.30).

**Q.30)** When you first met those people FACE TO FACE who your OFFLINE friends, family, or trusted adults **DID NOT KNOW FACE TO FACE**,

What was the situation when FIRST met EACH OF THEM?

(Please FILL out a separate column for the FIRST face to face meeting with EACH new person you met in the past year. If you met more than 3 online contacts face to face in the past year, please fill this out for the first 3 people you met in the past year.)

*(Please tick ALL the answers that apply)*

| **What was the situation when you FIRST met EACH OF THEM?** *(Please tick ALL the answers that apply)* | First Meeting with Person #1 | First Meeting with Person #2 | First Meeting with Person #3 |
|---|---|---|---|
| **Before** I went to meet them, I told a **parent or caregiver** I was meeting an online friend face to face | ☐ | ☐ | ☐ |
| **Before** I went to meet them, I told an offline **friend** I was meeting an online friend face to face | ☐ | ☐ | ☐ |
| I met them **at their house**, or **someone else's house,** who I **also** didn't know **face to face** | ☐ | ☐ | ☐ |
| I met them at a public place where there **weren't many other people around** (e.g., empty beach, park, street, etc) | ☐ | ☐ | ☐ |
| I met them at a public place where there were **lots of people around** (e.g., a fast food restaurant, a party, the mall, the movies, etc.) | ☐ | ☐ | ☐ |
| I **took** a **friend** (my age) with me to meet them | ☐ | ☐ | ☐ |
| I **took** a **trusted adult** (like a parent or auntie) with me to meet them | ☐ | ☐ | ☐ |

Page 13. **Q.31)** Thinking about the **most serious** time in the past year when you met someone **face to face** who you hadn't met in person before, (and who your OFF LINE friends, family, or trusted adults didn't already know in person)...

| **How did you feel about it afterwards?** | **Very unhappy :-(** | **Unhappy** | **No feelings either way :-\|** | **Happy** | **Very Happy :-)** |
|---|---|---|---|---|---|
| *(Please tick ONE of the answers to the side)* | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked a **"Happy"** answer please **go to** Question 35 (**Q.35** on **page 14**).
If you ticked an **"Unhappy"** or **"No feelings"** answer, please **continue** to Q.32.

**Q.32)** Thinking about the **most serious** time in the past year when,

You met someone face to face from the **internet** or a **mobile phone**, who you hadn't met in person before (and who your OFF LINE friends, family, or trusted adults didn't already know in person),

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing - I didn't care about it | ☐ |
| Nothing - I didn't know what to do about it | ☐ |
| Nothing, I decided **not** to meet them AGAIN but we're **still** friends | ☐ |
| Nothing, I decided **not** to meet them AGAIN and we're **not** friends anymore | ☐ |
| I ignored them to make them go away | ☐ |
| I told them to stop contacting me (I warned or confronted them) | ☐ |
| I changed my screen name, profile, or email address | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I looked up information about it | ☐ |
| I electronically "blocked" or "banned" that person | ☐ |
| I reported it to the Police | ☐ |
| I reported it to the **host** of the website or web-service | ☐ |
| I reported it to my Internet Service Provider **(ISP)** | ☐ |
| And/or... I did something else (please write here) ..... ..... | |

Page 14. **Q.33)** Thinking about the **most serious** time in the past year you met someone **face to face** who you hadn't met in person before (and who your OFF LINE friends, family, or trusted adults didn't already know in person)…

| **How did you feel about it…?** *(Please tick ONE of the answers below)* |
|---|
| ☐ Extremely upset |
| ☐ Very upset |
| ☐ Upset |
| ☐ Just a little bit upset |
| ☐ Not at all upset |

| **I thought it was:** *(Please tick ONE of the answers below)* |
|---|
| ☐ Very unacceptable |
| ☐ Unacceptable |
| ☐ Sort of acceptable |
| ☐ Acceptable |
| ☐ Very acceptable |

**Q.34)** Please rate if THAT issue or experience (of meeting someone face to face) was **"sorted out"** by ticking ONE answers below. (*'1' means wasn't sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.35)** Sometimes when people are curious about sex they look at x-rated (adults only) websites, or search for pictures, videos, or stories of naked people or of people having sex.

In the past year, have you (either on your own or with others) gone to x-rated sites or searched for x-rated sexual pictures, videos, or stories, on purpose?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.36)** In the past year when you were **surfing the web**, or **receiving messages** on a **mobile phone** or **messenger programme** (like receiving emails, instant messages, opening a link in a message, txt messages, pxt messages, etc.):

Did you see pictures, videos, or stories of naked people or of people having sex, **when you did not want to see them** ?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 40 (**Q.40** on **page 16**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.37).

Page 15. **Q.37)** Thinking about the **most serious** time in the past year that you received a message, or opened a web page, that showed sexual pictures, videos, or stories **that you did not want to see,**

| **How did you feel about it...?** *(Please tick ONE of the answers below)* | **I thought it was:** *(Please tick ONE of the answers below)* |
|---|---|
| ☐ Extremely upset | ☐ Very unacceptable |
| ☐ Very upset | ☐ Unacceptable |
| ☐ Upset | ☐ Sort of acceptable |
| ☐ Just a little bit upset | ☐ Acceptable |
| ☐ Not at all upset | ☐ Very acceptable |

**Q.38)** Thinking about the **most serious** time in the past year when,

...you received a message, or opened a web page, that showed sexual pictures, videos, or stories **that you did not want to see,**

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing - I didn't know what to do about it | ☐ |
| Nothing - I didn't care about it | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I told the sender to stop (I confronted or warned them) | ☐ |
| I changed my screen name, profile, or email address | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I electronically "blocked" or "banned" that person or website. | ☐ |
| I changed the way I surfed the net for information | ☐ |
| I stopped going online for a while after it happened | ☐ |
| I reported it to the Police | ☐ |
| I reported it to the **host** of the website or web-service | ☐ |
| I reported it to my Internet Service Provider **(ISP)** | ☐ |
| And/or... I did something else (please write here) ..... ..... | |

**Page 16. Q.39)** Please rate if THAT issue or experience (of seeing sexual stuff you didn't want to see) was **"sorted out"** by ticking ONE answers below.
*('1' means wasn't sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.40)** In the past year, did anyone **online** or on a **mobile** ever ask you about private sexual things, ask you to do sexual things, ask you to take naked or sexual pictures of yourself, or try to get you to talk about sex, **when you did not want to**?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 44 (**Q.44** on **page 17**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.41).

**Q.41)** Thinking about the **most serious** time in the past year when,

someone **online** or **on a mobile** asked you about private sexual things, asked you to do sexual things, take naked or sexual pictures of yourself, or tried to get you to talk about sex, **when you did not want to**,

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing - I didn't know what to do about it | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I told them to stop doing it (I confronted or warned them) | ☐ |
| I changed my screen name, profile, or email address | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I electronically "blocked" or "banned" that person | ☐ |
| I stopped going online for a while after it happened | ☐ |
| I reported it to the Police | ☐ |
| I reported it to the host of the website or web-service | ☐ |
| I reported it to my Internet Service Provider (ISP) | ☐ |
| And/or... I did something else (please write here) ..... | |
| ..... | |

Page 17. **Q.42)** Thinking about the **most serious** time in the past year that someone **online** or **on a mobile** asked you about:
Private sexual things, asked you to do sexual things, asked you to take naked or sexual pictures of yourself, or tried to get you to talk about sex, **when you did not want to**,

| **How did you feel about it...?** *(Please tick ONE of the answers below)* | **I thought it was:** *(Please tick ONE of the answers below)* |
|---|---|
| ☐ Extremely upset | ☐ Very unacceptable |
| ☐ Very upset | ☐ Unacceptable |
| ☐ Upset | ☐ Sort of acceptable |
| ☐ Just a little bit upset | ☐ Acceptable |
| ☐ Not at all upset | ☐ Very acceptable |

**Q.43)** Please rate if THAT issue or experience (of being asked to do, or being asked about, sexual things online/on mobile) was **"sorted out"** by ticking ONE answers below.
*('1' means wasn't sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.44)** In the past year, have you seen **anything** else (other than sexual material) **online** or on a **mobile phone** that made you feel uncomfortable or upset?
*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 49 (**Q.49** on **page 18**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.45).

**Q.45)** Thinking about the **most serious time** in the past year when something else **online** or on a **mobile phone** made you feel uncomfortable or upset, **what did you see?**
(please write here:) .....
.....
.....
.....

**Q.46)** Thinking about the **most serious** time in the past year when something else **online** or on a **mobile** made you feel uncomfortable or upset,

| **How did you feel about it...?** *(Please tick ONE of the answers below)* | **I thought it was:** *(Please tick ONE of the answers below)* |
|---|---|
| ☐ Extremely upset | ☐ Very unacceptable |
| ☐ Very upset | ☐ Unacceptable |
| ☐ Upset | ☐ Sort of acceptable |
| ☐ Just a little bit upset | ☐ Acceptable |
| ☐ Not at all upset | ☐ Very acceptable |

Page 18. **Q.47)** Thinking about the **most serious** time in the past year when, something else **online** or on a **mobile** made you feel uncomfortable or upset,

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing - I didn't know what to do about it | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult I trusted about it | ☐ |
| I talked to someone at a help-line or about it | ☐ |
| I changed the way I surfed the net for information | ☐ |
| I electronically "blocked" or "banned" that person or website | ☐ |
| I stopped going online for a while after it happened | ☐ |
| I reported it to the Police | ☐ |
| I reported it to the **host** of the website or web-service | ☐ |
| I reported it to my Internet Service Provider **(ISP)** | ☐ |
| And/or... I did something else (please write here) ..... ..... | |

**Q.48)** Please rate if THAT issue or experience (of seeing something else that made you uncomfortable or upset) was **"sorted out"** by ticking ONE answers below.
*('1' means wasn't sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.49)** In the past year have you got music, movies, or videos **without paying for them** by downloading them by **file sharing** (some people use software like LimeWire, KaZzA, BitTorrent, etc. to do this)?

Note: This does **not include** music, movies, or videos that were **paid for** (e.g., from iTunes, Vodafone, Telecom, etc.) or **streamed** online.

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

**Page 19. Q.50)** In the past year, has the **time** you **spent online** or on a **mobile** meant you couldn't do things you **had** to do, or would have **preferred** to do?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 54 (**Q.54** on **page 20**).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.51).

**Q.51)** Thinking about the **most serious** time in the past year when the **time** you **spent online** or on a **mobile** meant you couldn't do things you **had** to do, or would have **preferred** to do...

**How did you feel about it...?**
*(Please tick ONE of the answers below)*
- ☐ Extremely upset
- ☐ Very upset
- ☐ Upset
- ☐ Just a little bit upset
- ☐ Not at all upset

**I thought it was:**
*(Please tick ONE of the answers below)*
- ☐ Very unacceptable
- ☐ Unacceptable
- ☐ Sort of acceptable
- ☐ Acceptable
- ☐ Very acceptable

**Q.52)** Thinking about the **most serious point** in the past year, when time **online** or on a **mobile** meant you couldn't do the things you **had** to do, or would have **preferred** to do,

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing – I didn't know what to do about it | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I talked to an adult about it | ☐ |
| I got into trouble about it | ☐ |
| I turned my phone off, or put it on silent, until I had time to use it | ☐ |
| I **removed** some programmes off the computer (like messenger and games programmes, etc.) | ☐ |
| I **closed** some programmes until I had time to use them later on (like messenger and games programmes, etc.) | ☐ |
| I banned myself from certain websites | ☐ |
| I stopped going online for a while | ☐ |
| I made sure I did the things I **had to**, before I did **other** stuff online or on a mobile | ☐ |
| And/or... I did something else (please write here) ..... ..... | |

Page 20. **Q.53)** Please rate if THAT issue or experience (time online/on mobile) was **"sorted out"** by ticking ONE answers below. *('1' means wasn't sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.54)** In the past year, have you ever **posted** any of the following things on a **public website** or **mobile phone chatroom** where someone you **didn't already know** face to face, OR **someone who didn't like you**, could find it?

(like posting it on 'open' blog sites, an 'open' page on Bebo, YouTube, web forums, chat rooms, etc)?

*(Please tick ALL the answers that apply)*

| **(Please tick ALL the answers that apply)** | Please tick if you've posted this |
|---|---|
| Your mobile phone number | ☐ |
| Your instant messenger ID or email address | ☐ |
| The address of your home | ☐ |
| Your first and last name, OR your first name and a recognizable picture of yourself, AND anything (like pictures, stories, or comments) that you wouldn't want someone who didn't like you, to find | ☐ |
| Or... I haven't posted any of these on a public (or 'open') webpage. | ☐ |

**Q.55)** In the past year have you ever lost something **valuable** because you were **tricked** or **scammed** out of it **online** or on a **mobile**?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question please **go to** Question 59 (**Q.59** on page 21).
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.56).

**Q.56)** Thinking about the **most serious** time in the past year you lost **something valuable** because you were **tricked** or **scammed** out of it **online** or on a **mobile**,

**How did you feel about it...?**
*(Please tick ONE of the answers below)*

- ☐ Extremely upset
- ☐ Very upset
- ☐ Upset
- ☐ Just a little bit upset
- ☐ Not at all upset

**I thought it was:**
*(Please tick ONE of the answers below)*

- ☐ Very unacceptable
- ☐ Unacceptable
- ☐ Sort of acceptable
- ☐ Acceptable
- ☐ Very acceptable

Page 21. **Q.57)** Thinking about the **most serious** time in the past year, when you lost **something valuable** because you were **tricked** or **scammed** out of it **online** or on a **mobile**,

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing - I didn't know what to do about it | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I told them to stop doing it (I confronted or warned them) | ☐ |
| I changed my screen name, profile, or email address | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult I trusted about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I changed the way I surfed the net for information | ☐ |
| I electronically "blocked" or "banned" that person or website | ☐ |
| I stopped going online for a while after it happened | ☐ |
| I reported it to the Police | ☐ |
| I reported it to the **host** of the website or web-service | ☐ |
| I reported it to my Internet Service Provider **(ISP)** | ☐ |
| And/or... I did something else (please write here) ..... ..... | |

**Q.58)** Please rate if THAT issue or experience (of loosing something valuable by being tricked or scammed) was **"sorted out"** by ticking ONE answers below.
*('1' means wasn't sorted out at all, and '5' means it was sorted out).*

| (1) No, it was not sorted out at all. | (2) | (3) It was kind of sorted out but there's still some issues | (4) | (5) Yes, it was sorted out |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ |

**Q.59)** In the past year have you ever **won** or **lost** cash or other **valuables** by **betting online** (like in an online casino, online poker game, or by betting on who would win a game)?
*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question You have **FINISHED** (Please go to the last page!)
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.60).

**Page 22. Q.60)** In the past year have you ever **LOST**, what was in your opinion, a **significant amount** of cash or other **valuables**, through **betting online**?

*(Please tick ONE of the answers below)*

| No | Yes, every day or nearly every day | Yes, two or three times a week | Yes, once or twice a month | Yes, one Time every few months | Yes, this happened only once in the year |
|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

If you ticked **"No"** to this question You have **FINISHED** (Please go to the last page!)
If you ticked **any** of the **"Yes"** answers, please **continue** to the next question (Q.61).

**Q.61)** Thinking about the **most serious** time in the past year **LOST**, what was in your opinion, a **significant amount** of cash or other **valuables**, through **betting online**,

**How did you feel about it...?**
*(Please tick ONE of the answers below)*
- ☐ Extremely upset
- ☐ Very upset
- ☐ Upset
- ☐ Just a little bit upset
- ☐ Not at all upset

**I thought it was:**
*(Please tick ONE of the answers below)*
- ☐ Very unacceptable
- ☐ Unacceptable
- ☐ Sort of acceptable
- ☐ Acceptable
- ☐ Very acceptable

**Q.62)** Thinking about the **most serious** time in the past year, when you **lost** cash or other **valuables** by **betting online** (like in an online casino, online poker game, or by betting on who would win a game),

| **What happened...?** *(Please tick ALL the answers that apply)* | Please tick if this happened |
|---|---|
| Nothing - I didn't know what to do about it | ☐ |
| Nothing - it's still happening, but I don't care about it | ☐ |
| I chatted (including online) to a friend about it | ☐ |
| I talked to a parent or caregiver about it | ☐ |
| I talked to an adult at school about it | ☐ |
| I talked to another adult I trusted about it | ☐ |
| I talked to someone at a help-line about it | ☐ |
| I went back and tried again so I could win my money back | ☐ |
| I went to different betting sites instead | ☐ |
| I stopped going to that website or all other betting websites | ☐ |
| I stopped going to that website for a bit, but I go back on it (or back on similar ones) now | ☐ |
| I stopped going onto the internet at all | ☐ |
| And/or... I did something else (please write here) ..... ..... | |

## You have reached the end of the questionnaire!

**THANK YOU so much for helping out with this research!**

If anything in the survey was upsetting you are welcome to call us or contact one of the people listed on the support sheet you will have received at the start of the survey.

If you don't have a support sheet free call
**0508 NETSAFE** to get one sent out to you.

If you want to find out about the results from the survey check out **www.netsafe.org.nz** towards the end of 2007.

**Last 4 digits of Student ID (if required).**

## Appendix N

Table 20. Responses for “Sexual Material” Inappropriate Content Theme (*n* = 29).

| Participant Responses |
|---|
| A picture naked. I felt uncomfortable and embaressed. |
| A story that had dirty stuff in it |
| A very rude video on You tube which was labeled wrongly but was for adults only |
| ads for dating sites |
| gay men are having sex |
| gay porn, shravia, mohomad, Mr White |
| Group sex, Anal sex, Oral sex, hardcore sex |
| I was on bebo and accidently clicked on a random persons bebo page and it came up with a nude girl showing her private parts. |
| my mate had dirty pictures of guys on her phone and it was really disqusting and rude |
| Naked girls |
| Naked pictures on a guys cell phone |
| naked pictures. |
| Naked pxt of a man |
| naked woman |
| Near naked people (mainly women, online horror pop ups, love calculators compatibility. |
| People doing it together. naked pic of guys and girls, also porn |
| pictures of naked girl on a cellphone |
| pictures of people having sex |
| porn |
| Porn pics |
| rude images |
| sexual pictures |
| the owner of the phone said it was Paris Hilton getting fucked. He showed us and we just went away. |
| this guy on top of this girl |
| This site called redtube.com which I didn't know that it existed and it was all adult rated. |
| Two people having sex, really. |
| un porno & not comfortable pictures. |
| very rude, disgusting pictures |
| X rated pictures |

Table 21. Responses for "'Objectionable' Sexual Material" Inappropriate Content Theme (*n* = 5).

| Participant Responses |
|---|
| a girl being raped |
| a picture of a man known as "goatse man" sites called " lemonparty" - pornographic images |
| A video about a man and a sheep. It was gross, but didn't bother anyone. |
| Cow rape |
| www.lemonparty.com www.meatspin.com www.hen2u.com www.goatsee.com |

Table 22. Responses for "'Sexual Solicitations/Harassment" Inappropriate Content Theme (*n* = 8).

| Participant Responses |
|---|
| I got random naked pictures emails from randon OLD men. |
| I saw pictures of dicks sent by an unknown person |
| People that are friends of my older sister sent me images of their genitals, as they where trying to get in my pants |
| random people adding me on msn and shown web cam of there private sexual bits (guys) |
| Sent me a picture of his penis and asked if i wanted to suck it. |
| some anonymous person sent me a picture of there private part |
| Some ones penis |
| Someone asked if i have ever had phone sex |

Table 23. Responses for “Human Violence/Injury” Inappropriate Content Theme (*n* = 28).

| Participant Responses |
|---|
| A child had an accident, face injured, needed money for operation. |
| A decapitated body |
| a guy who had been run over in Iraq with his head all flat and blood and his brain everywhere. |
| A picture of this head with blood on it and flesh hanging out. Eww |
| abuse, cruelty to other people |
| blood, ghosts, dead bodies. |
| Cannabalisn, plane crashes. |
| feotus' which had been aborted at home by the unwanting mother. |
| Global warming, animal torture, war, fall of human race. |
| horrible sex image full of blood and stuff and some random person asking me about my personal information |
| I was tricked into watching the terrorist clip when a young american male had his head cut off, extremly gruesome. |
| I went on a baby website for early childhood research for photos of babies and pictures of aborted babies came up |
| inhumain treatment to prisoners |
| injured people |
| kids getting punched on u tube |
| Mostly violence of killing people. |
| Murderous and sadistic comments that were overly and excessively violent towards other people (not myself). It wasn't anyone I knew, but it was kind of a scary feeling knowing people can be so hateful. |
| people attacking other people |
| physical abuse |
| Picture of mans corpse half eaten by giant bear. |
| pictures of people all cut up and wounded like alot of blood and guts etc very gory |
| saw a cop get shot on the website |
| scary pictures of evil people and like devils images, pictures of the Nazi people and the dead jew corpse, death camps |
| Someone getting beaten up |
| Sucide Boming |
| Telling me that some1 died |
| Unborn babies |
| Very extreme violence things on some website's video or pictures of bloo, horrible death things ... |

Table 24. Responses for “Self-Harm” Inappropriate Content Theme (*n* = 5).

| Participant Responses |
|---|
| a person commit suicide, dead people, animals. |
| I stumbled onto a pro ana website |
| Pictures of very anerexic people |
| Pro Anorexic people |
| Sucide Boming |

Table 25. Responses for “Bullying and Harassment” Inappropriate Content Theme (*n* = 13).

| Participant Responses |
|---|
| A photo of me at my mates party sitting next to a guy I didn't know and everyone saying that we are 'Fuck buddies' and stuff like that. |
| A text from a friend to another friend saying she hated me for some unknown reason |
| Friends being dissed |
| Girls from other schools fighting/screaming |
| Hate sites about me, and fake bebo pages (people pretending to be me) |
| It might be the same as the harrassing side of things but when i got some txt messages saying that i was being watched and they could tell me anything that i asked them about myself. It was a practicle joke that one of my friends was pulling on me, but it still scared the crap out of me. |
| kids getting punched on u tube |
| Murderous and sadistic comments that were overly and excessively violent towards other people (not myself). It wasn't anyone I knew, but it was kind of a scary feeling knowing people can be so hateful. |
| one of the guys at a school claimed he had photos of me naked last year |
| people writing mean stuff to people |
| Someone getting beaten up |
| Text messages or "blog" messages saving hurtful and unacceptable things about ppl I know. |
| they rote a huge insulting message to me |

Table 26. Responses for “Animal-Harm” Inappropriate Content Theme (*n* = 20).

| Participant Responses |
|---|
| a person commit suicide, dead people, animals. |
| A video about a crazy old man drowning cats that came onto his property. |
| A video about fur farming in Asian countries. It was on the peta website but it was my own choice to watch it. |
| Animal Cruelty |
| Animal testing |
| animal vivasection/animal crulty |
| Animal vivisection |
| animals being hurt |
| animals being made to fight each other |
| battery farm chickens and really dangerously fat dogs. |
| Bonsai Kittens (Animal abuse) Saw it in an online attempt by someone to raise awareness and get it to stop |
| Global warming, animal torture, war, fall of human race. |
| gory images of abused animals |
| I saw animal cruelty |
| I saw pictures of animals being tested on. |
| It was a patition on seal killings. There were disturbing pictures of seal killed - I can't take blood so well. |
| it was a story about someone who killed a puppy |
| It was a video about animal cruelty. It had some very upsetting images, it was on a classmates powerpoint for school. |
| photots of animals being abused |
| some video about animal killing |

Table 27. Responses for “‘Scary/Horror” Inappropriate Content Theme (*n* = 10).

| Participant Responses |
|---|
| A scary image in an email aimed at amusement. |
| blood, ghosts, dead bodies. |
| brief horror video |
| Horror things |
| Near naked people (mainly women, online horror pop ups, love calculators compatibility. |
| scary pictures of evil people and like devils images, pictures of the Nazi people and the dead jew corpse, death camps |
| Spooky websites |
| Telling me that some1 died |
| Very extreme violence things on some website's video or pictures of bloo, horrible death things ... |
| When a scary face popped up on the screen |

Table 28. Responses for “Miscellaneous” Inappropriate Content Theme (*n* = 25).

| Participant Responses |
| --- |
| 2 hard 2 say |
| a text froma friend |
| bad advertising |
| DISTURBING PICTURES ON BEBO |
| fat people |
| gay porn, shravia, mohomad, Mr White |
| horrible sex image full of blood and stuff and some random person asking me about my personal information |
| Internet shopping advertisment |
| just pictures on bebo |
| Just some peopoe eating disturbing things |
| messages sent by other girls to my BF. There were so many messages online for him that I started doubting him and spying on him online. We broke up in the end because we kept fighting about whom he chats with online. |
| Most of them were just T.V shows concerning others beliefs on certain things. There was one concerning a woman and her family who used God as a thing for hate, though I personally am not religious I thought it was upsetting and disgraceful. |
| my girlfriend dumped me |
| on stage flirting - hyde dancing |
| people I love being sad, depressed, thinking they're hopeless. |
| people who spam your email and try to sell you viagra and stuff, its so annoying. |
| Pictures |
| Price up |
| saying things about religion |
| scary pictures of evil people and like devils images, pictures of the Nazi people and the dead jew corpse, death camps |
| Telling me that some1 died |
| the message and pop ups like "you've just won $10,000" |
| ugly pictures |
| Unborn babies |
| Wallpapers of things that are not nice to look at. |

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