Media Literacy Information in New Zealand: a comparative assessment of current data in relation to adults

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Media Literacy Information in New Zealand: a comparative assessment of current data in relation to adults

by

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Aim and scope of this report

This report, commissioned by the Broadcasting Standards Authority (BSA), is an investigation into the current availability of media literacy information in New Zealand. In turn, the report will inform the development of the Authority's media literacy strategy.

Our focus has been on adults (including young adults), rather than children, and our task has been to gather available data about aspects of media literacy in New Zealand from government and official documents and from academic sources. This has been supplemented by a limited amount of data from commercial research sources. In compiling this review we have, as requested by the BSA, concentrated on electronic communications, particularly broadcasting, the internet, and mobile phones. Further, we have adopted as our working definition, the definition of media literacy developed by Ofcom (regulator for the communication industries in the United Kingdom): *the ability to access, understand and create communications in a variety of contexts.*

The report opens with an introduction locating the current research in the context of changing media technologies, international trends and local development. It moves on to a brief consideration of the multiple definitions of media literacy, helping to put the Ofcom definition into perspective and pointing the way to a New Zealand definition.

A section on international empirical research focuses largely on Ofcom's benchmark work but includes other major studies, with a particular emphasis on international activities aimed at addressing media literacy issues among adults.

The structure of the New Zealand section, the core of the report, begins with information about access and amount of use, consideration of types of use (what we know about competencies), then moves to discuss protection and other issues, and the limited data on creative use of media. It concludes with a section on activities aimed at increasing media literacy among adults in New Zealand.

The conclusion summarises the major findings and gaps in our knowledge of media literacy in New Zealand and briefly addresses issues the BSA may consider as it develops a media literacy strategy.

Introduction

As a society, it is becoming progressively more important for New Zealand that we are able to identify as well as facilitate the acquisition of skills and abilities needed to use today's information and communication technologies effectively and safely. There is considerable debate over the exact nature of these skills and how they should be developed across the diverse sectors of society. In the United Kingdom policy debate, for example, abilities and understanding have been brought under the heading of 'media literacy' in the Communications Act (2003).

Britain has led the world in its investigation of how adults and children access, understand, and create electronic communications in the audits conducted by Ofcom, which has a statutory obligation to promote media literacy. The BSA has initiated this investigation as part of its objective to publish useful research (*Statement of Intent 2006-2009,* p.24) and as a foundation for a media literacy strategy.

A key driver for the BSA is the changing broadcasting environment with advances in digital distribution technology giving a greatly expanded choice of content and ways to receive it. Choice of content makes a quantum leap when the internet, with its huge resources and additional potential for users to create content, is factored in. The impact of this technology and its implications for content regulation, has been covered in a recent report for the BSA on *Issues facing broadcast content regulation* (Millwood Hargrave, Lealand, Norris, and Stirling, 2006). The authors say the very concept of 'broadcasting' is under challenge in the new environment where far more control is in the hands of the user. Industry is being encouraged to self-regulate the new media and a greater responsibility is being placed on the user to 'negotiate content'. As a result, there is internationally an increased need for media literacy initiatives:

> With the advent of new media there is a corresponding responsibility to educate the public so they can make informed choices from what is available, and understand how to protect their children against more extreme forms of content (p.56).

However, the need for media literacy goes beyond protection issues to concerns about personal opportunity and growth, and wider social and economic issues. This approach is encapsulated in Ofcom's *Adult Media Literacy: A review of the research literature (2005).*

> With the growing importance of media, information and communications in society, media literacy can be said to serve three key purposes: contributing to (i) democracy, participation and active citizenship; (ii) the knowledge economy, competitiveness and choice; and (iii) lifelong learning, cultural expression and personal fulfillment (Livingstone et al, p.3).

Concern about media literacy in New Zealand stemmed initially from a deficit viewpoint – the need for protection. A more recent fear has been that of the 'digital divide', when it became clear that those in lower socio-economic categories, certain ethnic groups, and the elderly had less access to modern technologies, and that this gap appeared to be increasing. The government report *Closing the Digital Divide* (2000) identified Māori, Pacific peoples, those on low incomes, sole parents, and older people as 'at risk' groups. The report further identified four aspects to the divide which would need to be addressed: physical access, ICT skills and support, favourable attitudes, and relevant content. The ensuing *Digital Strategy* (2005) eschews the language of barriers and discusses instead three enablers: content, confidence, and connection. The confidence arm of the strategy is aimed at improving New Zealanders' 'digital literacy' through training in both ICT capability and security.

Ofcom merges the concepts of information literacy and digital literacy into its definition of media literacy. Clearly, in the current digital era, the older 'broadcast media' and information and communication technologies (ICT) are inevitably interrelated. Digital television is currently in nearly half a million New Zealand homes and free to air digital television has been launched. While we take basic competencies in television for granted, there is evidence that people are only slowly coming to terms with the possibilities of digital television and in

New Zealand's case there are indications that the advent of Freeview and its set top boxes will cause consumer confusion. Meanwhile, TVNZ's '*Inspiring on Every Screen' Strategy for 2007-2011* (TVNZ, 2006a) paints a picture of the potential of interrelated digital media content and its ability to reach fragmented target demographics using a combination of digital television, subscription video on demand, podcasting, mobile phone downloads, digitalised archives, online social networks, and interactive services encouraging creative use.

The aim of this document has been to examine the various and changing definitions of media literacy and to review information about public access to, competence with, and understanding of media by adults in New Zealand with reference to international information. We have also highlighted some of the activities undertaken to address media literacy issues. The endeavour is to provide a basis from which the BSA can see the gaps in our knowledge of media literacy and identify what its role in relation to promoting media literacy might be.

1.0 Definitions of media literacy

With the ever-growing quantity of information and the infinite options of receiving this information, the way in which we process and interpret electronic messages has become progressively more crucial. Further, as communication and information technologies become vital to modern society, it is essential to identify and deal with the development of abilities and skills needed to use them. Walsh (n.d.) points out that:

> Media literacy is an attempt to *expand* the traditional view of literacy, not to replace it. Reading and writing *are* important. They are vitally important. People communicate through reading and writing in their everyday lives. The ability to read and write (which is, after all, the oldest definition of literacy) is crucial.

Defining literacy is a difficult task as there are, of course, a large and growing number of definitions of literacy within the policy and academic communities (OECD, 2000; UNESCO, 2005). Among the growing new forms of literacy, there are internet literacy, digital literacy, cyber-literacy, and so forth. (We deal with the vexed question of the differences between media literacy, media education, and media studies in Appendix One.)

The Center for Media Literacy (2003, p.6) characterises life in the 21st century by stating that:

> Today information about the world around us comes to us not only by words on a piece of paper but more and more through the powerful images and sounds of our multi-media culture.

Livingstone (2003, p.1) points out that:

> Within both academic and policy discourses, the concept of media literacy is being extended from its traditional focus on print and audiovisual media to encompass the internet and other new media.

The Alliance for a Media Literate America (2007) states:

> Today's information and entertainment technologies communicate to us through a powerful combination of words, images, and sounds. As such, we need to develop a wider set of literacy skills helping us to both comprehend the messages we receive and effectively utilize these tools to design and distribute our own messages. Being literate in a media age requires critical thinking skills that empower us as we make decisions, whether in the classroom, the living room, the workplace, the boardroom, or the voting booth.

David Considine, Professor of Instructional Technology & Media Studies and international speaker on interdisciplinary media literacy states, 'Media literacy … is an expanded information and communication skill that is responsive to the changing nature of information in our society' (1995, p.6). Many definitions and visions of media literacy have been created to reflect these changes, and the different points of view, different approaches and goals, and different audiences.

The Office of Communications in the United Kingdom, Ofcom, (2006, p.8) defines media literacy as, 'The ability to access, understand and create communications in a variety of contexts'.

'Access' includes interest in and awareness of the digital features of the various media platforms; usage, volume of usage, breadth of usage of the platforms; competence in using the features available on each platform; the extent and level of concerns with each platform; and knowledge of and competence in using content controls, such as the ability to block unwanted email messages.

'Understanding' includes knowledge of regulation; knowledge of how elements of each media platform are funded; trust in news outlets on each medium; and trust in internet sites.

'Creation' includes the ability of individuals to create their own content; and the ability of users to interact with the medium or with other users.

Livingstone, Van Couvering, and Thumim (2005, p.30) point out that:

> Studies of audience's understanding of broadcast media adopt either a defensive or empowering conception of media literacy (Buckingham, 1989). Under both approaches, media literacy, like other forms of literacy, is theorized as the interaction between encoding and decoding.

In her 2003 definition of media literacy, Livingstone includes the ability to 'evaluate', and explains why this is an important component:

> There is little point in access or analysis without judgement, but a stress on evaluation raises, rightly, some difficult policy questions when specifying and legitimating appropriate bases of critical literacy – aesthetic, political, ideological and/or economic (p.2).

This is similar to the definition most often cited in the United States, taken from the 1992 Aspen Media Literacy Leadership Institute (cited in Aufderheide, 1993):

> Media Literacy is the ability to access, analyze, evaluate and create media in a variety of forms.

The National Telemedia Council in the United States concurs with this and provides its own similar definition, namely, 'the ability to access, analyze, evaluate, and communicate information in a variety of formats including print and nonprint'.

However, Livingstone (2003, p.2) points out that the concept of evaluation is not simple, and poses the following question:

> …is media literacy intended to promote a democratised, diverse, anti-elitist approach to online representations or should it underpin a more traditional, hierarchical discrimination of good from bad, authoritative from unauthorised, information and communication?

The Center for Media Literacy in the United States believes that a more vigorous definition is now needed to position media literacy in the context of 21st century media culture, one which also emphasizes citizenship and democracy in addition to skills:

> Media literacy is a 21st century approach to education. It provides a framework to access, analyze, evaluate and create messages in a variety of forms – from print to video to the Internet. Media literacy builds an understanding of the role of media in society as well as essential skills of inquiry and self-expression necessary for citizens of a democracy (Thoman and Jolls, 2005, p.190).

This is echoed by the European Commission (2006, p.4):

> Media literacy also supports freedom of expression and the right to information, helping to build and sustain democracy. There is also a link between media literacy and better regulation, because a media-literate society is one that is empowered to make its own judgments and choices, and hence is in less need of detailed protective rules.

The Alliance for a Media Literate America (2007) provides a slightly different interpretation of media literacy:

> Media literacy empowers people to be both critical thinkers and creative producers of an increasingly wide range of messages using image, language, and sound. It is the skilful application of literacy skills to media and technology messages. As communication technologies transform society, they impact our understanding of ourselves, our communities, and our diverse cultures, making media literacy an essential life skill for the 21st century.

Additionally, Bowen (1996) from Citizens for Media Literacy, Asheville states:

> Media literacy seeks to empower citizens and to transform their passive relationship to media into an active, critical engagement— capable of challenging the traditions and structures of a privatized, commercial media culture, and finding new avenues of citizen speech and discourse.

Tallim (n.d.) points out that:

> Media literacy is the ability to sift through and analyze the messages that inform, entertain and sell to us every day. It's the ability to bring critical thinking skills to bear on all media … And it's the instinct to question what lies behind media productions— the motives, the money, the values and the ownership— and to be aware of how these factors influence content.

Livingstone, Van Couvering, and Thumim (2005, p.12) draw together information literacy and media literacy and conclude:

> While media literacy and information literacy have developed as separate traditions, they share many of the same values. In general, the 'media literacy' tradition stresses the understanding, comprehension, critique and creation of media materials, whereas the 'information literacy' tradition stresses the identification, location, evaluation and use of media materials. Metaphorically, we might say that 'media literacy' sees media as a lens through which to view the world and express oneself, while 'information literacy' sees information as a tool with which to act on the world. Both perspectives are relevant for developing media literacy policy.

There are a wide range of definitions of media literacy from different parts of the world and from diverse contexts, many of which have similar key concepts. The selection above is intended to indicate the direction of change and outline broad areas of consensus. What is important to note is that in these widely accepted definitions, media literacy is not centred upon 'protecting' children and adults from unwanted messages. Media literacy is about assisting individuals to become competent, critical, and literate in all media forms so that they control the interpretation of what they see or hear, rather than letting the interpretation control them. The European Commission (n.d., p.2) states that, for citizens:

> The aim of media literacy is to increase awareness of the many forms of media messages encountered in their everyday lives. It should help citizens to recognise how the media filter their perceptions and beliefs, shape popular culture and influence personal choices. It should empower them with the critical thinking and creative problem-solving skills to make them judicious consumers and producers of information.

To become media literate is not to memorise facts or statistics about the media, but rather to learn to raise the right questions about what you are watching, reading or listening to. Len Masterman, the acclaimed author of *Teaching the Media*, calls it 'critical autonomy' or the ability to think for oneself. He says:

> Without this fundamental ability, an individual cannot have full dignity as a human person or exercise citizenship in a democratic society where to be a citizen is to both *understand* and *contribute* to the debates of the time (Centre for Media Literacy, 2003, p.21).

In the European Commission's Audiovisual Media Services Directive (2007, p.7) it is noted that:

> Media-literate people will be able to exercise informed choices, understand the nature of content and services and take advantage of the full range of opportunities offered by new communications technologies. They will be better able to protect themselves and their families from harmful or offensive material. Therefore development of media literacy in all sections of society should be promoted and monitored.

1.1 A definition for New Zealand?

With the research we have done on defining media literacy, we have encountered key concepts, which recur in the above definitions, as well as in others accessed for this report. These include:

- accessing
- understanding
- analysing
- evaluating
- communicating
- creating
- empowering citizens.

We would like to suggest a definition for our New Zealand context:

> Media literacy is the ability to access, understand, analyse, evaluate, create and communicate information in a variety of contexts and formats, including print and nonprint, in order to empower citizens to control their relationship with the media.

It is important to bear in mind that whatever definition one chooses, recognition must be given to the shifting nature of media literacy. Media literacy is not static and will develop over time and be subject to change in line with emerging technological change (Ofcom, 2006). It is equally important to note that as media choices expand, the definition of 'broadcasting' is also shifting.

2.0 Report on international research and projects

This section of the report shows figures around media access, beginning with world statistics and moving to relevant country data; then moves on to specific projects and activities. Although the vast majority of information available is on children, the focus of this report is on adults, including young adults/teenagers.

2.1 International internet use: the big picture

Figure 1: Internet users throughout the world

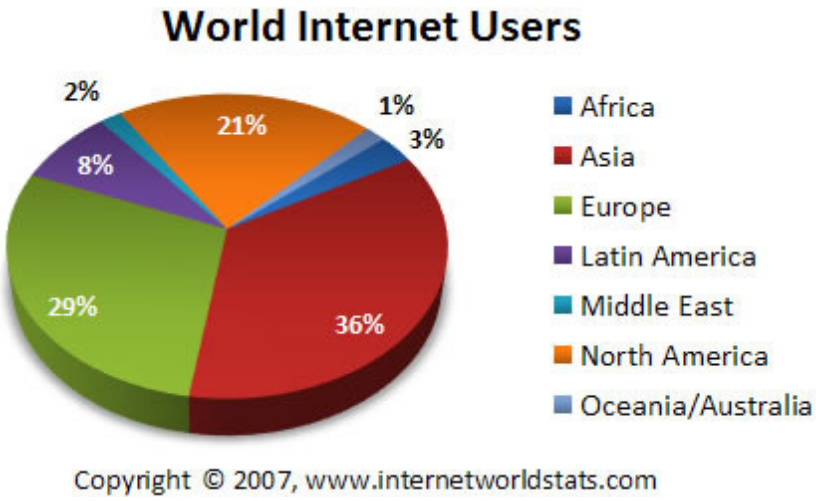


Table 1: World internet use and population statistics

WORLD REGION	Population (2007 Estimate)	% Pop. Using Internet	Internet Users, Latest Data	% Usage of World	Use Growth 2000-2007
Africa	933,448,292	3.6%	33,334,800	3.0 %	638.4%
Asia	3,712,527,624	10.7%	398,709,065	35.8 %	248.8%
Europe	809,624,686	38.9%	314,792,225	28.3%	199.5 %
Middle East	193,452,727	10.0%	19,424,700	1.7 %	491.4 %
North America	334,538,018	69.7%	233,188,086	20.9%	115.7 %
Latin America/Caribbean	556,606,627	17.3%	96,386,009	8.7 %	433.4 %
Oceania/Australia	34,468,443	53.5%	18,439,541	1.7 %	142.0 %
TOTAL WORLD	**6,574,666,417**	**17%**	**1,114,274,426**	**100.0 %**	**208.7 %**

Source: http://www.internetworldstats.com/stats.htm

Note: Usage figures are naturally considerably higher than access and connection figures and many people access the internet only at work.

2.2 United Kingdom: empirical research

The United Kingdom begins this country-by-country section, and it has been artificially separated out from the rest of Europe because of the major benchmarking research undertaken by Ofcom (United Kingdom's Office of Communications) and its particular interest to the Broadcasting Standards Authority.

2.2.1 Ofcom's general usage figure*s*

Ofcom's annual Communications Market Report for 2005 (Ofcom, 2006) presents new consumer usage trends in television, radio, telecommunications and wireless communications consumer usage. The report reveals striking evidence that a new 'networked generation' is turning away from television, radio, and newspapers in favour of online services, including downloadable content – used on multiple devices such as iPods and mobile phones – and participation in online communities.

Television

Television is of declining interest to many 16-24 year olds; they watch television for one hour less per day than the average television viewer. Of the television they do watch, an even smaller proportion of their time is spent viewing public service broadcasting channels – down from 74% of total viewing among this age group in 2001 to 58% today. Instead, the internet plays a central role in daily life; more than 70% of 16-24 year old internet users use social networking websites (compared to 41% of all United Kingdom internet users) and 37% of 18-24 year olds have contributed to a blog or website message board (compared to 14% of all United Kingdom internet users).

Mobile phones

Mobile phone usage increased, accounting for 31% of all call minutes (up from 28% in 2004 and 20% in 2001), and the number of households using their broadband connections to make low-cost or free voice over internet (VOIP) phone calls had risen to 1.8 million by the end of 2005.

As many United Kingdom households now have a mobile phone as have a landline phone; and, for the first time, the proportion of households relying on mobile phones exclusively (10%) is the same as the proportion who only use landline phones.

Mobiles are becoming the preferred means of making calls in many households, including those with both mobile and landline phones. Some 31% of consumers surveyed now consider their mobile to be their main telephone, up from 21% in 2004. For the first time, none of those surveyed said they relied on public payphones for their main means of making and receiving calls, compared to 2% of consumers surveyed in 2004.

The 16-24 year old group uses mobile phones extensively, on average making seven more calls and sending 42 more texts per week than the wider United Kingdom population. Extensive use of the internet has also influenced 16-24 year olds' consumption of other media. Their radio listening is lower, by an average of 15 minutes a day compared to the wider population. In addition, 27% of those surveyed said they read newspapers less as a consequence of their online usage.

Broadband

Household usage and adoption of communications services continue to increase. The number of households with broadband connections increased by 63% between 2004 and 2005 to a total of 9 million, and the number of households with digital television also increased by 18% between March 2005 and March 2006 to a total of 18.3 million. Of the 11.1

million United Kingdom homes and small businesses with broadband connections, more than three million were cable and eight million were DSL – the latter up from five million in 2004.

2.2.2 Ofcom's media literacy search

Ofcom was established in December 2003 as the independent regulator and competition authority for the communications industries (television, radio, telecommunications, and wireless communications services) in the United Kingdom. It has been given the duty of promoting media literacy under Section 11 of the Communications Act 2003. This requires Ofcom to bring about or encourage others to bring about a better public understanding of the nature and characteristics of material published using electronic media, and the processes and systems by which it is delivered.

Ofcom's focus from 2004 to 2006 has been to achieve greater:

- Awareness in stakeholders of the need to promote media literacy
- Understanding of the extent of media literacy in the UK and
- Awareness of and confidence and competence in the use of new communications technologies.

Three major pieces of research relating to media literacy among adults have stemmed from this remit:

- An initial review of the academic literature, *Assessing the Media Literacy of UK Adults* (Livingstone and Thumim, 2003)
- A later review based on the Ofcom definition of media literacy (Livingstone, Van Couvering and Thumim, 2005); and
- An *Audit* of how UK adults access, understand and create electronic communications published in 2006.

Assessing the media literacy of UK adults: literature review 2003

Livingstone and Thumim's (2003) review of the academic literature asked, 'How media literate is the adult population in the UK?' The review revealed little empirical research and drew on diverse sources that 'more-or-less indirectly' revealed the nature and extent of adult literacy (p.1). The authors also noted the lack of consensus on the definition of media literacy and of the appropriate means to measure it. The review covered technical competencies, critical reception practices, and content production, and discussed audio-visual media and ICT separately.

Livingstone and Thumim say access to media is a prerequisite for media literacy which can be gained informally through direct use of media at home or work or through formal education programmes. Their summary states: 'There are clear indications that the public is highly motivated to acquire media literacy skills with formal provision at present lagging behind demand' (p.1). They note that access is related to social and economic status, and that a drawback of increasing the provision of formal training is that it may actually increase the digital divide.

Research showed competencies in audio-visual media are gradually acquired as new innovations hit the market. However, Livingstone and Thumim reported that little research had been done on the skill acquisition for the latest innovations. With information and communication technologies (ICT), they said, skill acquisition is more an 'all-in-one experience, often occurring in a context of uncertainty and ignorance' (p.2). Indications were that skill levels vary widely, that many adults were anxious and using only a small portion of what is available online.

The authors noted a large body of research on critical reception practices of audio-visual media indicating that while the public had a 'complex understanding of television genres, of the fact/fiction distinction and of the place of commercial messages', it was less well equipped

in regard to news, the critical evaluation of much audio-visual content and economic and regulatory contexts shaping content (p.2). The review noted that little was known about the critical response to ICT, particularly online content: 'It seems likely that without specific interventions, many will continue to misunderstand or misuse internet content' (p.2). Little research has been done on content production and the authors concluded few adults had experience in audio-visual content production or even knew what ICT content production was possible.

Adult Media Literacy: Literature Review 2005

In the second literature review, Livingstone, Van Couvering, and Thumim (2005) aimed to 'identify relevant academic research and research methods, barriers and enablers to media literacy and key research gaps and priorities for future research' (p.3).

Access barriers are related to social class, gender, age, and region with inequalities repeated over and again – for VCR, satellite and cable TV, and now for digital television (p.14). These findings fit with other broader findings about the acquisition of consumer goods and with the adoption of technological innovations.

Digital television is attracting a growing body of academic research, much of which has been critical of the design and content offered through enhanced services. The authors say the uptake of digital broadcasting in Britain has been slow and uneven and there has been little interactive or complex use of the new technology. They identify a mindset 'that still divides television (a non-interactive mass medium) from the internet (an interactive 'pull' technology)" (p.3).

Livingstone et al argue that research shows the demographic barriers to uptake are contributed to by material and symbolic barriers of finances, understanding, disposable time, and, crucially, the production, content and design features of media technologies. They say access to ICT has been a key focus because exclusion from internet-mediated economic, social, political and cultural networks is 'one of the most damaging forms of exclusion in our economy and our culture' (Castells, 2002, p.3, cited in Livingstone et al., pp.14-15).

Concerns about the digital divide have led to a range of policy initiatives and interventions to enhance access for potentially or actually excluded groups. Research in the review indicates that the concept of closing the digital divide might be too simplistic, as ideas of what is acceptable access are changing. The authors say the question becomes 'access, where, how and to what?' (p.15). Further, continually changing ICT requires people to keep buying to keep up and this exacerbates any divide. Academics now hypothesise there is a series of divides or, alternatively, a continuum.

In evaluating barriers and enablers, the authors note the paucity of research about how these factors interact. The key factors identified and discussed as barriers are: age; socio-economic status (including education and income factors); gender; disability; ethnicity; and proficiency in English. The key factors identified and discussed as enablers are: design of technologies and contents; adult education opportunities; consumer information and awareness; perceived value of media goods and services; self-efficacy (skills and confidence in using new media technologies); social networks to support in gaining and maintaining access; family composition (especially having children in the household); work involving the use of computers and new technologies; and institutional stakeholders.

A major national survey in 2003 showed that 'home access is a key enabler of internet usage, while age, education, income, social class and to a much lesser extent, gender, represent barriers to use' (p.15). The review also reports on the mushrooming of mobile phone ownership and states that research is needed to establish whether 'mobile phone literacy' skills might be transferable.

'Access' is a complex subject because issues of time, cost, and quality of technology, along with concerns about privacy and ease of use, are all closely bound up with it. The writers say that material resources, social resources (someone to help or advise), as well as the cultural

resource of literacy all play a major role. Therefore, people with limited resources 'need a good reason to access the Internet' (p.16). The authors report on a US study showing that low-income people want simply-presented, practical information and local information, along with cultural information and content for non-English speakers. However, a major website review showed such information is rarely available.

Other academics suggest that low interest in online information may be related to lack of useful content and that this might be redressed by improving the quality of information. However, not using the internet may also be a conscious choice by those who do not wish to be slaves to technology.

In terms of competencies, the review notes that basic competencies for radio and television are taken for granted. However, they cite Miles and Thomas (1995) as concluding: 'It is probably still the case that many cannot easily programme the VCR or use the full services of Teletext' (p.18) and say there is still considerable research to be done on digital and interactive television. Perceptions of ease of use remain crucial, as do barriers for the visually impaired and elderly.

Research by Ofcom in 2004 showed that 43% of digital TV viewers have used interactive television services and 68% had interacted with advertisements (ie pressed the red button). As for other interactive media, such as the internet, these people tended to be younger, and were more likely to be male and middle class.

The authors say basic literacy is associated with computer skills, and advanced competencies are related to the ability to make computers perform – such as searching effectively. 16% of British users had downloaded music (these people were likely to be younger, better educated, well off, and more likely to be in routine occupations rather than professional or managerial roles). With mobile phones, research shows that not all users use all services available but there is little research on why this is so and there is some evidence that this is not a digital divide issue.

In terms of protective media competencies the review notes a growing minority of parents using a 'parental lock' for TV, although there has been little evaluation of the effectiveness of the technology. The review reports little research on knowledge and understanding of how to block web content, and how to judge the 'safety' of sites and so on.

However, there was evidence of concerns. One study reported that 48% of UK parents had used content filters to help regulate their children's use. A large-scale survey reported that 23% of internet users have received obscene or abusive emails and 17% had received foreign fraud or scam email. While one study showed such experiences made users less trustful of the internet, another reported that 'familiar brands offer a degree of "psychological security" that enhances trust in e-commerce' (p.26). Another large-scale survey found 54% of UK adults thought that going online put privacy at risk, while 41% agreed that going online allowed people to get information about you. Studies in the US showed that most people could not identify 'cookies', and only 10% overall had set their browsers to reject them, indicating that 'literacy issues might be a factor in the public's ability to control their privacy online' (p.26).

The reviewers note the vast, wide-ranging research on understanding of television content. This is divided into two major streams of evidence: 'evidence pointing to a creative "media-savvy" audience and evidence pointing to an often forgetful, confused, biased or inattentive audience low in critical literacy skills' (p.4). Livingstone et al conclude that as channels of information proliferate, many viewers are overwhelmed by multiple content sources they find difficult to evaluate or compare. Other barriers to media literacy include hybrid genres that blur reality and drama. The authors say that little is known about how well adults understand online content.

Livingstone et al argue that more research is needed on how barriers and enablers interact. They add:

> Research on media literacy also faces a series of methodological challenges, from conceptual definitions through to evaluation of policy initiatives. The trend is towards multi-method, qualitative and quantitative research designs. It is recommended that future research considers conducting longitudinal surveys to chart change over time, and builds on the range of innovative, in-depth qualitative methods being developed in media research (p.6).

Adult Media Literacy Audit 2006

In 2005 Ofcom conducted a benchmark 'Audit' of how UK adults and children access, understand, and create communications, particularly electronic communications. Over 3,200 adults (aged 16 and over) and more than 1,500 children (between 8 and 15 years old) were interviewed between 8 June and 5 August 2005. Six reports were produced in 2006 covering adults, children, nations and regions, disabled people, older people, and adults from minority ethnic groups. Here we report on the adult audit with a summary of the findings on people from ethnic minority groups, people with disabilities, and older people.

The adult questionnaire, starting from the Ofcom definition of media literacy, covered digital television, digital radio, internet and mobile phones. Interviewees were asked about access, amount and 'depth' of use, interest and awareness of digital features, competence, knowledge of content controls, concerns about each media platform, trust in news outlets, and creation of content.

In terms of ownership, 82% of UK adults owned a mobile phone, 62% digital television, 54% had access to the internet at home, and 44% had access to digital radio. With the exception of mobile phones (most likely to be owned by those 25-35), figures for ownership rose slightly to the 35-44 age group and then dropped off, particularly sharply after 55. Because digital radio is available through both the internet and digital television (therefore available altogether to 77%), the lower figures for digital radio access reflect a lack of awareness among one in three adults that they have the service. The survey also showed high penetration of CD, VCR and DVD players, while digital cameras, games consoles, MP3 players, digital camcorders, DVD recorders, and palmtop computers were owned by far fewer people. The highest level of ownership was for 35-44 year olds, except for games consoles and MP3 players which were more likely to be owned by 16-24 year olds. Those over 65 were least likely to own any of the devices.

The 'snapshot' of media literacy showed variation between media platforms. Television was the dominant platform in terms of people's knowledge and interest. Over three-quarters of adults responded correctly to questions about TV funding and regulation.

Almost 60% of adults were interested in features of digital TV compared with just under half for radio, internet, and mobile phone. People were most interested in features most familiar to them. For instance, with digital TV 'a crystal clear picture' was of interest to 81%, compared to buying things directly through TV (46%), while with mobiles two-thirds were interested in voice and text features, compared to one-third interested in watching live news and sport. Awareness among those interested was high.

Questions on use and concern covered both digital and analogue TV and radio. TV use was the highest at close to 22 hours per week, followed by radio (15 hours) and internet, both inside and outside the home (10 hours). Mobile use was on average 20 calls and 28 texts per week. Participants were asked to nominate their concerns for each platform and rate the level of those concerns. Concern about the internet was the highest, with 70% of all those with internet access at home nominating a concern, most frequently about offensive content. This is compared with a level of 44% who did not have internet at home. Of TV owners, 46% nominated concerns (again about content); with mobile phones 42% nominated concerns (most about health); while with radio the figure was just 9% (most frequently about language and lyrics). In terms of the level of concern as measured against the maximum potential, this was 38% for internet, 27% for TV, 23% for mobile phone, and 6% for radio.

Participants rated their competence (interest in plus confidence) with digital tasks. There were high levels of self-rated competence for digital TV (such as using the interactive button and setting up a menu of favourite channels), even higher levels for internet tasks such as using email and visiting websites to find the latest news, while 88% of mobile users could 'lock' the phone so numbers were not dialled by mistake, and store new contacts on their phone.

A high percentage (81%) of participants knew about TV's 9pm watershed. Content control for internet users was measured by those who said they were confident about blocking computer viruses or email spam – the figure was 58%. By contrast, only 17% of mobile phone owners knew about content controls available on the latest phones.

'Understanding' was measured by asking questions about industry funding and regulation and trust in news outlets. Levels of knowledge of how TV is funded are high at 80% (although less so among the 16-24 year olds). Levels of knowledge about radio funding are less high. Awareness of funding of internet search-engine websites is fairly low at 25% (those who have the internet at home are more likely, 37%, to know advertising pays for this).

Respondents rated trust in named TV, radio, internet, and press outlets. Trust in TV and radio news outlets is highest (three-quarters of maximum potential). Trust in internet news outlets was 63%, while for newspapers it was 46%.

To measure the 'creating content' aspect of media literacy, respondents with internet at home were asked if they have their own website, web-log, and can edit and organise photos on a computer. The overall response was low at 13% (with 5% having their own website, 3% having their own web-log, and about 58% being able to edit and organise photos).

Media literacy among adults from ethnic minority groups

A total of 863 interviews was conducted with adults from the following groups: Indian, Pakistani, Bangladeshi, Black Caribbean, Black African, Middle Eastern and Arabic origin, and Chinese. The interview sample reflected the younger profile of these groups compared with the total population. Ofcom acknowledges that the groups are different from each other but a further breakdown was restricted because sample sizes of individual groups (around 100) were small.

Overall, in terms of usage and general competence, minority ethnic groups have somewhat higher levels of media literacy compared to the UK as a whole. Minority groups have mostly lower levels of knowledge about how platforms are funded and regulated, and slightly lower levels of trust in news media. Levels of concern about all platforms (except the internet) are higher than the UK average. The higher levels of media literacy of minority ethnic groups are partially explained by the preponderance of young people. Those under 45 have much higher levels of media literacy than those over 45.

There is higher ownership of digital TV (75%) than among the overall UK population (68%) – but Freeview penetration is markedly lower. Minority ethnic groups watch less TV, and fewer know about funding and regulation of TV than the overall population. More of those in the ethnic minority groups know they have access to digital radio and listen to it. But they listen to less radio than all UK adults. Further, levels of concern about radio are twice as high as for the total population – but are still low compared with other platforms.

Internet access in the home is higher (64%) than for the UK population as a whole (54%). These groups also use the internet more frequently (14.5 hours a week compared with 9.9 hours overall). Minority ethnic groups are slightly less concerned about the internet and more likely to say they are happy to give out personal details online than UK adults as a whole.

3G mobile phones are more prevalent among minority ethnic groups with consequently higher levels of spending and awareness of content control systems, and concerns are largely about affordability. Levels of trust in news are about the same as all UK adults for TV news but somewhat lower for news on radio, the internet, and in the press. People from minority ethnic groups are less likely to agree that content on TV and radio should be free to be expressive

and creative. Around 40% have experience of learning more about media platforms (compared with 20% for the population as a whole).

Media literacy among adults under 65 with a disability

To identify this group, Ofcom used self-reported impairment that 'limits your daily activity or the work you can do' (a wide view of disability). The focus was on those under 65 to 'disentangle the strong relationship that exists between age and disability'. Where possible, subgroups of those with visual impairment, hearing impairment, and with mobility impairment were separated out.

Levels of ownership of TV and radio are similar to those of all UK adults under 65, but are lower for mobiles and home internet. Digital TV was most likely to be owned by those with mobility impairments, while those with visual impairment are slightly more likely to have a mobile phone and internet access at home. People with disabilities are likely to watch more TV and listen to more radio than the under 65 population as a whole. Concerns about TV content are higher among this group. Fewer people with disabilities report they are able to use digital features of their TVs. Knowledge of TV regulation, channel funding, and the watershed are at very similar levels to those of all adults under 65. Similar numbers of people with disabilities have explored interactive options with their TV.

The amount of internet use is similar to the total population under 65. However, this use tends to be narrower, with fewer people with disabilities using the internet for communication, leisure, and transactions than the overall population. Levels of competence for various internet tasks are lower than for all adults under 65.

More of those with disabilities (59%) have concerns about what is on TV (compared with 43% of the overall population). Concern appears to increase with age, and those with mobility impairments appear more concerned than those with sensory impairments. Those with visual impairments listen to more radio and are more likely to be interested in features of digital radio. Fourteen percent of adults with a disability say they have concerns about radio content (compared with 10% in the overall population).

Just under half of all those with disabilities said they are interested in, and confident about blocking viruses/spam, compared with 58% of the overall population. A similar percentage of those with disabilities nominated concerns about the internet; these concerns mainly centred on content.

People with disabilities use broadly similar sources of news to those of all UK adults and levels of trust in TV and radio are similar to those of the overall population, while levels of trust for news websites and newspapers are slightly lower, especially for those with disabilities aged between 45 and 64.

Media literacy among older people

Nearly half of those surveyed aged 65 and over have digital TV and 49% have a mobile phone. About 20% have access to the internet at home, and nearly a quarter say they have access to digital radio. All of these figures are significantly lower than for UK adults as a whole. Older people watch more TV and listen to the same amount of radio as the overall population. Mobile phone use is considerably lower at 5 calls and 2 texts, compared to 20 calls and 28 text messages for the UK as a whole. Two in five older people make no use of their mobile phone in a typical week. Weekly use of the internet is broadly the same, although use outside the home is negligible compared with adults as a whole. Concerns about TV are higher than those of all adults, concerns about radio are at the same level, while older people nominated fewer concerns about the internet and mobile phones.

Older people rate their competence for using the internet higher than for using mobiles and digital TV. But levels of competence are lower than among the general population as more older people say they are not interested or have no perceived need (for instance in sending texts or changing ring tones). Knowledge of industry funding and regulation is at the same

high level as for the overall population. Specifically, older people are more aware of BBC's funding source and somewhat less aware of the 9pm watershed than the general population. Knowledge of internet funding is lower for the older age group, but not for those who have internet at home.

As with all adults, almost all older people use TV for news and it is the most used news source, but more (25%) older people use newspapers as their main source, compared with 19% for the population as a whole. Fewer of those over 65 used Teletext as a source, compared with all UK adults. Levels of trust in TV news, radio news, and newspapers do not differ between those over 65 and the general population. However, levels of distrust in news websites are significantly higher among older groups. Nearly 70% of older people say they like technology to be simple and straightforward compared to 59% of all UK adults. Just 13% of older people say they would like to learn more about various elements of the media, compared with 32% of all adults. About 7% say they are interested in learning more about the internet and 7% say they have already learned about it through classes or training. Those over 75 or living alone are less likely to express interest in learning.

2.3 United Kingdom: activities and projects

2.3.1 Ofcom's activities promoting media literacy

Ofcom has worked in partnership with the National Institute of Adult Continuing Education (NIACE) in England and Wales developing and delivering a media literacy theme in Adult Learners' Week in 2005 and 2006. With the E Government Unit in Northern Ireland it has produced a CD ROM 'Internet made Easy' and is working with the Home Office and industry to produce a standard and kite mark scheme for domestic internet filtering products (in order to have a benchmark). With Help the Aged, Ofcom has run media literacy workshops fronted by broadcasters to provide older people with news production experience. Ofcom has provided support for trainers from Age Concern and Digital Unite for Silver Surfers Week 2006. It produces the quarterly online *Ofcom Media Literacy Bulletin* for professionals and others in the area. Further, it provides the secretariat to the Associate Parliamentary Media Literacy Group which has a programme of events to inform MPs.

2.3.2 Community Media Association: Comliteracy

In 2006 the Community Media Association (CMA) submitted a proposal to Ofcom to use community radio as a tool for promoting media literacy, based on the theory that community radio has a greater personal reach into UK society than other broadcasters, educational institutions, and media agencies. The proposal outlined a 'national project to use Community Radio as a tool to raise awareness and understanding of Media Literacy issues'. As a result of this proposal the CMA is now running 'Comliteracy', a Community Radio Media Literacy project. This project will use community radio to raise awareness, skills and understanding around media literacy issues.

2.3.3 NIACE: promoting adult literacy

With the development of communications technology and convergence, media literacy will soon be understood as being as important as traditional literacy, language, and numeracy learning are now. The National Institute of Adult Continuing Education (NIACE) aims to highlight media literacy as a major theme for Adult Learners' Week in 2007 by promoting the value of media literacy through publicity and campaign materials; providing platforms to inform learners, providers, decision-makers and opinion-formers of the value and importance of media literacy; developing the range and breadth of media literacy-related partnerships at national, regional and local levels; and providing opportunities for joint promotions and publicity.

2.4 Europe: empirical research

2.4.1 Internet use in Europe

Table 2: Internet user statistics and population for 52 European countries and regions

WORLD REGION	Population (2007 Estimate)	% Pop. Using Internet	Internet Users, Latest Data	% Usage of World	Use Growth (2000-2007)
Europe	809,624,686	39.0%	314,792,225	28.3 %	199.5 %
Rest of World	5,765,041,731	13.4%	799,482,201	71.7 %	212.4 %
TOTAL WORLD	**6,574,666,417**	**17.0%**	**1,114,274,426**	**100.0 %**	**208.7 %**

Source: http://www.internetworldstats.com/stats4.htm#top

In the EU25, 52% of households had access to the internet during the first quarter of 2006, compared to 48% during the first quarter of 2005, and 32% had a broadband connection, compared to 23% in 2005. At the beginning of 2006, 94% of enterprises with at least 10 persons employed had access to the internet (91% at the beginning of 2005), and 75% of enterprises had a broadband connection (63% in 2005). In the first quarter of 2006, 47% of individuals in the EU25 used the internet regularly, ie at least once a week, whether at home or at any other location.

Internet access ranged from 23% in Greece to 80% in the Netherlands. In the first quarter of 2006, the highest proportions of households with internet access were recorded in the Netherlands (80%), Denmark (79%), Sweden (77%) and Luxembourg (70%). The lowest levels were registered in Greece (23%), Slovakia (27%), Hungary (32%), Lithuania and Portugal (both 35%).

At the beginning of 2006, the highest proportions of enterprises with internet access were recorded in Finland (99%), Denmark and Austria (both 98%), and the Netherlands (97%). Only in Latvia (80%), Cyprus (86%), Lithuania (88%), and Poland (89%) were fewer than 90% of enterprises connected to the internet.

Broadband offers a much faster connection to the internet, and offers the potential of changing the way the internet is used. The proportion of households with a broadband connection in 2006 was highest in the Netherlands (66%), Denmark (63%), Finland (53%) and Sweden (51%), and lowest in Greece (4%), Slovakia (11%), Cyprus (12%), and Ireland (13%). Amongst enterprises, the highest levels of broadband connections were recorded in Sweden and Finland (both 89%), Spain (87%), and France (86%), and the lowest in Poland (46%), Cyprus (55%), Lithuania (57%), and Latvia (59%).

Nearly three-quarters of young people used the internet at least once a week. In the first quarter of 2006, the highest proportions of individuals regularly using the internet were recorded in Sweden (80%), Denmark (78%), the Netherlands (76%), and Finland (71%), and the lowest in Greece (23%), Cyprus (29%), and Italy and Portugal (both 31%).

A higher proportion of men than women used the internet regularly (51% of men compared with 43% of women), and this was true for all member states, although in Estonia, Latvia, Lithuania, and Finland the gap was only one or two percentage points. In Luxembourg the gap was 21 percentage points (men 76%, women 55%).

While nearly three-quarters of individuals in the EU25 aged 16 to 24 (73%), and more than half of those aged 25 to 54 (54%), used the internet regularly, only a fifth of those aged 55 to

74 (20%) did so. While the gap in regular use between Member States ranged from one to two for 16-24 year olds (47% in Greece to 96% in the Netherlands) and one to three for 25-54 year olds (27% in Greece to 89% in Sweden), it reached one to fourteen for 55-74 year olds (4% in Greece to 56% in Denmark and Sweden).
(The above figures are from http://www.internetworldstats.com/usage/use006.htm.)

2.4.2 Skills in use of the internet

A Eurostat (2006) report examined how skilled Europeans were in using computers and the internet. The report uses the term 'digital literacy' which it says involves the critical use of Information Communication Technology (ICT) for communication at work or at home. Digital literacy is underpinned by basic ICT skills, like the use of computers to retrieve, access, store, produce, present, and exchange information, and to communicate and participate via the internet. In a survey conducted by Eurostat (2006) a considerable proportion of European citizens was shown not to have any computer skills at all. Thirty-seven percent of the population lack basic computer skills; in fact one in three (34%) of EU residents have *never* used a computer, ranging from 8% in the Nordic countries Sweden, Denmark and Iceland, to 65% in Greece. A majority of 57% do *not regularly* use the internet, whilst about 43% have never used it. In Greece, for example, only 18% of people aged 16 to 74 are regularly online (ie on average at least once a week).

2.4.3 Interactive TV

The number of digital TV households in Western Europe will nearly double over the next five years, from 61 million in 2006 to 116 million in 2011, according to a report from Informa Telecoms and Media (http://www.informatm.com/itmgcontent/icoms).

Projected digital TV households in selected countries in Western Europe in 2011 (with 2006 figures in brackets) are presented below:

- UK: 25.3 million (up from 19.7 million in 2006)
- Germany: 21.8 million (11.1 million)
- France: 18.3 million (8.3 million)
- Western Europe: 116.0 million (61.0 million).

At nearly 80% of households, the United Kingdom has by far the highest digital TV penetration in Europe. Its nearest rivals are Sweden and Finland — both with a penetration level nearly 27% lower.

The percentage of households in selected countries in Western Europe with at least one digital TV service in 2006 ranged from the UK having the highest figure at 79.8%, to Portugal with the lowest figure of 14.7% (http://www.etcnewmedia.com/review/default.asp?SectionID =11&CountryID=50).

2.4.4 Mobile phones and wireless access

The Western European mobile phone market, consisting of traditional mobile phones and converged devices, grew by 9% year on year in the third quarter of 2006, with shipments reaching 44.1 million units compared to 40.5 million units in the corresponding period of 2005, according to IDC's European Mobile Devices Tracker. IDC anticipates healthy final-quarter growth for both converged devices and traditional mobile phone segments, resulting in expected full year 2006 growth of 11% year on year (November 2006, http://www.idc.com).

Deployment of wireless networks is set to increase in 64% of businesses over the next year, research from analyst Gartner suggests, as 44% of respondents said mobility will improve productivity. One-fifth (21%) of respondents said the primary reason this will happen is to access places that are impossible to wire, while 13% said it is cheaper than installing a fixed-line network.

Security was considered to be among the top five concerns for respondents. Sixty percent of respondents believe they have inadequate security for their wireless environment (July 2006, http://software.silicon.com/).

2.4.5 Europe's digital divide

Europe has a digital divide (by age and education), according to a survey conducted by Eurostat for the European Union, which gathered information from 25 nations across the continent. The report finds that a gap remains between users and non-users or between 'haves' and 'have-nots'.

Among 16-24 year olds, the survey found the proportion of internet users to be three times higher than among the 55-64 year old population.

Table 3: Internet users in the European Union, by age in 2004 (as a % of respondents in each group)

16-24 year olds	75%	25-34 year olds	62%
35-44 year olds	54%	45-54 year olds	43%
55-64: year olds	27%	65-74 year olds	11%

Data source: Nielsen Panorama 2006

A similar degree of inequality is seen when comparing by level of education.

Internet users in Europe, by education level in 2004 (as a % of respondents in each group):

- Lower educated: 25%
- Middle educated: 52%
- Higher educated: 77%

The gap is most apparent when combining age and education. Some 85% of students aged 16 to 24 are using the internet, compared to 13% of people aged between 55 and 74.

Although more older users are going online, the gap between old and young has actually widened since 2002. The same pattern is apparent when comparing education levels. The percentage of 'lower education' people online rose to 25% in 2004 from 20% in 2002, but that uptake hasn't been enough to narrow the gap, as 'higher education' usage rose from 67% to 79% over the same period.

The Western European countries, led by Germany and the UK, have some of the largest internet user populations in the world. In 2004, the combined internet populations of Germany, the UK, France, Italy and Spain totalled 131.5 million, compared to 170.1 million in the US.

By 2008 the gap will narrow considerably to 174.6 million versus 188.5 million, as internet users grow at a 7.3% annual rate in Europe as opposed to a 2.6% rate in the US. The fastest growing online countries in Western Europe are Italy and Spain.

Europeans spend an average of 10 hours 15 minutes per week online. Twenty-four percent of those surveyed spend over 16 hours per week. Broadband brings the number of users on the web over 16 hours a week up to 31%.

Although Nordic countries have traditionally been identified as the most advanced internet users, French consumers spend the most time online each week, logging about 13 hours. About 32% of French internet users spend over 16 hours online per week. Hours spent online per week ranged from 13 hours in France to 8 hours in Italy.

2.5 Europe: activities and projects

2.5.1 The Charter for Media Literacy

The Charter for Media Literacy exists to support the establishment of media literacy across Europe. The Charter was drawn up by the Media Literacy Task Force comprising representatives of the UK Film Council, the BFI, Channel Four, the BBC, and Skillset. It sets out some broad definitions of media literacy and priorities for developing it in what had previously been a fragmented field. The text of the Charter has been widely consulted upon and many individuals and agencies in education, the media, and related industries have pledged their support. It facilitates consensus and networking amongst those working for media literacy in different countries across Europe. The Charter's authors hope that it will assist in establishing the value of media literacy and encourage both public and private investment in its development. The main purpose of the Charter is to raise the profile of media literacy as a very significant portfolio of skills, knowledge and understanding needed by every citizen in the 21st Century. These *skills, knowledge and understanding* are echoed in the European Commission's Audiovisual Media Services Directive (2007, p.7), where it states that 'media literacy refers to skills, knowledge and understanding that allow consumers to use media effectively and safely'.

2.5.2 Mediappro

Between January 2005 and June 2006, universities, government ministries, associations and foundations from nine European countries – Belgium, Denmark, Estonia, France, Greece, Italy, Poland, Portugal, and the United Kingdom – collaborated on an applied research project for media education called Mediappro ('media appropriation').

These various institutions, specialising in media education, designed a study to explore how young people between the ages of 12 and 18 appropriate digital media, including networks and portable media such as the internet, mobile phones, and video games. A similar survey was also carried out during the same period in Quebec, Canada. This complementary approach allowed for comparison and a better understanding of the situation in Europe and North America.

2.5.3 Alliance for a Media Literate Europe (ALLMEDIA)

The ALLMEDIA project brings together a diverse alliance of schools, universities, companies, individuals, and other formal and non-formal educational organisations to create a pan-European non-profit network organisation that will be a key force in bringing media literacy education to all pupils and students in Europe, their parents, their teachers, and others who care about youth.

2.5.4 European Centre for Media Literacy (ECML)

ECML was a 24-month project which started in 2004 and ended in 2006, with funding from the European Commission. The aim of the project was to create a European Centre for Media Literacy (ECML) as a non-profit educational organisation that wanted to help stakeholders to understand why teaching media literacy is so important, and to give students new education tools. The project's mission was to help children and adults prepare for living and learning in a global media culture by translating media literacy research and theory into practical information, training, and educational tools for teachers, youth leaders, parents, and caregivers of children.

2.6 North America: empirical research

2.6.1 Internet use in North America

Table 4: Internet user statistics and population for North America:

NORTH AMERICA	Population (2007 Estimate)	% Pop. Using Internet	Internet Users, Latest Data	% Usage of N.A.	Use Growth (2000-2007)
Bermuda	64,574	65.0%	42,000	0.0 %	68.0 %
Canada	32,440,970	67.8%	22,000,000	9.4 %	73.2 %
Greenland	57,327	66.3%	38,000	0.0 %	113.5 %
St. Pierre & Miquelon	7,466	-	-	-	0.0 %
United States	301,967,681	69.9%	211,108,086	90.5 %	121.4 %
TOTAL N. AMERICA	**334,538,018**	**69.7%**	**233,188,086**	**100.0 %**	**115.7 %**

Source: http://www.internetworldstats.com/stats2.htm

2.6.2 Internet use patterns in the US

The Stanford University Institute for the Quantitative Study of Society (SIQSS) conducted an Internet Survey Study to find out how people spend their time online and their uses of the internet in the US (http://www.stanford.edu/group/siqss/Press_Release/press_detail.html).

In this study 4000 respondents were asked to select from a list of 17 common internet activities and state what they did or did not do. The researchers found that email is by far the most common internet activity, with 90% of all internet users claiming to be emailers. The study described the internet today as being for the most part a giant public library with a decidedly commercial tilt. The most widespread use of the internet today, it said, was as an information search utility for products, travel, hobbies, and general information. A little over a third of all internet users report using the web to engage in entertainment such as computer games (eg online chess, role games, etc.). The current internet is thus also emerging as an entertainment utility. While a quarter of internet users claim to have used chat rooms, this activity substantially decreases after age 25. In addition, the chatters report that the overwhelming portion of their chat room interaction is with anonymous others whose identities remain unknown. Purchasing, stock trading, online auctions, and e-banking are engaged in by much smaller numbers of internet users, with only a quarter reporting they make purchases online and under 15% doing any of the other transactional activities.

Researchers looked at the number of different activities internet users engage in and found that the average internet user reports engaging in 7.2 different types of activities. The average user is engaging in at least 5 distinct types of activities on the web: a combination of different types of information searches, entertainment and games, and, for one quarter, some commercial transactional activity.

This study also found that the more time people spend using the internet, the more they lose contact with their social environment; the more they turn their back on the traditional media; the more time they spend working at home and at the office; and the less time they spend shopping in stores and commuting in traffic.

Americans spend more time watching TV, listening to the radio, surfing the internet, and reading newspapers than anything else except breathing. In 2007, Americans are projected to

spend more than nine and a half hours a day with the media, though hours spent doing two things at once, such as watching TV and using the internet, are counted twice in the Census Bureau report. In the US, there are more TVs than people (Associated Press article, December 15, 2006, based on the US Census Bureau's annual Statistical Abstract of the US, released the same day).

In a study conducted by researchers from Ball State University's Center for Media Design and released by the Online Publishers Association, it was found that the internet has become the number one or number two medium behind television during nearly every part of the day, according to new research. In the mornings from 8am to 11am, internet has surpassed the radio. Web usage peaks between 2pm and 5pm, when nearly 40% of all users are online either at work or at home. The study found that more than 60% of participants used the internet for roughly two hours per day. The study also found that in the morning, TV has a reach of 41%, and combined with the web this increases to 62%. Newspapers have a reach of 17%, and combined with the web that increases to 44%. Magazines go from 7% to 39%. Looking at the evening, the combination of the web and print, newspapers, it goes from 39% to 75%, magazines from 31 to 72% (http://www.internetworldstats.com/usage/use004.htm).

According to a market research study by Parks Associates, the residential subscriptions to broadband internet services in the United States surged 20% in 2006 to exceed 50 million households. The report estimates US residential broadband subscriptions will surpass 60 million households by year-end 2007, accounting for 55% of all US households.
(Source: http://www.internetworldstats.com/usage/use011.htm)

2.6.3 Internet use patterns in Canada

As of 2006, 58.3% of the population in Canada aged 3 and older uses the internet at least once per month, according to eMarketer (2006). That amounts to 19.3 million people. Online Canadians and Americans tend to demonstrate similar attitudes and behaviours, according to eMarketer's Canada Online report. eMarketer estimates that 58% of Canada's population is online, which is only slightly behind the US penetration rate of 63%. Canadian broadband growth has actually exceeded the US rate, with 59% of Canadian households connected via a high-speed internet connection at the end of 2006, compared with 44% of US households. eMarketer also reports that 90% of Canadians aged 18 to 24 are online, according to Canada Internet Project. Only 61% of Canadian adults ages 55 and older have access to the internet from any location, compared with 88% of adults ages 18-54.

Adults in Canada with internet access by age in 2001 and 2006 (% of respondents in each group) are:

- Aged 18-54: 88% in 2006, up from 82% in 2001
- Aged 55 and older: 61% in 2006, up from 48% in 2001.

The amount of time Canadian internet users are spending actively online is on the rise, averaging 12.7 hours per week (up 46% from 8.7 hours in 2002). This increase appears to have come at the expense of radio as the typical adult internet user spends 11 hours per week listening to the radio, down from 16 hours per week in 2002. While weekly internet usage has surpassed radio listening, television retains the number one position among media sources with Canadian internet users averaging 14.3 hours of TV viewing per week. Still, the gap between internet and TV usage is closing (a difference of 1.6 hours per week compared to 4.5 hours in 2002), with the internet threatening to overtake television should these trends continue (Ipsos Reis, 2005, http://www.ipsos-na.com/). By the end of 2006, 59% of the total number of households in Canada would have broadband connection, up from 51% at the end of 2005, according to eMarketer.
(Source: http://www.etcnewmedia.com/review/default.asp?SectionID=10&Country ID=41)

2.6.4 Mobile phone use in Canada

Cell phones are poised to become an important mobile directory, camera, and a mobile internet and telephone device. Canadians are already using cell phones to take and send pictures while travelling. An April 2006 Conference Board online survey of travellers indicated that 75% of Canadians vacationing in Canada take their cell phones with them. Of these travellers, 17% use their cell phones to take pictures while on their trip. The figures are even more impressive for overseas travellers. About 44% of Canadians travelling overseas on vacation take their cell phones with them. Of these cell phone travellers, 28% use their phones to take pictures.
(Source: (2006) http://www.corporate.canada.travel/en/ca/index.html?sa_campaign= domains/un/www.canadatourism.com/home)

2.7 North America: activities and projects

2.7.1 Alliance for a Media Literate America (AMLA)

Media literacy is an essential life skill for the 21st century. As communication technologies transform society, they affect our understanding of ourselves, our communities, and our diverse culture. By applying literacy skills to media and technology messages, by learning to skilfully interpret, analyse, and create messages, media literacy empowers people to be both critical thinkers and creative producers of messages using image, language, and sound. The AMLA was formed to unite the media literacy field and be involved in the drive to include the teaching of media literacy in a wide range of educational settings. Its goal is to help all people to be able to critically analyse and create messages using the wide variety of technological tools available in and out of school.

2.7.2 Center for Media Literacy (CML)

The Center for Media Literacy (CML) is a non-profit educational organisation that provides leadership, public education, professional development and educational resources nationally. Dedicated to promoting and supporting media literacy education as a framework for accessing, analysing, evaluating, and creating media content, CML works to help citizens, especially the young, develop critical thinking and media production skills needed to live fully in the 21st century media culture. Their mission is to help children and adults prepare for living and learning in a global media culture by translating media literacy research and theory into practical information, training and educational tools for teachers and youth leaders, parents and caregivers of children.

2.7.3 Cable in the Classroom

This project provides resources for teachers on teaching and learning media literacy. It encourages parents to sharpen their own media skills and get guidelines on conversations they can have with their children about media and technology.

2.7.4 New Mexico Media Literacy Project

The New Mexico Media Literacy Project was founded in 1993 to empower children, youth, and adults to become more critical consumers of media messages. Its mission is to cultivate critical thinking and activism in media culture to build healthy and just communities. It produces media literacy resources for teachers, health professionals, activists, parents and youth. The Project offers multimedia presentations to children and adults in classrooms, community centres, and training seminars. A variety of training opportunities are provided, including intensive training in media literacy concepts and skills at the Catalyst Institute, as well as teacher in-service training programmes.

2.7.5 Citizens for Media Literacy

CML is a non-profit, public-interest organisation linking media literacy with the concepts and practices of citizenship. It promotes citizens' responsibility for free speech rights; provides assistance to citizen activists and journalists on issues related to the Freedom of Information Act and Open Records laws; publishes media analysis and criticism; and promotes public access to the media environment, especially via cable TV and the internet.

2.7.6 The Association for Media Literacy

Founded in 1978, The Association for Media Literacy was the first comprehensive organisation for media literacy teachers in Canada. The Association for Media Literacy is made up of teachers, librarians, consultants, parents, cultural workers, and media professionals concerned about the impact of the mass media on contemporary culture. It views media literacy as an educational initiative that aims to increase students' understanding and enjoyment of how the media work, how they produce meaning, how they are organised, and how the media construct reality. AML is concerned with helping students develop an informed and critical understanding of the nature of the mass media, the techniques used by media industries, and the impact of these techniques. It also aims to provide students with the ability to create their own media products.

2.7.7 The Jesuit Communication Project

The major work of the Jesuit Communication Project is to encourage, promote, and develop Media Education in schools across Canada. Media Education is concerned with 'helping students develop an informed and critical understanding of the nature of the mass media, the techniques used by them, and the impact of these techniques' (Ontario Media Literacy Resources Guide, 1989). The Jesuit Communication Project is working in response to this call by providing a variety of resources and services for teachers, parents, church groups, school boards, students, and other interested groups.

2.8 Oceania: empirical research

2.8.1 Internet use in Oceania

Table 5: Internet user statistics and population comparing Oceania as a whole with New Zealand and Australia

WORLD REGION	Population (2007 Estimate)	% Pop. Using Internet	Internet Users, Latest Data	% Usage of World	Use Growth (2000-2007)
Oceania	34,468,443	53.5%	18,439,541	1.7 %	142.0 %
New Zealand	4,274,588	74.9%	3,200,000	17.4 %	285.5 %
Australia	20,984,595	70.2%	14,729,191	79.9 %	123.2 %

Source: http://www.internetworldstats.com/stats6.htm.

2.9 Australia: Empirical research

2.9.1 Internet use

There were 14,729,209 internet users in Australia (representing 70.2% of the population) in January 2007, according to Internet World Stats. This was up by 123.2% compared to 2000 (http://www.internetworldstats.com/stats6.htm, 2007). There were 10,752,677 active home internet users in Australia in January 2007, according to Nielsen/NetRatings. This was up 0.50% compared to the previous month (ClickZ.com, February 2007).

There were almost 6 million (5,945,000) active internet subscribers in Australia at the end of the June quarter 2006 (comprising 867,000 business and government subscribers and almost 5.1 million household subscribers), according to findings of the Australian Bureau of Statistics Internet Activity Survey in June 2006. This was up from 5,384,000 at the end of the March quarter 2005. Non dial-up subscribers represented 53% of total internet subscribers in Australia at the end of June 2006 compared with 31% at the end of March 2005.

Australian children and teenagers are increasing their use of the internet, according to a survey sponsored by Nickelodeon, conducted by Nielsen/NetRatings (http://www.nielsen-netratings.com/). But, as in the US, children in Australia still seem to find television and music more important.

According to a survey conducted in July 2005, 79% of 9-17 year olds have been using the internet for more than two years. The survey has been conducted biannually since 1999 among families in metropolitan areas, but the latest survey includes families living in metropolitan, suburban and rural communities in Australia, and indicates some significant differences in web usage between the different regions. Other findings show that about two-thirds of respondents ages 9-17 use the internet every day, compared to about one-third of respondents ages 6-8. In metropolitan areas, however, over 40% of the latter age group use the web daily.

Children and teens use the internet about 6.3 hours per week on average, up from 5.3 hours per week in 2003. Older teenagers are the heaviest users, with teens aged 15-17 spending 15 hours per week online.

Web usage may be growing rapidly, but survey respondents tended to rank TV and music as more important. About 1 in 3 children between the ages of 6 and 17 said they couldn't live without TV, compared to 1 in 5 who felt that way about music, and 1 in 6 who considered the

internet that essential. A survey conducted last year by Nielsen Media Research found that about 40% of children and teens in Australia watch two to four hours of TV on a school day and about 60% watch that much TV on a weekend day.

2.9.2 Broadband access

Broadband adoption in Australia is continuing apace, according to the Australian Competition and Consumer Commission. As of the end of the third quarter of 2006, the country had 3,639,700 total broadband connections. More than a million subscribers signed on during the previous year. About three-quarters of Australian broadband subscribers have DSL. Adoption of all other types of broadband access (cable, satellite, and wireless) is continuing to increase as well (eMarketer, February 2007). Ninety percent of Australia's small and medium size businesses – companies with five to 199 employees – now use broadband internet connections, according to the 'Broadband Barometer 2006' report by Pacific Internet undertaken by GfK Marketing Services. This was up from 79% in October 2005.

Using the definition currently adopted by the Australian Bureau of Statistics to define broadband (an 'always on' internet connection with an access speed equal to or greater than 256kbps), there were more than 3.1 million broadband subscribers at the end of June 2006 (Australian Bureau of Statistics, September 2006).

Australia has traditionally been among the top countries in the world in terms of household internet penetration. But it has only been over the last two years that Australia has caught up with its Asian, European and North American counterparts in terms of broadband adoption (http://www.etcnewmedia.com/review/default.asp?SectionID=11&CountryID=36).

2.9.3 Digital divide in Australia

Research gathered in the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) highlights the digital divide between indigenous and non-indigenous communities in Australia. It shows that at the time of the data collection, 67.6% of the non-indigenous population had used a computer at home in the previous 12 months compared with only 43.5% of the indigenous population. Similarly, internet use at home was significantly different between the indigenous and non-indigenous populations, at 30.4% and 57.9% respectively.

Level of education plays an important role in ICT use. Aboriginal and Torres Strait Islanders with low or no formally quantifiable educational qualifications were found to have lower use rates of ICT, whereas those with Year 12 and post-school qualifications have a higher rate of computer and internet use. The fact that education qualifications are a strong determinant of ICT is not surprising. Studies have shown that post-secondary education is the strongest determinate of computer use for the overall Australian population. However, post-Year 11 education is the most prominent determinant of computer use for the indigenous community, with Year 12 and post-school qualifications making no significant difference.

2.10 Australia: activities and projects

2.10.1 Connect Australia

In 2005, the Australian Government announced a $1.1 billion communications package for regional access to telecommunications services. Connect Australia aims to roll out broadband to people living in regional, rural and remote areas, extend mobile phone coverage, build new regional communications networks, and set up vital telecommunications services for remote indigenous communities.

Communications Fund

In addition, the $2 billion Communications Fund has been established to deliver an income stream to fund government responses to the recommendations of future legislated reviews into regional telecommunications. The first regular review will commence before the end of 2008. The government aims to provide a more robust regulatory framework for the telecommunications industry, while maintaining strong safeguards to protect consumers.

Mobile Connect

The new $30 million Mobile Connect programme, part of Connect Australia, will extend mobile phone coverage in smaller regional communities and along highways where a case for strategic location or economic importance can be established and where services will have ongoing commercial viability. Mobile Connect has also extended the existing Satellite Phone Subsidy Scheme until June 2009. During 2006–07, this subsidy is providing up to $1200 towards the cost of a satellite phone handset to eligible people who live or operate a business in an area without terrestrial mobile phone coverage, and up to $900 to other eligible people if they spend significant time in such areas.

2.10.2 Backing Indigenous Ability

Another Connect Australia package is the Backing Indigenous Ability (BIA), an $89.9 million initiative of the Australian Government to help to improve communications services in remote indigenous communities. It has three components:

- National Indigenous Television (NITV) ($50.0 million), to establish an organisation to develop, produce and aggregate indigenous television content.
- Indigenous Remote Radio Replacement (IRRR) programme ($3.3 million), to replace ageing and unreliable radio infrastructure for 79 remote area radio stations with community broadcasting licences.
- BIA telecommunications programme ($36.6 million), to address the need for telephones, internet and videoconferencing, provide training and skills development and promote and develop indigenous online content.

2.10.3 Community Connectivity

Community Connectivity is a project with the aim of ensuring that all Australians have the capabilities, networks, and tools to participate in the benefits of the information economy. Supporting strategies focus on individuals, communities, and sectors where additional effort is required to achieve wider uptake and effective use of technology. Specifically, this work relates to:

- Developing the networks and capabilities needed by people living in regional communities, indigenous Australians, older Australians, people with disabilities, and others facing economic or social barriers to participation in the information economy.
- Strengthening collaboration and capabilities in non-profit organisations and key sectors to facilitate their participation in the information economy.

2.10.4 Telecommunications Action Plan for Remote Indigenous Communities

The Telecommunications Action Plan for Remote Indigenous Communities (TAPRIC) was released in May 2002. The Australian Government is providing funding of $8.3 million over four years to support the strategies identified in the Action Plan. TAPRIC arose from the government's response to the Telecommunications Service Inquiry, when two initiatives to improve telecommunications services in remote indigenous communities were implemented:

- Improving payphone accessibility by working with telecommunications carriers and communities.

- Undertaking a study to develop a longer-term strategy and Action Plan for improving telecommunications in remote indigenous communities.

TAPRIC has four key objectives for remote indigenous communities:

- Improved and sustained take-up and use of telephone services
- Improved take-up and effective use of internet services
- Improved viability and provision of broadband services for community service delivery and community development
- Increased awareness of telecommunications opportunities and rights.

To achieve these objectives, TAPRIC is implementing a range of communications-related programmes and strategies and working with remote indigenous communities and other departments and agencies to achieve realistic and sustainable solutions.

3.0 Information on media literacy in New Zealand

3.1 Introduction

According to the European Commission (n.d.1), 'Australia, New Zealand and Canada are currently the most advanced countries in the world' in terms of media literacy. They add:

> Media education forms part of school curricula either as a separate subject or as part of the mother tongue language curriculum. In these countries there are also well established partnerships with the media industry and regulators; many associations publish journals and newsletters and some maintain extensive websites.

Following the Ofcom definition of media literacy as 'the ability to access, understand and create communications in a variety of contexts' adopted for the purposes of this report, this section considers New Zealand patterns of, and research into issues of, media access, understanding, and creation. Local statistics, collated by various government and research agencies, are presented alongside New Zealand research, from both academic and government sources.

There is a small amount of local research looking at audiences and how they make use of media. For example, Schott and Kambouri (2006) consider how players use and enjoy computer games, and how these fit into their social lives and contribute to information learning. Jocelyn Williams' research into the 20/20 Trust's Computers in Homes programme considers social interconnectivity around computer technology and the internet. Teenage girls, rural women, and older people have also been the subjects of focus groups, interviews and cases studies around computer usage and technology uptake. These studies include attention to aspects such as how the technologies are used, and the benefits and barriers to use (Richardson, Weaver, and Zorn, 2005; Weaver and Tucker, 2005; Weaver, Hart, and Richardson, 2002). In a related vein, the Families Commission Blue Skies Report, *New Communication Technologies and Family Life* (Weatherall and Ramsay, 2006) looks at the research around gaming and internet technologies and how these impact upon families, with attention to both risks and opportunities.

In general, much of this existing literacy research is concerned with children and adolescents, and there is more data relating to marketing and advertising than other media forms. However, the key findings of such studies do remain pertinent to the wider topic of media literacy, and this section will also consider the relevance and implications for a more general audience. It will become clear that media literacy, among adults in particular, is under-researched and data is piecemeal and often commercially-focused.

3.2 Access: media ownership and amount of use

The access component of media literacy calls for an understanding of household and individual media ownership, and the amount of use such technologies provoke. The data presented here concern ownership of televisions, related recording and viewing equipment, and computer ownership, as well as viewing and use times. Because the figures reported here come from a variety of sources, using different sampling techniques and questions, they are not directly comparable. However, we have selected recent statistics along with those that reveal general trends and developments, to give an overall perspective of the rapidly changing media environment.

The information comes from media and research organisations, as well as the New Zealand Census, and Statistics New Zealand's Household Use of ICT surveys. The BSA and the research team also commissioned limited statistics from Nielsen Media Research's Panorama Readership Survey database. The survey sample is 12,000 and the figures are from February to December 2006. These reveal interesting demographic differences between those who are heavy 'users' of television, radio, newspapers or the internet, and those who

do not use these media at all. These are compared with the overall population of people aged ten and over.

The importance of the access component of media literacy is demonstrated by Williamson (2005) who reports on her survey of individuals who were both users of ICT and active in the community voluntary sector. Responses showed clear patterns of established computer and internet usage. An interesting factor to emerge was the impact of the immediacy of access to ICT. It appeared that amongst this group those who had access to a computer either at home or at work were using it on a daily basis and were using it for a wider range of activities than those who relied on public access, such as at libraries, community centres or cybercafés. This indicates that those without immediate access to ICT are being disadvantaged and that strategies for encouraging personal ownership of computers could provide benefits at both the personal and community level.

However, elsewhere, Williamson (2003) has pointed out that when it comes to solving problems posed by the digital divide, provision of more computers alone is not the answer. Instead, the key focal points should be literacy and the strategies needed to create and maintain it, along with online content, which needs to serve interests and meet needs.

An example of new technologies serving particular interests and needs comes from the way they are being used to improve connection and cohesion among iwi members. Research on Tuhoe shows that of 30,000 iwi members only 5,000 live in the traditional tribal area. ICT use has helped overcome logistical difficulties in maintaining community connection, interests, and decision making. Digital technology is also being used in a project with Years 12 and 13 students recording stories of Tuhoe to preserve Tuhoe history (Weatherall and Ramsay, 2006, p.20). Of course, creating and maintaining literacy and developing relevant content remains predicated upon access as the initial building block. The following section presents access data for television, computers, and mobile telephones.

3.2.1 Television

The presence of televisions and television services in homes

Television and Related Technology Data accessed by the BSA from Nielsen Media Research traces media access in New Zealand homes over several decades. The 2004 figures show colour TV is in 98.8% of homes, and that 63% of homes have more than one TV set (24% had three or more sets). Eighty-three point six percent of homes have VCR players, a figure that has slightly reduced since 2002 as DVD player ownership has risen rapidly from very low numbers in 2001 to 42.8% of homes in 2004. Those homes with three or more TVs are more likely to have a PC, a games machine, and internet access at home.

SKY subscriptions, below 5% of the population in 1992, were 36.3% in 2004. Pay television operator SKY introduced its satellite digital service in December 1998. As of 30 June 2006, SKY reported it was in 42% of New Zealand homes and had 667,270 subscribers, an increase of more than 48,000 on the previous year. Nearly three-quarters of these (492,381) were residential digital subscribers. There was limited updating of these figures in the half year results (to 31 December, 2006), indicating continued rapid growth, and the latest figures released by SKY are for 690,994 subscribers as of 26 February 2007.

Nielsen's TV viewing figures for peak time (6pm until 10.30pm) reflect the penetration of SKY pay TV. SKY's peak share of viewing has gone from 3.6% in 1995 to 13.6% in 2004. Outside peak hours this trend has been more marked, with SKY figures at 7.8% of all viewers over five in 1995 and 28.4% in 2004. Demographics of SKY subscribers show they are slightly more likely to be male, in the 40 to 65 age group, to have a VCR and a DVD player, a PC, and a games machine, and considerably more likely to have home internet access and three or more TVs.

Free to air digital broadcasting through Freeview was launched on 2 May 2007. The initial service is satellite, and channels for the launch are: TV1, TV2, TV3, C4, Māori TV, plus two

radio stations. Radio New Zealand National and Radio New Zealand Concert. In early 2008 Freeview will be transmitted in terrestrial format in the larger centres and TVNZ will launch two new digital channels. The introduction of Freeview followed a cost benefit analysis produced for the Ministry for Culture and Heritage in June 2006. According to predictions in the report, if the current government scenario for free to air digital goes ahead and there is a switchover date with no analogue broadcasting available after 2015, the uptake of digital television is as follows: 1) by 2010 digital penetration would be 56% (up from 36% in 2005) – of these 10% would be FTA digital and 46% pay TV; 2) by 2015 (the switchover date) FTA digital figures will have risen to 37% and pay TV digital to 61% (Ministry for Culture and Heritage, 2006).

One of the purposes behind free to air digital broadcasting is to make it available to a wider range of people. Those who can receive the terrestrial feed would have the one-off expense of a set-top box. There has been some debate and confusion about the cost of boxes. Original indications were that these would be $200. However, Freeview has approved two set-top box makers, and a basic model available through local retailers costs about $299 and a more advanced model will cost nearly $600. On the other hand, Griffin (2007) reports that a thriving market has sprung up among importers and cheaper models from $160 are available.

Time spent watching television

Despite the growth in internet home access, the hours spent online, and the prevalence of VCRs and RVRs allowing people to 'time shift' their viewing, the average daily time spent viewing TV is still increasing. In 1995 it was 2 hours 43 minutes. This rose to 2 hours 50 minutes in 1998, and then dropped a little. In both 2003 and 2004 it was 2 hours 53 minutes. There has been an increase in the amount of very early morning and morning viewing.

The figures for playback of recorded VCR material show that the numbers of homes using VCRs for this purpose have decreased, while more are using VCRs for playing non-home recorded material (although this figure has decreased as the number of DVD players has increased).

In terms of age composition, there is an indication that viewers over 60 (despite being an increasing percentage of the population) are watching less television. However, over 60s still make up a quarter of all viewers. The audience percentage figures for those aged 40-60 have increased, while the percentage of viewers in the 20-29 age group decreased between 1994 and 2004. This latter figure may reflect the uptake of internet and other digital technologies by this age group. For example, qualitative interviews with caregivers of families participating in the 20/20 Trust's Computers in Homes programme (Williamson, Sligo, and Wallace, 2004) show how internet access can impact upon the use of other media. Nine of 21 participants in this study felt their television watching declined following the introduction of the internet into their lives, with smaller proportions noting less time spent reading newspapers and talking on the telephone. The issue of whether internet access increases or reduces people's feelings of community connectivity is the topic of related ongoing doctoral research.

A Nielsen survey, *New Zealand eGeneration Study 2005 – Kids and Teens Online*, gives us some insight into changing use of television from childhood through teenage years. The survey asked children for the medium they 'cannot live without' and found TV was the most popular with 9-11 year olds, while for 12-17 year olds it was music. A study on the relationship between children's television viewing and literacy levels claims that 'television plays an everyday role in children's lives' (Wylie, 2001, p.8) with average peak viewing levels of 2.65 hours at age 5 dropping to 1.26 hours at age 6, and increasing again to 2.2 hours at the age of 10. The relationship between traditional literacy and children's television and computer use is summed up by Wylie:

> There is uneven competition between them, however, for children's time. At present, television does appear to compete with the printed word, but not with the computer. The computer and the printed word do not appear to compete (p.14).

More specific data on children's computer access time is provided later in this section.

A comparison of these local figures with those provided by the Ofcom audit shows that UK adults on average watch nearly 2 hours more TV than New Zealanders, but listen to the same amount of radio at nearly 15 hours a week. New Zealand figures also broadly support the UK findings that those over 65 watch proportionately more television.

Nielsen's Panorama Survey (2006) shows that one third (33.9%) of the general population are heavy users of television (watching more than 23 hours a week). Those over 65 were far more likely (at 45.7%) to be heavy TV users, especially compared to 25-64 year olds where only 30.5% were heavy users. Only a very few did not watch television at all (overall 1.8%, about 64,000 people). Those who did not watch were slightly more likely to be between 15 and 64 years old.

Table 6: Percentage of population who are heavy or nil users of television in relation to major age cohorts

Television use	All over 15 yrs	15-14 years	25-64 years	Over 65 years
Heavy*	33.9%	35.1%	30.5%	45.7%
Nil	1.8%	2.1%	2.0%	1.5%

* Heavy television use is defined as viewing 23 hours or more per week. Data source: Nielsen

Those with household incomes under $40,000 were more likely to be heavy viewers (possibly reflecting the reduced income for retired people). The table below presents results for key ethnic groupings and we note that there is a correlation of low income with ethnicities such as Māori and Pacific people.

Table 7: Heavy and nil use of television in relation to ethnicity, 2006

Television Use	All over 15	European	Māori	Pacific	Other*
Heavy	33.9%	33.5%	45.2%	40.3%	23.6%
Nil	1.8%	1.6%	1.0%	1.6%	3.9%

* 'Other' ethnicities includes Chinese, Indian and other Asian nationals as well as all others not identifying as European, Māori or Pacific people. Data source: Nielsen Panorama 2006

Those who identified as Māori were much more likely (at 45.2%) to be heavy users as were, to a slightly lesser extent, those who identified as Pacific people (40.3%). Also, Māori were less likely not to watch television at all. However, those from 'other' non-European ethnic groups (including Chinese, Indian, other Asian nationalities and other non-Caucasian groups) were much less likely (at only 23.6%) to be heavy users of television and more than twice as likely (at 3.9%) to watch no television at all. The findings for Māori and Pacific people demonstrate that figures from overseas on ethnic minority groupings cannot be simply transposed to New Zealand. The findings for 'other' ethnic groups, however, reflect findings in the Ofcom Adult Media Literacy Audit, which found that minority ethnic groups in the UK watch less television. The Ofcom audit also found that this group knew less about television funding and regulation than the population as a whole – a finding we might tentatively apply to the 'other' ethnicities group in the New Zealand situation.

3.2.2 Radio

The Nielsen figures (2006) only measure listenership of commercial radio and this makes comparison with the UK figures difficult. Heavy radio use is defined as more than 20 hours per week. Around a quarter of the population (24.9%) are heavy users of radio and almost as many (23.8%) do not listen at all. As the table below shows, there was less difference between the age groups than for television; those aged 25-64 years were more likely to be heavy users (27.3%), as were 15-24 year olds (27.1%). However, older people were much more likely than the norm not to listen to radio (40.1% of over 65s did not listen to radio). The fact that the measurement is of commercial radio listening might partly explain this result as may the higher incidence of hearing disabilities among the elderly.

Table 8: Percentage of population who are heavy or nil users of commercial radio in relation to major age cohorts

Radio use	All over 15 yrs	15-14 years	25-64 years	Over 65 years
Heavy*	24.9%	27.1%	27.3%	24.2%
Nil	23.8%	18.3%	21.4%	40.1%

* Heavy radio use defined as 20 hours or more a week. Data source: Nielsen Panorama 2006

The greatest difference in listenership was among the ethnic groupings (see table below) where Pacific people were clearly more likely to be heavy users (30.5%) and less likely than the average not to listen (15.3%). This trend was reversed among the 'other' ethnic grouping who were much less likely to be heavy radio users (17.1%) and more likely not to listen than the general population.

Table 9: Heavy and nil use of commercial radio in relation to ethnicity

Radio Use	All over 15	European	Māori	Pacific	Other*
Heavy	24.9%	25.6%	26.5%	30.5%	17.1%
Nil	23.8%	24.0%	20.8%	15.3%	28.8%

* 'Other' ethnicities includes Chinese, Indian and other Asian nationals as well as all others not identifying as European, Māori or Pacific people. Data source: Nielsen Panorama 2006

As with the television viewing figures, these radio figures demonstrate the unique profile of the Māori and Pacific population in New Zealand, although the figures for other ethnicities show a similarity to the Ofcom audit findings that ethnic minority groups in the UK listen to less radio that the adult population as a whole.

3.2.3 Newspapers

The Nielsen Panorama Survey (2006) indicates that just under a third of the population read six or more daily papers a week while 27.6% do not read any daily papers. Over 65s were almost twice as likely to be heavy readers (60.7%), while 15-25 year olds were much less likely than the norm to be heavy newspaper readers (only 16.1%). Pacific people (11.9%) were the ethnic demographic least likely to be heavy users of newspapers; this was followed by other ethnic groups (17.9%) and Māori (22.6%). These groups were correspondingly more likely not read the daily paper at all.

3.2.4 Internet access and use

Internet connection rates

Results of Statistics New Zealand's Household Use of ICT Survey 2006, released on April 27, 2007 and based on a sample of 15,000 households, show that 71.6% of households have access to a computer at home (up from 47% in 2001). Nearly two-thirds (64.5% or 1 million) had access to the internet at home. This compares favourably with the 54% figure in the Ofcom audit, although the latter figure will have risen since the British survey was undertaken in mid 2005.

The total number of internet subscribers in New Zealand is of course higher than the household figures as it includes businesses. According to the latest Internet Service Provider (ISP) Survey results, released in March 2007, there were a total of 1.4 million internet subscribers in New Zealand at the end of September 2007, an increase of 100,000 in six months. Of these, residential subscribers accounted for 83% and provided 71.5% of revenue, while together businesses and the government accounted for the rest. Residential subscribers increased at a rate of nearly 10% while the percentage of business and government users decreased. The figures also showed that in New Zealand in 2005 there were 30 subscribers per 100 inhabitants. By September 2006, the number had risen to 33.

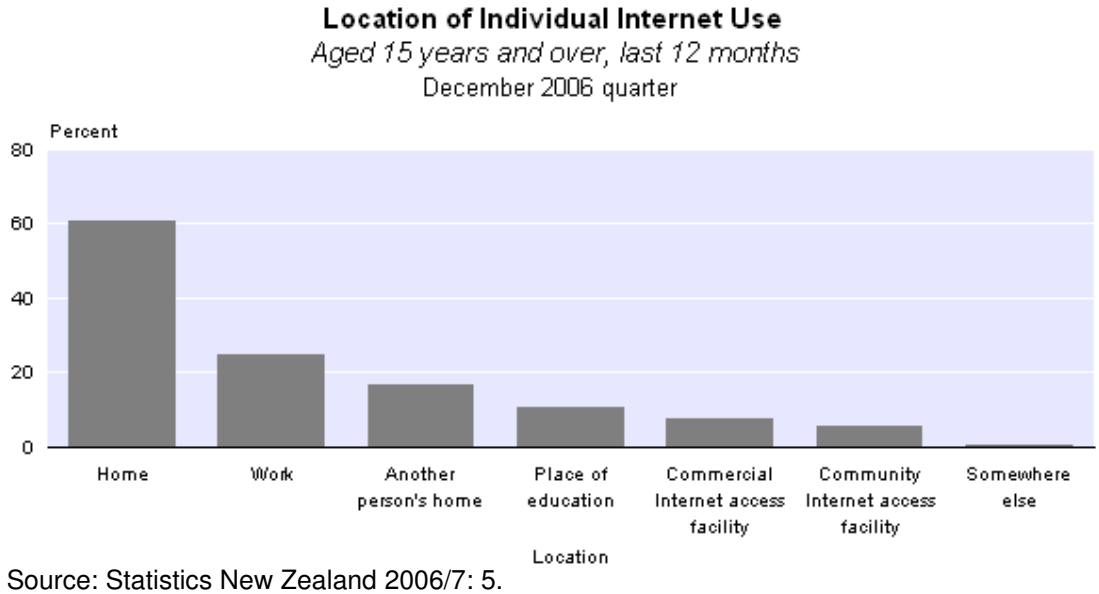
Nielsen (2005) provides a comparison of New Zealand home internet connection figures with those of nine other countries. At that stage, New Zealand, with 58% of homes with internet access, was third, behind only the US (69%) and Sweden (65%), just ahead of Australia (57%), and further ahead of the UK at 49%. Other European figures were lower and Brazil had just 11%. Nielsen reported that the figure had stabilised and that households with school-age children and higher incomes were the most likely to be connected.

While New Zealand home connection figures were strong, Nielsen (2005) described them as lagging 'significantly behind' in terms of access to broadband (just under 20% compared with 40% in Sweden and Australia, 51% in the US and 54% in the UK, 72% in France and Germany and a massive 95% in Hong Kong). There is considerable interest about broadband access, as a key to greater and more active use of the internet's facilities. New Zealand has been ranked at 22nd in the OECD for broadband take-up. The ISP Survey of 2006 reported that broadband (or non-analogue) subscribers had increased by 29% from nine to 14.7 per 100 (ie to a total of 611,600 business and homes) in the year to September 2006. Concurrently, the number of dial-up subscribers fell by almost 7% in the six months to March and a further 5% in the next six months. Dial-up connection numbers continue to fall and broadband is predicted to outstrip dial-up by late 2007. Indeed, the Household Use of ICT Survey shows that this was already the case for households in December 2006: 33.2% of NZ households had broadband access, while 30.9% had dial-up access. However, the recent rise in broadband access may not be enough to move New Zealand up the OECD league table, because other countries are likely to have increased broadband uptake as well (Pullar-Strecker, 2006).

Where people access the internet

According to the Household Use Survey, 69% of the 30,000 respondents aged over 15 had used the internet at some stage during the year to December 2006. They were asked where they had accessed the internet. As shown in the Statistics NZ graph below, most (60.4%) had used the internet from home, and a quarter from work. This was followed by 'another person's home', while about 10% had used the internet from 'a place of education' and only 6% had used community internet access facilities. This latter figure is of interest to those who aim to increase internet use by those in marginalised groups.

Figure 2: Location of individual internet use for those aged 15 and over, 2006

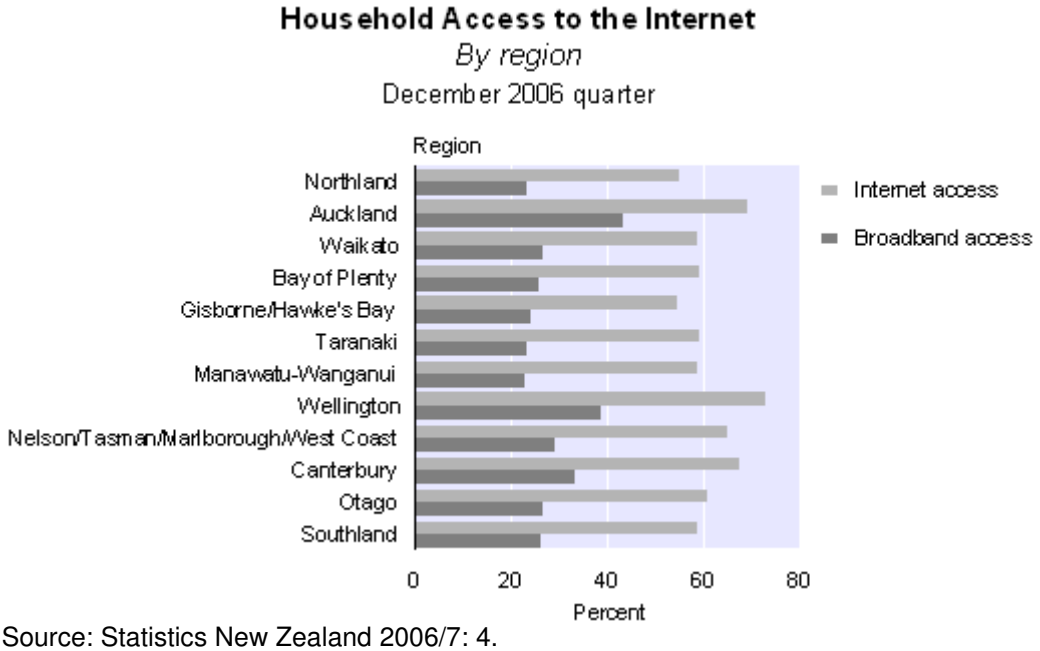


Source: Statistics New Zealand 2006/7: 5.

Internet access in different regions

The Statistics New Zealand Household Use Survey (see Figure 3 below) shows that access to the internet was highest (73%) in the Wellington region, with Auckland (69%) and Canterbury (67%) following. At the bottom of the table were Northland (55%) and Gisborne/ Hawkes Bay (55%). When household access to broadband was surveyed, Auckland (at 43%) led the regions, followed by Wellington (38%) and Canterbury (33%). The Manawatu-Wanganui area has the lowest proportion of households with broadband access at 23%.

Figure 3: Household access to the internet by region, December 2006 quarter



Source: Statistics New Zealand 2006/7: 4.

There is also a relationship between the size of urban settlement and household internet access but there is not a simple rural/urban divide. As can be seen in Table 10, the smaller the urban area the less likely households are to have an internet connection. However, in rural areas, those truly 'out in the country' were as likely to have internet access as those in larger urban areas (perhaps underlining the importance of this communication tool for those physically isolated). Meanwhile those in small rural centres were more likely to have internet access than those in minor urban areas.

Table 10: New Zealand rural/urban internet access, December 2006 quarter

Type of Urban or Rural Area	Descriptor	% Internet access
Main urban areas	Population over 30,000	67.0%
Secondary urban area	10,000-29,999 near larger centres	56.2%
Minor urban areas	1000-9,999 around smaller towns	48.1%
Rural centre	300-999	56.0%
Smaller rural area	Under 300	65.9%

Data source: Nielsen Panorama 2006

Cost was the main reason, given by more than half of the households who had dial-up access, for not having broadband. However, a third of those in rural areas who were on dial-up access said the reason they did not have broadband at home was because there were no broadband services available. Only 22% of this rural group said that dial-up was sufficient for their needs compared with 35% of those in urban areas who had dial-up service.

Internet access and household income and composition

Census statistics on access to, and use of, information communications technology are limited because questions about access to information technology are on the Household Questionnaire and not also on the Individual Questionnaire. This means that data can be examined in relation to a range of variables surrounding household composition but not in relation to similar variables surrounding individuals.

A comparison of 2001 and 2006 Census figures shows that households with access to the internet almost doubled from 482,361 in 2001 to 843,735 in 2006. Correspondingly, households with no access to telecommunication systems have almost halved from 46,815 to 28,407. In contrast, access to a fax machine can be shown to have grown much more modestly from 325,557 to 362,040, an increase of only 36,483.

Just as cost is the most important factor in whether households have broadband (see above), income is the chief determinant of household internet access. From the 2001 Census data (the Census figures used are based on 2004 reports using 2001 Census figures) it was found that household connection to the internet depended mostly on total household income. Eagle and de Bruin (2001) also note that 'computer access is highly correlated with high levels of family income and education'. In the Census data this was followed by highest qualification and household composition. Household composition was examined by such factors as whether there was one person only; a couple only; a couple or one parent with number, age and dependency status of children; age of youngest occupant; age of at least one household member; ethnicity based on the presence of at least one occupant of the ethnicity in the household; and labour force status of occupants (see Statistics New Zealand, 2004).

For example, households comprising a couple plus children had the highest levels of internet access at 55%, while only 16% of one-person households were connected. When the effects of income and highest qualifications were removed, one-parent households were still less likely to have internet access, which Statistics New Zealand (2004) says suggests that digital uptake is not simply a reflection of income. Nielsen's (2005) figures show that households with school-age children and higher incomes were the most likely to be connected.

Patterns of internet use

A limited amount of data from a Nielsen 2006 Panorama Survey was requested to help fill some of the gaps in information about how much New Zealanders use the internet and how this is reflected in key demographics. The summary below is followed by sections on what other information can be found on ethnicity, age, and gender in relation to internet use and access in New Zealand. The data shows some commonality with overseas findings. However, it also underlines the paucity of local publicly available information.

In terms of knowledge about media literacy, it is perhaps unfortunate that this Nielsen data on internet use is 'ex email' because, as the Household Use Survey (reported later in this section) finds, email is the top online activity for New Zealanders, as it is in the US and UK.

Nielsen's 2006 Panorama Survey statistics show that more than a third of the population (34.8%) were heavy users of the internet. However, this was the only media where there were more non-users than heavy users (37.4%). See table below for comparisons of major media. Despite the reducing cost of new technology, clearly a number of barriers to participation still exist that are less evident for traditional media, even with newspapers which require both ongoing investment and a level of literacy that a significant portion of the adult population struggle to achieve.

Table 11: Percentage of population 15 years and over who are heavy or nil users of main media

Television	Radio	Newspapers	Internet
(over 23 hrs) Heavy = 33.9%	(over 20 hrs) Heavy = 24.9%	(6+ per week) Heavy = 33.2%	(151+ min per week) Heavy = 34.8%
Nil = 1.8%	Nil = 23.8%	Nil = 27.6%	Nil = 37.4%

Data source: Nielsen Panorama 2006

A further breakdown of the figures can give us some idea of who is less likely to have access to the internet and, in contrast, who are heavy users. Age is a major determinant. Heavy users were more likely to be younger and much less likely to be over 65 (12.1%). Correspondingly, 70.5% of over 65s did not use the internet at all, as seen in the table below.

Table 12: Percentage of population who are heavy or nil users of the internet in relation to major age cohorts

Internet use	All over 15 yrs	15-14 years	25-64 years	Over 65 years
Heavy	34.8%	41.1%	39.2%`	12.1%
Nil	37.4%	32.1%	31.6%	70.5%

Data source: Nielsen Panorama 2006

Further information on age and the internet follows later in this section. The Nielsen figures also provide additional confirmation of a technological divide associated with income. Internet use was also related to household income with only 20.9% of those in households earning less than $40,000 counting as heavy users and 61.4% in this low-income bracket not having access at all to the internet.

Ethnicity and internet access

The 2001 Census Household Survey revealed that households with at least one person of Asian ethnicity had the highest internet access level at 58%, while households with Pacific people were less than half as likely to have access to the internet (23%). Moreover, although people of Asian ethnicity comprise only around 7% of the New Zealand population, nearly 70% of households with a person of Asian ethnicity have a computer. In comparison, just under half of households in the European ethnic group, which comprise 80% of the population, have a computer. Richardson, Weaver, and Zorn (2005) note that SeniorNet clubs in New Zealand tend to attract 'relatively affluent mainly white, English-speaking, educated older people' (p.241).

The Panorama figures relate to individuals, provide more up to date information, and give us a glimpse into the internet use of Māori and Pacific people. As seen in the table below, Māori and Pacific people also had less access to the internet; 64.6% of Pacific people and 57.1% of Māori had not used the internet. However, other minority ethnic groups (including Chinese, Indian and other Asian nationals) were more likely than the norm to be heavy users and less likely not to have used the internet. This latter finding is also reflected in the UK's Ofcom audit.

Table 13: Heavy and nil use of the internet in relation to ethnicity, 2006

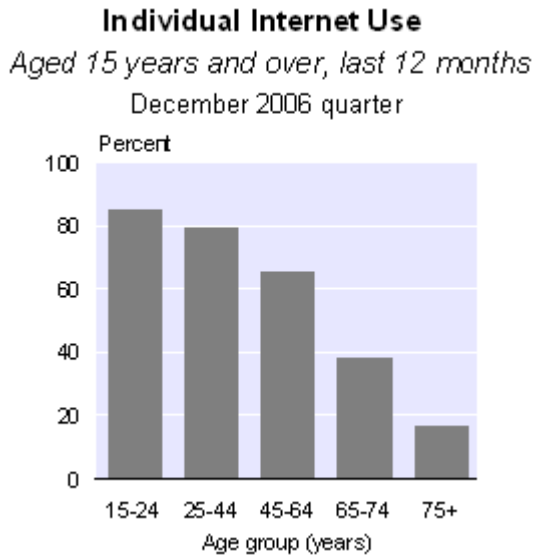
Internet Use	All over 15	European	Māori	Pacific	Other*
Heavy	34.8%	35.3%	25.1%	25.1%	49.6%
Nil	37.4%	34.2%	57.1%	64.6%	22.9%

* 'Other' ethnicities includes Chinese, Indian and other Asian nationals as well as all others not identifying as European, Māori or Pacific people. Data source: Nielsen Panorama 2006

Age and the internet

Data from the Household Use Survey confirmed findings from Nielsen and showed a clear trend of internet use related to age, as seen in the Statistics New Zealand graph reproduced below.

Figure 4: Individual internet use for population aged 15 years and over, December 2006



Source: Statistics New Zealand 2006/7: 5

Of those aged between 15 and 24, 85.5% had used the internet in the last year, compared with only 17.3% of those over 75 years old.

This data is supported by a small body of research which consistently shows that older people are significantly less likely to use computer technologies, and provides solid evidence to underpin government-level concern that 'many older people are consequently disadvantaged in accessing and participating in e-government and e-commerce' (Richardson, Weaver, and Zorn, 2005, p.220). There is little information, however, about older people's attitudes and perceptions, and a particular gap in understanding how gender, ethnicity, and socio-economic status interact with these. It seems likely that we have a situation paralleling that found in the Ofcom Audit. In New Zealand, in a smaller study, Richardson et al identified a series of barriers to older people's use of computers, on the personal level, in the learning environment, and at the individual circumstances level.

However, more recent research suggests that older people are growing users of particular services available through the internet. A study released in December 2006 shows a 400% increase in online shopping by New Zealanders since 2001, with 1.25 million people shopping online in the preceding year. Regular online shoppers (who we suggest are likely to have high levels of media literacy) tend to be relatively affluent, live in Auckland or Wellington, and more than a quarter are tertiary educated (although in the past 5 years, people with a broader range of qualifications and occupations are shopping online). The research suggests that age is not a barrier, but online shopping is becoming more popular in the under-20 and over-60 categories. Further information about types of internet use follows later in the report.

There is, though, relatively little information available about older people and the internet in New Zealand and we know little about the barriers to use of it. Organisations like SeniorNet concentrate mainly on offering support, and any evidence from this source is largely anecdotal. So despite the fact that increasing age represents a significant obstacle (presumably in combination with other factors of health, education, and economic status), this area is little investigated, while research and concern have concentrated on the interaction of younger people with the internet and their consequent vulnerability.

Young people and internet use

Bullen and Harré's (2000) research, while dated, remains pertinent. Their report was prepared for the Internet Safety Group (NetSafe), set up to educate and protect young people and to educate caregivers on the safe use of the internet. Their literature review reported that while internet usage is steadily increasing each year, it is most popular among the young (at that stage 76% of 10-17 year olds were internet users, compared to 60% of the general population), and that this trend has continued despite increase in overall use. Since this report was written, the importance of the school as a prime source of internet access for the young has declined as more and more homes go online.

Eagle and de Bruin (2001) note that Census data from the US show that children primarily use computers to play games and run stand-alone software. Their own research results on the views of caregivers about their children's use of the internet came from a survey conducted in Auckland schools across a range of deciles. This showed email and games were the primary uses for internet access.

In 2005, Wylie published research showing that the amount of time adolescents spend on computers almost doubled between ages 12 and 14, and that this use was also more frequently outside of school. Wylie also observed gender differences in how the computer was used, 'with females more likely to use it for communication, word processing, and seeking information; and males for games, and installing or downloading software' (p.9). Other gender differences among young people have been noted by researchers. Research into underage gaming shows that males are considerably more likely than females to have played restricted and banned computer games (UMR, 2005). Teenage male children tend to be higher users of chat rooms and MP3 (music) files (Eagle and de Bruin, 2001). NetSafe's (2001) survey of the way adolescent girls use the internet also revealed some interesting access-related trends. Ninety-five and a half percent of those surveyed said they used the internet at home, yet 75% stated that their use of the internet at home was only occasionally (37.5%) or never (37.5%) monitored by an adult. Internet use at schools was more likely to be monitored in some way, but girls were also less likely to access the web there, with findings showing that 44.5% use the internet at school, but 58% stating that this was monitored only occasionally (28.5%) or never (29.5%) by an adult. Access at public libraries was low (only 5.5%) but this form of access was even less likely to be guided by an adult. Finally, 36.5% of girls reported using the internet at someone else's home.

The question of where access occurs and the presence or absence of parental guidance has become a key focus for safety groups and researchers. Bullen and Harré (2000) report that the anonymous nature of the internet can result in adolescents doing or saying things online that they may not normally do or say in person. This anonymity can affect the reliability of any information obtained via the internet, including the possibility that people do not present themselves accurately to other users. Media reports and recent research have indicated that young people can be placed at risk as a result of being unsupervised while online. These risks include unwanted sexual solicitation, unsolicited exposure to legal and illegal pornography, and threats to personal safety when personal information or personal meetings are arranged with individuals met online. Bullen and Harré conclude that research on internet usage, in particular the *risks* of internet usage, is limited, and, while more has been conducted since, their argument that there is a great need for research in this area remains valid.

A NetSafe study found that 43% of children access the internet at a friend's house, and recommends that parents educate children about pornography. However, Wylie, chief researcher for the New Zealand Council for Educational Research (NZCER), suggests that currently New Zealand has a lower percentage of computers in bedrooms than other countries such as the US. Therefore, by using social marketing campaigns and talking to manufacturers, it has been suggested New Zealand has the opportunity to try to deal with potential security problems before they get out of hand (Weatherall and Ramsay, 2006, pp.18-19).

The Internet Safety Group (2001) carried out a survey of 347 female respondents, aged 11-19 (72% of whom were aged 13–16), and residing in New Zealand at the time of the survey. The survey reported that 68.5% were using the internet most days and that 23% were using the internet more than 10 hours per week (12% over 15 hours). Twenty-nine percent have sent or received post mail and 26% have communicated by telephone with people they have met on the internet – ways of communicating that are no longer anonymous. Thirty-three and a half percent have had a personal face-to-face meeting with someone they met on the internet.

Gender and internet use

Outside the context of adolescence, there is little research exploring gendered patterns in computer access, but what there is suggests some differences exist between males and females. The section above discusses some of the different uses adolescent males and females make of the internet. However, there has also been concern that women may be at some disadvantage when it comes to ICT.

For example, although Hutchinson and Weaver (2004) refer to research findings suggesting women feel comfortable with new information communication technologies, there is still a perception that Information Technology as a course and profession is a 'male domain'. Interview and survey research reveals this is attributable to a lack of knowledge, perceived male domination of the industry, lack of confidence, and gendered ideas about appropriate roles and careers. In their study of older New Zealanders and computer use, Richardson et al (2005) note that women tended to express feelings of guilt around using 'leisure technologies' in the home – a finding also supported by earlier studies into television viewing, for example. They write that 'computers, like other ICTs, are coded as the domain of younger generations; older women additionally contend with the masculine coding of such technologies' (p.239).

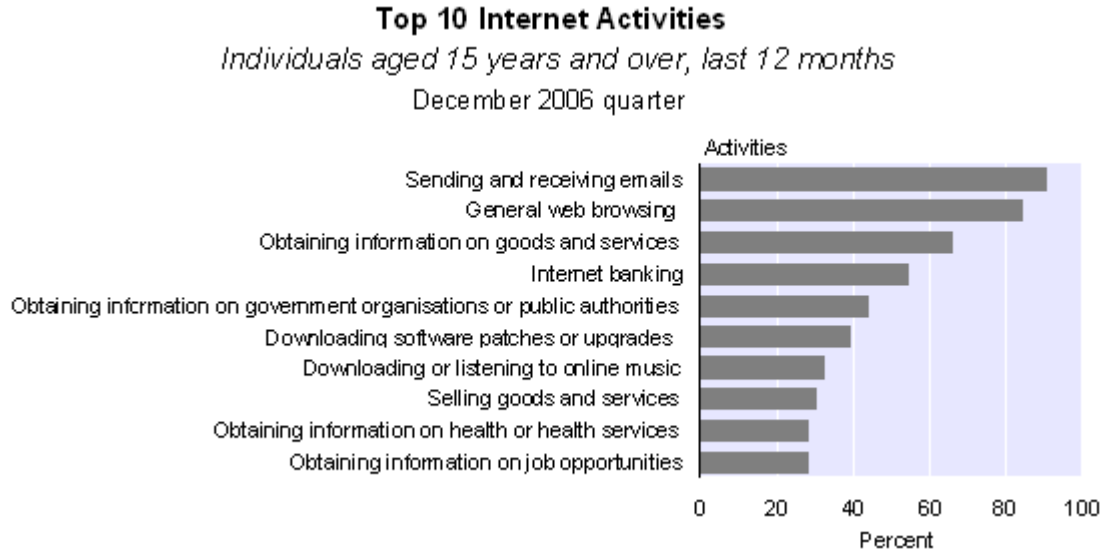
More optimistically, Williams (2003) quotes US research from the early 2000s, showing that 'women, minorities, and families with modest incomes continue to surge online'.

New Zealanders' activities on the internet

The newly released Household Use Survey also asked respondents about their activities on the net. In order to gain some idea of what Ofcom refers to as advanced competencies on the internet (the ability to make media perform) we commissioned some additional data from Nielsen Media Research Panorama figures on activities on the internet in 2006. Both sets of findings are reported here and the findings generally support each other. The Statistics NZ Household Survey, covered first, reports activities in terms of the percentage of those who have used the internet, while the Nielsen data is reported in terms of the total population over 10 years old and also offers some demographic comparisons.

The findings of the Statistics NZ Household Use of ICT Survey (see Figure 5 below) of the most common activities on the internet reflect overseas findings: 90% of those who used the internet sent or received emails; 84% browsed the web; 65% looked for information on goods; 54% used internet banking services; and 32% downloaded music or listened to music online.

Figure 5: Top internet activities of population aged 15 years and over, December 2006



Source: Statistics New Zealand 2006/7: 6.

Nielsen's 2006 Panorama figures indicate that 62.2% of the population over 10 uses the internet (about 2.2 million people) and that most internet users engage in a variety of activities. On average, the New Zealand users engaged in 7.7 different kinds of activities. (A broad comparison may be made with the Stanford figure of 7.2 activities, although the categories of use are not identical.)

Respondents were asked about their activities over a four week period. Reflecting overseas trends, the most popular activity, undertaken by 58.8% of the total population aged 10 and above, was sending and receiving email. This was also very clearly the most popular activity across all the demographic groups. 'General surfing', at 37.8%, was the next most frequent activity, and again this held across all demographic groups. Overall, this was followed closely by internet banking (32.7%). This was the third most regular activity for all but those aged 15-24 and for Pacific people (both of whom were more likely to listen to music).

Music is an important component of internet activity with 19.1% listening to music (an activity undertaken by 38.9% of 15-24 year olds) and 12.2% downloading music (rising to 31.5% for 15-24 year olds). Eighteen percent played games (both individual and multi-player) and 15.4% downloaded software.

Although emailing was so popular, far fewer (12%) took part in instant messaging and even fewer (5.1%) joined chat or discussion groups.

Buying and shopping were important with 14.3% visiting a New Zealand online shopping site, 7.5% an overseas site, and 12.6% taking part in an online auction. An average of 10.5% of the population visited an online job site – figures for this were higher for younger people and in the minority ethnic groupings.

In common with findings from the Stanford University study, it was clear that information gathering of many varieties was a significant activity. Basic information sources were popular: 14.6% accessed the Telecom White Pages, 11.3% the Yellow Pages, and 9.2% a street directory. Travel information was accessed by 15.6%, entertainment information by 14.5%, information on sport by 13.5%, 10.5% visited an online job site and 6.1% accessed information on finance, loans and mortgages.

Research was a major activity with 11.2% (largely 15-24 year olds) using the internet for education research. Eleven point nine percent engaged in general research (for instance information about health).

Reading electronic newspapers was also important, with 15% reading a New Zealand paper and 11% reading an international paper (unsurprisingly, the percentage reading international papers was higher among other ethnic minority groups). Also, 13.1% said they 'accessed news and current affairs'. However, people still seem to prefer to 'consume' other media by traditional means, with only 4.7% listening to the radio, while 5.6% watched television or movies from the internet.

Table 14: Top ten internet activities in relation to key age groupings by percentage

Population over 15: 3526,000	**15-24 years: 602,000**	**Over 65 years: 497,000**
Email 58.8%	Email 65.7%	Email 29.8%
General surfing 37.8%	General surfing 48.3%	Not specified 12.2%
Internet banking 32.7%	Listen to music 38.9%	General surfing 11.3%
Product/service info 26.2%	Internet banking 37.8%	Internet banking 9.4%
Listen to music 19.1%	Download music 31.5%	Product/service info 9.0%
Paid bill 19.0%	Instant messaging 27.9%	Play games 8.7%
Play games 18.0%	Play games 25.9%	Travel info 7.6%
Travel info 15.6%	Product/service info 24.6%	Research (eg health) 6.1%
Download software 15.4%	Education research 22.8%	NZ online newspaper 5.7%
NZ online newspaper 15.0%	Download software 22.7%	News & current affairs 5.6%

Data Source: Nielsen Panorama 2006

Just as internet access varied with age, so did patterns of use. The over 65s are far less likely to be online (only 29.5%) compared with 67.9% of young people between 15-24 years, but also, older people who did access the internet undertook fewer activities (an average of 1.6 activities across the four week period) compared with 8.8 for young people. The top activities for young people are emailing, general surfing, listening to music, internet banking, and downloading music. For the over 65s it was emailing (almost all who access the internet do this), general surfing, banking and accessing information about a product or service and playing games – but the numbers doing these activities are comparatively small.

Those with a household income of under $40,000 were also less likely than the general population to access the internet (only 38.6% compared with 62.6%). This group had similar 'top five' activities to older people, but undertook more activities (an average of 7.9) and were more likely to listen to music, download software, and pay a bill online than those over 65.

In terms of ethnic groupings, Māori and Pacific people access the internet less than the population as a whole. Forty-two point nine percent of Māori and only 35.4% of Pacific people had accessed the internet in the time period. However, those of other ethnic minorities (including those of Chinese, Indian, and other Asian origin) were more likely to use the internet than the general population; 77.1% of this group has used the internet. All the minority ethnic groups were widely active on the internet. While a minority of Pacific people used the internet, they undertook the most activities (an average of 11.4), Māori undertook an average of 8.5 activities, while those of 'other' minority ethnic groups undertook 8.1. Listening to music on the internet was particularly important for Pacific people and other minority ethnic people. This may reflect the younger demographics of this group or it could reflect that the music they preferred was less available on radio. Downloading music was an important activity for all three groups. As indicated, however, all these groups made wide use of the activities available on the internet.

We also accessed Nielsen Panorama figures for four key websites on the internet: nzherald.co.nz, tvnz.co.nz, stuff.co.nz and govt.nz. Of these, the site most visited during the previous four weeks was govt.nz, accessed by 15.5% of the population aged over 10 (about 545,000 people). Ten point two percent had accessed the New Zealand Herald site, 7.5% the TVNZ site and 6.9% had accessed stuff.co.nz. Access to these sites in relation to age cohorts is reported in the table below.

Table 15: Key websites visited by age groupings expressed as a percentage of total population

Website	All over 15 yrs	15-14 years	25-64 years	Over 65 years
govt.nz	15.5%	12.9%	20.6%	5.2%
nzherald.co.nz	10.2%	7.1%	13.3%	3.8%
tvnz.co.nz	7.5%	8.1%	8.5%	2.6%
stuff.co.nz	6.9%	5.6%	8.9%	3.2%

Data Source: Nielsen Panorama 2006

For young people, TVNZ was second placed, but for other age groups it was in fourth position. Of the age groupings, 25-64 year olds were most likely to have visited the sites, while the low percentage of older people visiting these sites reflected their limited activity on the internet.

Table 16: Key websites visited by ethnic groupings expressed as a percentage of total population

Websites	All over 15	European	Māori	Pacific	Other*
govt.nz	15.5%	15.8%	12.2%	8.9%	20.7%
nzherald.co.nz	10.2%	9.6%	7.3%	9.4%	17.9%
tvnz.co.nz	7.5%	7.4%	6.9%	5.6%	10.1%
stuff.co.nz	6.9%	7.6%	3.9%	4.2%	7.0%

* 'Other' ethnicities includes Chinese, Indian, and other Asian nationals, as well as all others not identifying as European, Māori or Pacific people. Data Source: Nielsen Panorama 2006

In terms of ethnic groupings (see table above), those who were in 'other' minority ethnic groups were more likely to visit all these sites (with the exception of stuff.co.nz) than the population as a whole. For this group, while the government site was most visited, they were much more likely to visit the New Zealand Herald site (17.9%) than the general population, and for them TVNZ was also comparably more popular. The percentages for Pacific people reflected the lower numbers who have access to the internet. The New Zealand Herald site was visited by more Pacific people (9.4%) than visited govt.nz (8.9%). For Māori, the govt.nz site, visited by 12.2%, was almost twice as popular as the New Zealand Herald site, while relatively few Māori visited stuff.co.nz.

While figures for over 65s were lower on every activity than the general population, it is notable that discrepancies were particularly large for activities like listening to music, online banking, and accessing online entertainment.

3.2.5 Mobile telephones

Household data on mobile telephone uptake and use

The 2001 New Zealand Census data showed access to a telephone by household. There was no census question about mobile phone use. However, there are clear indications that access to mobile phones is increasing rapidly. In 2006 when there was a question about access to a telephone and another about access to a mobile phone, the proportion of households with access to a telephone had dropped very slightly from 1,240,827 of 1,344,267 households (92%) to 1,277,325 of 1,393,707 households (91%). However, a 2004 Household Economic Survey (HES) showed that while 59% of households had access to a mobile phone in 2000/2001, 71% of households had access to a mobile phone in 2003/4. Census highlights show that in 2006 almost three-quarters of households (74%) had access to a mobile phone. This figure had increased again by the final quarter of 2006. The Household Use of ICT Survey reported that 86.2% of households had personal use of at least one mobile phone.

In further evidence of increasing access, it is interesting to note that in presenting household cell phone access by household income quintile, the 2003/2004 HES shows a decreasing gap

in access between the lowest and highest income quintiles compared with 2000/2001. (The 2006/2007 figures will not be available until the end of 2007.)

Barbara Craig (n.d., cited in Weatherall and Ramsay, 2006) found some lower socio-economic families prefer mobiles to landlines because of costs; but also, because telecommunication companies do not provide internet-only phone lines. The 20/20 Trust has lobbied Telecom to provide reduced-cost internet-only lines to lower rental price and help low-income families access the internet, but it has not happened yet.

Information from the two main providers of mobile telephone services, Vodafone and Telecom, while providing different figures, still adds to our understanding of mobile phone use. According to a Vodafone media release (November, 2006), 93% of New Zealanders own a mobile phone. Vodafone reported that in the three months to December 31 2006 they picked up an extra 89,000 customers, bringing their total to 2,200,000. Both Telecom and Vodafone report continuing growth in mobile phone connections. Telecom reported in a November 2006 release that mobile data revenue continues to be driven by services such as photo and video messaging and caller tunes. Video calling on mobile phones is a service only available in New Zealand to Vodafone customers.

In Australia, current mobile phone ownership is estimated at 18 million, or more than 80% of the population, and use of services is also increasing (SMS rates rose 44% from 2002 to 2003, for example). Ownership and usage is even higher among young people. International commentators predict an increase in use of mobile phones for a greater range of applications and services, with a forecasted shift to more marketing-related opportunities. In New Zealand, this is likely to be a similarly important area in terms of media literacy.

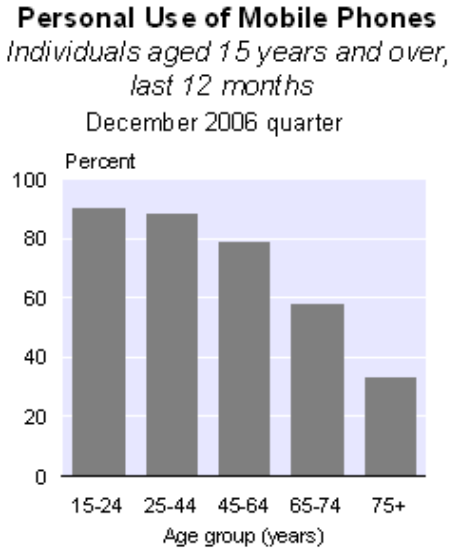
Young people and mobile telephone use

All sources note the prevalence of use of mobile phones among younger people. The Statistics NZ Household Use of ICT Survey notes:

> The proportion of individuals (rather than households) with personal use of a mobile phone in the previous 12 months was 80 percent (almost 2.6 million individuals). In the 15 to 24 years age group, 90.6 percent had personal use of a mobile phone. This contrasted with the 75 years and over age group where just over one-third (33.9 percent) had personal use of a mobile phone (2007, n.p.).

The Statistics NZ report also included a graph of mobile phone use according to age (below).

Figure 6: Personal use of mobile phones for population aged 15 years and over, December 2006



Source: Statistics New Zealand, 2006/7: 7

According to Vodafone NZ, mobile telephones are now more used than fixed phone lines, and most young people over 14 or 15 own, or have access to, a mobile phone, which is considered a fashion accessory and is changing the way they communicate (Carroll, Barnes, and Scornavacca, 2005). Overall, New Zealand is identified as a country which has successfully adopted text messaging. Nielsen's (2005) data says that 6-17 year olds on average spend 5 hours per week texting (unfortunately, no further breakdown of this figure is available).

A study by NetSafe (2005) shows that mobile phones are a central part of everyday life for most young people in New Zealand. 1,528 students from a metropolitan decile-4 high school were surveyed. The students were aged between 12 and 19 years with 52% males and 48% females. The study found that 73% use mobile phones (66% of this group had a phone with them at the time of filling out the survey during class time). Thirty-one percent of those who do not currently use a mobile phone had previously used one and 69% of those who do not have a phone reported that they use others' mobile phones. The most common reason for not currently using a mobile phone was not wanting one (54%), with 23% not being allowed to use one, and 19% not being able to afford one. The most important reasons given for using a mobile phone were 'to talk and text with friends' (56%), 'for safety' (23%), and 'to talk and text with family' (17%). Four percent had other reasons (eg 'looking cool').

There have been incidences of narrowly averted or tragic consequences following the use of mobile phones by young people. Activities reported include text bullying of young people, (eg. Harris, 2006; Henzell, 2006; Lewis, 2006); grooming of young people for sexual favours (eg Goff, 2005; TVNZ, 2006a); circulating 'degrading and humiliating' video footage (Stuff, May 08 2007); and the sending of mass texts resulting in hundreds of teenagers gathering uninvited at parties and in the deaths of two Christchurch teenagers (eg *NZ Law & Order News*, 2007). These events have contributed to a rising tide of concern and even 'moral panic' (Shrestha, 2005) over the risks of mobile phone use by young people.

A NetSafe survey of teenage (12-19 years) mobile phone use, published in 2005, showed 73% of teenagers were then using mobile phones, primarily motivated by the desire to talk and text friends (56%) and for safety (23%). Almost a quarter of the teenagers (23%) reported receiving an offensive, pornographic, abusive or threatening text or picture on a phone, and a third of these did not report this to anyone.

The Household Use of ICT Survey reported that of all those interviewed, 3.7% reported receiving harassing or threatening messages while using a mobile phone in the previous 12 months.

As well as personal safety issues, other risks of mobile phones, according to Carroll, Barnes, and Scornavacca (2005), include financial and privacy risks. The Consumers' Institute reported that over the Christmas 2006 period complaints about text message advertising had outstripped all others for the first time, with a steady increase in complaints since mid-2006. Young people tend to be most affected.

3.3 Attitudes towards, and understanding of, media forms

The second key component of media literacy moves the focus away from the relatively straightforward aspect of access, to more complex issues around understanding. What does the literature tell us about the audience's ability to understand, evaluate and control aspects of media content, and their attitudes towards various media and protective systems? In New Zealand and around the developed world, there are well established theoretical and community concerns about the way people (often those classified by society as more 'vulnerable' people) understand and interact with media forms.

For example, as noted earlier, local academic research on the internet and television has tended to focus on young people and/or their parents and caregivers (eg Bullen and Harré, 2000; Bulmer, Hawkins, and Eagle, 2005; Eagle and de Bruin, 2001). Many studies show young people are among the highest users – although with little difference on the basis of gender or ethnic and socio-economic factors (primarily linked to availability of the internet in schools) (Bullen and Harré, 2000). These studies generally call for further research into an under-examined area. Key areas of interest are related to the impact of the internet on communication, interaction, addiction, and the affects of anonymity. One of the key risk areas identified in the literature is to do with the uncensored nature of the internet and the difficulty young people, in particular, may have in critically evaluating the information they find. Research into the relationship between age/maturity and decision making shows that these skills tend to improve with age, although variations continue.

Academic research on mobile telephone use has covered topics such as addiction (in Australia, James and Drennan, 2005). Academic studies in Australia have identified a range of positive outcomes of this technology form, including the ability for deaf people to connect via text messaging, forming and supporting relationships; security and safety; and social gratifications related to mobility, access and convenience. Policy makers and community groups have also identified areas of concern around excessive or extreme use, although there is little empirical data on this (James and Drennan, 2005). Results of one of the few academic studies of mobile phone addiction show damaged relationships, emotional stress, and falling literacy as consequences.

Weatherall and Ramsay (2006) note that there has been much concern over behavioural and health effects of children's television viewing and use of computer games. Some studies link forms of aggressive behaviour to the use of specific R18 video games (eg *Grand Theft Auto*). Others link hours of television viewing to obesity and lower educational achievement, regardless of IQ and socio-economic background. However, some overseas research suggests the link between video game playing and obesity is not so high. There were also suggestions from Andy Williamson (member of the Digital Strategy Advisory Group) that playing video games may have a positive effect on children's cognitive development, and from Cathy Wylie that 'video games may provide an entry into learning for children who are performing poorly but enjoy video games' (p.16).

Bill Hastings, Chief Censor Film and Literature in New Zealand (cited in Weatherall and Ramsay, 2006, pp.20-21), is concerned that – unlike DVDs, films and videos – unrestricted computer games currently have no New Zealand censorship rating. Since 1993 Australian and British ratings have been recognised, although Australian censors do not view games but train those in the computer games industry to rate their own games – seen by Hastings as a possible conflict of interest. Also, most computer games sold in New Zealand are developed in the US where the tolerance towards gun culture and violence tends to be viewed in New Zealand as unacceptably high. According to Hastings, we should review our partnership rating system with Australia and use our own classification system for all games instead of accepting unrestricted material carrying foreign classifications. Hastings suggests possible cultural homogenisation caused by the lack of New Zealand material could be avoided:

> Think if you have a sort of historical Māori Wars [sic] game it would have violence which everybody wants but wouldn't necessarily be the gross sadistic violence that we have in games now, it would be historical (p.21).

Against this context, the key attitudinal and understanding issues relate to trust, protective competencies, understanding of restrictions, and awareness of quality principles.

Trust in media forms

A 2004 UMR survey showed that just 29% of New Zealanders have 'a great deal' or 'quite a lot' of confidence in the media. International research consistently indicates that audiences consider TV news to be more trustworthy that any other source of news. It is believed that this is because it offers audiences 'evidence' of events and positions them as 'unseen onlookers' to events.

There are slightly different trust issues around new media and communication technologies. Here, there is a greater emphasis on safety aspects and how these impact on people's willingness to engage. The *NetGuide* publishes articles around internet safety, with online resources covering how to avoid getting scammed, safe online banking and how to shop and trade online. Martin Cocker, NetSafe Executive Director, has written about the automatic trusting response to internet information. He encourages people to learn to be more 'sceptical of everything', with particular attention on young people and 'critical online moments'.

> Researchers often describe young people operating at 'click speed'. At these speeds the brain has little time to consider the validity of information. With increasing internet connection speeds combining with this digital dexterity, it is important to encourage young people to slow down at certain critical online moments…. [These] are the focus of our education campaigns (Cocker, 2006).

However, 2006 research by Symantec shows 21% of New Zealanders do not trust the internet, with roughly half of people concerned about aspects of online security around banking, passwords, and identity theft, for example (cited in Cocker, 2006).

The issue of trust in relation to mobile phones is increasingly under scrutiny by those interested in the potential growth of mobile marketing. One of the few academic studies in this area, which used questionnaires and focus groups to test New Zealand consumers' perceptions and attitudes towards mobile marketing, concluded that:

> Consumers are more likely to trust messages coming from their service providers than anywhere else and so it is important that service providers provide a high level of filtering and protection as reassurance for their users (Carroll et al, 2005, p.439).

3.4 Protective competencies: internet filtering

The Internet Service Provider Survey (2006) analysed uptake of filtering services provided by ISPs. Results showed that at the end of March 2006, 90% of ISPs offered their subscribers a spam-filtering service and that these had been adopted by 1,157,800, that is, 90% of subscribers. While 77% of these spam-filtering services were offered free in 2005, in 2006 the free service had dropped to 63%. Furthermore, 84% of providers (down slightly from 86% in the 2005 ISP survey) offered a virus-filtering service which had been adopted by 91% of internet subscribers. The free virus-filtering service proportion of 77% offered in 2005 had dropped to 68% in 2006. Content filtering services, however, were offered by only 32% of ISPs (down from 36% in 2005). The percentage of ISPs offering no content filtering had risen from 60% in 2005 to 68% in 2006. No uptake figures for filtering services were available.

The NetSafe Home Computer Security Survey (2005) offers a snapshot of home computer security in New Zealand. The questions focused primarily on the updating of operating systems and the installation and updating of anti-virus software and firewalls (the 'net basics'). The 612 completed surveys included a wide spread of ages, approximately 70% of which was clustered in the 32-64 year age grouping (the median being the 40-48 age group). Results show that a minority of New Zealanders (30%) have basics in place: an operating system, firewall, and anti-virus software that is appropriately updated (either by using the automatic update feature, or by manually updating each day they go online). Figures were better for anti-virus programmes (65% having appropriate cover), but worse for components such as having a 'strong' password (30%). Despite these security limitations, the majority (72%) use credit cards online although 55% only use them 'occasionally'.

Perhaps unsurprisingly, then, Hope (n.d.) says that technical expertise is the second highest barrier to schools' implementation of ICT. In particular, he says, 'the technical issues involved with filters can be massive', with part time ICT leaders at primary level generally lacking the time and expertise to evaluate, install and manage a filtering system.

In Eagle and de Bruin's (2001) study, parents generally appeared to have low awareness of blocking and filtering software. Hope suggests that parents and caregivers are unlikely to be educated about internet security unless schools take an active role, yet they tend to be constrained by financial and resource issues. Schools, then, appear to be potentially important sites of media literacy education for adults as well as children.

3.5 Understanding of media restrictions

Media commentators have noted that the general public lack a solid understanding of media processes, and that this may leave them vulnerable in certain circumstances. Media educator Jim Tucker feels that in terms of protection, it is the general public – who for the most part are not media wise – that really need to be looked after:

> Most people don't understand the media process, especially with television. They're talked into going on TV and they don't know what editing is going to take place, what juxtapositions will be used … there are also vulnerable groups such as the victims of crime and organisations who don't have a lot of money to spend on public relations or media training who are probably at risk, they need the media possibly for fundraising and to raise their profiles and often the media is quite cynical in the way that it deals with them. (Quoted in Fountaine, 2004, p.45)

Similarly, representatives from TVNZ and TV3 also noted the public misconception that television requires consent to film (or report or photograph) someone in a public place (ibid).

An insight into young people's understanding comes in a project commissioned by New Zealand's Classification Office and the Censorship Compliance Unit of the Department of Internal Affairs that tested teenagers' awareness of the gaming labelling system. A survey of 331 students indicated that 80% correctly recognise the meaning of the R18 symbol but just 56% knew that the Australian M15+ label (also able to be used on computer games sold in New Zealand) meant that the game is recommended for, but not restricted to, those over 15 years (UMR Research, 2005).

In November 2006, NetSafe, New Zealand Police, Telecom, and Vodafone established a standardised process for handling complaints of text bullying or mobile phone harassment. According to a media release, NetSafe, which runs a national text bully helpline, was receiving 750 complaints of text bullying a year, of which 45% were from adults and 55% from children. Moreover, 33% of these calls were considered serious enough to warrant advising callers to contact the Police (NetSafe, 2 November, 2006).

3.6 Ability to judge internet quality

Another strand of research relates to health communication, with a focus on patients' sources of information on medication, including online and television programmes and advertising. A mail survey of New Zealanders, conducted by Eagle, Hawkins, Styles, and Reid (2005), showed that a quarter of respondents saw the internet as extremely important or important – more than traditional advertising. The authors note the variance in readability and value of online information and urge further research in this area.

Some academic research has noted growing concern over university students' ability to differentiate in quality internet information. Cunningham (1997) argues that 'our students should be formally taught how to critically evaluate internet-accessible resources' (p.31). However, to date, there appears to be little academic work on this topic, although it is arguably a growing problem among students who, nearly ten years later, are even more versed in how to locate, if not evaluate, online information.

Johnston and Webber (2003), in their review and case study of information literacy education, advocate the need for a framework throughout university students' careers. They recognise the importance of information literacy as a 'key discipline of the information society' (p.347), and develop a framework and vision for students and learning institutions based on the premise that information literacy should be part of every level of a workplace.

In their examination of young people, Bullen and Harré (2000) discuss how the potential risks of the internet (related to lack of censorship, privacy, pornography, sexual solicitation, and harassment) vary according to adolescents' ability to critically evaluate information. They conclude by quoting the inventor of the internet, Tim Berners-Lee, as saying: 'If you are worried that your children are going to read low quality information, teach them what to read. Teach them how to judge the information' (ibid p.17). Parental direction over internet use was reported as high in all socio-economic groups (Eagle and de Bruin, 2001). However, as Zanker (2006) notes, 'some parents feel less knowledgeable about the use of digital media than their children' (p.8). Due to higher internet usage levels among the young, parents/caregivers may have less understanding of the way in which the internet functions than their children.

Bullen and Harré (2000) are concerned with youth, and they note that the literature about related areas, such as adolescents' ability to evaluate information and make informed health choices, makes a range of suggestions about the age at which young people become capable of independent and informed choices. Eagle and de Bruin (2001) draw on research showing 11-16 year olds have 'sophisticated information processing skills, understand the intent of advertisements and clearly separate advertising from programmes and recognise bias and deception'. Zanker (2006) notes that active audience researchers tend to observe children behaving in a more media-literate way than they are given credit for, including an understanding of the intent of advertising. However, the internet is increasingly blurring the more traditional media's differentiation between advertising, editorial, and entertainment. While Bullen and Harré (2000) point out that variations exist among adolescents, the work of Eagle et al (2005), in a health context, suggests that recognition of this variability be extended to adults. Clearly, differences in literacy levels among adults will have repercussions for media evaluation skills at all ages, and the youth-oriented literature's emphasis on the parental role is insufficient in this wider context. As Eagle and de Bruin (2001) note:

> Protection may involve curbing freedoms for children in ways that would constitute unacceptable restriction for adults. Setting such limits … are justified on the basis that children's cognitive and emotional capacity with regard to fully rational decisions are deemed to be less complete than adults.

Interestingly, Eagle and de Bruin's study showed that parents demonstrate concern over their own limited knowledge and understanding of the internet. If the fate of children's media literacy is to be placed in the hands of the family, parents' own media literacy skills need to be developed. In the researchers' words:

> Our study confirmed a willingness of parents to play the primary role in the protection from and control over electronic media and also a key role for parents in developing the skills of their children as critical consumers. Additionally, our study serves to highlight the need for policy to mitigate the parental knowledge gap on new mediums and other related adult education gaps, for instance on available modes of media control.

Zanker (2006) also notes the irony of increased emphasis away from the state and onto the parental role, at a time when family members are spending less time at home and able to supervise, and as media use becomes more individual.

The importance of at least some focus on quality and safety issues is underwritten by Berson and Berson (2005), whose study of teenage girls' online behaviours suggests that:

> The dialogue with and monitoring by significant adults seem to make a difference for many young people. None of the teens who had a significant adult spend time with them while they surfed reported engaging in sexually explicit exchanges online and other potentially unsafe behaviour, whereas almost 60% of the adolescents in general reported experiences with at-risk behaviours (p.35).

The youth-focused literature also suggests further research into the intersection of literacy and cultural background. Bulmer, Hawkins, and Eagle (2005), in their study of advertising literacy among five to eight year olds in schools across a range of deciles, proposed that 'future researchers consider differences in advertising literacy and reception amongst refugees and recent immigrants' (p.8). They note that modifications in literacy levels over time, due to acculturation and assimilation, also need to be examined. Again, there are implications here for adult research.

3.7 Social media and creativity

Social media is the term used to describe technologies and practices used for sharing opinions, information, insights, and experiences online. They can incorporate use of text, images, audio, and video. Popular forms of social media include blogs, message boards, podcasts, and vlogs. Examples of applications using these technologies for user interaction on a regular basis are Wikipedia (reference), MySpace (social networking), YouTube (video sharing and social networking), Digg (news sharing), Flickr (photo sharing) and Miniclip (game sharing) (www.wikipedia.org). In effect, as Fernando (2007) points out, social media offer opportunities to marketers, as they involve an intersection of software, marketing, media, information, and entertainment, and are viewed as the 'next big space for marketing online' (p.10). However, even more importantly, they offer opportunities for communication that is consumer-led, enabling consumers to both generate and control content.

The third component of media literacy, then, is creativity, or the ability of audiences to contribute to media forms in a creative sense. There is little literature readily available on this more advanced component of literacy, with most emphasis currently placed on the dimensions of access and understanding. However, it has been observed that technology trends are creating an environment conducive to audience-driven contributions to media forms, referred to by Brown and Price (2006: 15) as 'citizen journalism'. For example, in the wake of the September 11, 2001 Twin Towers tragedy in New York, the 2004 Boxing Day tsunami and the London underground bombings in 2005, news organisations ran visual material captured by the mobile phones of those at, or affected by, the scenes. Such images, even when not broadcast by traditional media, also quickly spread around the world. In doing so, they circumvent television networks' traditional 'power' as the 'circulator of images'. As Brown and Price argue, in taking a more active role in the media sphere, media consumers now see themselves also as media producers.

Berson and Berson (2005) have used the phrases 'digital literacy' and 'cyber literacy', pointing out that, 'Young people today consume huge amounts of information through various media outlets and simultaneously create and distribute messages via digital technologies' (p.164).

There is other literature that is still too new to access freely. One example is Trier (February 2007), who presents an analysis of website YouTube. According to the abstract, topics discussed include:

> Hot and cold media, satellite radio, iTunes, interactive and participatory media, online journals, the wiki principle, and podcasting, … the importance of videocasting, its academic potential for both teachers and students, … the significance of YouTube, statistics on videocasting viewership and participation, and the impact of YouTube on American society (p.10).

Mobile phones and creativity

Cameron (2006) notes that, increasingly, mobile phones are not just personal communication tools but 'a portable media production system capable of receiving, recording, editing, and transmitting a range of audio, text and image media forms' (p.12). He suggests that while not all mobile phone users regard themselves as 'content producers', the user base is increasingly 'a source of original media content' (p.12). As noted above, the prevalence of mobile phones with digital cameras has changed the nature of news coverage. Citizens provide visual material of such events as the London train bombings in 2005 and the 2004 Boxing Day tsunami, material which can be easily and quickly transmitted around the world. Technical knowledge and resources are less of a barrier with the growth of Msites and groups of enthusiastic communities of users. The Pew Internet and American Life projects show that younger users, in particular, desire greater access to mobile phone services such as the internet, music and videos.

According to Chan and Ford (2007), an mLearning programme has been trialled at Christchurch Polytechnic Institute of Technology (CPIT) since 2005. In 2007 CPIT is piloting the system with a group of baking apprentices. The apprentices will use their mobile phones

to take photos or videos to create an ePortfolio of their work which can then be assessed by their tutors to avoid the necessity for bakers to undertake workplace assessments. Theory of baking courses will also be supported by voice and text messaging (SMS) on mobile phones with written components, answers and assessments all delivered via SMS.

Academics are also turning their attention to the wider implications of mobile telephones, as the technology morphs into new forms. Cameron (2006) writes of:

> …the mobile telephone's stealthy but rapid shift from a telephony device towards a portable, personal media hub that enables an increasing range of personalised and customised communication, entertainment, relationship management and service functions (p.2).

There has been a media tendency to focus on negative impacts of mobile phone use by young people, but we need to remember that they are also used constructively. As Shrestha (2005) points out, mobile phones are 'clearly facilitative of new kinds of social relationships and they are able to rework spaces and places … in positive ways'. Detective Senior Sergeant David Harvey and Waikato University's senior psychology lecturer Neville Robertson (cited in NZ Law and Order, 2007) reinforced this view as they discussed the deaths of the two Christchurch teenagers mentioned above. Although police had been unable to effectively control behaviour after mass texting had led to hundreds gathering uninvited at a party, the teenagers also used mass forwarding of texts to express their grief, as a sign of respect to the bereaved families, and to bring people back to the site of the deaths for a minute's silence (TVNZ, 2007).

Blogs

According to NetGuide, weblogs (known as blogs) are increasingly growing in popularity and volume. Blog indexing site Technorati tracks more than 57 million blogs worldwide, and the number is growing every week. An interesting example of a recent New Zealand blog is *Spare Room*, published by Ana Samways, author of the *New Zealand Herald*'s Side Swipe column (see Barnett, 2007), and Steven Shaw. It includes humorous postings on a wide range of topics, includes links to buying tips, film, music and TV reviews, and Side Swipe contributions. It also allows others to contribute and comment on the material (see http://www.spareroom.co.nz/2007).

Brown and Price (2006) argue that while the role of bloggers in keeping mainstream media accountable may be overstated, the 'role is now a permanent feature of the media environment, and … has improved media content' (p.18). Examining the role of blogging in New Zealand, Brown and Price note that on the day of the 2005 London bombings there were posts from expatriates in London published on blogs in New Zealand. However, they point out that there remains an absence of New Zealand data about audience involvement in blogging, both as readers and as contributors, because local bloggers use international sites to download the required software (p.16).

Vlogs: YouTube

A vlog is a weblog which is primarily a medium for distributing video content, although text and other data may be included with the video. Launched in 2005, YouTube is an internet vlog site that allows the uploading of video clips, up to ten minutes long, for free viewing by others. Brown and Price (2006) claim that YouTube forbids unlawful, obscene or inappropriate material and that anything on the site meets New Zealand censorship regulations on pornography. However, they warn that material that might otherwise be considered offensive still remains available on YouTube. An example of the posting of such offensive material occurred recently in New Zealand when video footage of the public bullying of a Hastings youth was uploaded to the site. Moreover, the same event showed the close links between the new forms of electronic technologies (see Stuff, 2 May 2007). The video footage of the bullying posted on YouTube was downloaded and circulated by mobile phones and via postings on another music and video website, Bebo (Stuff, 8 May 2007).

While we do not have examples of YouTube use by the elderly in New Zealand, the growing use among older people noted in the US and Britain by Schneider (2007) makes it appear that similar activities will be inevitable in New Zealand. Schneider describes how the rise of video-sharing sites such as YouTube, along with the availability of low-cost video cameras and simplified software, are enabling a growing number of elderly and retired people to participate creatively in the new social media to share stories of their lives and experiences. Schneider cites Bennett, a retired managing editor of CBSNews.com, who uses his blog to encourage older people to video and upload their stories. Bennett says:

> The internet provides people with a new way to tell their story. When the grandkids aren't interested in listening any more, older people can still share their stories and get feedback. The technology makes it simple.

Moreover, according to Schneider, a 79-year old in England has used very simple technology, following prompts on his personal computer, to film himself on a basic webcam and upload the videos to YouTube. He attracted 500,000 viewers in the first week and now has nearly 40,000 subscribers to his new episodes, four to five times a month.

3.8 Activities and agencies aimed at increasing media literacy in New Zealand

3.8.1 Government agencies

The Department of Internal Affairs is charged with censorship compliance but also promotes internet safety. Its website contains information to help individuals, parents and organisations use the internet safely, and it publishes brochures containing guidelines and 'agreements' for internet use. It also advises parents how to monitor what their children look at, encouraging open communication with children. It directs people to their ISP's policies, including access to any filtering software they may provide, and 'safe' website access. The Cyberkidz website is designed to help parents and teachers educate children about safety on the internet.

The Ministry of Economic Development focuses on the economic dimensions of media and communication technologies, including competition, investment, and regulation. The focus here tends to be on the access aspects of media literacy, with particular attention paid to the more 'mechanical' issues (for example, broadband access and uptake, implications for rural people, relay services for the deaf).

The Government is making $44.7 million of contestable funding available directly to communities and partnerships, as part of its Digital Strategy (2005). It aims to improve New Zealanders' digital literacy through ICT training and education programmes, including Digital Horizons initiatives. The funding will be aimed at communities and sectors who demonstrate they need support or can make significant breakthroughs.

3.8.2 Mediascape

Mediascape is a New Zealand media literacy website, www.mediascape.ac.nz, launched in February 2006. It is jointly sponsored by the New Zealand Broadcasting Standards Authority (BSA), the Advertising Standards Authority (ASA), the Families Commission and the Christchurch Polytechnic Institute of Technology's (CPIT) Foundation, and created, managed and edited by media scholars at the New Zealand Broadcasting School, CPIT. According to Zanker (2006), Mediascape specialises in sharing information and research about the media in New Zealand. It promotes media literacy, media research and the exchange of views and opinions for New Zealanders, including 'students, parents, teachers, researchers … and others with an interest in how the media operates and the research around its effects' (BSA Annual Report, 2006). The aims are to enable media users to make informed decisions, create opportunities, link to each other and build new knowledge and ideas around media in New Zealand.

Zanker further describes the purpose of the site:

> The site connects up elements in the ad hoc, uncoordinated media and advertising environment in New Zealand. It is designed for use by a wide range of users, families, students, young people, policy makers, researchers and those working in the media industry via targeted top navigation strands: Family/Regulation/Issues showcasing local media/ Media organisations/Research. Research suggested that no other such holistic web approach to media literacy existed [in New Zealand] (p.2).

Examples of New Zealand media research listed by Mediascape include Richardson, Weaver, and Zorn (2005), Schott and Kambouri (2006), Weatherall and Ramsay (2006), and Weaver and Tucker (2002).

3.8.3 Computers in Homes projects

Computers in Homes (CIH) projects are the brainchild of the 20/20 Communications Trust, which aims to provide access to ICT and the internet to all families in Aotearoa New Zealand.

Through CIH, the Trust aims to support low-income communities to use ICT to strengthen family opportunity and education. It is not intended as a means of dumping hardware or for the learning of computer skills for their own sake. The project works via low decile schools to help families in greatest need to use the internet, email and basic computer skills in their daily lives to enhance their performance at school and at work. Training for parents is provided at their children's school and this must be completed before the refurbished computer is taken home to the family (20/20 Communications Trust, 2000, 2002).

The original CIH project was begun with families from Cannons Creek School in 1997 when recycled computers were given to 25 families who could not otherwise afford them. Since then other projects have been established throughout the country and at the time of the report 600 families had been given a computer. As well as a computer, the families have been provided with an internet connection and computer training and support systems (Weatherall and Ramsay, 2006: 13).

Four major benefits of the CIH project were noted in the *New Communication Technologies and Family Life* report:

1. Increased literacy and media literacy levels and confidence among participating children who were given responsibility for running and updating the school website and for installing new software throughout school.

2. In many cases there was first time contact between parents and the school because participating Cannons Creek parents were required to have weekly email contact with the school and additional computers and training sessions were set up at school for the parents' use.

3. Literacy training was introduced as part of the project because many parents had low literacy levels and were unemployed. Training included online literacy courses plus fortnightly guest speakers providing educational courses, advising on job seeking and writing CVs. The whole family benefited. Parents' literacy improved and some subsequently gained employment.

4. Improved communication with overseas families was made possible for many Pacific Islands families involved in the projects. Work has now also begun with refugee families who may struggle with losing their identity. Families can re-establish links and communicate via email, online chatting, cheap telephone communication, emails with video sequences, sending and downloading family photographs (Weatherall and Ramsay 2006: 14, 17).

Computers in Homes: Tuhoe Project

As mentioned previously, the CIH project was also established with The Tuhoe Education Authority Schools Project, described by Craig (n.d., p.12) in *The Tuhoe Education Authority Schools Project – Report on the first 6-12 months of connectivity, Clusters 1 & 2*.

Craig reported that the most popular activities of adults involved in the project included: emailing whānau; web surfing; finding information for work (eg paid, volunteer, local Trusts); word-processing for such activities as keeping minutes of Board of Trustee meetings and study assignments; searching for information about courses; finding Māori sites and culture; searching genealogy/whakapapa; finding hobby information and music; visiting chatrooms; and using a typing tutor.

Among children, the most popular ICT activities included: games; drawing (young children); gathering music lyrics (older children); and email. Adolescents preferred: MSN instant messenger; searching for information for homework projects; using the word-processor for writing stories and assignments; using a typing tutor; searching for children's sites and joining clubs; searching for hobbies, recipes, and sports information especially; searching for Māori sites; web browsing (older adolescents only).

Follow-up research findings

Nevertheless, findings from Williams, Sligo, and Wallace (2006) show that positive results from the Computers in Homes scheme might not last. The authors investigated whether free internet can really make a difference to low-income communities. They looked at community outcomes in the Computers in Homes programme. The results of the study suggest that the programme has value in providing the most basic ICT access, and is being used by school communities to expand individuals' worldviews. However, connectivity in the group showed decline after one year of internet connection, and five different types of internet users became apparent. These include people who maintain or increase their levels of internet use, and those who decrease their use or become disconnected once more.

3.8.4 SeniorNet

Internet use by seniors is being encouraged and supported by SeniorNet, a community-based learning centre established in New Zealand in 1992 with support from Telecom and now operating 102 groups throughout New Zealand (SeniorNet, 2007). Telecom has provided financial support, phone lines, and free internet access to assist SeniorNet clubs, which give older adults an opportunity to access the internet, and learn more about new communication and information technology.

SeniorNet recently established a New Zealand-developed, free-to-use website GrownUps, focusing on products and services for those retired or nearing retirement. The site had 20,000 visits in five months. According to Richard Poole, GrownUps co-creator, 'Thirty thousand people 55 plus belong to SeniorNet, and thousands more are computer literate … avid web users' (cited in GrownUps media release, 2006). GrownUps features include job and product advertising for seniors; a calendar that sends users email reminders when their Warrant of Fitness is due, or pills need taking; a state benefits adviser who answers emails from members on their entitlements; and weather from New Zealand's Met Service.

3.8.5 NetSafe

NetSafe provides information for adults on how to keep themselves safe when using the internet. For example, NetSafe reminds adults of possible dangers from lack of visual and aural cues (eg body language and sound of voice) when chatting to online acquaintances. It offers cautionary advice about meeting new internet friends, what to do and what to look out for, how to set up an offline meeting, and tips on online dating websites. There are sections on computer security, privacy, and the internet at work. A section on how to buy things online encourages buyers to access the Ministry of Consumer Affairs guidelines for internet shopping before making a purchase

NetSafe provides similar information for young adults, but in addition includes advice on how to keep safe on social networking websites like Bebo and MySpace. It warns young adults to consider the personal information they reveal in blog profiles and the photographs of themselves (or friends) they post on the internet. Further advice for young adults is about how to deal with bullying and identity theft on social networking sites, with details on how to make a complaint about cyber-bullying or the use of an individual's identity in cyberspace without permission. Education is also offered on the grooming of children and young adults in chat rooms by sexual offenders and potential offenders. To help young people, NetSafe advises how to define grooming, how to recognise it, and how to respond when confronted with it. Should young adults suspect they are being groomed, they can contact NetSafe for advice on what to say and do.

NetSafe runs a national Text Bully helpline and receives approximately 750 calls a year from adults (45%) and children (55%) who have experienced text bullying. In November 2006, NetSafe, the Internet Safety Group, the New Zealand Police, Telecom and Vodafone launched a standardised process for dealing more swiftly and effectively with text bullying or mobile phone harassment. Training packages offered by NetSafe for educational modules include Training Modules for Schools (professional development for those responsible for

cybersafety in schools) and Training for Counsellors (a full-day workshop developed by NetSafe, the University of Auckland, SAFE and the New Zealand Association of Counsellors (NZAC) for professionals in the counselling field).

3.8.6 Other media initiatives

The print and broadcast news media in New Zealand have, to some extent, adopted an informal role of educating audiences about what they do and the importance of journalistic principles such as freedom of expression. Television networks are also required to publicise standards-based information and alert audiences to the existence of the Broadcasting Standards Authority. However, some have expressed concern about the resources and energy that 'minority' groups must expend to make complaints about mainstream media, and the ethnocentric nature of New Zealand television's standards of what is classified as objectionable (Fountaine, 2004). While a number of groups feel powerless in response to mainstream media, concerns may best be addressed around greater education of principles underlying Western media.

Outside of conventional broadcast media there is Access radio which offers a creative outlet to various community and cultural groups, but is not dependent on traditional literacy skills (as the internet is).

In 2007, *Girlfriend* magazine is running a 'self respect' campaign, resulting in what its publishers call 'significant changes … to ensure readers become media literate'. These changes include clear pointers for readers showing where alterations such as photoshop, styling, and airbrushing have been used. They argue:

> Raising awareness that seeing is not always believing, and that the images presented by media are not always natural or realistic, is the first step in the modern teenager having a healthy self image (Pacific Magazines, 2006).

3.8.7 Other activities

Other recent New Zealand uses of new media technology: the National Library has created an interloan link between New Zealand's Te Puna Interloan service and Australia's Libraries Australia Document Delivery service to enable 'seamless' requests from, and supply of material to, one another; Auckland City Council is investigating setting up its own broadband network to cut costs and increase connection speeds; Government funding has been approved for the Advanced Network to link New Zealand and international universities and research organisations; Canterbury University is podcasting lectures from an introductory IT course, available to public as well as students (*New Zealand News Round Up*, 2007).

In a press release (1 March, 2006) Steve Maharey, Research, Science and Technology Minister, announced funding of $43 million to establish the Advanced Network – a super high-speed internet link between universities and research organisations in New Zealand and overseas. The Advanced Network will connect New Zealand universities and research institutes through a fibre optics network that is 400 times faster than domestic broadband.

4.0 Summary and conclusions

There is no doubt that changing media technologies and patterns of commercial media ownership and of personal media use have brought the need for greater media literacy to the fore. There is growing public concern, fuelled by news media coverage, about the potential danger that mobile phones and the internet represent to young people. Zanker (2006), in writing about the formation of New Zealand's media literacy website, Mediascape, identifies some of the competing social and political groups who, for often contradictory reasons, are calling for greater media education. In this atmosphere, the need for rigorous research about citizens' understanding and use of media is highly important.

The BSA wishes to develop a media literacy strategy. However, there is unlikely to be a national consensus about the purpose and indeed the nature of media literacy. Zanker has identified some particular problems in this country which underpin the importance of media literacy. These include the complexity of media structures in New Zealand, the lack of an over-arching policy think-tank, the scattered and often inaccessible research, and the lack of incisive media journalism. All this makes the BSA's challenge the greater. The purpose of this report has been to assemble some of the limited and scattered research and information on media literacy in New Zealand so that the BSA can begin the task.

We began with a review of the definitions of media literacy and then proceeded to suggest a New Zealand definition that is more comprehensive than the Ofcom definition. However, we believe that it is paramount that the BSA debates its relationship with 'media literacy'. What aspect of this complex phenomenon should the BSA concern itself with?

In this regard, we point out that the concept of media literacy is notable for its absence in government documents. The *Digital Strategy* uses the term 'digital literacy', clearly a related concept. However, the Ministry of Social Development's (2001) document *Improving the knowledge base for social policy: strategic knowledge needs* makes no mention of media literacy, computers, internet, broadcasting, television, or information technology. The *Social Report* (2006) in its Social Connectedness section discusses telephone and internet access and concludes that internet access is significant in improving access to information and therefore encouraging more social engagement and encouraging the building of social networks. The Tertiary Education Strategy 2002-7, makes no mention of media literacy; it discusses 'computer literacy' in the context of an employee education programme and mentions television only in the context of another case study. The Tertiary Education Strategy 2007-12 makes no mention of media literacy, computer literacy or digital literacy, neither does the New Zealand Adult Literacy Strategy.

Any media literacy strategy devised by the BSA will need to take these absences into account and build on any synergies of investigation and projects already being undertaken at government level. We suggest that prior investigations will build on some of the data and points of consideration from the review summarised below.

- Our review shows that international statistics all indicate huge growth of all electronic and digital media usage.

- Overall New Zealand's status in terms of digital technology uptake is broadly compatible with that in Australia and the UK.

- There are large gaps in our understanding of media literacy in practice. While we have a considerable range of statistics available on access to, and uptake of, technology, there has been little investigation of the deeper meanings of access as outlined by Ofcom, or adults' understanding and ability to create electronic media. Ofcom's audit is the exception here, and indicates the lack of New Zealand-based knowledge. However, while Ofcom leads the pack, there are still more questions than answers.

- While the digital revolution has increased our choices of receiving content, it is clear that television remains very much the dominant medium. Equally clearly, though, this dominance is being eroded, especially among young people.

- In New Zealand only 1.8% of the population over 10 years reports not using TV, and one-third of the population watch more than 23 hours a week. While it can be assumed there is almost universal access to radio, this dominance does not hold here; almost a quarter of the population (23.8%) report not listening to radio. The figures for internet use are close to two-thirds of the population but concerns about the 'digital divide' are still valid in 2006 with low access by the elderly, those with low incomes, and those of Māori and Pacific descent.

- In summary across the kinds of media, we find young people are more likely to use the internet, listen to the radio and watch television, but are much less likely to read the daily paper. Over 65s watch more television and read more papers, but listen to less radio and are much less likely to use the internet. Those in households of under $40,000 income per year are more likely to be heavy TV users and less likely to read the daily paper or use the internet. Māori and Pacific people are more likely to be heavy TV watchers and radio listeners, and less likely to read newspapers or access the internet. In all of these cases the figures for Pacific people differ more sharply from the norm. For people from other minority ethnic groups, the internet seems to be the media of choice and they watch less television, read fewer papers, and listen to less radio than the general population.

- There can be no question that a digital divide exists. The *Digital Strategy's* model is for government, business, and community to work together, and it will provide nearly $45 million for community and partnership projects. A series of actions and funding aims to increase the amount, quality of and access to New Zealand online content, of which public broadcasting is an important component. The confidence arm of the strategy is aimed at improving New Zealanders' 'digital literacy' through training in both ICT capability and security. Much of this action is to be led by the Ministry of Education, with Netsafe leading key activities in security education. The connection arm is aimed at improving broadband connection and networks, with schools and hospitals a current focus. The BSA may consider where its role lies within this area of 'digital literacy'.

- Another clear area which requires consideration is to investigate what is known about, and what is being done about, media literacy within specifically marginalised groups. Our review does not address issues for people with disabilities, although the Ofcom audit does suggest they have specific issues and concerns. While SeniorNet is tackling competencies at a practical level, there is still much to be understood and undertaken in this area.

- It is clearly important for us to gather more knowledge about the different access and media literacy issues for the diverse minority ethnic peoples of New Zealand.

- The issue of content (on broadcast and online media) is a crucial factor in 'pulling' people into media, and this merits investigation, particularly in regard to New Zealand's partnership obligations to Māori.

- Above all, we lack any real investigation of the issues for Māori people. The natural impetus for, and conduct of, this research should come from Māori themselves. We merely point here to the success of Māori Television, demonstrating that content created by and for Māori has attracted an audience from both Māori and Pākehā. Such an investigation would have relevance to all New Zealanders.

- The New Zealand figures about what websites are accessed and by which demographic provide a very initial (if interesting) assessment of 'competence' with the internet. Clearly, there is much more that needs to be discovered in this area.

- Even less research appears to have been undertaken in media competencies in radio and television. The advent of digital television presents a series of unknowns. In the UK it has been noted that uptake has been patchy, and findings of the Ofcom audit indicate that competence and understanding of its interactive capabilities may be limited.

- Similarly, our study of adults' knowledge of controls of internet content comes largely through secondary sources. It would seem to be a priority to investigate the 'protective competencies' of adults across all media.

- This priority would seem to be underlined by the studies of children's media behaviour and the frequent discussion of the role of the caregiver in guiding the young – an ironic situation where frequently caregivers know less about technology and its capabilities than those they care for.

- In terms of 'understanding', we note we would be unlikely to replicate the positive UK findings on knowledge of media funding. This is because of the lower profile of public service broadcasting in New Zealand and the complex funding structures. Whether these issues are an important knowledge may be debated. However, the advent of Freeview makes it more imperative that adults know more about their media landscape and what they can access.

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Appendix One

Differences between media literacy, media education, and media studies

Media literacy and *media education* are sometimes used interchangeably in the US, and even those within the 'movement' have not decided on exactly when to use one or the other. Each has its advantages and disadvantages as a label.

For example, the word *literacy* is abstract and not immediately understandable for many people, who think of reading and writing when they hear the word *literacy*. On the other hand, to some people, *media education* means teaching children how to use video production equipment.

Media literacy is presently the most used term, and it clearly makes the point that to be a literate person in the 21st century, one needs to know how to 'read' and produce all forms of media, including visual media – reading and writing words is not enough any more.

In the United Kingdom and Canada, the classes where you learn to become media literate are *media studies* classes, and *media education* pertains to everything which supports the teaching of media in the classroom. In summary: ***media education*** is the larger field of helping educators learn how to teach ***media studies*** classes, so the students will become ***media literate*** (http://www1.medialiteracy.com/faq.jsp).