



Australian Government

**Australian Communications
and Media Authority**

Australia's regulator for broadcasting, the internet, radiocommunications and telecommunications

www.acma.gov.au

Media use by girls and boys

No. 2

September 2008

Media and Communications
in Australian Families series



Introduction

Media use by girls and boys is the second in a series of short reports that provide detailed analysis of particular topics from a major piece of community research commissioned by the Australian Communications and Media Authority (ACMA). That research, *Media and communications in Australian families* (the MCAF report), was first published by ACMA in December 2007 and provides a rich source of data on:

- the use of electronic media and communications technologies by young people aged 8–17 years
- the level of ownership of those technologies by families with young people aged 8–17 years
- parent concerns about young people’s use of electronic media and communications, family rules and arrangements around media use, and the challenges experienced by parents in supervising young people’s media and communications activities.

Some of the short reports in this series reproduce data from the MCAF report but go into greater analysis of that data. *Media use by girls and boys* is one such report. Other reports in the series will provide additional data analyses of young people’s use of media and communications technologies.

This and other short reports in the series are available on ACMA’s website at www.acma.gov.au/mediareports along with the MCAF report (which also includes an academic literature review regarding media influences on young people and families) and other related material.

REGULATORY CONTEXT

ACMA is Australia’s regulator for broadcasting, the internet, radiocommunications and telecommunications. ACMA regulates broadcasting services, internet content and mobile content in accordance with a number of pieces of legislation, including the *Broadcasting Services Act 1992*, the *Radiocommunications Act 1992*, the *Australian Communications and Media Authority Act 2005*, the *Telecommunications Act 1997* and the *Telecommunications (Consumer Protection and Service Standards) Act 1999*.

Understanding the ways that young Australians are using electronic media and communications is a core part of ACMA’s regulatory responsibilities. ACMA has an ongoing research program to assist in providing an evidence base for its regulatory and other functions.

The research in this report will assist ACMA to:

- understand the contemporary media environment in which young people operate
- understand how boys and girls are using new electronic media and communications technologies
- advise the Minister on technological advances and service trends in the broadcasting and internet industries
- develop community education products and activities to help young people, parents and educators understand and navigate online risks.

MEDIA USE BY GIRLS AND BOYS

Young Australians between the age of eight and 17 years participate in a range of electronic media and communications activities in their leisure time. Almost all young people watch television and use the internet, while approximately two-thirds play video or computer games. More than one-half listen to recorded music and have their own mobile phone.

This report focuses on the use of electronic media and communications technologies by young Australian boys and girls to understand differences between the genders in their interests and behaviours.

The community research data presented in this report provides information on:

- the extent to which boys and girls participate in, and spend their leisure time doing, different electronic media and communications activities
- changes to gender media-use patterns since 1995
- how parents mediate their son's and daughter's use of electronic media and communications
- girls and boys favourite electronic media and communications leisure activities
- level of access to electronic media and communications devices in girls' and boys' bedrooms.

Key findings

In 2007 boys and girls both spent about half of their discretionary time on electronic media and communications activities.

Watching television was the most time consuming activity for both boys (an average of one hour 58 minutes per day) and girls (one hour 50 minutes).

Boys watched an average 20 minutes less television per day in 2007 than they did in 1995.

Total screen time—i.e. time spent using a television screen or computer monitor—was higher for boys (an average four hours 15 minutes per day) than girls (three hours 51 minutes).

More boys (82 per cent) played video or computer games than girls (58 per cent), and boys spent significantly more time playing them (an average 55 minutes per day for boys, 24 minutes for girls).

Playing games against other players online was the only internet activity where boys had higher participation than girls (28 per cent and 18 per cent respectively).

Significantly more girls than boys participated in online communications activities, including messaging or chatting online (34 per cent girls, 24 per cent boys), email (26 per cent girls, 16 per cent boys), and visiting social websites (25 per cent girls, 19 per cent boys).

More girls than boys had their own material posted online at the time of the study—80 per cent of girls aged 14–17 compared with 65 per cent of boys of the same age.

Listening to recorded music was a more common activity for girls (45 per cent) than boys (35 per cent). More girls (31 per cent) than boys (25 per cent) also listened to the radio.

Mobile phones were used by more girls (63 per cent) than boys (44 per cent). Girls also spent significantly more time talking and messaging on mobile phones than boys.

Parents of girls were more likely than parents of boys to trust their child to choose television programs (61 per cent girls, 53 per cent boys) and internet content (73 per cent girls, 60 per cent boys) all or most of the time.

Reflecting boys' greater participation in gaming, more parents of boys who played video or computer games had rules, understandings or arrangements around their son's gaming (79 per cent), compared with parents of girls (60 per cent).

Reflecting girls' greater use of mobile phones, more parents of girls reported having concerns about mobile phone use (31 per cent), compared with parents of boys (16 per cent).

Favourite activities for girls when by themselves were reading, drawing and writing letters, listening to recorded music, watching television, and messaging or chatting online.

Favourite activities for boys when by themselves were playing video or computer games, watching television, physical activity, and reading, drawing and writing letters.

Significantly fewer boys had a television in their bedroom in 2007 (23 per cent) than was the case in 1995 (31 per cent).

The research

Most of the findings in this report are sourced from the major community research study commissioned by ACMA from Urbis, and reported in *Media and Communications in Australian Families 2007* (ACMA 2007). The research was conducted with a representative sample of Australian families with young people aged eight to 17 years between March and June 2007.

The community research design comprised:

- a representative telephone survey of parents from 751 family households across Australia (n=751 parents with young people aged 8–17 years), including an inventory of electronic media and communications equipment in these households
- three-day time-use diaries completed by young people aged 8–17 years (n=751 one main child from each household; and n=1,003 total young people who completed a diary) during school term, and short questions on the use of communications technologies at the end of each of the three diary days
- a short self-complete survey that was filled out by young people on the day after completing the three-day time-use diary (i.e. Day 4 diary questions, n=1,055).

ACMA research findings are complemented by the inclusion of research commissioned by the Australian Broadcasting Authority (ABA) in 1995 and published in the report *Families and Electronic Entertainment* (ABA 1996).

ANALYSIS AND INTERPRETATION

Statistically significant differences are noted in the figures and tables in this report.

Parent survey

The sample of 751 family households from across Australia gives a confidence interval of +/- 3.5 at $p < 0.05$. That is, if we asked this sample a yes/no question and half said 'yes', we can be 95 per cent sure that households with 8–17 year olds would find a 'yes' answer of between 46.5 per cent and 53.5 per cent.

When comparing with 1995 results, differences of four percentage points or more will be significant at $p < 0.05$.

Diary data

For the 2007 three-day time-use diary data, gender and age category analysis and significance testing were conducted for each activity.

When comparing time spent on activities in 2007 with data from 1995, differences of nine minutes or more are significant at $p < 0.05$.

How boys and girls use their discretionary time

Boys and girls divided their discretionary time evenly between electronic media and communications activities and non-electronic media activities.

Boys aged 8–17 years reported spending 51 per cent of their aggregate discretionary time¹—an average of five hours and three minutes per day—engaging in electronic media and communications activities. The remaining 49 per cent of that time—4 hours and 46 minutes—was spent doing other activities. Girls spent 50 per cent—an average four hours and 59 minutes—on electronic media and communications activities and 50 per cent—4 hours and 57 minutes—involved in other activities² (Figure 1).

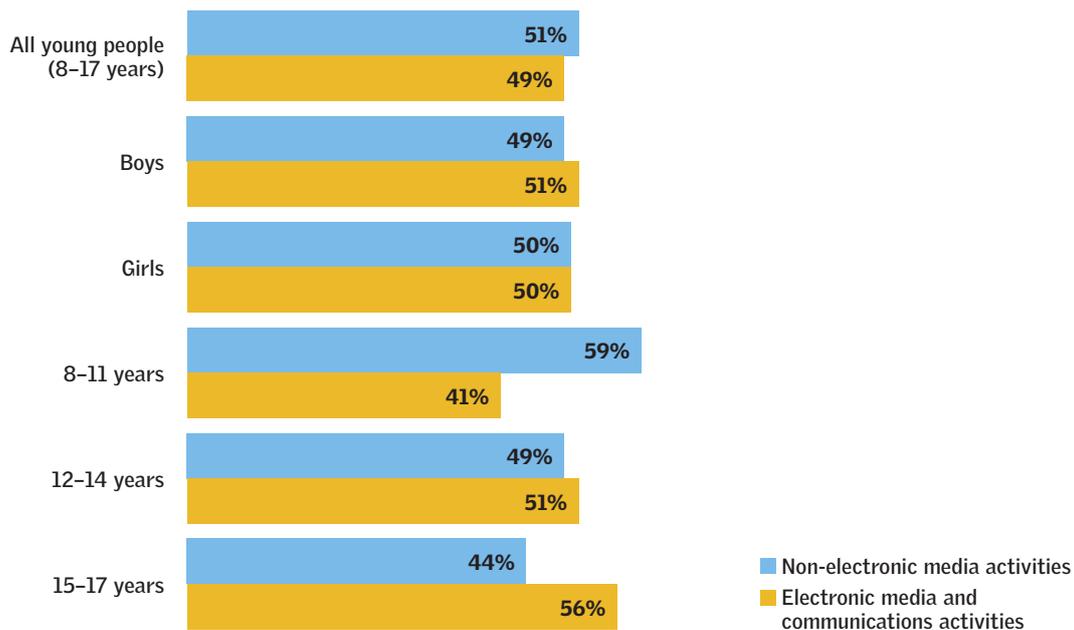


Figure 1: Electronic media and other activities as a proportion of aggregate discretionary time, by gender and age, 2007

Source: Diary (n=1, 003; n=522 boys; n=478 girls; n=431 8–11 years; n=337 12–14 years; n=225 15–17 years)

Note: there are significant differences between age groups on the basis of average time spent on electronic media and communications activities

1. 'Aggregate discretionary time' is calculated by adding the time spent on individual leisure activities together. It includes double or triple counting of time periods during which multiple activities may have been undertaken. Aggregate discretionary time includes time spent doing homework.
2. These gender differences are not statistically significant.

Time-use diaries were used to gather this information from young people. Each young person in the sample recorded their activities in 15 minute time blocks from 6.00 a.m. to 2.00 a.m. for three days during school term. In aggregate, diary data covered every day of the week, including weekends. Young people also recorded where they were and who they were with while doing each activity.

The diaries included 31 activities. About two-thirds were electronic media and communications activities and about one-quarter were non-electronic media activities (listed below). The remaining activities were non-discretionary activities covering time spent at school, sleeping, eating and personal care, household chores and jobs, and travelling. Non-discretionary activities were not included in the analysis of young people's use of discretionary time.

ACTIVITIES INCLUDED IN YOUNG PEOPLE'S DISCRETIONARY TIME

Electronic media and communications activities

<p>TELEVISION AND MOVIES Watching free TV Watching subscription TV Watching DVDs/videos</p> <p>MUSIC AND RADIO Recorded music (CDs, MP3s, tapes etc) Radio</p> <p>VIDEO AND COMPUTER GAMES Online against other players All other gaming</p> <p>HOMEWORK ON COMPUTER/INTERNET</p> <p>OTHER COMPUTER NOT online or playing games</p>	<p>MOBILE PHONES Talking Messaging (SMS/MMS/picture/video) TV shows/clips, Internet, video calls, etc Other</p> <p>OTHER PHONE Landline, internet phone</p> <p>INTERNET Emailing Messaging/chatting Watching/listening to music, video clips, movies, cartoons, TV shows etc Social websites, blogs etc (e.g. MySpace) Other things on the Internet</p>
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Non-electronic media and communications activities

- Hanging out, veging out
- Physical activity
- Going out
- General activities/play
- Reading, drawing, writing letters
- Homework NOT on computer/internet
- Other

Among the non-electronic media and communications activities, boys spent significantly more time engaged in physical activity (an average of one hour two minutes per day) than girls (55 minutes). Girls spent significantly more time going out (an average 48 minutes per day) than boys (40 minutes).

There were no substantial gender differences for the remaining non-electronic media and communications activities.

AGE DIFFERENCES

Age had a stronger relationship than gender to how aggregate discretionary time was divided. Fifteen–17 year olds spent a greater proportion of this time doing electronic media and communications activities (56 per cent of aggregate discretionary time) compared with 8–11 year olds (41 per cent) (Figure 1).

In general, participation in electronic media and communications activities increased with age, and participation in non-media activities decreased with age.

Besides the gender relationships that are the focus of this report, age often had considerable bearing on participation in, and the amount of time spent on, many activities. The main age-related patterns are referred to throughout this report.

SIMULTANEOUS ACTIVITIES

Girls spent more time engaged in simultaneous activities than boys. Girls aged 8–17 years averaged three hours and three minutes per day doing more than one activity at the same time, while boys spent two hours and 38 minutes—a difference of 25 minutes per day more for girls (Figure 2). Simultaneous activities refer to the amount of time spent doing two or more different activities in the same 15-minute block as recorded in the time-use diaries.³



Figure 2: Average time spent per day doing simultaneous activities, by gender and age, 2007

Source: Diary (n=1, 003; n=522 boys; n=478 girls; n=431 8–11 years; n=337 12–14 years; n=225 15–17 years)

Note: there are significant differences between age groups for average time spent on simultaneous activities

Age differences

More time was spent by older teenagers than younger children doing simultaneous activities, ranging from an average one hour and 48 minutes per day for 8–11 year olds, two hours and 43 minutes for 12–14 year olds, to four hours and 56 minutes for 15–17 year olds.

3. Simultaneous activities encompass electronic media and communications activities and non-media activities. Simultaneous activities are explored further in short report No.4 in this series.

ELECTRONIC MEDIA AND COMMUNICATIONS ACTIVITIES

While boys and girls spent a similar amount of time on electronic media and communications activities as a whole during their discretionary time, they allocated different amounts of time to certain individual activities.

Girls spent more time on average per day⁴ than boys:

- listening to recorded music or radio (40 minutes girls, 30 minutes boys)
- using a mobile phone (23 minutes girls, 13 minutes boys).

Boys spent more time per day on average:

- playing video or computer games (55 minutes boys, 24 minutes girls).

The extra 31 minutes of video or computer game playing by boys contributed to them spending more time using a computer screen or television monitor than girls. Boys accrued an average 24 minutes more total screen time per day (four hours and 15 minutes) than girls (three hours and 51 minutes). Total screen time includes watching television and DVDs, playing video or computer games, using the internet, and doing homework on the computer or internet (Table 1).

Table 1: Average time spent per day by young people on electronic media and communications activities, by gender, 2007

Electronic media and communications activity	Total 8-17yrs (n=1,003)	Boys 8-17yrs (n=522)	Girls 8-17yrs (n=478)
Watching television (free and subscription)	1:54	1:58	1:50
Watching DVDs or videos	0:24	0:24	0:24
Using mobile phone	0:19	0:13	0:23
Using other phone (e.g. landline, VoIP)	0:05	0:05	0:05
Listening to recorded music or radio	0:35	0:30	0:40
Playing video or computer games (includes gaming against other players online)	0:39	0:55	0:24
Using the internet (e.g. messaging, email, music/video content, visiting websites—excludes online gaming)	0:49	0:42	0:53
Doing homework on computer/internet	0:13	0:12	0:15
Other computer activities (not online or gaming)	0:04	0:04	0:05
Total electronic media and communications (excludes homework on computer/internet)	4:49	4:51	4:44
Total screen time (i.e. homework on computer/internet + TV + DVDs + gaming + internet + other computer)	4:03	4:15	3:51

Source: Diary

Note: significant gender differences for individual activities are identified in later sections of this report

4. Average amount of time per day was calculated across all young people in the diary sample whether or not they participated in a particular activity (i.e. using the internet) over the three-day diary period.

Boys and girls each spent an average 27 per cent of their discretionary time watching television, and six per cent of that time watching DVDs or videos (Figure 3).

Discretionary time for girls amounted to an average of six hours and 51 minutes per day, and for boys it was seven hours and 11 minutes. Discretionary time is the average amount of ‘free’ time that young people had available to them per day.

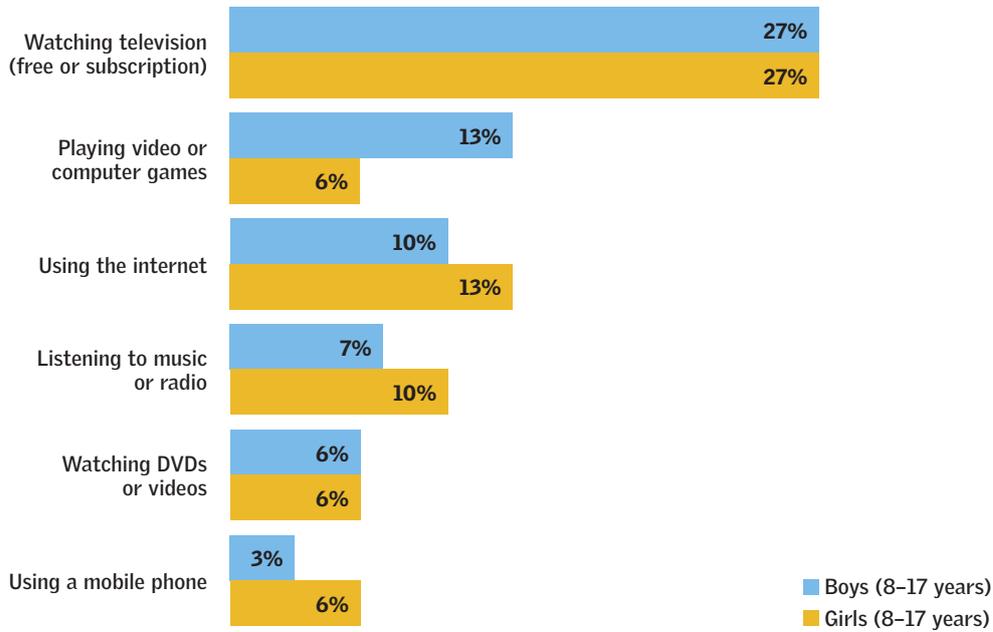


Figure 3: Electronic media and communications activities as a proportion of discretionary time, by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

Notes: Because young people engaged in simultaneous activities, the proportion of discretionary time spent on individual activities (e.g. using a mobile phone) may overlap with other activities (e.g. watching television).

Significant gender differences for individual activities are identified in later sections of this report

For boys, the electronic media and communications activities which took up the greatest proportion of their discretionary time were:

1. watching free-to-air or subscription television (27 per cent of discretionary time and one hour 58 minutes on average per day)
2. playing video or computer games—including games against other players online (13 per cent of discretionary time and 55 minutes per day)
3. using the internet (10 per cent of discretionary time and 42 minutes per day)
4. listening to music or radio (seven per cent of discretionary time and 30 minutes per day)
5. watching DVDs or videos (six per cent of discretionary time and 24 minutes per day)
6. using a mobile phone (three per cent of discretionary time and 13 minutes per day).

For girls, the electronic media and communications activities which took up the greatest proportion of their discretionary time were:

1. watching free-to-air or subscription television (27 per cent of discretionary time and one hour and 50 minutes on average per day)
2. using the internet (13 per cent of discretionary time and 53 minutes per day)
3. listening to music or radio (10 per cent of discretionary time and 40 minutes per day)
4. playing video or computer games, watching DVDs and using a mobile phone, with these last three activities consuming six per cent of discretionary time and between 23–24 minutes per day.

The following sections explain in greater detail the relationship of gender to television and DVD viewing, playing video and computer games, using the internet, listening to music and radio, and using mobile phones.

Watching television and DVDs

PARTICIPATION

Watching television was the most time-consuming electronic media and communications activity for boys and girls, and more young people watched television than participated in any other activity.

Overall, 94 per cent of young people recorded watching television in their time-use diary, with no significant gender differences. Eighty-nine per cent of boys and 87 per cent of girls watched free-to-air television, and 30 per cent of boys and 31 per cent of girls watched subscription television (Figure 4). Parents reported that 99 per cent of households with young people had at least one television, and 32 per cent had subscription television.

DVD or video viewing was recorded by 43 per cent of boys and 47 per cent of girls. Ninety-seven per cent of parents said their home had a DVD player.

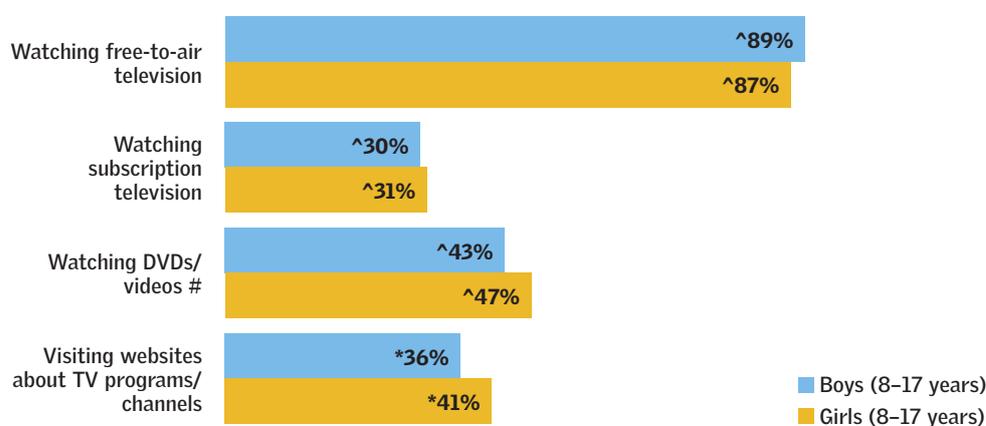


Figure 4: Watching television, DVDs, and related activities by gender, 2007

^ Diary: (n=522 boys; n=478 girls)

* Day 4 diary question: "How often (if at all) do you go to websites about TV programs or TV channels (free or pay TV channels)?" (n=541 boys; n=514 girls)

denotes significant gender difference at $p < 0.05$

On day four, after completing the three-day time-use diary, young people were asked whether they ever visited websites about television programs or channels. Forty-one per cent of girls and 36 per cent of boys said they had visited television-related websites.

AMOUNT OF TIME SPENT

Girls and boys spent a similar amount of time watching television (an average one hour 50 minutes per day and one hour 58 minutes respectively)—an average difference of eight minutes per day which is not statistically significant. Regardless of gender, young people spent the same amount of time watching DVDs or videos (24 minutes per day).

In total, girls spent an average of two hours and 14 minutes per day watching television or DVD/videos, and boys spent two hours and 22 minutes (Figure 5).

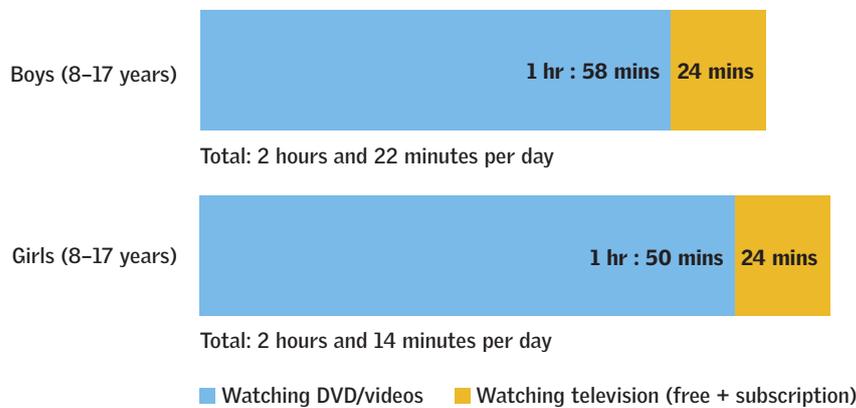


Figure 5: Average time spent per day watching television and DVDs by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

Note: gender differences are not significant

Age differences

The amount of time spent watching television and DVDs or videos was largely consistent across the different age groups. However, 8–11 year olds watched more subscription television (31 minutes per day on average) compared with the two older age groups (25 minutes for 12–14 year olds, and 21 minutes for 15–17 year olds).

CHANGES SINCE 1995

In 2007, boys watched an average 20 minutes less television per day than they did twelve years earlier (ABA 1996) (Figure 6). Girls have maintained their level of television viewing since 1995.

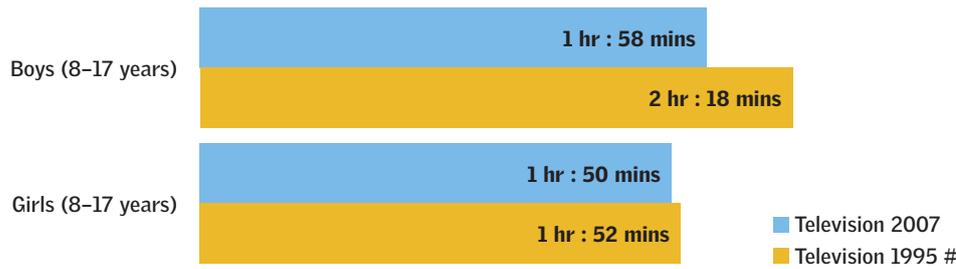


Figure 6: Average time spent per day watching television in 1995 (free-to-air) and 2007 (free and subscription), by gender

Source: 2007 Diary (n=522 boys; n=478 girls); 1995 Diary (n=250 boys; n=250 girls)

denotes significant gender difference in 1995

In 1995, boys spent significantly more time watching free-to-air television than girls. At that time, boys averaged two hours and 18 minutes of television viewing per day while girls spent one hour and 52 minutes—an additional 26 minutes per day on average for boys in 1995.

PARENT MEDIATION

Among households with a television at home, 79 per cent of parents had rules, understandings or agreements around when their child watched television or what could be watched. Parents of boys and girls were equally likely to have these rules in place. Gender was not associated with parent’s level of concern about, or difficulty in managing, their child’s television viewing.

However, parents of girls (61 per cent) were more likely than parents of boys (53 per cent) to trust their child’s judgement to choose what was watched on television all or most of the time.

Playing video or computer games

PARTICIPATION

From the day four questionnaire, significantly more boys (82 per cent) than girls (58 per cent) said they had played video or computer games over the previous three days. Gender difference was most pronounced for game consoles that were played by 53 per cent of boys and 16 per cent of girls (Figure 7).

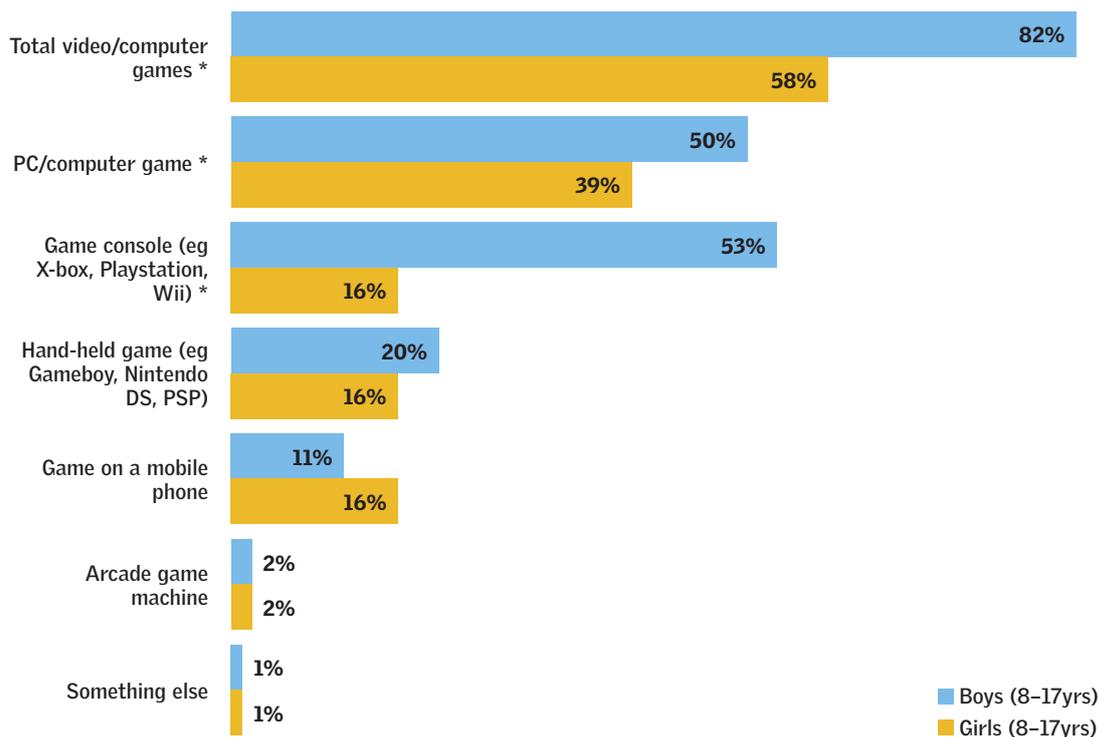


Figure 7: Playing video or computer games by gender, 2007

Source: Day 4 diary question: "If you played video or computer games over the last three days, did you play on...? (Fill in as many circles as you need)" (n=541 boys; n=514 girls)

* denotes significant gender difference at $p < 0.01$.

Note: care is needed when interpreting gender differences where the sample size is small, e.g. less than 20 per cent (or less than 100 young people)

In the diaries there were two gaming categories that allowed young people to record (a) game playing against other players online, and/or (b) all other gaming⁵. Fifty-three per cent of 8–17 year olds recorded playing games against these categories. More boys played games against other players online (28 per cent) and other video or computer games (50 per cent) than girls (18 per cent and 36 per cent respectively).

AMOUNT OF TIME SPENT

Reflecting boys' higher participation in gaming, boys also spent more time playing video or computer games than girls. Boys played video or computer games for an average of 55 minutes per day compared with girls who played for 24 minutes (Figure 8). Boys spent significantly more time gaming against other players online (an average 22 minutes per day) than girls (eight minutes), and playing 'other' video and computer games (an average 33 minutes per day for boys, 16 minutes for girls).

5. 'All other gaming' includes games played on the internet but not against other online players, and video games that were not played on the internet.

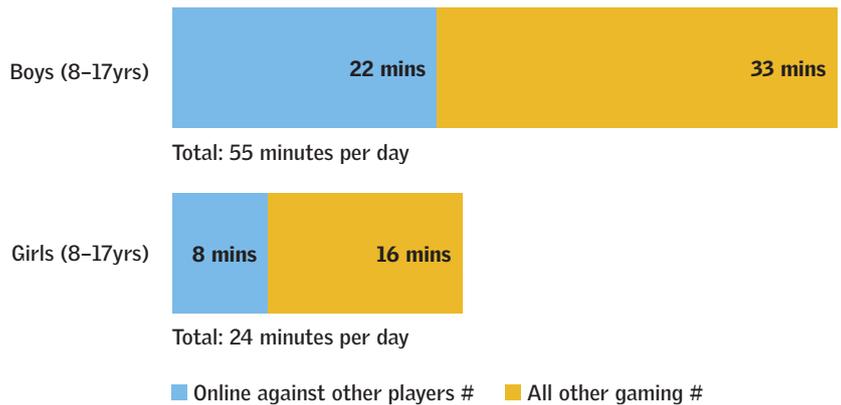


Figure 8: Average time spent per day playing video or computer games by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

denotes significant gender difference at $p < 0.05$

For boys and girls combined, 38 per cent of total gaming time was spent gaming against other players online, and the remaining 62 per cent was spent on all other gaming.

Age differences

Playing games against other players online was highest for 15–17 year olds (55 per cent of total gaming time or an average 23 minutes per day) and lowest for 8–11 year olds (29 per cent or 11 minutes per day).

For games not played against other players online, participation peaked at around 11 years of age and declined after age 13. Computer gaming had greatest appeal for 10–13 year olds, console games for 9–13 year olds, and hand-held games for 8–12 year olds.

CHANGES SINCE 1995

The average amount of time spent gaming by boys increased significantly from 29 minutes per day in 1995 to 55 minutes in 2007—an average increase of 26 minutes per day (Figure 9). In part this increase may be attributed to boys taking advantage of technological developments to expand their gaming activities. In 2007, gaming against other players online averaged 22 minutes per day for boys or 40 per cent of their total time spent gaming.

Girls maintained a similar level of game playing between 1995 (an average of 22 minutes per day) and 2007 (23 minutes). In 2007, this included eight minutes online against other players or 35 per cent of total gaming time.

The gap between video and computer game playing by boys and girls has also widened significantly since 1995. In 1995 boys spent an average seven minutes more per day playing games than girls which increased in 2007 to a 32 minute difference.

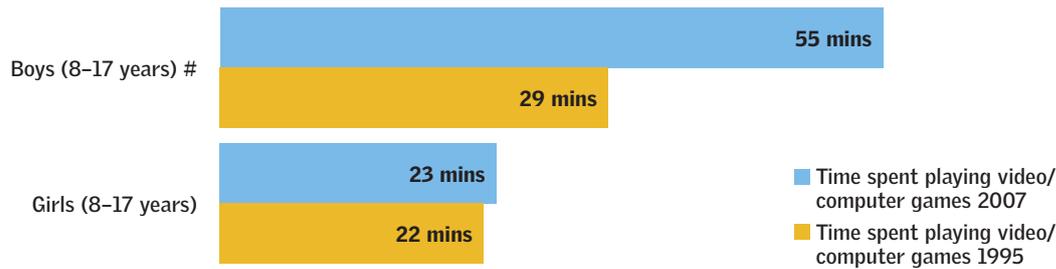


Figure 9: Average time spent per day playing video or computer games by gender, 1995 and 2007

Source: 2007 Diary (n=522 boys; n=478 girls); 1995 Diary (n=250 boys; n=250 girls)

denotes significant difference for boys between 1995 and 2007 at p<0.05

In 1995, video and computer gaming included video games, games played at arcades, hand-held video games and games played on the computer. In 2007, they also included playing games on a mobile phone and online against other players.

PARENT MEDIATION

More parents of boys were concerned about their son’s use of video and computer games (39 per cent) compared with parents of girls (13 per cent).

Parents of boys also had greater difficulty managing their son’s use of video or computer games (17 per cent of parents said gaming was either very or fairly difficult to manage) compared with parents of girls (eight per cent).

Among parents whose main child⁶ was a boy who played video or computer games, 79 per cent had rules, understandings or arrangements around gaming. This compares with 60 per cent of parents of girls who played. Most parents of boys had rules about when their son could play games (70 per cent of parents with boys, 54 per cent girls); including rules about the amount of time they were allowed to play (43 per cent boys, 31 per cent girls). Fewer parents had rules about the type of games that could be played (54 per cent boys, 39 per cent girls).

Use of the internet

PARTICIPATION

Seventy-four per cent of 8–17 year olds, including 77 per cent of girls and 72 per cent of boys, reported doing internet activities over the three diary days.

Significantly more girls participated in online communications activities than boys. These activities included messaging or chatting (34 per cent girls, 24 per cent boys), emailing (26 per cent girls, 16 per cent boys), and visiting social websites, blogs etc (25 per cent girls, 19 per cent boys) (Figure 10).

6. As part of the telephone survey, parents were asked a series of questions relating to one ‘main’ child aged 8–17 years in each household.

More girls (38 per cent) than boys (34 per cent) also did homework on the computer or internet and other things on the internet⁷ (27 percent girls, 23 per cent boys).

The only internet activity, for which boys (28 per cent) had higher participation than girls (18 per cent), was playing games against other players online (as discussed earlier under ‘Playing video and computer games’).

A similar proportion of boys (17 per cent) and girls (19 per cent) watched video content or listened to music from the internet.

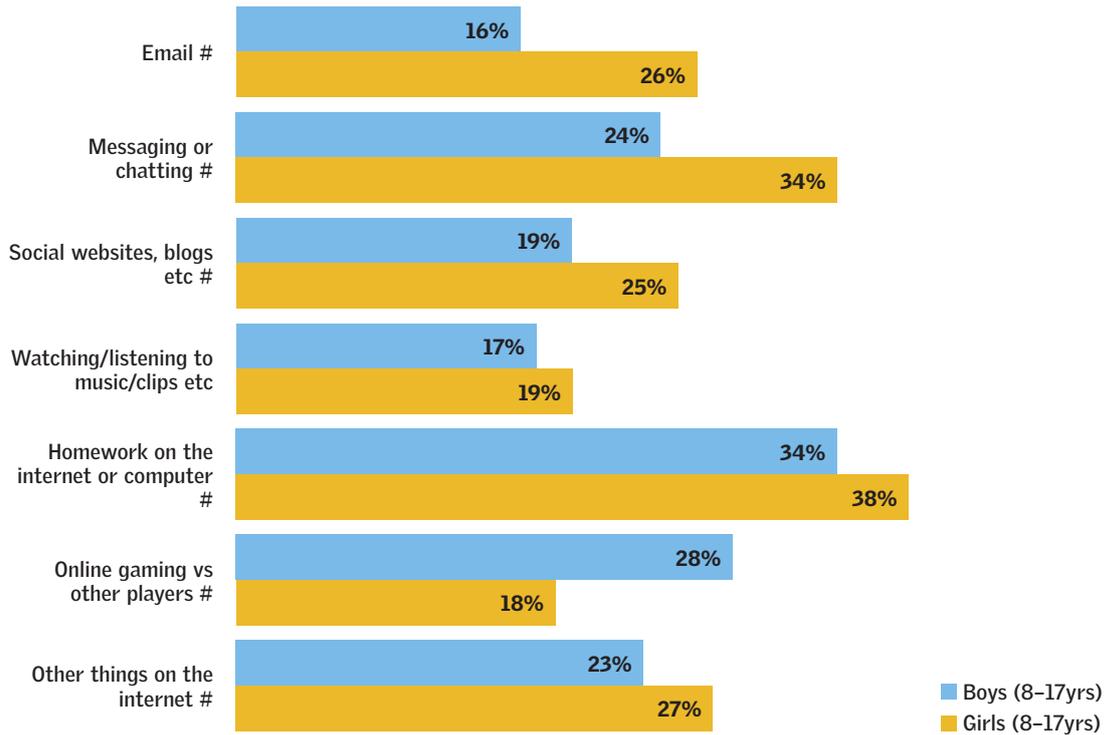


Figure 10: Use of the internet by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

denotes significant gender difference at p<0.05

AMOUNT OF TIME SPENT

Both boys and girls aged 8–17 years spent an average of one hour and 17 minutes per day using the internet. Figure 11 illustrates how they divided their internet time into individual online activities.

7. ‘Other things on the internet’ captured activities that did not fall within a specific internet activity category as listed in Figure 10.

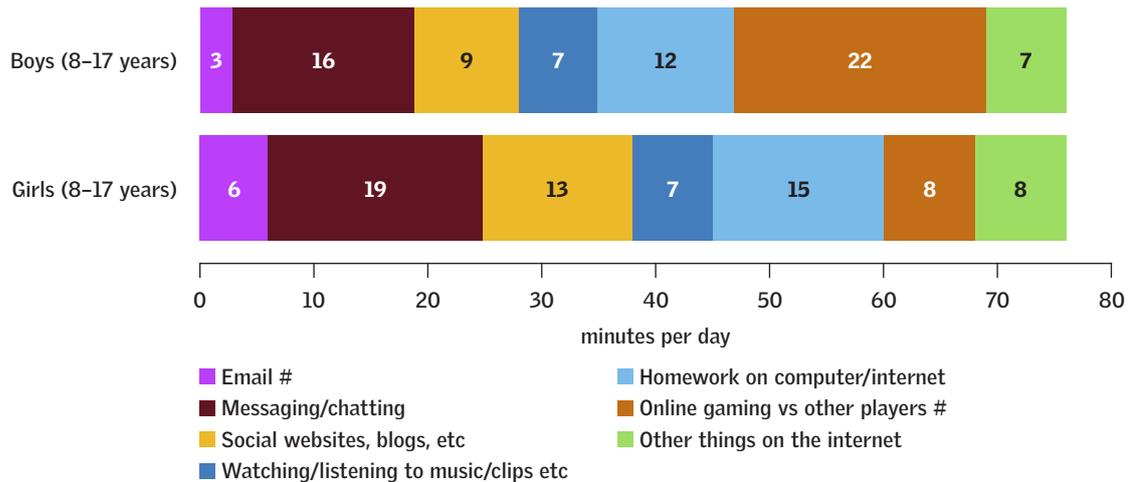


Figure 11: Average time spent per day on internet activities by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

denotes significant gender difference at $p < 0.05$

Note: data adds to less than one hour and 17 minutes due to rounding

Girls spent significantly more time per day than boys engaged in online communications activities as a group of activities (an average 38 minutes girls, 28 minutes boys). Online communication activities include email, messaging or chatting online and visiting social websites.

Boys spent significantly more time than girls playing games against other players online (22 minutes boys, 8 minutes girls—as discussed earlier under ‘Playing video and computer games’).

Boys and girls spent a similar amount of time doing homework on the computer or internet (12 minutes boys, 15 minutes girls), watching video content or listening to music online (7 minutes boys, 7 minutes girls), and doing other things on the internet (7 minutes boys, 8 minutes girls).

Age differences

Average time spent online increased with age, where 8–11 year olds spent an average 30 minutes per day online, 12–14 year olds spent one hour and 32 minutes, and 15–17 year olds spent two hours and 24 minutes. Average time spent doing individual online activities also increased with the age of young people.

Similarly, a higher proportion of 15–17 year olds used the internet over three diary days. For example, 48 per cent of 15–17 year olds messaged or chatted online compared with 10 per cent of 8–11 year olds.

AUTHORING OF WEB CONTENT AND WATCHING DOWNLOADED CONTENT

From the day four questionnaire, 47 per cent of girls and 38 per cent of boys said they had their own material on the internet at the time of the study (Figure 12). Among 14–17 year olds, these percentages increased to 80 per cent for girls and 65 per cent for boys having some form of web authorship.

More girls than boys had a personal profile on a user-generated social networking website (41 per cent girls, 27 per cent boys). Among 14–17 year olds, 72 per cent of girls and 52 per cent of boys had a personal profile.

More girls than boys also reported posting artwork or photos on the internet (22 per cent girls, 12 per cent boys).

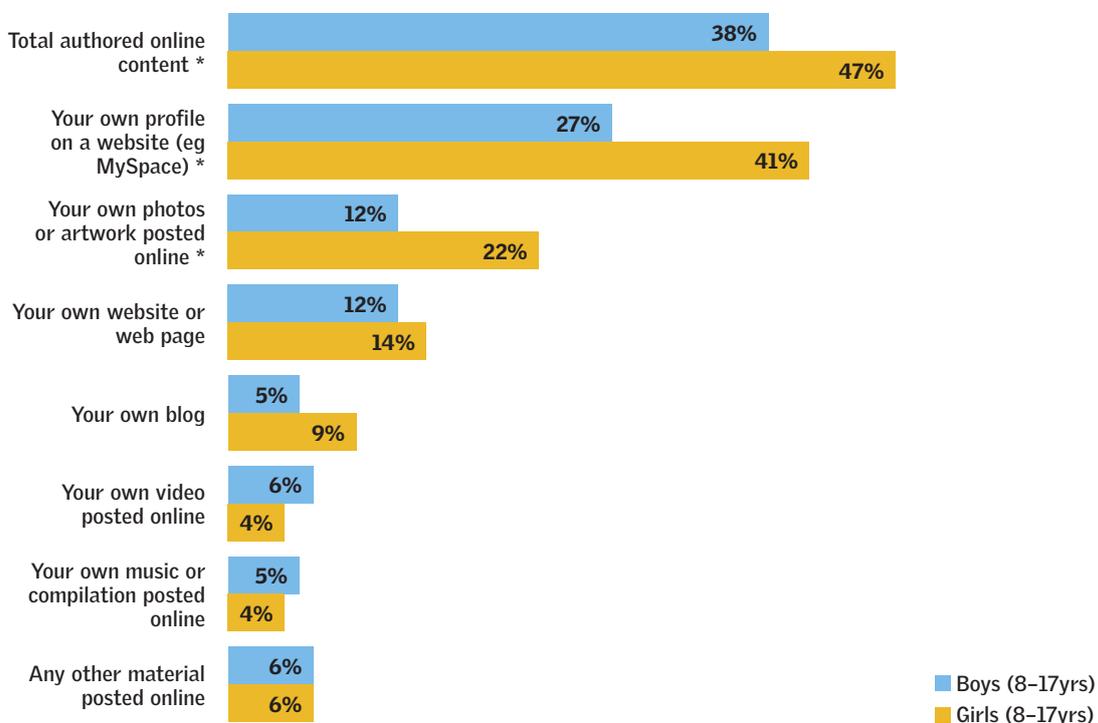


Figure 12: Authoring of online content by gender, 2007

Source: Day 4 diary question: "Do you currently have...? (Fill in as many circles as you need)" (n=541 boys; n=514 girls)

* denotes significant gender difference at $p < 0.01$

Note: care is needed when interpreting gender differences where the sample size is small, e.g. less than 20 per cent (or less than 100 young people)

Almost half of the young people aged 8–17 years said they had watched television shows, movies, cartoons or video clips downloaded from the internet (47 per cent). This was more commonly reported by boys (49 per cent) than girls (42 per cent).

Boys also reported watching downloaded video content more regularly than girls. Twenty-six per cent of boys said they watched downloaded video content on a daily or weekly basis, compared with 17 per cent of girls (Figure 13).

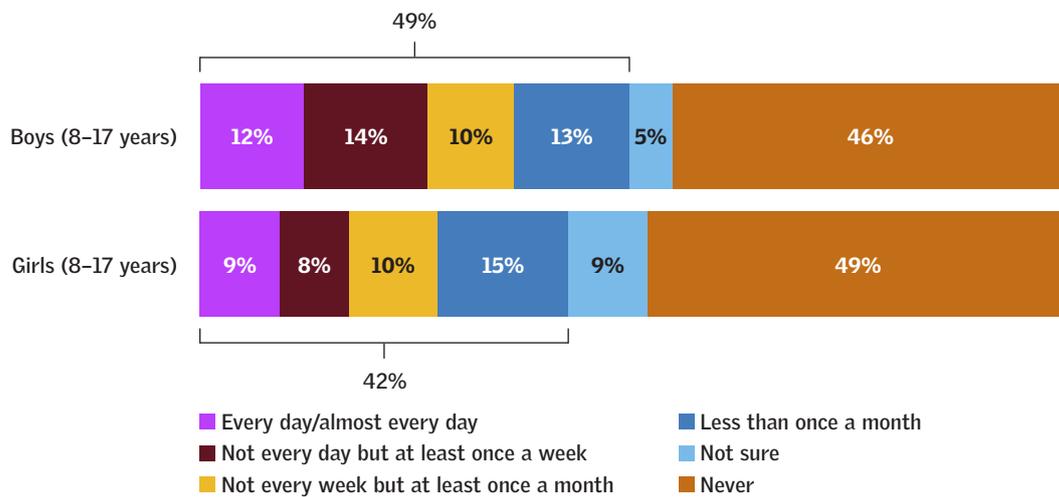


Figure 13: Watching downloaded video content by gender, 2007

Source: Day 4 diary question: How often (if at all) do you watch TV shows, movies, cartoons, video clips, etc that have been downloaded from the internet? (n=541 boys; n=514 girls)

Note: there is a significant gender difference between young people who watched downloaded video content for at least once a week at $p < 0.05$

Age differences

Participation in authoring web content and watching downloaded video content was strongly associated with young people’s age.

Authoring of web content increased steadily with age from three per cent for eight year olds to 72 per cent for 14 year olds, where it then stabilised and reached a high 78 per cent for 17 year olds.

Exposure to downloaded video content also increased with age, from a low 18 per cent among eight year olds to a high 66 per cent for 17 year olds.

OBSERVATIONS BY PARENTS

Parents of 8–17 year olds in the sample made a number of observations about their main child’s use of the internet when interviewed over the phone (Table 2).

Parents showed a general awareness of the kinds of internet activities undertaken by their sons and daughters. They reported that boys and girls were just as likely to use the internet overall (93 per cent of boys and girls). They also reported similar gender trends for young people’s participation in individual online activities to those recorded by young people in the three-day time-use diary.

Table 2: Parents' views on internet use by their main child, 2007

Activity	Total (n=751)	Boys (n=405)	Girls (n=346)
Uses the internet	93%	93%	93%
Viewing photos, images, graphics, pictures #	71%	67%	76%
Sending/receiving emails *	62%	53%	72%
Listening to/downloading music #	62%	58%	66%
Chatting/instant messaging *	57%	50%	66%
Visiting user-generated websites #	44%	40%	48%
Playing online games against others *	28%	39%	16%
Working on own website or material to post online *	25%	19%	31%
Using eBay/auction sites, internet shopping facilities	18%	20%	15%
Watching/downloading TV, cartoons, movies etc #	14%	18%	10%

Source: Parent survey question: "As far as you are aware, which of the following does your child do on the internet? For each activity I read out, just say 'yes', 'no' or 'not sure'"

* denotes significant gender difference at $p < 0.01$

denotes significant gender difference at $p < 0.05$

Parents said that more boys (39 per cent) than girls (16 per cent) used the internet to play games against other players online (reported by 28 per cent of boys and 18 per cent of girls in their diaries). They also said that more boys watched or downloaded web content than girls (18 per cent boys, 10 per cent girls).

Parents also confirmed that more girls than boys viewed photos or images online (76 per cent girls, 67 per cent boys), emailed (72 per cent girls, 53 per cent boys), listened to downloaded music (66 per cent girls, 58 per cent boys), chatted or messaged (66 per cent girls, 50 per cent boys), visited user-generated websites (48 per cent girls, 40 per cent boys), and worked on their own website or material to post online (31 per cent girls, 19 per cent boys).

PARENT MEDIATION

Among family households with an internet connection at home, 76 per cent of parents had rules, understandings or arrangements about when their child could use the internet (57 per cent) or what they could use it for (48 per cent). Time-related rules were more often in place for girls (60 per cent) than boys (54 per cent).

Content-related rules were also more commonly in place for girls (51 per cent) rather than boys (46 per cent). In particular, girls (18 per cent) were more likely than boys (eight per cent) to have content-related rules around online social interaction.

Gender was not associated with parents' level of concern about, or difficulty in managing, their child's internet use. However parents of girls (73 per cent) were more likely than parents of boys (60 per cent) to trust their child's judgement to choose internet content all or most of the time.

Listening to recorded music and radio

PARTICIPATION

Girls showed stronger interest than boys in listening to recorded music and radio. Significantly more girls (45 per cent) than boys (35 per cent) reported listening to recorded music (e.g. using a portable MP3 or MP4 player) in their three-day time-use diaries. Significantly more girls (31 per cent) than boys (25 per cent) also listened to the radio.

USE OF MP3 AND MP4 PLAYERS

Parents reported that 67 per cent of girls and 58 per cent of boys had their own MP3 or MP4 player.

From the day four questionnaire, more girls (52 per cent) than boys (41 per cent) had used an MP3 or MP4 player over the previous three days. The most popular activities were listening to music downloaded from the internet (36 per cent girls, 25 per cent boys) and listening to music copied from CDs (37 per cent girls, 28 per cent boys) (Figure 14).

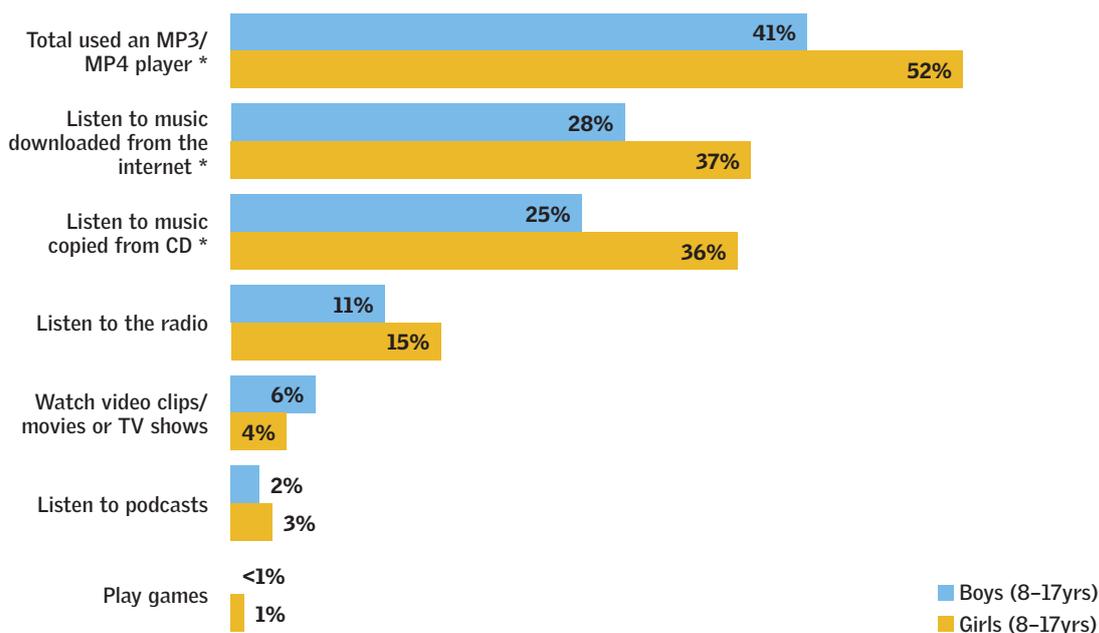


Figure 14: Use of MP3/MP4 players by gender, 2007

Source: Day 4 diary question: "If you used an iPod or other MP3/MP4 player over the last three days, did you...? (Fill in as many circles as you need)" (n=541 boys; n=514 girls)

* denotes significant gender difference at p<0.01

Note: care is needed when interpreting gender differences where the sample size is small, e.g. less than 20 per cent (or less than 100 young people)

AMOUNT OF TIME SPENT

From the diaries, girls and boys spent a similar amount of time listening to the radio (an average of 14 minutes and 12 minutes per day respectively). However, girls spent significantly more time listening to recorded music than boys (26 minutes girls, 18 minutes boys) (Figure 15).

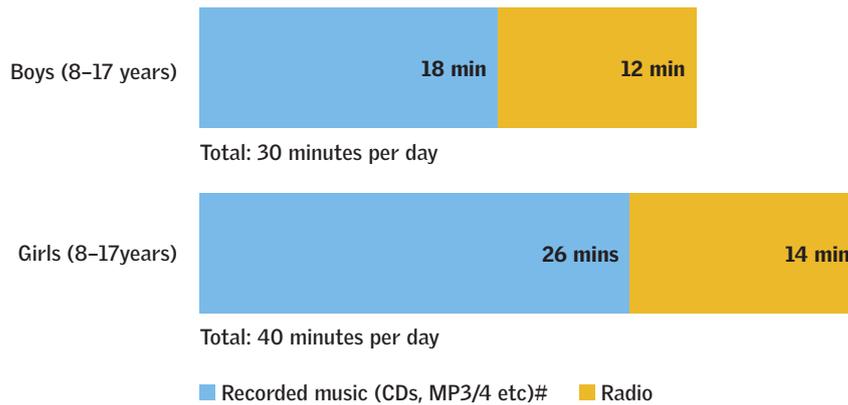


Figure 15: Average time spent listening to recorded music and radio by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

denotes significant gender difference at $p < 0.05$

Age differences

Average time spent listening to recorded music and radio increased with age. Eight–11 year olds spent an average 17 minutes per day listening to music, while 12–14 year olds spent 38 minutes, and 15–17 year olds spent one hour and six minutes.

More 15–17 year olds listened to recorded music and radio (59 per cent and 37 per cent respectively), than 12–14 year olds (47 per cent and 27 per cent) and eight–11 year olds (25 per cent and 24 per cent).

Use of MP3 or MP4 players also increased with age from 16 per cent of eight year olds, peaking at 79 per cent of 15 year olds, and declining to 61 per cent of 17 year olds.

CHANGE SINCE 1995

Young people spent more time listening to recorded music and radio in 2007 (an average 35 minutes per day) than they did in 1995 (28 minutes). However in 2007, considerably more time was spent listening to recorded music.

While time spent listening to the radio remained consistent between 1995 and 2007 (an average 15 minutes per day and 13 minutes respectively), young people listened to more recorded music in 2007 (an average 22 minutes per day) than they did twelve years earlier (13 minutes). This reflects the adoption of new technologies such as MP3 and MP4 players since 1995, which young people used in addition to tapes and CDs.

Gender differences in listening to recorded music and radio have not changed since 1995. As in 2007, girls in 1995 spent a similar amount of time to boys listening to the radio (18 minutes girls, 13 minutes boys) and significantly more time listening to recorded music (16 minutes girls, 10 minutes boys) (ABA 1996).

Use of mobile phones

PARTICIPATION

More girls than boys had their own mobile phone and girls were more intensive mobile users. Parents reported that 54 per cent of young people aged 8–17 years had their own mobile phone, comprising 63 per cent of girls and 46 per cent of boys. Mobile phone ownership was highest amongst teenage girls. For 15–17 year olds, 99 per cent of girls compared with 80 per cent of boys had their own mobile phone. Girls were also more likely to be mobile phone owners in the younger age groups. Eighty-one per cent of girls and 70 per cent of boys aged 12–14 years, and 22 per cent of girls and 15 per cent of boys aged 8–11 years, owned a mobile phone.

From the day four questionnaire, more girls (63 per cent) than boys (44 per cent) said they had used a mobile phone over the previous three days (Figure 16).

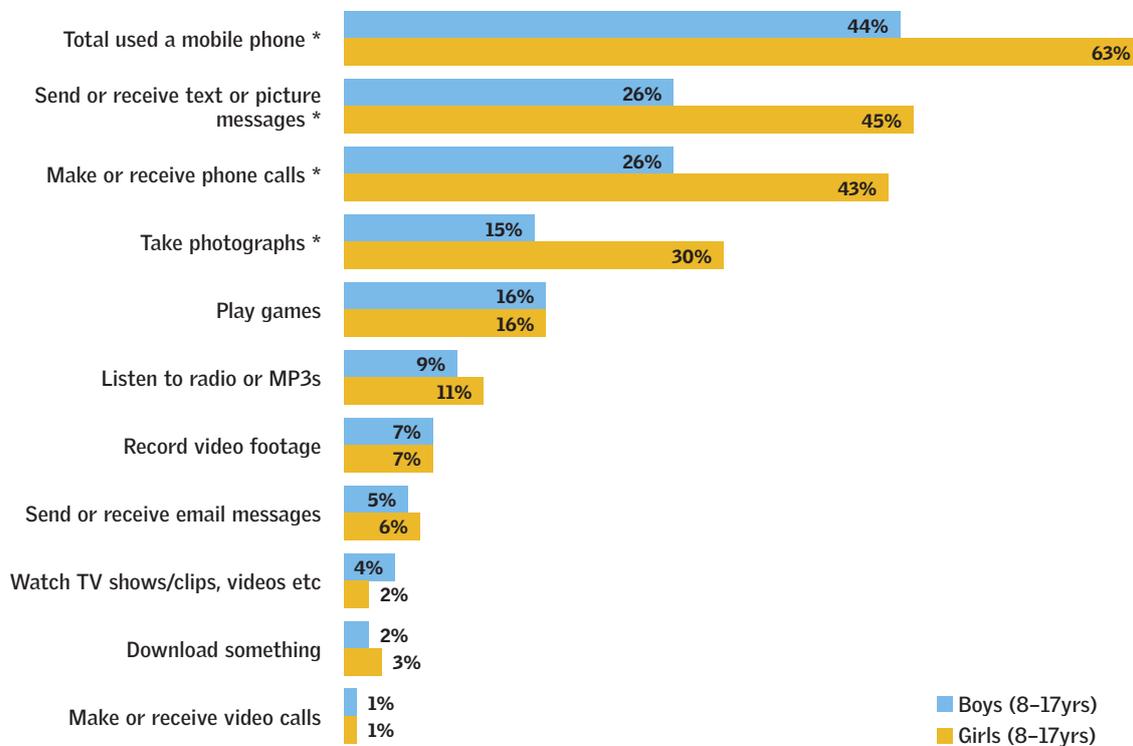


Figure 16: Use of mobile phones by gender, 2007

Source: Day 4 diary question: "If you used a mobile phone in the last three days, did you use it to...? (Fill in as many circles as you need)" (n=541 boys; n=514 girls)

* denotes significant gender difference at $p < 0.01$

Note: care is needed when interpreting gender differences where the sample size is small, e.g. less than 20 per cent (or less than 100 young people)

Text or picture messaging and talking were the most commonly reported uses of mobile phones by both boys and girls.

In keeping with girls' higher use of the internet for communications, more girls than boys sent or received text or picture messages (45 per cent girls, 26 per cent boys) and made or received phone calls (43 per cent girls, 26 per cent boys). More girls also took photographs using their mobile (30 per cent girls, 15 per cent boys).

Only in playing games (16 per cent girls, 16 per cent boys) and listening to music on mobiles (11 per cent girls, 9 per cent boys) did boys approach similar levels of use to girls.

AMOUNT OF TIME SPENT

From the diaries, girls spent significantly more time per day using a mobile phone than boys (an average 23 minutes girls, 13 minutes boys). Girls spent an average seven minutes per day talking, 14 minutes messaging, one minute watching video content, using the internet and making video calls and one minute doing other activities such as playing games or taking photographs. Boys spent four minutes per day talking and nine minutes messaging (Figure 17).

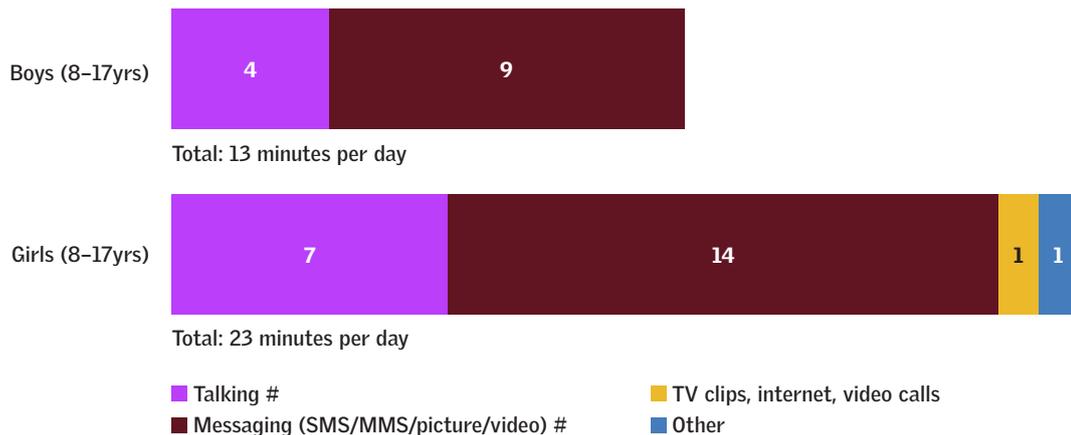


Figure 17: Average time spent per day using a mobile phone by gender, 2007

Source: Diary (n=522 boys; n=478 girls)

denotes significant gender difference at $p < 0.05$

Age differences

Mobile phone use increased with age from 16 per cent of eight year olds to 90 per cent of 17 year olds.

Average time spent using a mobile phone also increased with age. Eight–11 year olds used a mobile for an average of three minutes per day, those aged 12–14 years for 19 minutes, and 15–17 year olds for 43 minutes.

PARENT MEDIATION

Reflecting girls greater use of mobile phones, more parents of girls reported having concerns about mobile phone use (31 per cent), compared with parents of boys (16 per cent).

More parents of girls had difficulty managing their daughter's mobile phone use. Twenty-two per cent of parents of girls said that management of mobile phone use was either very or fairly difficult, while 36 per cent said it was very easy. In comparison, amongst parents of boys, 15 per cent found management very or fairly difficult and 45 per cent found it very easy.

Among parents of girls who used mobile phones, 77 per cent had rules, understandings or arrangements around mobile phone use. This compares to 71 per cent of parents of boys. In particular more parents of girls had rules about how often a mobile phone could be used (60 per cent girls, 45 per cent boys).

Favourite media and communications activities

Young people reviewed a list of different leisure activities, covering electronic media and communications activities and non-media related activities that were replicated from the diary. They then identified the three activities they most liked to do for fun—when by themselves and with other people. This information provides an additional layer of understanding about boys and girls preferences for different leisure activities.

FAVOURITE ACTIVITIES WHEN ALONE

The top five leisure activities that girls liked to do for fun when by themselves included three electronic media and communications activities, whereas boys nominated two. Watching free-to-air television was included in the top five by both boys and girls. Boys included playing video and computer games, whereas girls included listening to recorded music and messaging online (Table 3).

Table 3: Favourite activities that young people liked to do for fun when alone by gender, 2007

Activity	All young people (n=1,013)		Boys 8–17yrs (n=520)		Girls 8–17yrs (n=493)	
	Rank	%	Rank	%	Rank	%
Watching free TV *	1	30%	2	35%	3	24%
Reading, drawing and writing letters *	2	29%	4	22%	1	35%
Listening to recorded music *	3	25%	6	20%	2	30%
Playing video/computer games—NOT online *	4	24%	1	36%	9	12%
Physical activity	5	23%	3	25%	5	21%
General activities/play *	6	18%	5	21%	7	15%
Messaging/chatting online *	7	17%	10	12%	4	23%

Source: Day 4 diary question: "Of all the things listed in the diary, which three do you most like to do for fun?... a) by yourself (fill in three circles) b) with other people (fill in three circles)"

* denotes significant gender difference at $p < 0.01$

Among the electronic media and communications activities, girls ranked listening to recorded music in second place (30 per cent of girls), followed by watching free-to-air television (24 per cent) and messaging or chatting online (23 per cent) as activities they liked doing when alone. Among the non-media activities reading, drawing and writing letters was ranked first by girls (35 per cent of girls) and physical activity ranked fifth (21 per cent).

When by themselves, more girls than boys showed a preference for:

- listening to recorded music (30 per cent girls, 20 per cent boys)
- messaging or chatting online (23 per cent girls, 12 per cent of boys)
- messaging people on their mobile phone (nine per cent girls, four per cent boys)
- visiting social websites such as MySpace (15 per cent girls, four per cent boys).

Boys' favourite activities were playing video or computer games⁸, (36 per cent of boys), followed closely by watching free-to-air television (35 per cent). The remaining three favourite activities for boys did not involve the use of electronic media and communications technologies: physical activity was ranked third (25 per cent of boys); reading, drawing and writing letters was fourth (22 per cent); and general activities or play ranked fifth (21 per cent).

When by themselves, more boys than girls showed preferences for:

- playing video or computer games—including games against other players online (47 per cent boys, 14 per cent girls)
- watching free-to-air television (35 per cent boys, 24 per cent girls)
- watching subscription television (15 per cent for boys, 11 per cent girls).

FAVOURITE ACTIVITIES WHEN WITH OTHERS

Both boys and girls preferred to do non-media related activities when they were with other people (Table 4).

Table 4: Favourite activities that young people liked to do for fun when with others by gender, 2007

Activity	All young people (n=1,013)		Boys 8–17yrs (n=520)		Girls 8–17yrs (n=493)	
	Rank	%	Rank	%	Rank	%
Physical activity *	1	49%	1	55%	2	44%
Going out *	2	38%	4	30%	1	46%
General activities/play #	3	36%	2	39%	3	32%
Hanging out *	4	31%	3	31%	4	31%
Watching DVDs/videos *	5	23%	7	19%	5	26%
Watching free TV	6	19%	6	21%	6	17%
Playing video/computer games—NOT online *	7	14%	5	22%	12	6%

Source: Day 4 diary question: "Of all the things listed in the diary, which three do you most like to do for fun?... a) by yourself (fill in three circles) b) with other people (fill in three circles)"

* denotes significant gender difference at $p < 0.01$

denotes significant gender difference at $p < 0.05$

Boys' favourite activity when with others was physical activity (55 per cent of boys), followed by general activities and play (39 per cent), hanging out (31 per cent) and going out (30 per cent). More boys than girls showed a preference for:

- physical activity (55 per cent boys, 44 per cent girls)
- general activities and play (39 per cent boys, 32 per cent of girls)
- playing video or computer games—not online (22 per cent boys, six per cent girls).

8. Not including online games.

Girls' favourite activity when with others was going out (46 per cent of girls), followed by physical activity (44 per cent), general activities and play (32 per cent) and hanging out (31 per cent). More girls than boys showed a preference for:

- going out (46 per cent girls, 30 per cent boys)
- watching DVDs or movies (25 per cent of girls, 19 per cent boys).

Additionally, more girls (11 per cent) than boys (six per cent) nominated chatting or messaging online as a favourite activity to do with other people.

Both boys and girls ranked hanging out as their fourth favourite thing to do with other people (31 per cent of boys and girls). Watching free-to-air television was ranked sixth by both boys (21 per cent) and girls (17 per cent).

Equipment in young peoples' bedrooms

Parents reported that significantly more boys than girls had a games console in their bedroom (16 per cent boys, six per cent girls).

A similar proportion of boys and girls had a computer in their bedroom (19 per cent boys, 17 per cent girls) and accessed the internet from their bedroom (11 per cent boys, 10 per cent girls). The majority of these young people had broadband connections (10 per cent boys, nine per cent girls).

Boys and girls were just as likely to have a television (23 per cent boys, 18 per cent girls), DVD player (11 per cent boys, 8 per cent girls) or VCR (6 per cent boys, 5 per cent girls) in their bedroom.

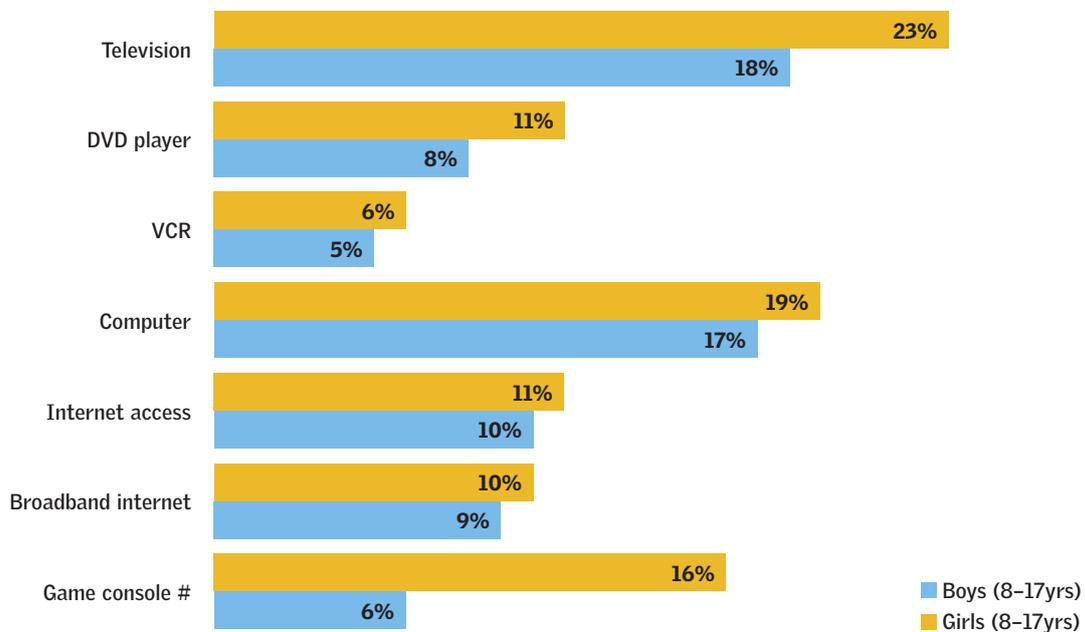


Figure 18: Equipment in the main child's room by gender, 2007

Source: Parent survey (Parents of boys n=405; parents of girls n=346)

denotes significant gender difference at p<0.05

CHANGE SINCE 1995

In 2007, fewer boys had a television in their bedroom (23 per cent) than in 1995 (31 per cent)—a significant drop of eight per cent (ABA 1996).

In 1995, the gender difference for having a television in the bedroom was significant (31 per cent boys, 19 per cent girls) (ABA 1996). The difference was not significant in 2007 (23 per cent boys, 18 per cent girls).

The gender difference for game consoles in 2007 (16 per cent boys, six per cent girls) was similar to that found in 1995 (17 per cent boys, eight per cent girls).

Access to computers and the internet in young people's bedrooms was rare in 1995 (eight per cent and less than one per cent respectively). Bedroom access to VCRs in 1995 was five per cent for boys and three per cent for girls.

Conclusion

In mid-2007 both boys and girls aged 8–17 years spent about half their aggregate discretionary time on electronic media and communications activities such as watching television, playing video and computer games, using the internet, listening to music, and using a mobile phone.

However, boys and girls had significantly different preferences for individual electronic media and communications activities. This was reflected in different levels of participation and time allocated to certain activities. Substantial changes to time spent doing activities by boys and girls also occurred between 1995 and 2007.

In 2007, watching television was the most time-consuming activity regardless of gender, as was the case twelve years ago. Notably, boys watched significantly less television than they did in 1995—an average 20 minutes less per day. This decline coincided with a reduction in the proportion of boys who had a television in their bedroom—23 per cent in 2007 compared with 31 per cent in 1995.

From 1995 to 2007, boys took advantage of technological developments and particularly the internet to expand their interest in video and computer gaming. Time spent playing games almost doubled for boys with playing games against other players online accounting for 40 per cent of total gaming time. Boys also nominated gaming as their favourite activity to do when by themselves, re-affirming the popularity of this activity for boys.

About a quarter of boys used the internet to download and watch video content on at least a weekly basis. Almost two-thirds of 14–17 year old boys created and posted their own material online (65 per cent). This included 52 percent who had a personal profile on a social networking website.

In 2007 girls also embraced the internet by spending the same amount of time online as boys. Girls were higher users of online communications than boys, spending an average 38 minutes per day messaging or chatting online, emailing, and visiting social websites. Eighty percent of 14–17 year old girls authored their own online content, including 72 per cent who had a personal profile on a social networking website.

Using a mobile phone was also a popular communication activity for girls, who spent an average 23 minutes per day texting, talking, and doing other activities on a mobile.

Listening to music continued to be an important activity for both boys and girls. Time spent listening to the radio remained consistent since 1995. However, the adoption of MP3 and MP4 players contributed to an increase in the amount of time spent listening to recorded music. This was especially for girls who spent an average 10 minutes more per day listening to recorded music in 2007. Sixty-seven per cent of girls and 58 per cent of boys had their own MP3 or MP4 player.

REFERENCES

Australian Broadcasting Authority and Office of Film and Literature Classification 1996, *Families and Electronic Entertainment*, ABA and OFLC, Sydney

Australian Communications and Media Authority (ACMA) 2007 *Media and communications in Australian families 2007*, Report of the Media and Society Research Project, Sydney, www.acma.gov.au/mediareports