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Australia in the Digital Economy

Report 2: Online Participation

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Summary

This report explores take-up and use of the internet, and seeks to build an understanding of the factors which influence people's decisions to participate online. The trends in internet use show that in the quarter to June 2008, 87 per cent of Australians aged 14 and over had used the internet, with 83 per cent of these logging on at least weekly.

This report is the second in the *Australia in the Digital Economy* series highlighting Australian's participation in the online environment. It builds on the first report, *Trust and Confidence,*[1] which explores Australian internet users' attitudes and behaviours towards their online security, and on internet use as explored in the *ACMA Communications Report 2007-08.*[2]

The take-up and use of the internet and online services is affected by a number of socioeconomic and demographic factors. These factors include household income and family structure, work status, gender, location, profession and age which has a significant impact. Australians aged 65 and over are less likely to be connected to the internet than all other age groups. Forty-eight per cent of this age group were connected to the internet in the quarter ending June 2008, compared with an average of 78 per cent for other age groups.

Australians are increasingly using the internet for applications such as email, instant messenger and chat, user-generated content services and voice over internet protocol and video applications. While adoption of these services is being driven by younger Australians they are increasingly being used by all age groups. Their use is influenced by factors such as lifestyle, the frequency of internet use and broadband connection. The data-intense nature of many of these services means that broadband is able to offer a more timely and efficient user experience.

While the majority of Australians use the internet, there is also a segment of Australian society that is not online. The Australian Bureau of Statistics identified from its 2006 Census of Population and Housing 2.6 million Australians who did not use the internet at home. More recent data shows that at June 2008 an estimated 13 per cent of Australians aged 14 years and over had never used the internet. These people tend to be older Australians, with nearly half being over the age of 50 years. Lack of interest or cost remain the most frequently reported reasons for not using the internet.

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[1] ACMA, *Australia in the Digital Economy: Trust and Confidence*, March 2009 http://www.acma.gov.au/WEB/STANDARD/pc=PC_311655

[2] ACMA, *ACMA Communications Report 2007–08*, December 2008, http://www.acma.gov.au/WEB/STANDARD/pc=PC_311541

The majority of older non-internet users see no real benefit in using the internet, seeing it as not relevant to their lifestyle; while non-internet users aged between 18 and 49 years identified cost as the major barrier to connection. The majority of those not online (77 per cent) do not plan to connect or use the internet in the future.

For this group of Australians who have yet to engage with the internet, finding ways to address these reasons for non-engagement will be important in ensuring that all Australians can make use of and participate fully in online communications and the digital economy.

1 Introduction

1.1 Report background

The increasing importance of the internet as a carriage service for content and increasingly voice is underpinning the expansion of the digital economy and contributes to a more participative model of communications.

As the statutory authority responsible for communications regulation in Australia, ACMA has the responsibility to conduct research into issues relating to internet content and internet carriage services, and to conduct community education (section 94, Schedule 5, *Broadcasting Services Act 1992*), as well as to report on matters affecting consumers or proposed consumers of carriage services (section 8 (d), *Australian Communication and Media Authority Act 2005*).

ACMA has an interest in how the internet is increasingly underpinning emerging business models, the types of internet-based services made available to Australians and the take-up of these services.

Australia in the Digital Economy: Online Participation is part of this process and aims to contribute to greater understanding of the profile of Australians who are connected to the internet and participating in the digital economy, as well as identifying those with limited or no online participation. This report also provides additional details on the use of internet which was explored in the *ACMA Communications Report 2007–08.*

1.2 Research objectives

This report seeks to analyse how socioeconomic and demographic factors influence participation in the digital economy, specifically:

1. the take-up and use of the internet (including frequency of use)
2. the services and applications undertaken online
3. the use of internet services and applications such as email, chat, instant messenger and user-generated content
4. the level of non-participation in the digital economy.

2 Methodology

Data within this report are drawn from a number of sources, including Roy Morgan Single Source, Australian Bureau of Statistics and Nielsen Online, and are referenced throughout the publication. This report also draws on research published in the ACMA report *Telecommunication Today, Report 6: Internet Activity and Content.*

Roy Morgan Single Source was the main source of data and the methodology is outlined below.

2.1 Roy Morgan Single Source Database

Roy Morgan Single Source Database is a survey of individuals aged 14 years and over drawn from a large-base survey sample (more than 25,000 per year in Australia). The Roy Morgan statistics cited in the report were derived from data collection periods below:

- take-up of internet—discrete quarter April 08–June 08
- internet activities—six month period from January 08–June 08
- non-internet users—12-month period, July 2007–June 2008.

This report provides further detail on take-up and use as reported in the *ACMA Communications Report 200–08*.

Throughout this report analysis has been based on the question, 'Have you ever accessed the internet?' In this report 'access' refers to the physical internet connection, that is, home access or work access. Therefore, for clarification, throughout the report references to this question have used the term 'use of internet' instead of 'ever accessed internet'.

2.2 Definition of terms

A number of emerging technologies are referred to throughout this report. Definitions of these are outlined below.[3]

Blog

Blogs or weblogs is a shared websites providing a list of text articles, videos or opinion pieces which allow people visiting the website to post their own comments on the articles.

[3] Definitions taken from the Australian Government Information Management Office (AGIMO), *Interacting With Government: Australians' Use and Satisfaction With E-government Service*s, December 2008, or Wikipedia, http://en.wikipedia.org/wiki/Online_chat

Instant messenger (IM)

IMs are programs which can instantly send messages in real time from one computer to another as a form of 'instant email'.

Online chat

Online chat can refer to any kind of communication over the internet, but is primarily meant to refer to direct one-on-one chat or text-based group chat (also known as 'synchronous conferencing').

Really Simple Syndication (RSS)

Really Simple Syndication is an online file format used to let people know when a certain website or part of a website has been updated with new content, for example news bulletins.

Social networking websites

On social networking websites people can create profiles about themselves and then communicate with others and form online networks. Examples include MySpace, Facebook, Bebo, Friendster and LinkedIn.

User-generated content (UGC)

User-generated content is the production of content by the general public rather than by paid professionals and experts in the field. User-generated content refers to material such as the daily news, encyclopaedias and other references, movie and product reviews, videos and phones, as well as articles on any subject, all of which have been traditionally written by editors, journalists and academics in the past. User-generated content is mostly available on the web via blogs and wikis.

Wikis

A wiki is a page or collection of web pages designed to enable anyone who accesses it to contribute or modify content.

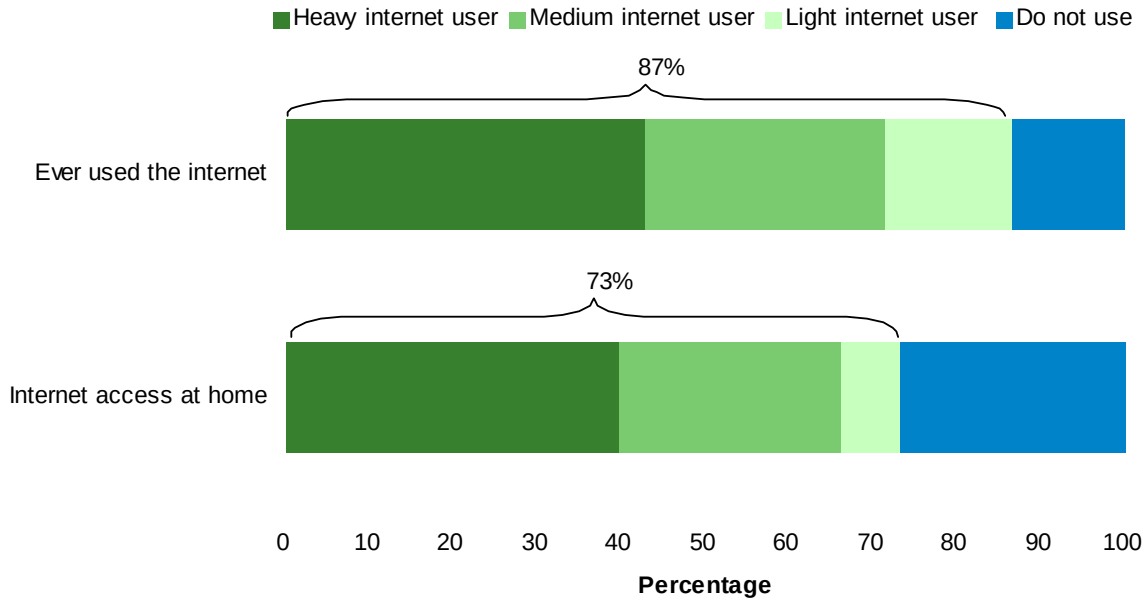
3 Overview of internet users

Use of the internet is typically the first step to engagement with the digital economy and trends in internet use show the majority of Australians (11.3 million in 2007)[4] are logging onto the internet during any week. Data collected from Roy Morgan Single Source indicates that 87 per cent of people aged 14 and over had used the internet and 73 per cent had access to the internet in the home. Approximately 40 per cent of the total population aged 14 and over were estimated to be heavy internet users, defined as using the internet at least once a day and a further 29 per cent were medium internet users, defined as using the internet one to seven times a week (**Figure 1**).

However, a proportion of Australians either use the internet infrequently, or have never used the internet at all, and hence have limited skills in its use and knowledge of it and therefore limited participation in the digital economy.

Approximately 15 per cent of the population aged 14 and over are estimated to be light users (defined as using the internet less than once a week), and a further 13 per cent were estimated to have never used the internet.

Figure 1: Australians' use and access to the internet



Source: Roy Morgan Single Source, April 2008–June 2008, 14+ years old, N = 5,175 all respondents

[4] ABS, *Patterns of Internet Access in Australia*, 2006, catalogue number: 8146.0.55.001

The links between internet access and factors such as age, education and income levels have been clearly established in previous research, in particular the Australian Bureau of Statistics (ABS) report, *Patterns of Internet Access in Australia 8146.0.55.00,* 2006. This study based on data collected in the 2006 census showed that characteristics such as income, family structure and level of education influenced take-up of the internet. Some of the key findings from this study include the following:

- Households with an income of $2,000 or more per week were three times more likely to have broadband access than households on less than $600 per week.
- Australians with postgraduate degrees were 83 per cent more likely to have broadband access at home than people with no tertiary qualifications.
- Families with children under 15 years of age or dependant students were three to four times more likely to have internet access at home than other family structures.
- Australians in low-skill occupations were 27 per cent less likely to have broadband access at home than those employed in high-skill occupations such as managers and professionals.
- Unemployed Australians were 12 per cent less likely to have broadband access at home.

3.1 Internet and broadband connection at home

The ABS recorded 6.2 million home internet connections in Australia at June 2008. From Roy Morgan data, approximately 73 per cent of people aged 14 and over lived in a household with an internet connection in the quarter to June 2008 and 58 per cent of people aged 14 and over lived in a household with a broadband connection (which comprises 79 per cent of internet connections).

Broadband connections are considered critical to the digital economy as they are always on and allow users to download and upload information in a timely manner. As well as the proportion of broadband connections increasing, there is also a trend to adopt services with higher download speeds and the ABS data indicates that 32 per cent of internet connections had a download speed greater than 1.5 Mbit/s at June 2008.[5]

Data from the Roy Morgan Single Source showed there were a number of factors which affect the propensity to subscribe to an internet or broadband service at home, including:

- **Age—**only 48 per cent of those aged 65 and over have a home internet connection and only 30 per cent had broadband.
- **Education level—**49 per cent of those who did not undertake further education had a broadband connection, compared to 70 per cent with some further education.
- **Work status—**retirees were less likely to have an internet connection at home (55 per cent) than other work status groups.
- **Occupation—**those unemployed were less likely to have a broadband connection at home (46 per cent) and professionals were more likely to have a broadband connection at home (79 per cent).

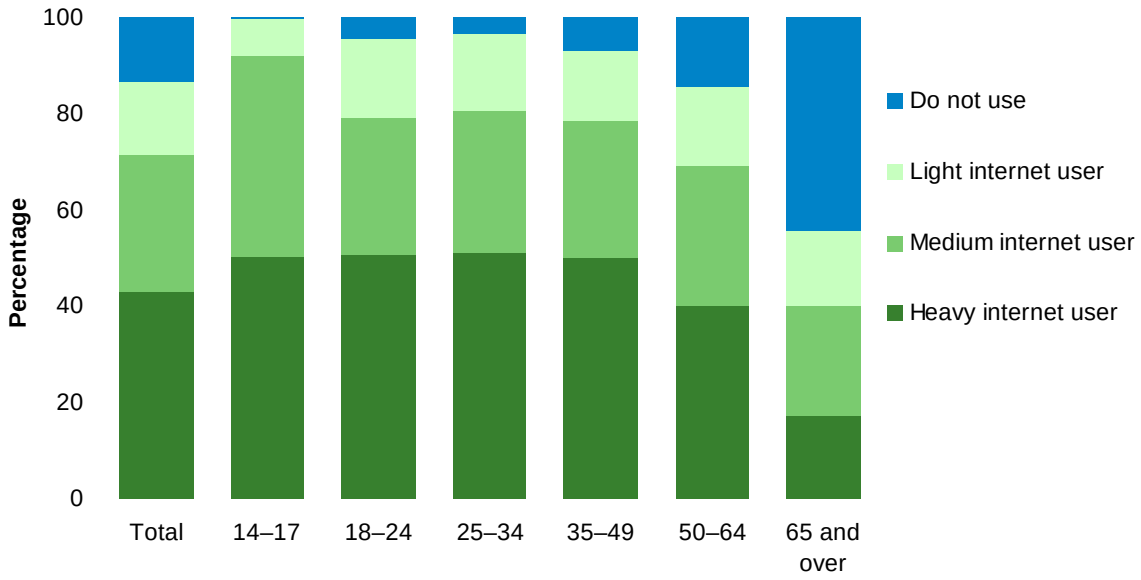
[5] ABS, *Internet Activity, Australia*, June 2008, catalogue number: 8153.0

- **Income—**those earning under $30,000 a year were less likely to have an internet connection (45 per cent) or broadband connection (29 per cent) than those earning over $110,000 (82 per cent and 67 per cent, respectively).
- **Living arrangements—**Australians who live in a household with a partner and children were more likely to have an internet connection (83 per cent) and this is more likely to be a broadband connection (68 per cent).

3.2 Ever used the internet

Age is the most significant driver of internet use, according to Roy Morgan Single Source survey data. The majority of all age groups are using the internet except those aged 65 and over. All respondents aged 14 to 17 have used the internet and 92 per cent were heavy or medium users. In contrast, of those aged 65 and over only 56 per cent have ever used the internet and 40 per cent indicated that they were heavy or medium users.

Figure 2: Users of the internet, by age



Source: Roy Morgan Single Source, April 2008–June 2008, 14+ years old, N = 5,175 all respondents

Other factors influence online participation levels to varying degrees:

- **Education level—**those with higher education were more likely to have used the internet (96 per cent) than those with primary school education only (45 per cent). It should be noted that 81 per cent of people with only a primary school education are aged 50 and over.
- **Work status—**retirees were less likely to have used the internet (62 per cent) than other work status groups (average 93 per cent). Again, this relates to age, with 98 per cent of retirees aged over 50.
- **Occupation—**the unemployed and farm owners were less likely to have used the internet (both 77 per cent) than other occupations (average of 94 per cent).
- **Income—**those earning less than $30,000 a year were less likely to have used the internet (64 per cent) compared with other income groups (75 per cent of those earning between $25,000 and $50,000 and 92 per cent of those earning over $50,000).

- **Living arrangements—**Australians living in households with partners and children were more likely to use the internet than those living in other household structures (94 per cent).

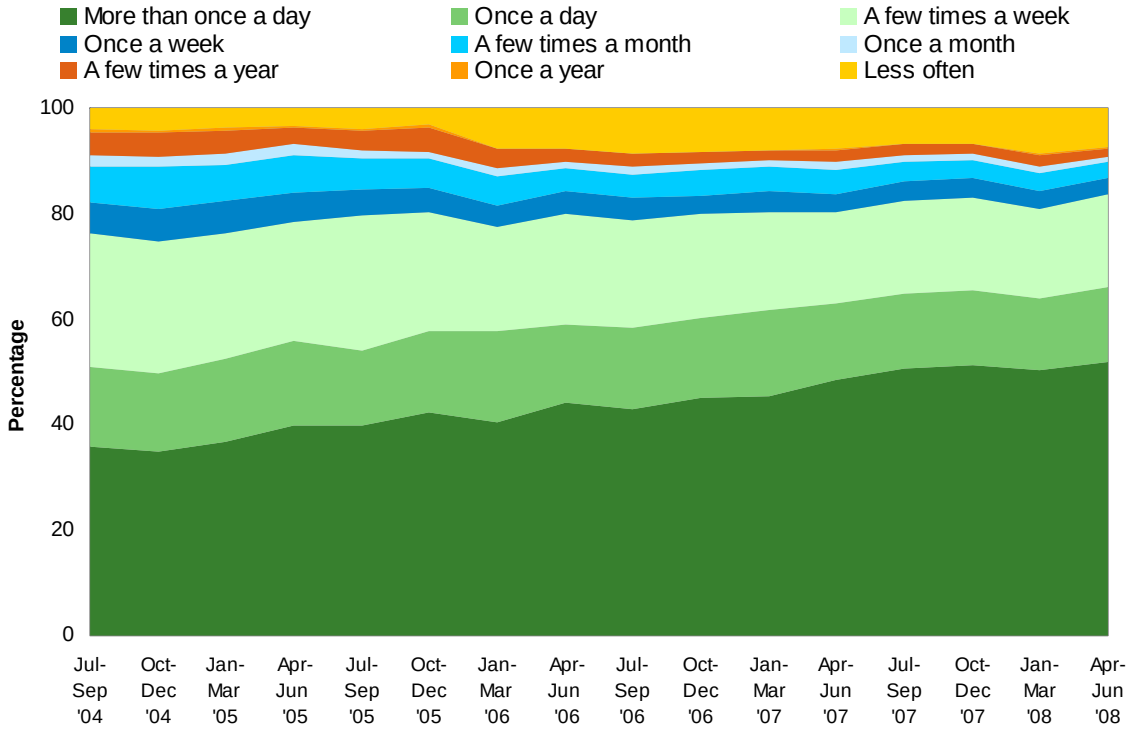
All these factors highlight that there are segments of the community which have not taken the first step in online participation.

3.3 Time spent online

As more Australians become familiar with the internet and its potential benefits they start to use it for day-to-day activities such as banking, shopping, entertainment and research and subsequently their internet use and frequency of usage increases (**Figure 3**). The number of people who use the internet more than once a day has increased from 36 per cent in the quarter ending September 2004 to 52 per cent in the quarter ending June 2008.

However, the proportion of people who use the internet less than once a week has remained relatively stable since July 2004 at an estimated 15 per cent of the population aged 14 years and over.

Figure 3: Frequency of internet use, July 2005 – June 2008



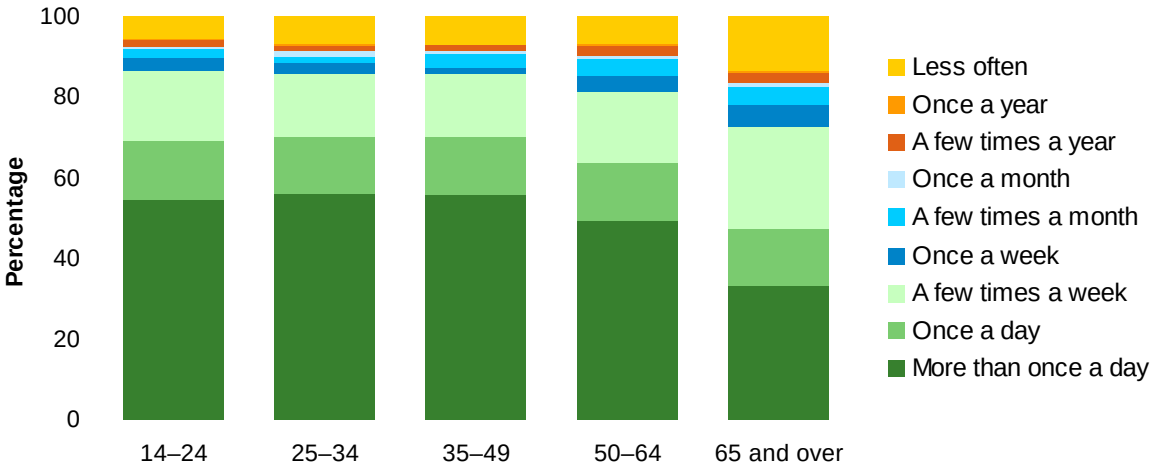
Source: Roy Morgan Single Source, July 2004–June 2008, 14+ years old, N = 65,446, ever accessed the internet. Note: excludes 'can't say'.

Apart from age, there are a number of additional factors which influence the frequency of internet use. The factors examined in this report offer a broad perspective on the socioeconomic and demographic influences and are not exhaustive.

Age

As shown in **Figure 4,** those aged 14 to 49 were more likely to be heavy internet users, with around 55 per cent using the internet more than once a day. This compares with 49 per cent of those aged 50 to 64 and only 33 per cent of those aged 65 and over.

Figure 4: Factors influencing frequency of internet use by age

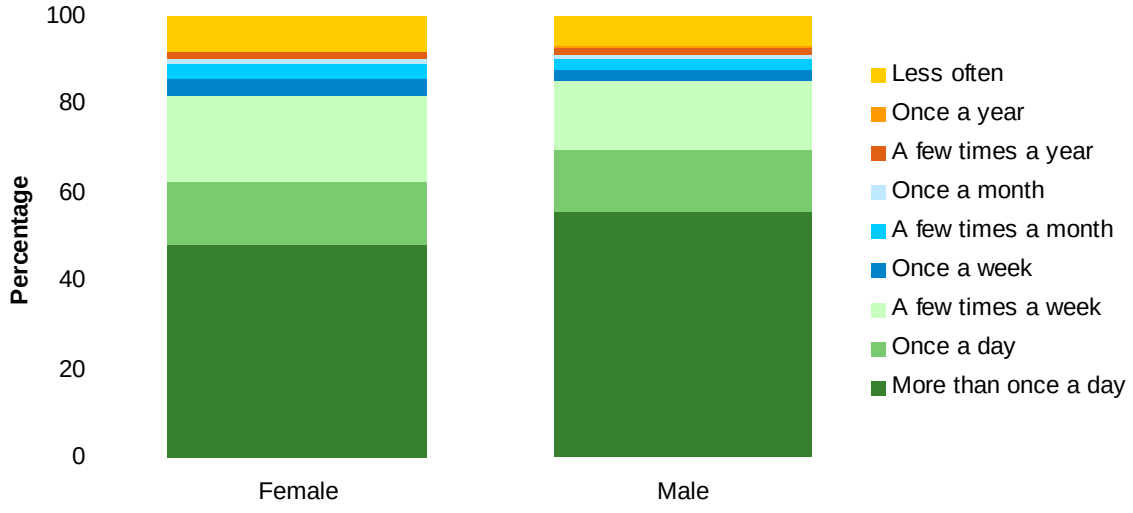


Source: Roy Morgan Single Source, April 2004–June 2008, 14+ years old, N = 3,909 ever accessed the internet, N = 3,865 home internet connection. Note: excludes 'can't say'

Gender

Gender also had an impact on frequency of use. Males were more likely to use the internet than females, with 56 per cent using the internet more than once a day compared with 48 per cent of females (**Figure 5**).

Figure 5: Factors influencing frequency of internet use by gender

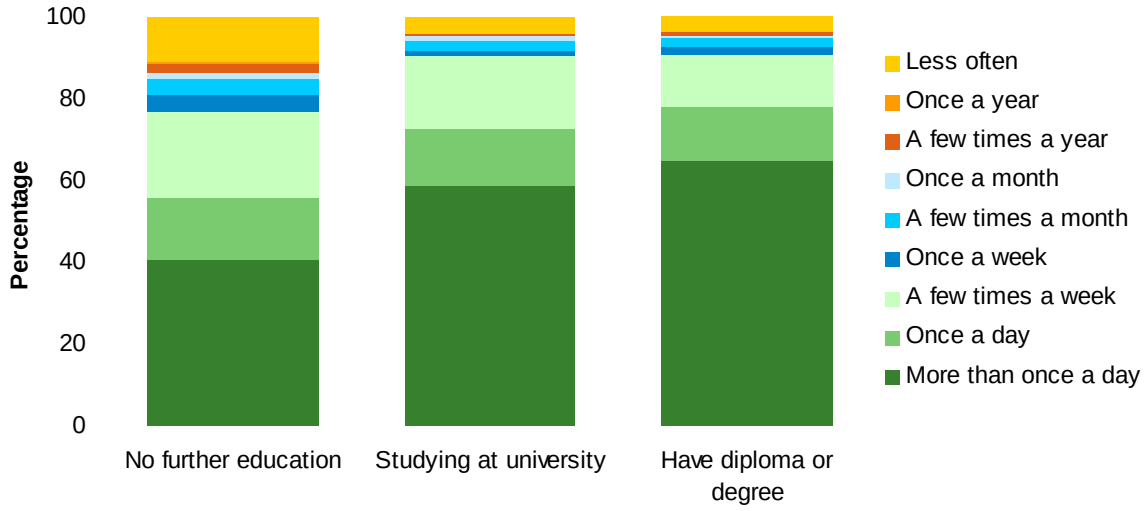


Source: Roy Morgan Single Source, April 2004–June 2008, 14+ years old, N = 3,909 ever accessed the internet, N = 3,865 home internet connection. Note: excludes 'can't say'.

Education level

People who are undertaking or have completed further education were more likely to be heavy internet users, with 65 per cent of those continuing further education and 59 per cent of those who have completed further education using the internet more than once a day. This compares to an average of 41 per cent for those with no further education. It should be noted that the latter statistic has increased from two years ago where in the quarter to June 2006 only 35 per cent of those with no further education were found to use the internet more than once a day.

Figure 6: Factors influencing frequency of internet use by education

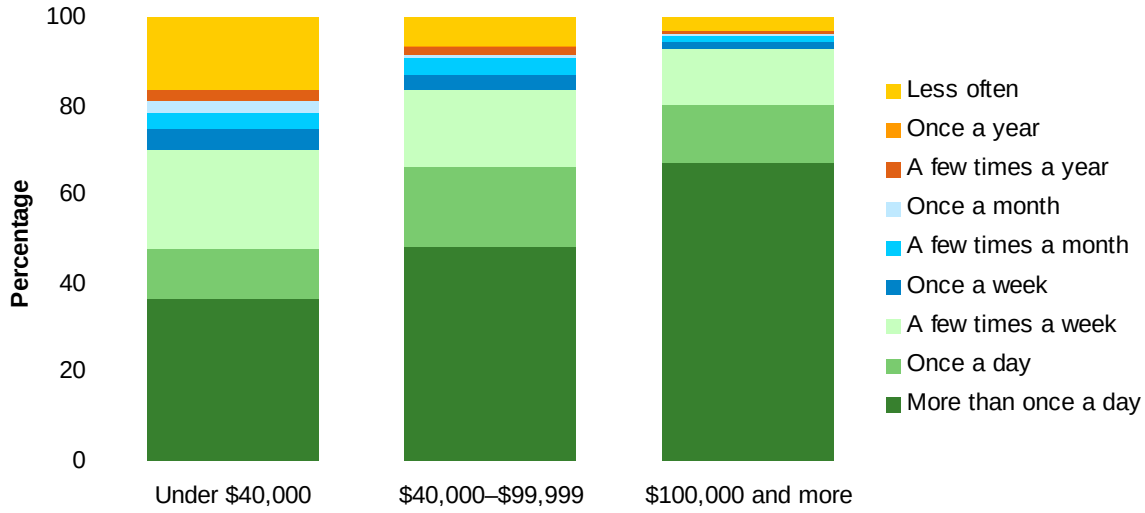


Source: Roy Morgan Single Source, April 2004–June 2008, 14+ years old, N = 3,909 ever accessed the internet, N = 3,865 home internet connection. Note: excludes 'can't say'.

Income

High income earners, defined as those earning over $100,000, were also significantly more likely to be heavy internet users, with 67 per cent using the internet more than once a day compared to only 37 per cent of those earning under $40,000. Access to the internet at work is likely to affect this, and 67 per cent of those earning over $100,000 had access at work.

Figure 7: Factors influencing frequency of internet use by household income



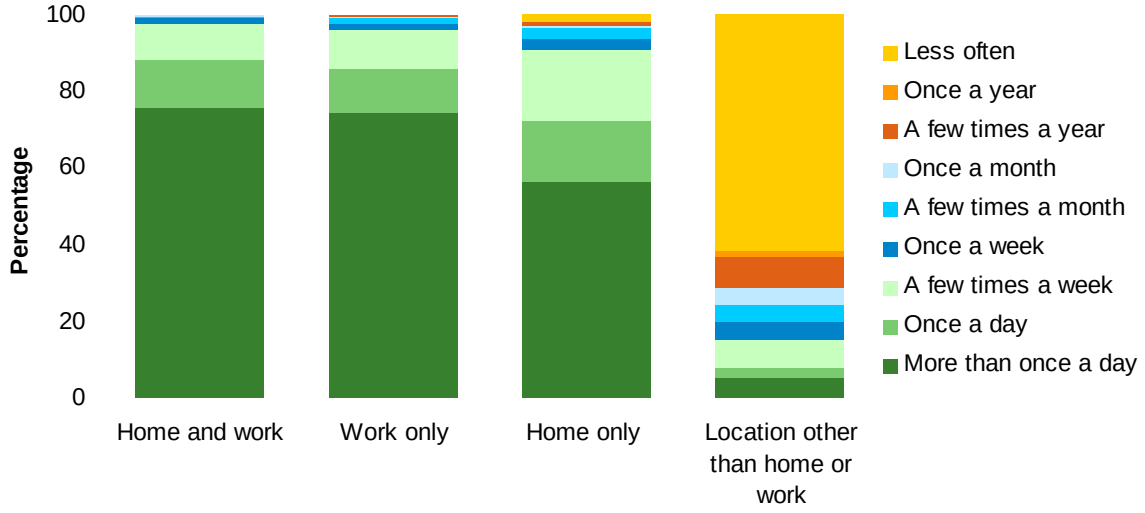
Source: Roy Morgan Single Source, April 2004–June 2008, 14+ years old, N = 3,909 ever accessed the internet, N = 3,865 home internet connection. Note: excludes 'can't say'.

Place of internet use

Of those who use the internet both at home and at work, 76 per cent use the internet more than once a day. This compares to 57 per cent for those who use the internet at home only and 6 per cent of those who use the internet at locations other than home or work (for example the library or a friends house).

Sixty-one per cent of people who use the internet at locations other than home or work use the internet less than once a year. This indicates that although internet access is widely available in locations such as libraries, education institutions and internet cafes, Australians most fully participate in the digital economy when the internet is readily available either in their homes or place of employment.

Figure 8: Factors influencing frequency of internet use by place of internet use

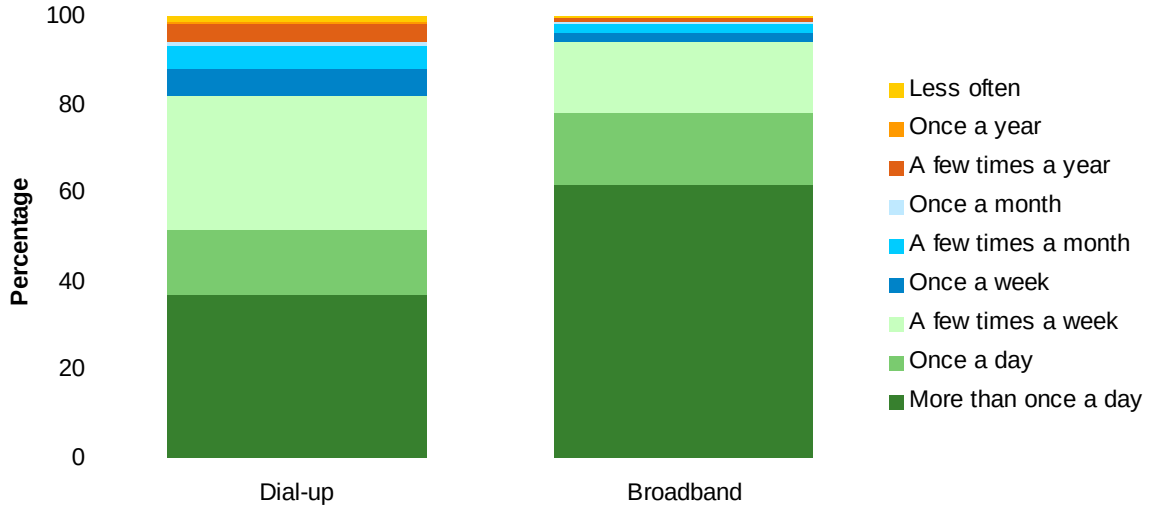


Source: Roy Morgan Single Source, April 2004–June 2008, 14+ years old, N = 3,909 ever accessed the internet, N = 3,865 home internet connection. Note: excludes 'can't say'.

Type of internet access

Broadband users were significantly more likely to use the internet more than once a day than were dial-up users, at 62 per cent compared with 37 per cent.

Figure 9: Factors influencing frequency of internet use by type of internet



Source: Roy Morgan Single Source, April 2004–June 2008, 14+ years old, N = 3,909 ever accessed the internet, N = 3,865 home internet connection. Note: excludes 'can't say'.

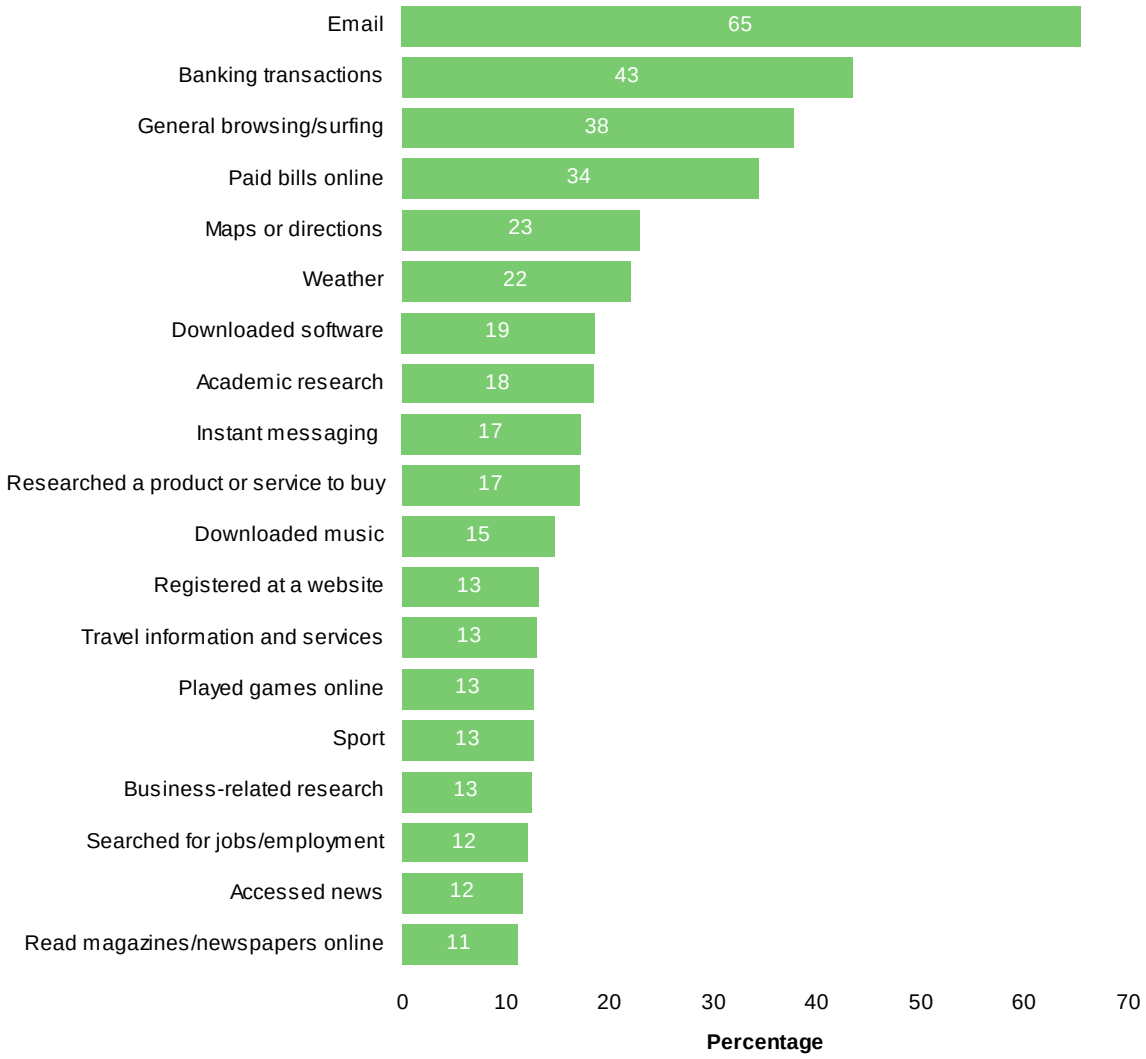
4 Online participation

The previous section identified a range of factors influencing people's propensity to use or connect to the internet. This section examines how these factors affect the type of activities Australians undertake online, particularly the use of emerging online applications and services such as chat, instant messaging (IM), voice over internet protocol (VoIP) and movies and videos.

4.1 Online activities, services and content

The most commonly used internet activity is email, followed by banking transactions, general browsing and surfing, and paying bills. This is similar to the results presented in the ACMA report, *Telecommunications Today Report 6: Internet Activity and Content* http://www.acma.gov.au/WEB/STANDARD/pc=PC_9058.

Figure 10: Online activities undertaken in the last four weeks



Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet.

These findings are also reinforced by an examination of websites most frequented by online Australians during 2008 (See **Table 1**). Internet users reported email to be the most popular online activity, and this is demonstrated by the presence of a number of email services in the Top 20 websites. Banking and web search sites also featured prominently.

Table 1: Top 20 websites based on Australian internet usage

	Dec-08	Jun-08
1	Google Australia	Google Australia
2	mail.live.com	Facebook
3	Ninemsn	Ninemsn
4	Facebook	mail.live.com
5	eBay	Google
6	MySpace	MySpace
7	Google	eBay
8	YouTube	YouTube
9	Yahoo!	Yahoo!
10	Wikipedia	Gmail
11	Microsoft	Bureau of Meteorology
12	Gmail	Microsoft
13	Yahoo!Mail	Yahoo!Mail
14	Google Image	Commonwealth Bank NetBank
15	Commonwealth Bank NetBank	Wikipedia
16	Microsoft Live Search	Ninemsn News
17	Ninemsn News	Google Image
18	msn	Microsoft Live Search
19	Blogger	Sydney Morning Herald
20	Bureau of Meteorology	ANZ

Source: Hitwise, December 2008, ranked by visits for the week ending 14 January 2009
http://www.hitwise.com.au/datacenter/rankings.php

There are a number of factors which influence the activities undertaken online. These factors are not exhaustive and include:

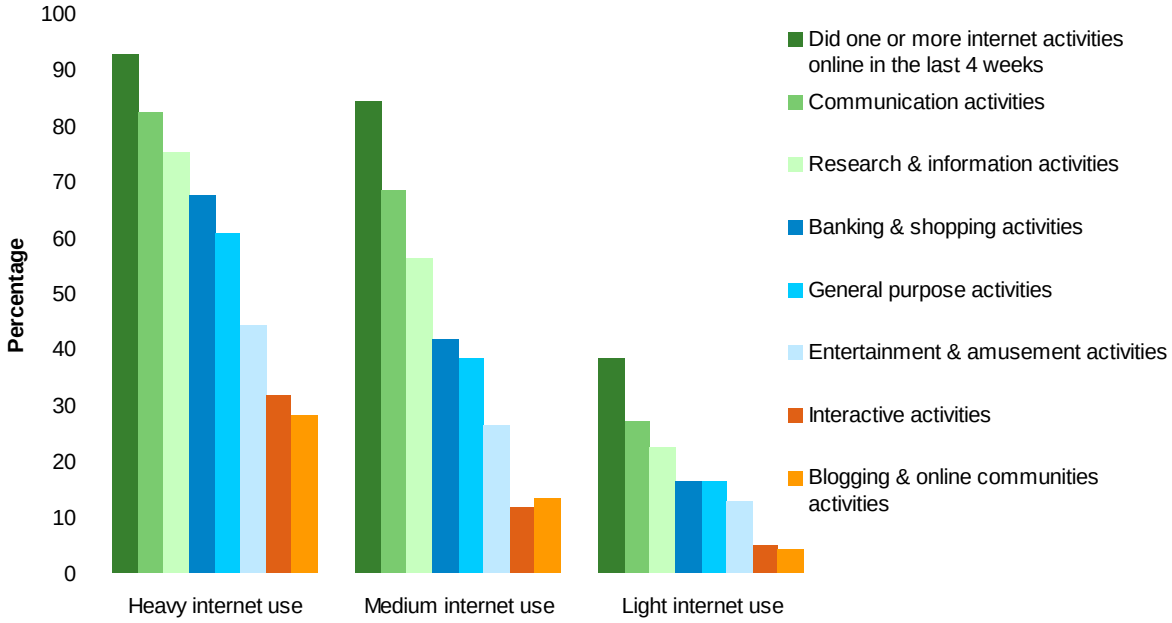
- frequency of internet use
- age
- income
- gender
- work status
- type of internet connection.

FREQUENCY OF INTERNET USE

Frequency of internet use has an effect on the level of participation in the digital economy and use is strongly influenced by a number of factors including age, income, gender, education level and type of connection.

Australians who are heavy or medium internet users are more likely to participate in a range of activities, including communication, entertainment, research and e-commerce as shown in **Figure 11.** Over 90 per cent of heavy internet users did one or more online activities in the last four weeks compared to only 38 per cent of light users. Heavy users were also seven times more likely to participate in blogging and online community activities and six times more likely to participate in interactive activities such as creating or registering their own website.

Figure 11: Frequency of internet use and online activities



Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet

AGE

As outlined in the *Telecommunication Today: Internet Activity and Content* report, age is a determining factor in the activities users choose to perform online. Data from Roy Morgan Single Source supports this and **Table 2** shows that email is the most common application while banking transactions were also an important activity across all age groups.

Australians aged between 14 and 17 years were more likely to use the internet for communication and entertainment, with IM, downloading music, playing games online and using and contributing to online communities all featuring in the top 10 activities undertaken online. More than half of 14 to 17-year-olds used IM compared with an average of only 17 per cent for other age groups, and 40 per cent of 14 to 17-year-olds downloaded music compared with an average of 15 per cent for other age groups. The propensity for people to undertake these activities online decreases with age, older age groups were more likely to indicate bill payments, banking, general browsing and research activities in their top 10 online activities.

Table 2: Internet activities undertaken in the last four weeks by age

	14–17	18–24	25–34	35–49	50–64	65 and over
1	Email	Email	Email	Email	Email	Email
2	Instant messaging	Banking transactions	Banking transactions	Banking transactions	Banking transactions	Banking transactions
3	Downloaded music	General browsing/surfing	Paid bills online	Paid bills online	Paid bills online	Paid bills online
4	Played games online	Instant messaging	General browsing/surfing	General browsing/surfing	General browsing/surfing	General browsing/surfing
5	General browsing/surfing	Downloaded music	Maps or directions	Maps or directions	Maps or directions	Weather
6	Downloaded software	Academic research	Weather	Weather	Weather	Maps or directions
7	Academic research	Maps and directions	Downloaded software	Researched a product or service to buy	Researched a product or service to buy	Researched travel information
8	Read or added a comment to someone else's journal or blog	Paid bills online	Researched a product or service to buy	Downloaded software	Researched travel information	Researched a product or service to buy
9	Used internet group/ community	Searched for weather	Instant messaging	Academic research	Academic research	Downloaded software
10	Researched sport	Searched for jobs and employment	Downloaded music	Business-related research	Business-related research	Used government services

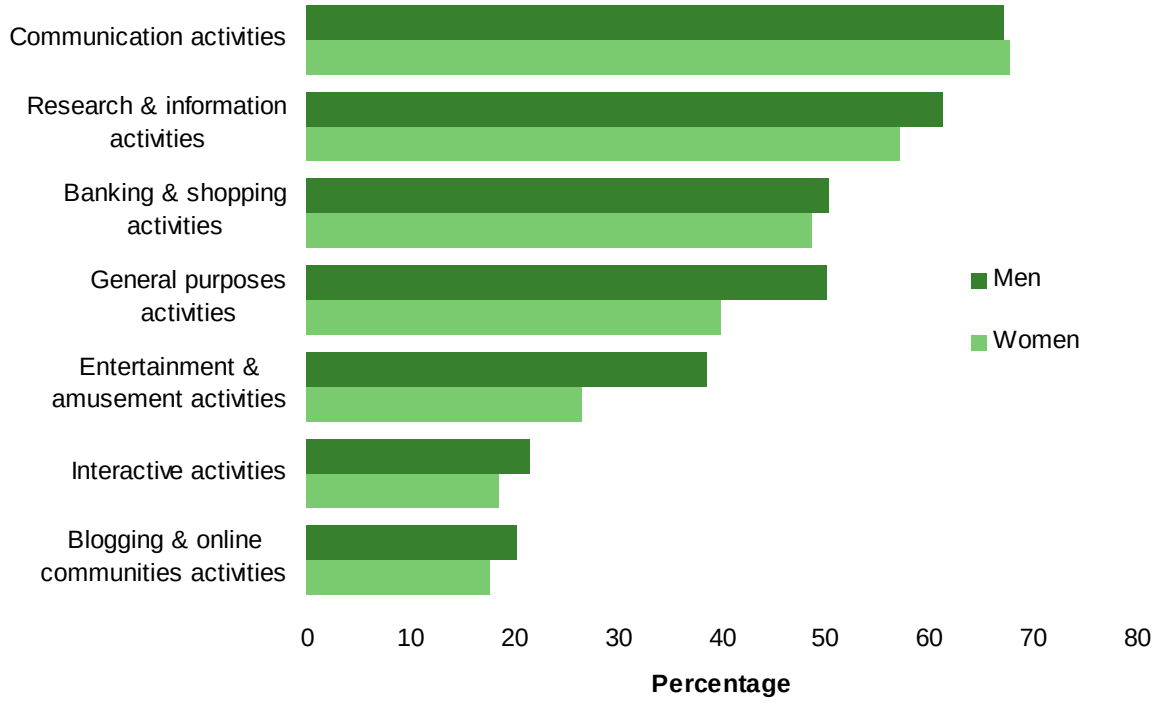
Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet

GENDER

Although gender has minimal influence on whether people use the internet or their frequency of use, it does affect the type of activities undertaken online, with males more likely to undertake a wider range of activities than females. Males were more likely to undertake general purpose activities such as web browsing and downloading software and entertainment and amusement activities such as downloading music, pictures and video clips, playing and downloading games and streaming radio and music.

Although there was a small difference in the proportion of males or females undertaking research and information-related activities online, there were marked differences in the type of research undertaken or information accessed online. Men were much more likely to access sport, business-related information and news and females were more likely to access travel information services, health and medical information and celebrity information.

Figure 12: Online activities undertaken in the last four weeks, by gender



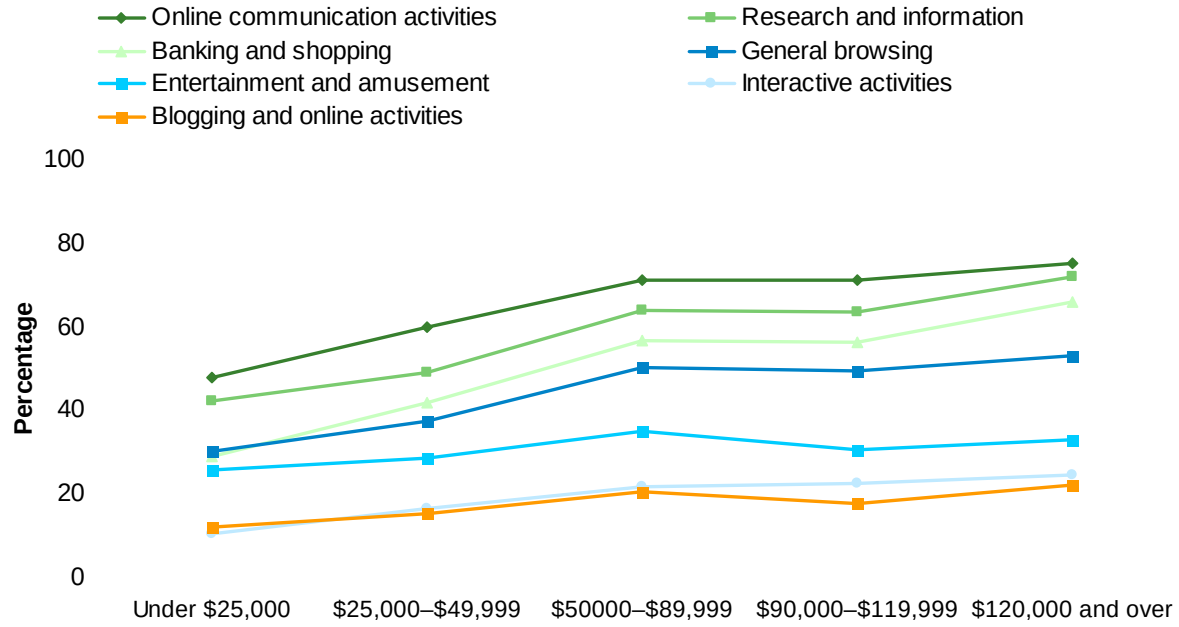
Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet

INCOME

Income also plays a role in the activities performed online. As shown in **Figure 13**, the more a person earns, the more likely they are to undertake a wider range of activities online more often. In particular, those earning over $50,000 were significantly more likely to bank online than those earning under $25,000 (59 per cent compared to 29 per cent) and they were also more likely to use interactive tools such as registering information on a website, entering online competitions and managing their own websites—24 per cent compared to 10 per cent.

The propensity to undertake entertainment and amusement-related activities online was not affected by personal income levels with similar levels of use (30 per cent) recorded across all income ranges.

Figure 13: Online activities undertaken in the last four weeks by income level



Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet

WORK STATUS

Work status has an effect on the type of activities undertaken online. However, this is in part also a factor of other socioeconomic influences such as income and age; students and those who do not work were more likely to earn less and those retired were more likely to be aged 65 and over.

Employed people are numerically the largest single group of internet users and tend to have some of the highest levels of online participation. It is therefore useful to compare the levels of online participation for other work status groups (activities undertaken online) to participation levels for employed people as shown in **Table 3**. This table shows that other work status groups were less likely to use most online applications particularly email, banking and paying bills online or undertaking online searches for maps or directions, weather, travel information and research product and services to buy.

However, there are a number of activities and applications that are more prominent for other work status groups. For example students were more likely to undertake academic research online than employed people—a 21 percentage point difference—and people looking for

work were more likely to use the internet to search for employment than those in employment—a 21 percentage point difference. Both students and those looking for work were also more likely to use newer application such as IM, and to download music and play games online while students were also more likely to download software, browse and email. These work status groups tend to be younger and have more discretionary time to spend online.

Table 3: Percentage point difference in online activities of other work status groups to those employed

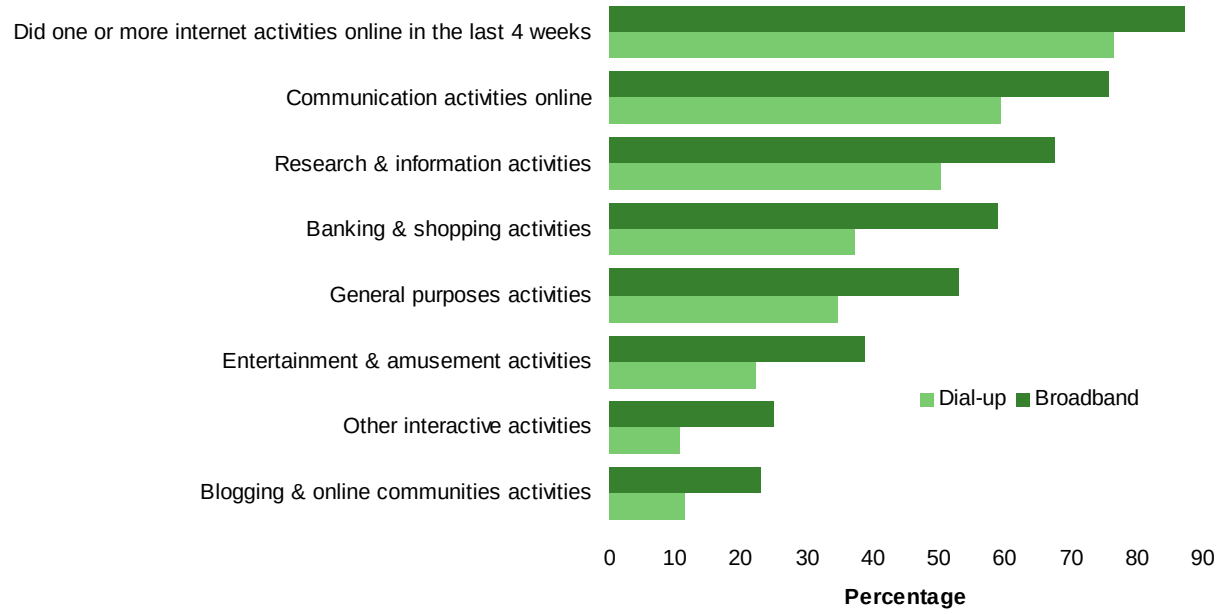
	Employed	Looking for work	Students	Home duties	Don't work	Retired
		Percentage point difference from those employed				
Email	69%	–15	11	–16	–15	–18
Banking transactions	51%	–28	–31	–14	–20	–23
General browsing/surfing	41%	–10	8	–5	–12	–19
Paid bills online	41%	–25	–25	–9	–20	–15
Maps or directions	27%	–15	–10	–13	–9	–11
Weather	25%	–14	–6	–8	–8	–9
Researched a product or service to buy	20%	–14	–11	–9	–7	–7
Downloaded software	20%	–6	10	–10	–2	–9
Academic research	20%	–4	21	–11	–10	–12
Business related research	18%	–14	–15	–17	–16	–14
Instant Messaging	17%	13	27	–3	5	–12
Downloaded music	15%	8	22	–6	1	–12
Sport	15%	–11	6	–11	–9	–8
Travel information and services	15%	–9	–10	–3	–8	0
Searched for jobs/employment	14%	13	2	–6	–2	–13
Played games online	11%	5	23	–1	1	–2

Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet, activities undertaken in the last four weeks.
Note: the orange shaded cells highlight where a work status group is significantly more likely to undertake an activity than those employed.

TYPE OF INTERNET CONNECTION

The type of internet connection has a significant effect on the level of online participation. People using broadband at home were more likely to undertake a wider range of activities than users of dial-up internet. Eighty-seven per cent of home broadband users undertook one or more internet activities in the last four weeks compared with 77 per cent of dial-up users. Broadband users were twice as likely to use the internet for interactive activities such as entering competitions, setting up their own websites and blog and community activities than dial-up users, a quarter of broadband users undertaking these activities compared to only around 11 per cent of dial-up users. Dial-up users were more likely to undertake communication, research and banking and shopping activities.

Figure 14: Online activities undertaken in the last four weeks, by internet connection type



Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 6,811 has an internet connection at home

4.2 Use of emerging online activities

The internet is transforming how people communicate. Where previously communication was limited to traditional voice telephony using the fixed line or mobile phone, the internet has now enabled the emergence of new channels for communicating and the development of online communities around interests and lifestyles.

There are a number of emerging online communication activities and applications highlighted in the list of Top 20 websites in **Table 1** which have experienced significant growth in adoption levels in recent years. User-generated content (UGC) and social networking sites such as Facebook, MySpace, YouTube and Wikipedia now rank among the Top 20 most frequently visited sites.

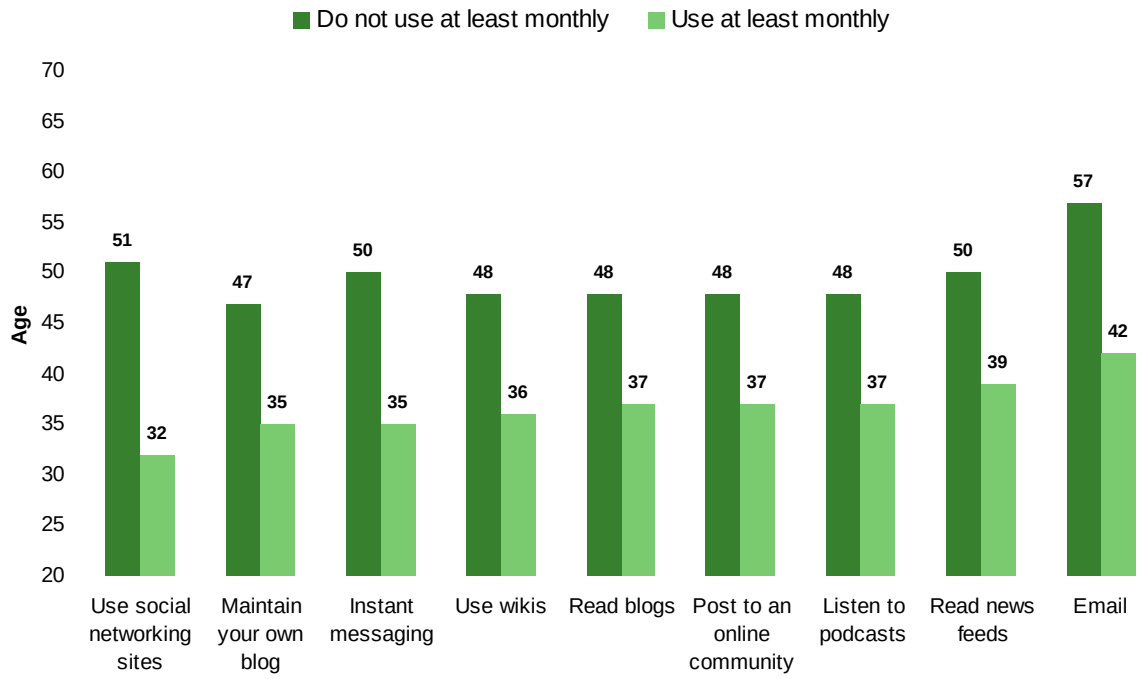
Research undertaken by Australian Government Information Management Office into Australians' use and satisfaction with electronic government (e-government) services supports this, and indicates that four in five internet users undertake at least one of the newer communication activities at least monthly, if not more regularly. The most common activities include:

- email, used by 75 per cent
- news feeds (Really Simple Syndication or RSS), used by 39 per cent
- instant messaging, used by 29 per cent
- social networking sites, used by 22 per cent
- blogs, read by 22 per cent.

This research also indicated that there is a very strong correlation with newer communication activities and age, with nearly all those under 35 involved in some form of activity at least once a month. This research also indicates older age groups use these services, but do not access them as frequently as the younger age groups.[6]

[6] Government Information Management Office (AGIMO), *Interacting With Government: Australians' Use and Satisfaction With E-government Services,* December 2008

Figure 15: Use of emerging online communication technologies, by average age of users



Source: Interacting With Government: Australians' Use and Satisfaction With E-government Services

Data presented in Table 4 indicates that while users of these emerging applications are generally younger, these applications are still used to varying degrees across all age groups. The importance of these services to the general internet population is becoming increasingly apparent, so the following analysis reviews the use of communication and content applications in more detail.

Table 4: Demographic of types of websites

		Email	Chat and IM	UGC	Videos/ movies	VoIP
Sex	Female	53%	50%	49%	46%	42%
	Male	47%	50%	51%	54%	58%
Age	2–11	4%	7%	7%	7%	3%
	12–17	15%	18%	15%	15%	8%
	18–24	11%	11%	10%	8%	6%
	25–34	22%	15%	18%	17%	22%
	35–49	26%	25%	27%	29%	26%
	50–64	16%	18%	19%	19%	25%
	65+	5%	5%	5%	5%	11%
Location	Metro	72%	68%	68%	69%	n/a
	Regional	28%	32%	72%	31%	n/a

Source: Nielsen Online, Netview Home & Work Panel, April 2008.

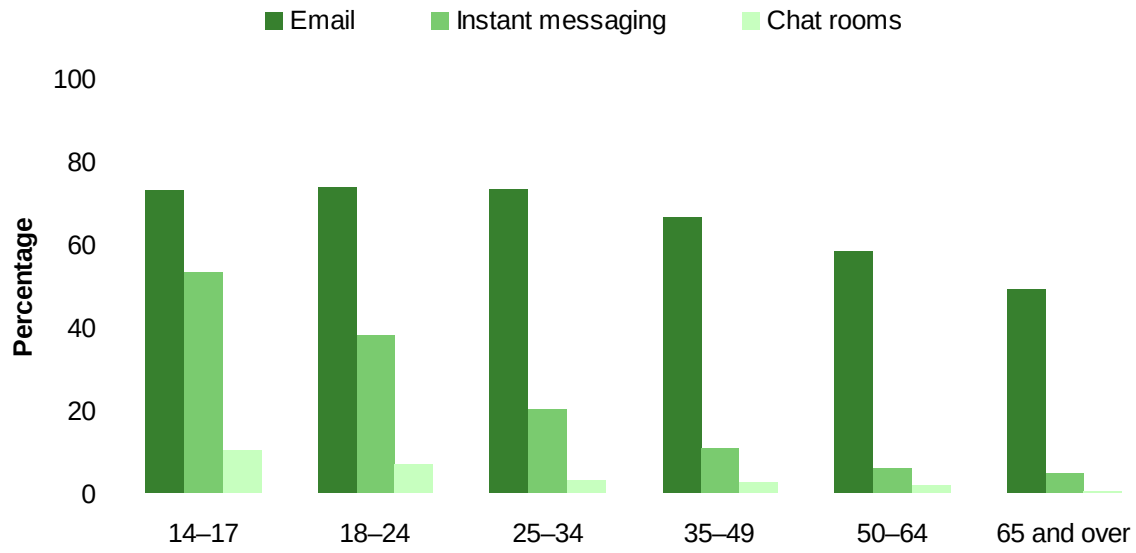
Chat, IM and email

Email was the top ranked activity across all age groups and IM ranked highly for those under 34 years of age. According to the Nielsen Online, Netview Home & Work Panel at April 2008 the most popular email sites accessed by Australians were Windows Live Hotmail, Yahoo!7 Mail and Google Gmail, which in aggregation had a unique audience of 5.8 million people. However, with the increase in UGC sites which offer online email facilities the audience for email sites has declined by 8 per cent in the year to April 2008. This is also apparent by viewing the Hitwise web site ranking, which indicated that Hotmail is declining in popularity.

Of the chat and IM services accessed by Australian internet users, Windows Live Messenger is by far the most frequented site with an audience of 4.3 million. The next most common is Yahoo! Messenger, with an audience of 459,000.

The demographic data presented in **Figure 16** indicates that email is widely used across all age groups; however, its use decreases with age with only 49 per cent of people aged 65 and over using the service, compared with an average of 73 per cent for those aged 14 to 34. The use of IM and chat rooms is predominantly by younger people, with 53 per cent of 14 to 17-year-olds using IM, and 38 per cent of 18 to 24-year-olds.

Figure 16: Email, IM and chat room services used in the last four weeks, by age



Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet.

For IM and chat rooms, age is the most dominant influencing factor; however, for email other factors such as income, work status, education level and occupation affect on use of service. For example, more highly educated people, those that earn more and those who work in a professional or white collar vocation were more likely to use email services—in many cases this is likely to be work-based email. Correspondingly, those earning less, based at home or retired, and have limited education use email less.

User-generated content (UGC)

According to the Nielsen Online, Netview Home & Work Panel the most popular UGC site in Australia at April 2008 was Wikipedia.org with an audience of 3.3 million followed by Facebook and MySpace, each with an audience of 2.6 million.

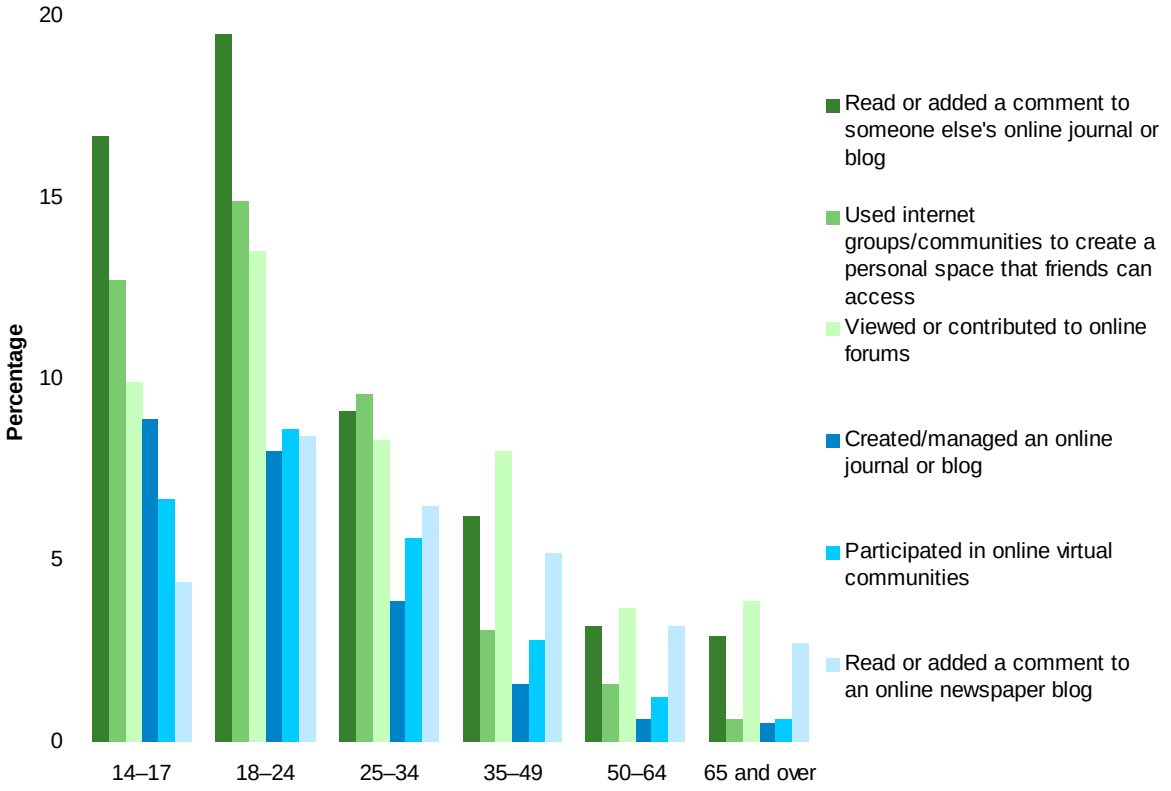
In the year to April 2008, UGC sites experienced a 16 per cent increase in users. However, there were a number of sites which experienced significant growth, such as Facebook with an audience growth of 816 per cent over the year. This was to the detriment of other small UGC sites.

Not only is access to these sites increasing, but Nielsen's Online indicated people were spending almost two hours per month on UGC sites at April 2008. Frequency of visits and pages viewed per person were also very high. Overall internet usage trends in the month of April 2008 indicate the average person accessed the internet 35 times and visited UGC sites 11 times. The average person viewed 1,393 web pages a month and 300 of these page views were on UGC sites.

In terms of demographic profiles, half of the Australian audience of UGC sites are under the age of 35; however, there has been a 20 per cent increase in the number of people aged over 50 accessing UGC sites in the year to April 2008.

A variety of activities can be undertaken on UGC sites. Data from Roy Morgan Single Source shows the scope of activities undertaken and the affect age has on participation levels (**Figure 17**). Twenty per cent of 18 to 24-year-olds who had used the internet in the last four weeks had read or added a comment to someone else's online journal or blog compared to only 3 per cent of people aged 65 and over. Using internet groups/communities to create a personal space that friends can access was also more common among younger users. In the older age groups the most common activity noted was to view or contribute to online forums.

Figure 17: UGC activities and age



Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 8,280 ever accessed the internet

Movies and video

According to the Nielsen Online, Netview Home & Work Panel, the most popular movie and video site in Australia is YouTube, with an audience of 3.5 million. This is followed by Lycos Europe Movies with an audience of 1.1 million and Ninemsn Video with an audience of 918,000.

Over the year to April 2008 there was a 16 per cent increase in the audience of movie and video sites.

The demographic profile of users of movies and video sites is similar to other interactive services with nearly half aged under 35; however, these sites are increasingly being used by all age groups. Slightly more males than females access movie and video sites.

While data from Roy Morgan Single Source indicates that the use of movies and video is still relatively small when compared to more traditional online activities, gender differences are apparent, with males using these services more than females, particularly for downloading video clips, with 75 per cent of video clip downloads undertaken by males. Again age was shown to be an influencing factor, of those that downloaded video clips 37 per cent were aged 14 to 24, 50 per cent were aged 25 to 49, and only 14 per cent were aged 50 and over.

VoIP

VoIP has emerged as a new platform for fixed-line (and recently mobile) communications, and a potential substitute for public switched telephone network (PSTN) fixed-voice services. The most popular VoIP service in Australia is Skype with an audience of nearly one million at April 2008. This is followed by GoogleTalk.

According to the Nielsen's Online, Netview Home & Work Panel, VoIP services have a higher age demographic than the other services and applications discussed in this section. A third of VoIP users were aged 50 and over, over half were aged between 25 and 49 and only 16 per cent were under 25 years of age. Use was also higher among males, at 58 per cent compared to 42 per cent of females.

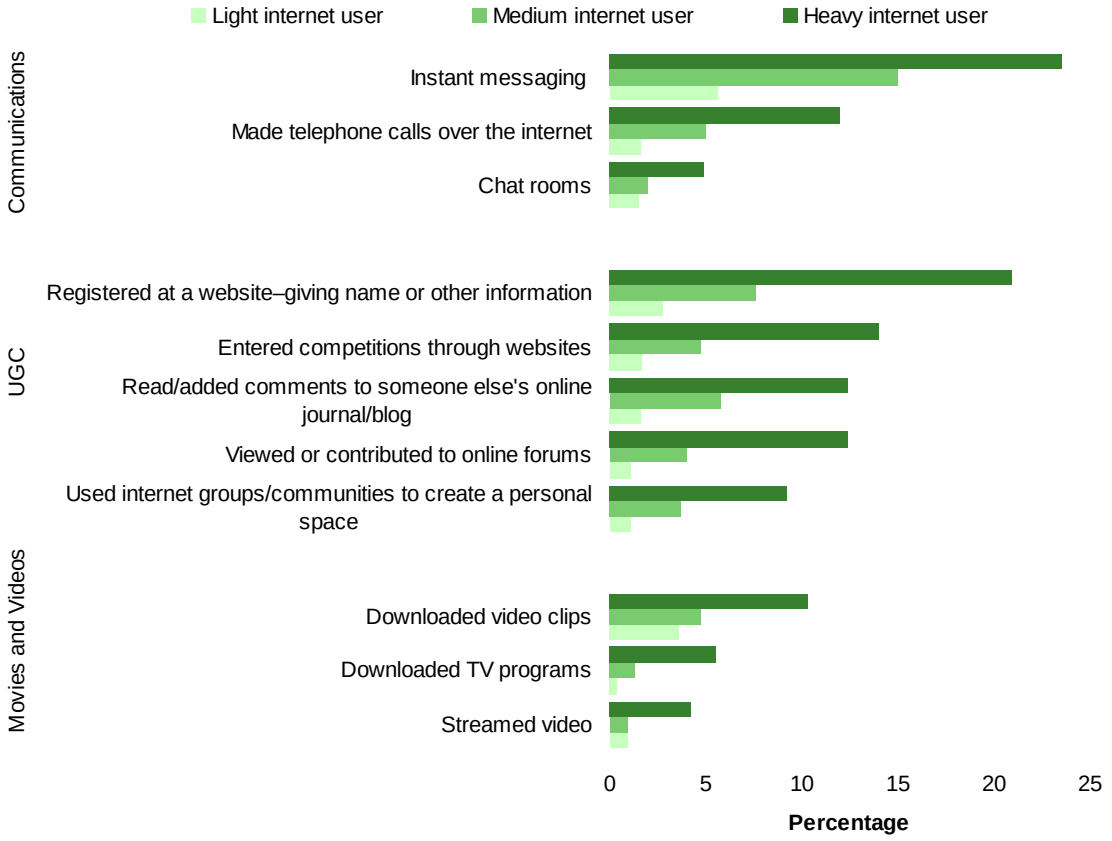
According to Roy Morgan, in the six months to June 2008 eight per cent of internet users had made a telephone call over the internet in the past four weeks.

FREQUENCY OF USE OF EMERGING ONLINE APPLICATIONS

As Australians increase their use of the internet and become more knowledgeable and confident, their use of emerging online applications also increases. Heavy internet users tend to be leaders and drivers in the use of new applications such as VoIP, and there is a direct correlation between adoption of these services and general frequency of internet use.

As shown in **Figure 18,** there is a difference in the use of emerging online applications among heavy, medium and light users. For example heavy users were twice more likely to make calls over the internet than medium users, and medium users were more than three times as likely to make calls over the internet than light users.

Figure 18: Frequency of internet use and a selection of new online activities and applications



Source: Roy Morgan Single Source, January 2008-June 2008, 14+ years old, N = 6,811 internet access at home

BROADBAND AND THE USE OF EMERGING ONLINE APPLICATIONS

Broadband allows for the download of more data at faster speeds. This is particularly important for many of the new data-intensive online activities and applications such as movies, videos and VoIP. Many new sites are also designed for optimum viewing on a broadband connection as they have heavy video or graphic content leaving dial-up users with an impaired viewing.

This is reflected in the activities which people undertake via a dial-up connection versus a broadband connection. Broadband users were twice more likely to use a range of emerging communication applications such as VoIP, movies, videos, blogs and community-related activities than users of dial-up internet.

Table 5: Newer applications and broadband

	Dial-up	Broadband
Communications		
Email	57.6%	73.4%
Instant messaging	11.6%	20.8%
VoIP	2.4%	10.2%
Chat rooms	2.1%	3.7%
UGC		
Registered at a website giving name or other information	7.3%	16.5%
Entered competitions through websites	4.9%	11.0%
Read or added a comment to someone else's online journal or blog	4.6%	10.0%
Viewed or contributed to online forums	4.9%	9.5%
Used internet groups/communities to create a personal space that friends can access	3.8%	7.3%
Read or added a comment to an online newspaper blog	2.7%	6.0%
Created/managed your own website	1.3%	5.4%
Participated in online virtual communities	2.6%	4.8%
Created/managed an online journal or blog	1.2%	3.6%
Movies and videos		
Downloaded video clips	2.9%	8.9%
Downloaded TV programs	1.5%	4.2%
Streamed TV	0.8%	2.5%
Downloaded a feature length movie	0.3%	3.1%
Streamed video	0.4%	3.2%

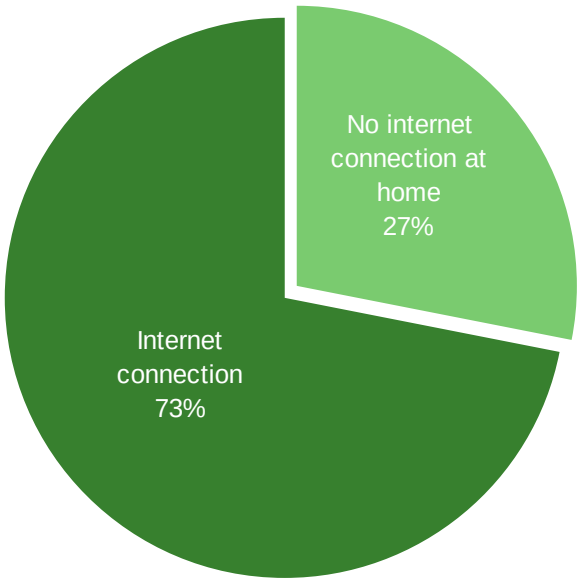
Source: Roy Morgan Single Source, January 2008–June 2008, 14+ years old, N = 6,811 internet access at home

5 Non-connected Australians

While the majority of Australians use the internet and participate online to some degree, there are still an estimated 2.6 million Australians who do not use the internet.[7] While the level of internet use is only one measure by which we can determine inclusion, it clearly shows that not all sections of the community are equally involved in the digital economy.

Roy Morgan data shows 73 per cent of Australians aged 14 years and over have an internet connection in their home and that those without an internet connection at home were less likely to use the internet frequently, suggesting 27 per cent of Australians are not participating online.

Figure 19: Internet connections in Australian homes, June 2008



Source: Roy Morgan Single Source, April 2008–June 2008, 14+ years old, N = 5,175 all respondents

[7] ABS, *Internet Activity, Australia*, June 2008, catalogue number: 8153.0

PROFILE OF THOSE WITHOUT A HOME INTERNET CONNECTION

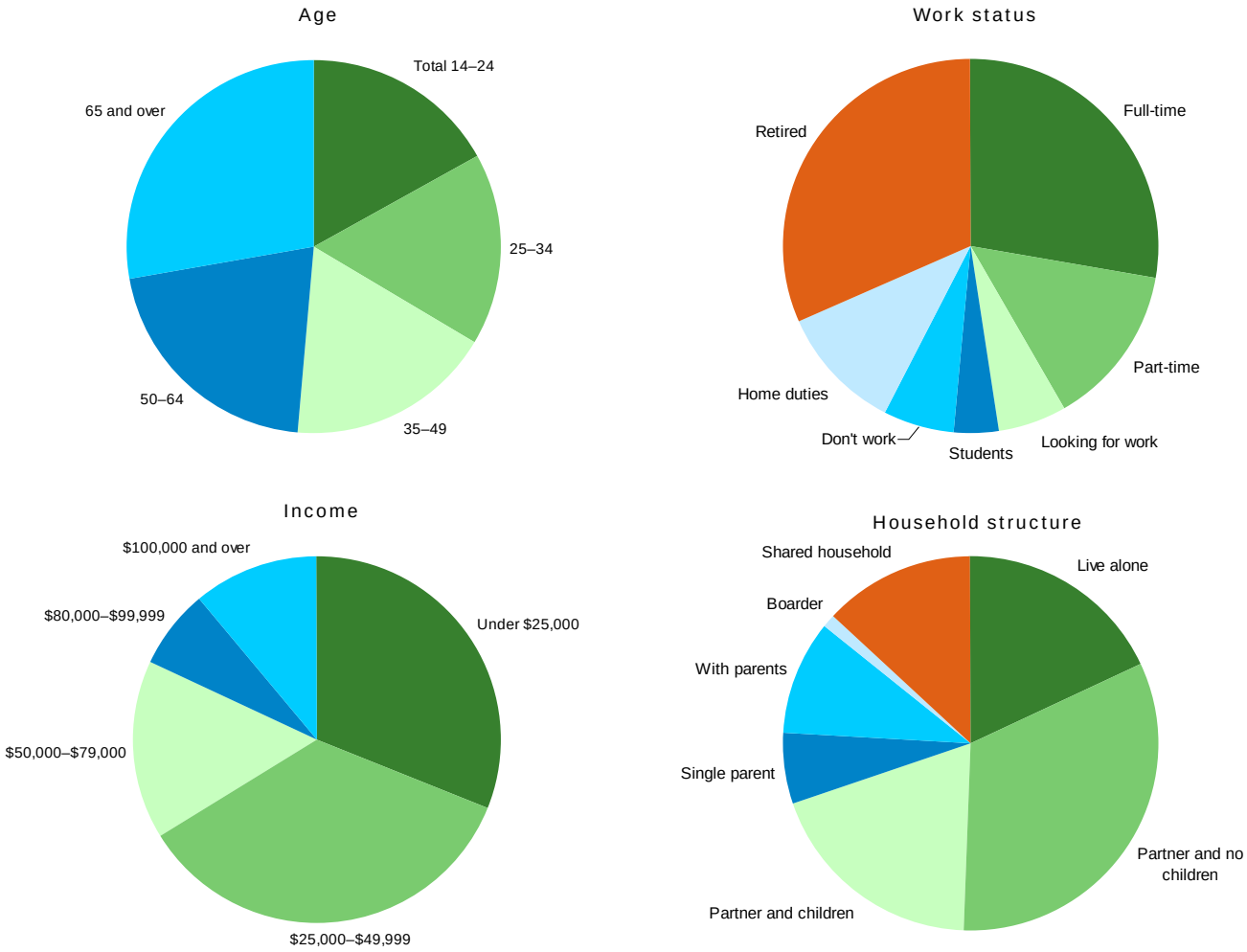
Age has a significant effect on the propensity to have an internet connection at home. Of those without an internet connection, nearly half were aged 50 and over, with the remainder split fairly evenly across other age groups.

However, age was not the only determining factor as shown in **Figure 20**. Household income also played a part, and 66 per cent of people living in a household without an internet connection earn under $50,000 a year.

People who either lived alone or with a partner and no children were also less likely to be connected to the internet. Over half of people who indicated they were not connected to the internet fitted into these categories; another third lived in a household with children.

As expected, retirees were less likely to be connected to the internet and a third of those with no internet connection were retired. There were also a high proportion of people in full-time employment; it is likely they have access to the internet at work.

Figure 20: Those without an internet connection, by age, work status, income and household structure

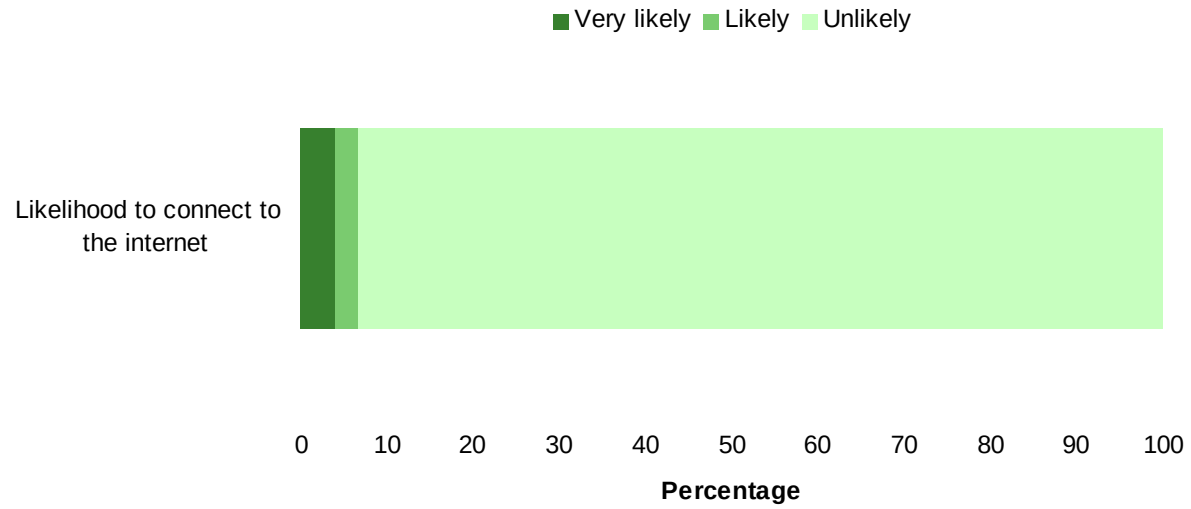


Source: Roy Morgan Single Source, July 2007–June 2008, 14+ years old, N =5,484 homes without internet access. Note: excludes 'can't say' and 'no answer'.

LIKELIHOOD OF USING THE INTERNET IN THE FUTURE

Of those who have never used the internet, only six per cent indicated they were likely or very likely to use the internet in the next six months (**Figure 20**). Age had an impact, with only four per cent of those aged 65 and over indicating they were likely to use the internet, compared to 15 per cent of those aged between 14 and 49. There were a high number of 'don't know' and 'can't say' responses for this question indicating the lack of awareness of the internet among those who have never gone online.

Figure 21: Likelihood to use the internet in the next six months

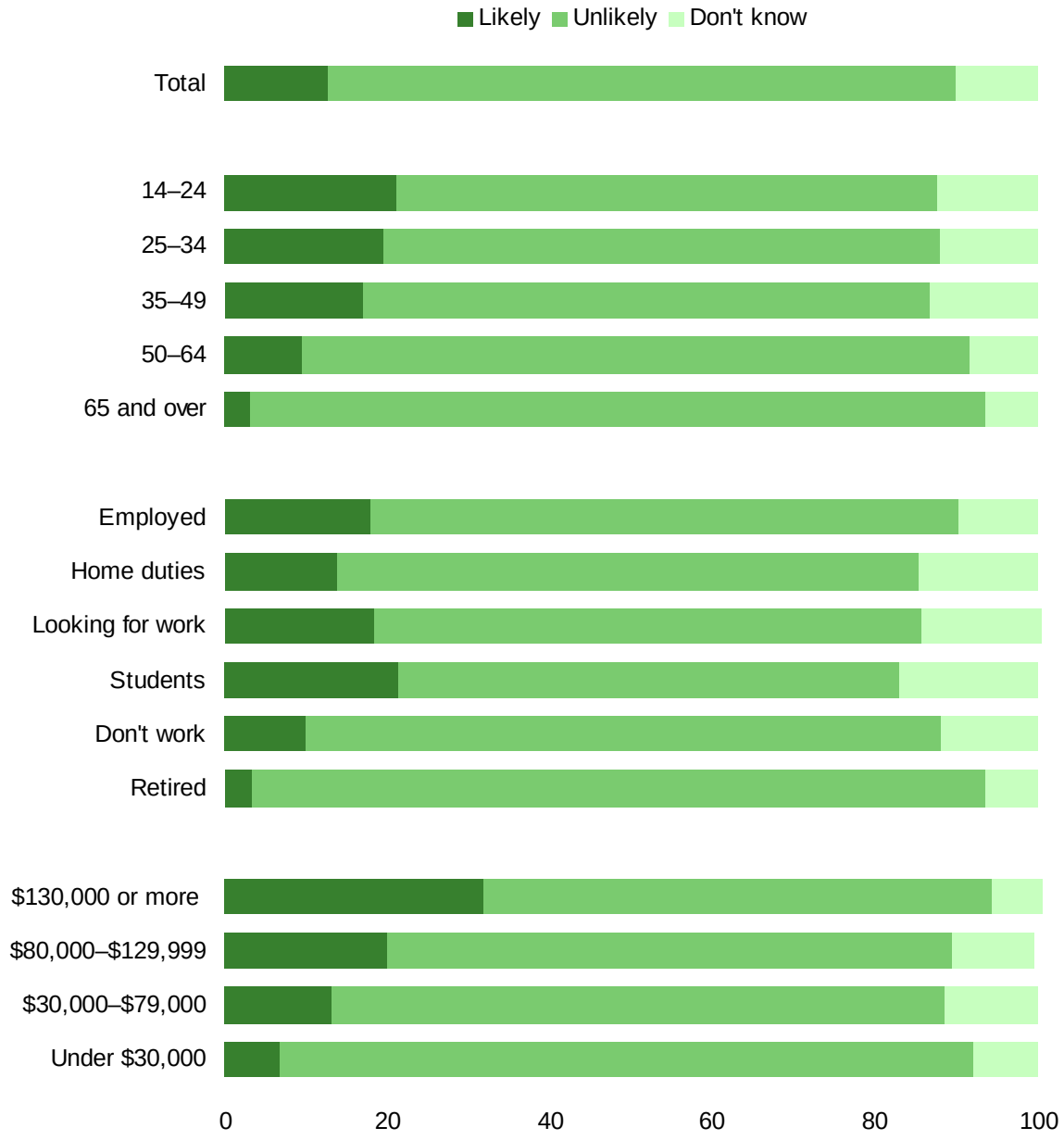


Source: Roy Morgan Single Source, July 2007–June 2008, 14+ years old, N = 2,697 those do have never accessed the internet. Note: excludes 'Can't say' and 'don't know'

Of those without an internet connection at home, 77 per cent indicated they did not intend to connect in the next six months. As shown in **Figure 22**, there were a number of factors which influence a person's propensity to connect to the internet, in particular age, work status and income. For example:

- Of those aged between 14 and 34, 20 per cent indicated they were likely to connect to the internet in the next six months, compared with only three per cent of those aged 65 and over.
- Students and those employed or looking for work were more likely to indicate they intend to connect in the future compared to those which are retired—around 18 per cent—than those who are retired—three per cent.
- Those earning over $130,000 were more likely to connect to the internet in the next six months—32 per cent—than those earning under $30,000—only seven per cent.

- **Figure 22: Likelihood to connect to the internet in the next six months**

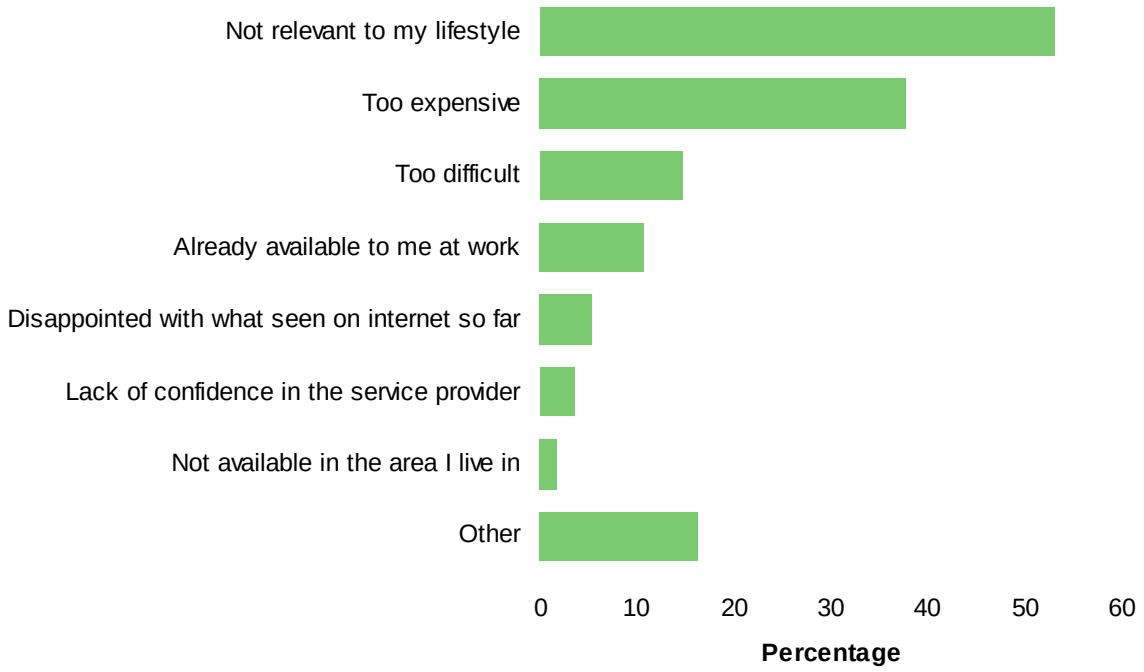


Source: Roy Morgan Single Source, July 2007–June 2008, 14+ years old, N = 1,334, households without internet. Note: excludes 'can't say'.

REASONS FOR NON-CONNECTION

Over half of people who do not plan to get an internet connection in the future stated lack of relevance to lifestyle as the reason for non-connection. This was followed by cost, which was cited by 38 per cent and 'too difficult' cited by 15 per cent (**Figure 23**).

Figure 23: Reason for internet non connection



Source: Roy Morgan Single Source, July 2007—June 2008, 14+ years old, N = 4,162, those who do not intend to connect to the internet. Note: excludes 'can't say' and 'no answer'

Reason for non-connection was influenced by age, income, work status and household structure. For respondents aged 65 and over, lack of relevance was the most significant factor, with 75 per cent citing this compared with only 28 per cent of those aged 14 to 24. For those aged 50 and under cost was more of a concern.

In terms of work status, retirees did not see the relevance of using the internet and students cited cost as the inhibiting factor. Those looking for work were also more likely to indicate cost as an inhibiting factor.

Australians living in households with children without an internet connection were more likely to indicate that cost was a barrier, while those living alone or with their partner and no children were more likely to mention relevance.

People earning less than $30,000 per annum were again more likely to indicate lack of relevance to their lifestyle as a barrier to connection to the internet, while people earning over $100,000 per annum were more likely to cite the availability of the internet elsewhere as a reason for not having the internet connected in the home.

These results indicate that at a time when services are increasingly being delivered online and the relevance of the internet is increasing for most; those Australians not using the internet are potentially missing out on the benefits of the digital economy.

Conclusion

Many Australians are now connected to the internet, with an ever-increasing number opting for a broadband connection. There are a number of socioeconomic and demographic factors which influence the take-up and use of the internet and internet activities. While there is no single internet usage profile, households with a broadband connection, households with children, younger Australians, those with a higher education and those with higher incomes are more likely to be connected and to use the internet more frequently.

All Australians connected to the internet, no matter how frequent their online use, are interacting with the digital economy. The most common activities online include banking, email, paying bills, general browsing and research, indicating many Australians now consider the internet an essential part of their life, as family, friends and colleagues increasingly engage with the online environment**.** However, the internet is also providing people with more choice of services through the enabling of new channels for communication and content services and providing alternatives to more traditional communication and content channels.

In terms of the adoption of emerging internet applications such as UGC and social networking, age has the most significant impact, with younger Australians significantly more likely to engage with instant messaging and chat, as well as social and entertainment services, and accessing movies and videos. Although these activities and applications are more prominent among younger people, their use is increasing across all age groups indicating their increasing value to the broader online community.

While the internet is becoming an essential part of most Australians' lives there are segments of the community who use the internet infrequently or not at all. These Australians are generally aged 65 and over, retired, and living on their own and are more likely to earn under $50,000 a year. The majority of these people do not plan to connect to the internet in the future. While cost was indentified as a barrier to use, particularly by younger people, for most they did not connect to the internet as they saw no relevance or benefit to their lifestyle.

Addressing these barriers to participation becomes important for social inclusion and ensuring that all Australians can garner the benefits of online activities in the digital economy. Access to the internet, an understanding of how to effectively use the internet and managing online risks are all important to a wider engagement in internet use and enhancing its role in underpinning the digital economy.