No. 5

NGfL Research and Evaluation Series

Young people and ICT

Findings from a survey conducted Autumn 2001

department for
education and skills
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This report was prepared for the DfES by Taylor Nelson Sofres – Social.

Young people and ICT

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1 Executive Summary

1.1 Introduction

In 2001 the Department for Education and Skills commissioned Taylor Nelson Sofres – Social to undertake a survey of the attitudes and experience of young people aged 5–18 years and their parents with regard to the use of Information and Communications Technology (ICT) at home and at school.

1.2 Key findings

- 78% of households had a personal or laptop computer in the home. This increased with the age of the child and was low among those in social grades D and E (59%) relative to other social grades.
- 64% of households had access to the Internet at home. The pattern of access was similar to that for ownership of computers. Access among households in social grades D and E was 41%.
- 99% of children had used computers at home, school or elsewhere. 23% of those who used them at school did not use them at home. This group had a relatively high incidence among those in social grades D and E and those in Key Stage 1.
- 73% of children used the Internet at home, school or elsewhere. Those in social grades D and E were more likely than other social grades to use the Internet at school but not at home.
- The main reasons why parents had not purchased a computer for the home were cost related. This was particularly true of households in social grades D and E.

1.3 Penetration of ICT within household

Some 78% of households had a personal computer or laptop. Groups where the incidence was lower relative to others were those with children in Key Stage 1 (67%), households in social grades D and E (59%) and single parents (63%).

According to parents, in 13% of households with a computer that is used regularly, the child who was the subject of the interview 'owned' the main computer in the household. This figure rose with age from 7% (where the child was in Key Stage 1) to 19% (where the young person was in post-16 education).

Some 64% of households had access to the Internet at home. Access was related to the key stage of the child and social grade. Groups noting low access at home relative to others were those in Key Stage 1 (54%), social grades D and E (41%), single parents (44%) and council/housing association tenants (44%).

Of households with Internet access, 73% had access via a modem, 2% via ISDN, 6% via ADSL and 14% via a cable modem.

Of households without a computer, 31% had an interactive digital TV while 71% had a games console.

1.4 Expenditure on ICT

The average annual household expenditure on ICT was £974 (telephone and mobile phone costs not included). The average contribution from the child was £45 (5% of the total). There was a strong link between expenditure and social grade.

1.5 Young people's usage of computers and the Internet

Overall, 99% of children used computers either at home, school or elsewhere. Hence, computer usage amongst children was almost universal. This usage breaks down as follows:

- School: 93%
- Home: 75%
- Total access at school or home: 98%
- Additional access from other sources: 1%

Some 23% of those who used computers at school did not use them at home.

The average amount of time per week spent using a computer in any location for those in Key Stage 3 and above was 11.5 hours, of which 3.5 hours were attributed to playing games. The time spent on non-games related uses increased with the age of the child.

Across all young people who had access to a computer at home, the average time per week spent using a computer there was 7.5 hours. This increased from 4.4 hours for children in Key Stage 1 to 10.7 hours for post-16s.

Overall, 73% of young people used the Internet at home, school or elsewhere. This breaks down as follows:

- School: 56%
- Home: 45%

- Total access at school or home: 72%
- Additional access from other sources: 1%

Internet use at school increased with age from 16% at Key Stage 1 to 66% at Key Stage 4 and 70% for post-16s.

Some 26% used the Internet at school but not at home.

Although 64% of young people had access to the Internet at home, only 45% used it there. The difference in these figures is accounted for mainly by lower use amongst children in Key Stage 1.

Where children from households without a computer used computers and accessed the Internet outside school they principally did so at a friend or relative's house or at a library.

1.6 Nature of young people's computer and Internet usage

Among those in Key Stages 1 and 2 the main use of computers at home was to play games (88%). Homework was quoted the most frequently by children in Key Stages 3 and above (85%).

Boys had a wider repertoire of uses than did girls: the largest differences occurred in relation to playing games (69% vs 49%) and accessing the Internet (58% vs 45%).

Amongst older children, the main computer-based activities at school were related to writing reports (60%), Internet access (49%) and analysing data (34%).

The range and sophistication of uses increased with age.

Children in Key Stages 1 and 2 were most likely to say that their main reasons for accessing the Internet were to play games (47% of those who use the Internet at home) and for help with school projects (39%).

The three main reasons for accessing the Internet outside school for older children were to gather information for school/college work (79%), send/receive e-mails (62%) and collate information for study/learning (59%).

As with computer usage, the range and sophistication of uses increased by key stage. There were also differences by social grade with those in social grades D and E using the Internet for a narrower range of purposes than other regular Internet users.

1.7 Barriers to computer and Internet usage in the home

Those parents of children in Key Stages 1–4 who did not have a computer in the home were asked why they had not purchased one. The main reasons were related to cost. This was expressed either as a lack of money or that the cost of a computer would be too high. The cost factor was most likely to be mentioned by those in social grades D and E (76% of non-purchasers in social grades D and E, compared with 52% of those in social grade C2, 47% of those in social grade C1 and 45% of those in social grades A and B). Results were similar by key stage.

Post-16s were asked directly why they had not purchased a computer. The main factors to be quoted were lack of money and the cost of the computer.

The barriers to future purchase of a computer were similar to those for reasons for not having purchased a computer to date. Those in social grades D and E were more likely to foresee barriers and cost of equipment as their main perceived barrier.

Children in Key Stages 3–4 and post-16 who used computers at home were asked whether there was anything that prevented them from using a computer more often. Some 43% said that there were no barriers. The three main issues to be mentioned were sharing with someone else (22%), lack of time (17%) and lack of access to the Internet (10%).

The three main barriers mentioned by those in Key Stages 3 and above relating to making more use of computers at school were lack of time (45%), a limited amount of computers (23%) and the need to share computers with others (17%). Some 18% said that there were no barriers to increased use at school.

Children in Key Stages 3–4 and post-16 were also asked whether they ever had difficulty in using a computer at school owing to the lack of adequate facilities. Some 29% said that they did have such difficulties. Those in private or independent schools were less likely to claim to have a lack of adequate facilities than those in state schools (14% vs 30%).

1.8 Interest in initiatives

Parents were presented with several hypothetical initiatives related to improving school resources or communications with the school and access to ICT, and

were asked whether they would be likely to take advantage of each initiative.

The highest levels of interest were for CD-ROMS / DVDs either to borrow from a school library, to buy or to rent.

A secondary tier of initiatives were Internet related, for example using an Internet security system, looking up details of the school performance on its web site or looking up school timetable/syllabus information on its web site.

Children in Key Stages 3–4 and post-16 were asked what additional ICT resources they would find useful at home.

Internet-related references were the most common, whether this was free access, access at all or faster access. Those in social grades D and E were more likely than other social grades to mention Internet access and free Internet access.

1.9 Attitudes towards using computers/the Internet

Attitudes of children in Key Stage 3 and above, and their parents, towards computers were positive. Both groups felt that using computers was enjoyable/enjoyable for their children (80%/85%) and that they allowed children to be more creative (81%/74%).

Children also agreed that computers had helped them to produce work of which they were really proud (86%) and that having access to the Internet was likely to help the quality of their work (82%).

Those parents without a computer at home were more likely than those with a home computer to agree that their child “would work better at school if they had greater access to computer facilities”.

2 Introduction

2.1 Background

The National Grid for Learning (NGfL) Programme supports the Government's vision for delivering higher standards of education and increasing employability through the use of Information and Communications Technology (ICT). A vision for the future of ICT in schools is provided in the paper *Transforming The Way We Learn*, available at http*://www.dfes.gov.uk/ictfutures/*.

To help inform the development of the Government's policy, research was required in the area of young people's access to ICT. The remit was for a detailed analysis of the attitudes and experience of young people aged 5–16 (Key Stages 1–4) and their parents with regard to the use of ICT both in and out of school. A further requirement was to include those aged 17–18 (post-16s) (and their parents) who were not in tertiary education.

As a result Taylor Nelson Sofres – Social was commissioned to undertake this research. Fieldwork was conducted in England in homes in the period 21st September to 29th October 2001, using CAPI[1]. A total of 1748 paired interviews[2] were completed.

2.2 Survey objectives

The main aims of the research were to:

- examine the extent and patterns of use of ICT[3] and the Internet by young people, both in and out of school, particularly educational usage
- examine the extent of ICT and Internet penetration in the home and wider out-of-school environment
- identify (as far as possible) the impact of ICT and the Internet on learning and attainment.

In particular, information was required on the following areas:

- Levels of ICT ownership and Internet access in the home and young people's access to this
- Levels of parent (and young people's) expenditure on ICT and the Internet in the home
- The extent and nature of ICT and Internet use (educational and non-educational), at school, at home and in other out of school settings, including:
  - types of technologies, connectivity, applications and on-line resources
  - frequency, duration and location of use
  - reasons for use/activities undertaken
- Views of parents and young people on the educational benefits of ICT and the Internet including:
  - improvements in attainment and other aspects of learning such as motivation, creativity, independence etc.
- Their perceptions of barriers to increased access to/use of ICT and how these might be overcome.

1 CAPI (Computer assisted personal interviewing): Interviewer administered interview, data collected electronically using a palmtop computer.
2 Interviews conducted with one child and their parent per household.
3 A broad definition of ICT was used, including desktop, portable and handheld computers, digital TV, games machines, mobile phones and WAP phones.

3 The Survey Method

Full details of the research method are given in the appendices. This section summarises the key aspects of the method. (Copies of the questionnaires used can be found on the Becta research web site.) http://www.becta.org.uk/research/reports/ngfl_es.html

The research was conducted in England in the period 21st September to 29th October 2001, using computer-assisted personal interviewing (CAPI). A total of 1748 paired interviews (with parents and children) were completed in 229 sample points. Sampling was carried out and quotas were set to ensure a representative and robust sample.

Throughout this report we refer to the social grade of respondents. Social grade is based on the Chief Income Earner in the household. The Chief Income Earner is the person with the largest income.

Social Grade	Social Status	Chief Income Earner's Occupation
A	Upper Middle Class	Higher managerial, administrative or professional
B	Middle Class	Intermediate managerial, administrative or professional
C1	Lower Middle Class	Supervisory or clerical, and junior managerial, administrative or professional
C2	Skilled Working Class	Skilled manual workers
D	Working Class	Semi and un-skilled manual workers
E	Those at lowest level of subsistence	State pensioners or widows (no other earner), casual or lowest grade workers

Throughout the report we analyse data by key stage. Figure 1 shows the age of child in each school year and how this relates to the key stages.

Key Stage Definitions

Figure 1

Date of birth	Age	School year	Key Stage
1/9/94 – 31/8/96	5 – 7	1 – 2	1
1/9/90 – 31/8/94	7 – 11	3 – 6	2
1/9/87 – 31/8/90	11 – 14	7 – 9	3
1/9/85 – 31/8/87	14 – 16	10 – 11	4
1/9/83 – 31/8/85	16 – 18	12 – 13	(post – 16)

The data were also analysed by demographics including ethnicity. The ethnic groups used were White, Asian (Indian, Pakistani, Bangladeshi, Chinese and Other Asian) and Black/Other (Black Caribbean, Black African, Black other, Other). Only 49 respondents were classified as 'Other' (that is, they felt they didn't fit into any of the ethnic groups listed) and they were grouped with the Black ethnic groups as their views most closely resembled this group.

4 ICT and the Home

4.1 Penetration of ICT by household

- 78% of households had a computer in the home
- Incidence was lower for households in social grades D and E, single parents and children in Key Stage 1
- 88% of households had mobile phones
- 71% of households had games consoles

Parents were asked what types of ICT they had in their home. The results from this question relate to access within the household (including owned, rented or borrowed equipment), not the child's level of access or ownership or usage. The results by key stage of child and social grade are shown below in Figures 2 and 3. (Where results are shown by key stage, this refers to the key stage of the child interviewed, and does not take into account the presence of other children of different ages in the household.)

Household Access to ICT by Key Stage of Child

Figure 2	Total	1	2	3	4	Post-16
Base: All households	1748	358	532	380	284	194
	%	%	%	%	%	%
Personal computer	76	64	72	76	85	88
Laptop computer	13	13	13	14	12	12
Personal or laptop computer	78	67	75	79	86	88
Mobile phone	88	87	85	89	93	89
Games console	71	60	74	79	74	59
Interactive digital TV	36	38	35	37	32	38
DVD player	23	18	19	26	28	27
WAP/3G phone	8	6	8	8	10	10
Palmtop computer	2	3	2	2	1	4
None of these	2	3	2	1	*	*

Some 78% of households had a personal or laptop computer. The penetration of computers increased with the key stage of the child, from 67% among those in Key Stage 1 to 88% of post-16s. There was also a link with the age of the parent: the youngest parents (aged 16–30) were the least likely to have a computer in the household (56%).

Other ICT devices to receive high mentions were mobile phones (88%) and games consoles (71%). Household ownership of mobile phones showed no relationship to the age of the child. However, games consoles were more likely to be owned by households where the child was in Key Stages 2–4 (76%) than in Key Stage 1 (60%) or post-16 (59%), and also in households where the child was male (79% male and 62% female).

Interactive digital TVs were owned in 36% of households and there was no relationship to the age of the child.

DVDs were mentioned by 23% of households. Here there was a relationship to the age of the child (19% of those in Key Stages 1–2, 27% of those in Key Stages 3–4 and post-16s).

Household Ownership of ICT by Social Grade

Figure 3	Total	AB	C1	C2	DE
Base: All households	1748	304	452	413	579
	%	%	%	%	%
Personal computer	76	91	86	78	58
Laptop computer	13	30	17	8	4
Personal or laptop computer	78	94	89	79	59
Mobile phone	88	92	89	89	84
Games console	71	63	67	76	75
Interactive digital TV	36	36	36	37	35
DVD player	23	26	25	23	18
WAP/3G phone	8	14	8	7	7
Palmtop computer	2	6	4	1	*
None of these	2	1	1	2	2

Social grade was an important discriminator in ownership of ICT. Some 94% of respondents in households in social grades A and B owned personal or laptop computers. This fell to 89% in households in social grade C1, 79% in households in social grade C2 and 59% in households in social grades D and E.

The incidence of computers was also lower among single parents (63%) and in households where the child had a statement of special educational needs (63%, compared with 79% of those who do not).

Households in social grades D and E were the least likely to own most of the sources of ICT. For example, 4% owned laptop computers compared to an incidence of 30% among households in social grades A and B. Exceptions were interactive digital TVs where there were no significant differences by social grade, and games consoles where the incidence was higher among those in social grades C2, D and E compared to those in social grades A, B and C1 (75% vs 66%).

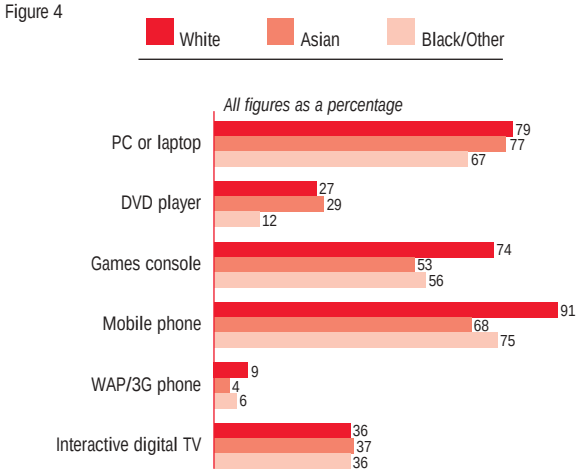
Of those households with laptop computers, 75% were households in social grades A, B and C1, and 86% were households where there already was a personal computer. The majority of laptops are therefore additional computer facilities in the home rather than a sole computer.

This was even truer of palmtop computers. Of those households with palmtop computers, 90% were households in social grades A, B and C1, and 98% were households where there was already a personal computer or laptop.

Black/Other respondents were less likely to own most of the sources of ICT than other ethnic groups. For example, 67% of the Black/Other group owned a PC or laptop, compared with 77% of the Asian group and 79% of the White group. The exception to this was interactive digital TV where ownership was the same across all ethnic groups.

Penetration of ICT in household by ethnic group

Figure 4



Base: All households (1748)

In households with a computer, the White group and the Asian group were more likely than Black/Other groups to have specialist equipment on their computer such as filtering software, a CD-Rom drive or a DVD drive.

4.2 Access to the Internet at home

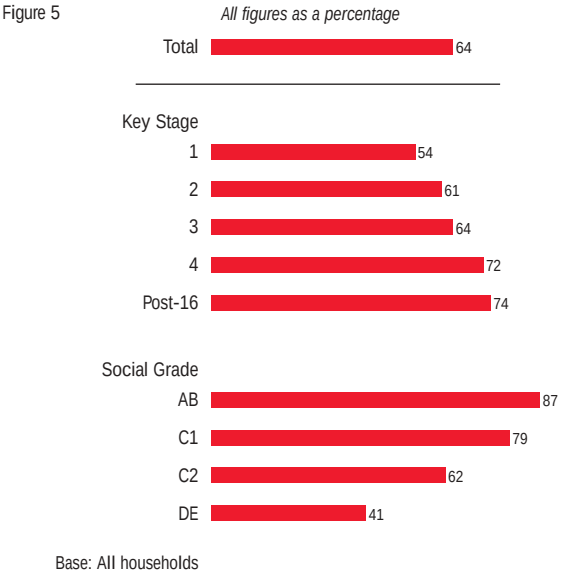
- 64% of households had access to the Internet at home
- Access related to key stage of child and social grade
- Of households with Internet access, 73% had access via a modem

Questions were asked of the parent and child to assess whether there was access to the Internet from the home. Of those with a personal computer or laptop in the home, 80% were connected to the Internet. Of the total sample, 2% did not have a personal computer or laptop but were connected to the Internet (through other means such as interactive digital TV or games consoles).

Household Internet access penetrations by key stage and social grade are shown in Figure 5.

Household access to the Internet

Figure 5



Base: All households

Of the total sample, 64% of households had access to the Internet at home. Access was related to the key stage of the child. Of those in Key Stage 1, 54% had access to the Internet at home. Of those in Key Stage 4, 72% had access and 74% of post-16s had access at home.

Access was also related to social grade. Whereas 87% of households in social grades A and B had access to the Internet from home, this applied to only 41% of households in social grades D and E.

Access to the Internet at home was also related to ethnic origin; Asian respondents (52%) and Black/Other respondents (53%) were less likely to have access than White respondents (61%).

Other groups showing low Internet access were:

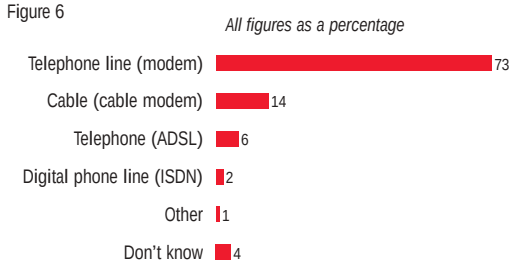
- Single parents (44%)
- Council/housing association tenants (44%)
- Those living in Yorkshire/Humberside (57%), the North West (58%) and the North (59%). The average in these three regions was 58% compared to 67% for the rest of the country.

Within respondents in social grades D and E, the group showing the lowest in-home access to the Internet were single parents. Some 33% of single parents in social grades D and E had access to the Internet compared with 45% of other households in social grades D and E.

The parents were also asked how the Internet was accessed in their household. The results are shown in Figure 6.

Method of Internet Access at Home

Figure 6



Base: All with Internet access (1028)

The majority accessed the Internet via a telephone line modem (73%). Some 14% mentioned that they used a cable modem. Households in rural areas were more likely than those in urban areas to access the Internet via a telephone line modem (79% vs 70%). Households in urban areas were more likely than those in rural areas to have a cable modem (16% vs 9%).

Cable modem access was greatest in the West Midlands (20%) and East Midlands (19%) and lowest in Yorkshire/Humberside (10%) and the South West (10%). Access via ADSL was greatest in the South West (10%).

4.3 Expenditure on ICT

- The average annual household expenditure on ICT was £974 (not including telephone and mobile costs)
- The average contribution from the child was £45 (5% of the total)
- There was a strong link between expenditure and social grade, with those in social grades A and B showing a higher expenditure than those in social grades D and E

Parents were asked what the household expenditure had been on various ICT facilities. In some cases these were asked for a monthly basis. On others, such as hardware purchases, the question was asked for an annual basis. The data were re-calculated to put all expenditure on an annual basis.

Included in the calculations were the following:

- Computers bought in the last year
- Peripherals such as printers, scanners, digital cameras bought in the last year
- Computer software, games, CD-ROMs bought in the last year
- DVD hardware and software bought in the last year
- Other electronic games/software bought in the last year
- Monthly cost of interactive digital TV subscriptions
- Other interactive digital TV costs in the last year
- Annual subscription to an Internet Service Provider.

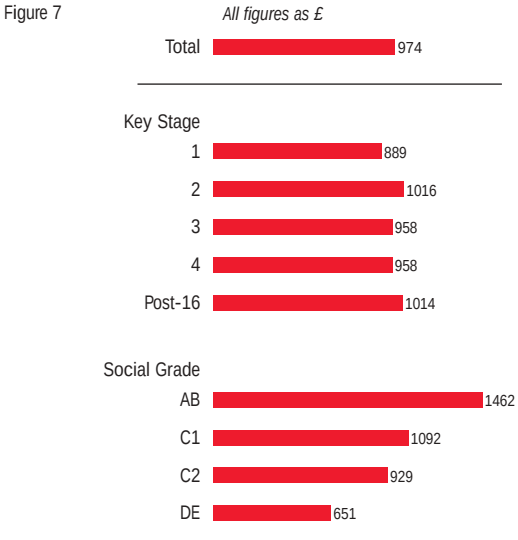
(Telephone and mobile bills were not included, as it was not possible to dissociate the ICT-related element from the overall charge.)

The average annual household expenditure on ICT was £974. Figure 7 shows that there is some relationship between expenditure and the key stage of the child. The average expenditure in households where the child was in Key Stage 1 was below average at £889. In households where the child was in Key Stage 2 the total was £1016, and in households where the child was post-16 it was £1014. In Key Stages 3–4 the total was close to the average.

There was a strong link with social grade. The average expenditure in households in social grades A and B was £1462. The average expenditure in households in social grades D and E was £651.

Average annual household expenditure on ICT (excluding telecoms charges)

Figure 7



Base: All households (1748)

The household expenditure on ICT of Asian households (£1108) was more than Black/Other households (£971) or White households (£964).

Although White respondents were more likely to own ICT equipment, they spent less money on their equipment than other ethnic groups. For example, the White group spent relatively less money than other ethnic groups on buying their computers, peripheral items for computers, computer software, games and equipment for games consoles, phone and mobile phone bills, digital TV and an Internet Service Provider.

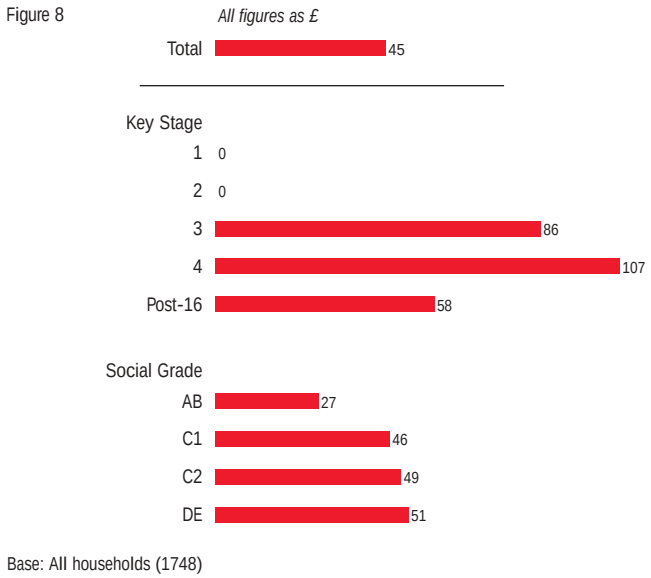
The average annual contribution by the children in the sample to this total was £45 (5% of the total). This is shown in Figure 8.

No child expenditure was reported by the parents of children in Key Stages 1–2. Expenditure was greatest among those in Key Stage 4 who spent an average of £107 per annum (11% of the total household expenditure).

By social grade, expenditure by children was lowest in households in social grades A and B. Their contribution was £27 per annum (2% of the total). Expenditure by children in social grades D and E was £51 per annum (8% of the total household expenditure).

Child contribution to annual ICT expenditure (excluding telecoms charges)

Figure 8



Base: All households (1748)

Parents were asked the expenditure questions about how much the child contributed to the Internet cost and peripheral items for computers. Children in Key Stages 3 and 4 and post-16s were asked directly about the cost of WAP and mobile phones (initial cost and monthly cost) and games consoles accessories and games.

Where there was a computer in the household the parent was asked how the computer had been paid for.

Figure 9 shows that the majority of the computers were bought using household money (80%). However, this was less true for households in social grades D and E (70%) than it was for other social grades (83%). They were more likely than others to say that the purchase had been made using funds from friends or relatives (15% vs 6%) or that it was a gift (6% vs 2%).

How the main computer in the household had been paid for

Figure 9	Total	AB	C1	C2	DE
Base: All with a personal computer/laptop	1231	277	369	290	295
	%	%	%	%	%
Purchased using household expenditure	80	79	85	82	70
Expenditure from friends/ relatives	8	4	6	6	15
Gift	3	1	1	6	6
Leased	2	1	2	1	3
Borrowed from employer	2	4	2	1	*

4.4 Ownership of ICT by young people

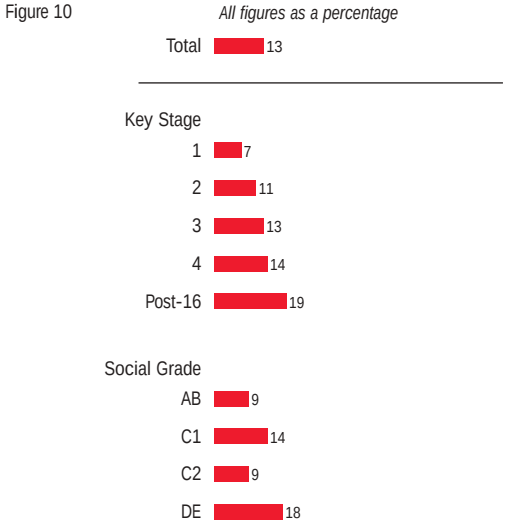
- 13% of parents said their child owned the main computer in the household
- The figure rose from 7% where the child was in Key Stage 1, to 19% where the child was post-16
- 40% of children owned a games console, and 34% a mobile phone

As well as asking parents about the presence of ICT in the home, the research explored what the parent perceived as being owned by the young person.

Turning first to computers, 13% of parents said that their child owned the main computer in the household. Figure 10 below shows that the likelihood of the child being perceived as owning the main computer increased with key stage from 7% of those in Key Stage 1 to 19% of post-16s. Some 15% of male children and 11% of female children owned the main computer. Ownership by the young person was highest for households in social grades D and E (18%) and households in social grade C1 (14%).

Child perceived by the parent as owning the main computer

Figure 10



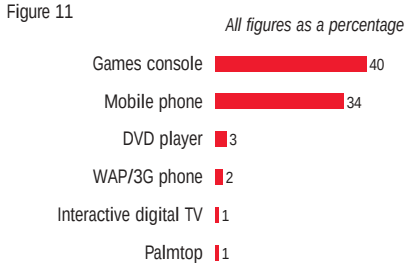
Base: All parents with a computer in the household which is used regularly (1231)

Of all computers owned within the household, the parents considered that 14% were owned by the young person.

In relation to computers other than the main one, the child was described as the owner in 21% of cases. This varied by key stage. In Key Stages 1 and 2, 15% of children were described as owners of computers other than the main one. This applied to 35% of children in Key Stages 3 and 4 and 74% of post-16s. The percentages also varied by social grade. Ownership of the additional computers was highest among children in social grade C1 (28%) and children in social grade C2 (20%). The percentages for children in social grades A and B and those in social grades D and E were 15% and 16% respectively.

Child ownership of ICT equipment other than computers

Figure 11



Base: All parents (1748)

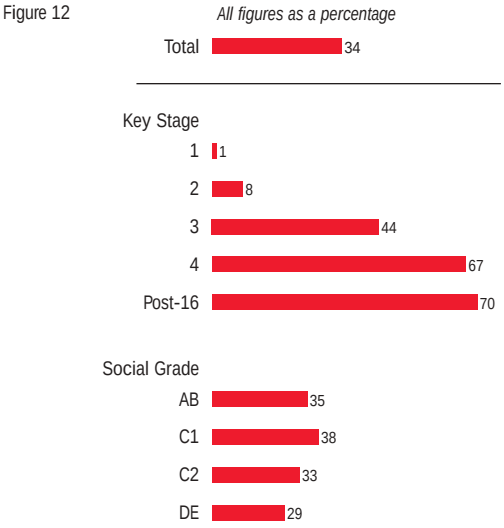
The parents were also asked what other ICT equipment in the household the child owned. The data is presented in Figure 11. Of all parents, 40% reported that their child owned a games console and 34% said that their child owned a mobile phone. Ownership of other ICT was less than 5%.

Ownership of games consoles was highest for children in Key Stage 3 (48%) and fell back to 35% for post-16s. Ownership was lowest for those in Key Stage 1 (25%). Ownership was similar for the different social grade groupings.

Ownership of mobile phones is shown in Figure 12. There was a strong relationship with key stage. In Key Stages 1 and 2, 6% reported that their child owned a mobile phone. This increased to 68% of those in Key Stage 4 and post-16s. Differences by social grade were not as large as differences by key stage. Ownership was lowest among children in social grades D and E (29%).

Child perceived by the parent as owning a mobile phone

Figure 12



Base: All parents (1748)

Ownership of games consoles and mobile phones varied by the gender of the child; 56% of male children owned a games console, compared with 21% of female children, and 28% of male children owned a mobile phone, compared with 40% of female children.

Young people and ICT

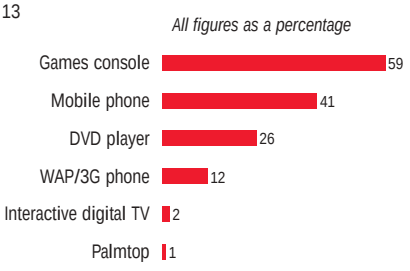
4.5 Usage of ICT equipment at home, other than computers

- 59% of children regularly used a games console, 41% a mobile phone and 26% a DVD player
- Male children were more likely to use a games console, and less likely to use a mobile phone than female children

The parents were asked what ICT in the home the child used on a regular basis. The answers are presented in Figure 13.

Child usage of ICT equipment other than computers

Figure 13



Base: All parents (1748)

The most frequently mentioned item was a games console (59%). Mobile phones were mentioned by 41% and interactive digital TVs by 26%.

Usage of games consoles was higher for children in social grades C2, D and E (65%) than children in social grades A, B and C1 (53%).

Mobile phone usage showed the same marked increase by key stage as had ownership of mobile phones. Usage among those in Key Stage 4 and post-16s was 76% compared to 6% among those in Key Stage 1. By social grade, child usage was more likely to be stated by parents in social grades A, B and C1 (45%) than parents in social grades C2, D and E (38%).

Usage of games consoles and mobile phones varied by the gender of the child: 74% of male children regularly used games consoles, compared with 43% of female children. Some 36% of male children regularly used mobile phones, compared with 47% of female children.

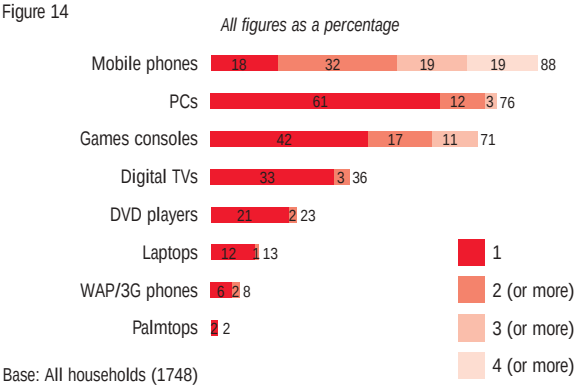
4.6 Volume of ICT equipment owned

- 70% of households owned more than one mobile phone
- 28% of households had more than one games console
- 15% of households had more than one PC

In addition to asking what items of ICT were present in the household, the questionnaire also asked people to enumerate the items. Figure 14 summarises the data.

Volume of ICT equipment owned

Figure 14



Base: All households (1748)

It was common for people to have more than one mobile phone in the household. In total, 88% of households had at least one mobile phone while 70% of households had more than one.

Ownership of multiple mobile phones was more common in larger households. Where there were five or more people in the household, 47% had three or more mobile phones. This applied to 5% of households where there were two people.

Multiple ownership was also more likely where the child was older. For example, in households where the child was in Key Stage 4 or post-16, 23% reported three or more mobile phones in the household. This applied to 14% of households where the child was in Key Stage 1.

There was a relationship between social grade and ownership of multiple mobile phones. Of households in social grades A and B, 79% reported that they owned more than one mobile phone. This applied to 72% of households in social grades C1 and C2, and 63% of households in social grades D and E.

Although ownership of personal computers (76%) was greater than that of games consoles (71%), respondents were more likely to say that there was more than one

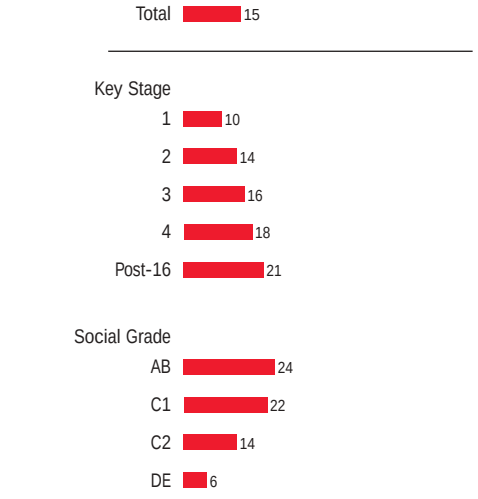
games console in the household (28%) than more than one personal computer (15%).

Ownership of multiple games consoles was more likely in households in social grades C2, D and E (31%) than households in social grades A, B and C1 (24%).

Figure 15 shows that ownership of multiple computers was more likely in households in social grades A, B and C1 (23%) than in households in social grade C2 (14%) or social grades D and E (6%). Ownership of multiple computers was also likely to increase with key stage of the child. It stood at 10% among households where the child was Key Stage 1 and 21% for post-16s.

Ownership of two or more computers as a percentage of all households

Figure 15 *All figures as a percentage*



Base: All parents (1748)

4.7 Location of computer at home

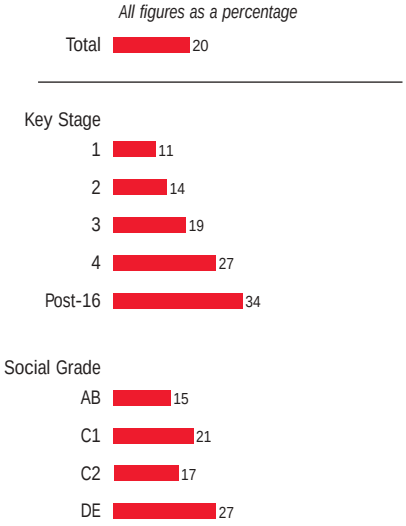
- 20% of children had a computer in their bedroom or study
- Older children were more likely to have a computer in their own bedroom

In those households where there was a personal computer or laptop, 20% of parents said that the child had a computer in their own bedroom or study. Figure 16 shows that the percentage increased with the key stage of the child from 11% in Key Stage 1 to 34% for post-16s.

By social grade, where there was a computer in the household, children in social grades D and E (27%) were the most likely to have one in their bedroom or study.

Presence of a computer in child's bedroom/study

Figure 16 *All figures as a percentage*



Base: All households with a personal computer or laptop (1231)

In those households where there was a personal computer or laptop, those in Key Stage 1 were the least likely to have access to a computer in their own bedroom or study or in a communal area (79%).

Although children in social grades D and E with a computer were the most likely to have a computer in their own bedroom, there was little difference across social grade for those who had access to computers in their bedroom or a study or communal living area. Some 82% of children in social grades A and B had access in a communal area, compared with 81% of those in social grade C1, 82% of those in social grade C2 and 78% of those in social grades D and E.

4.8 Time spent using computers and frequency of Internet use at home

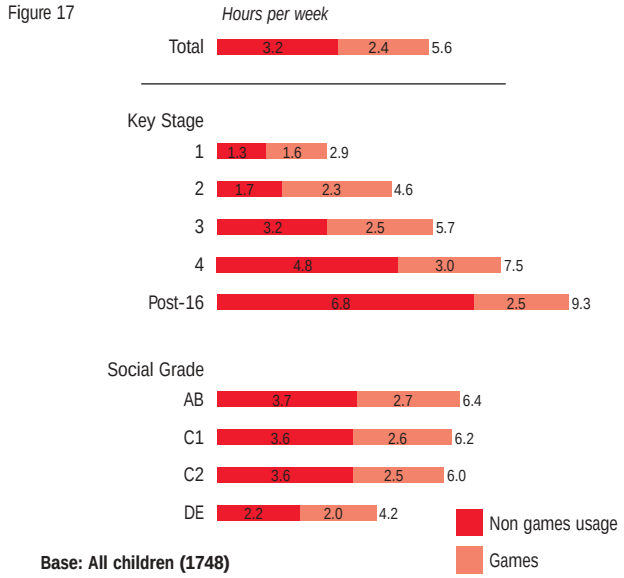
- The average total time spent on computers at home was 5.6 hours per week
- Time spent on a computer at home increased by Key Stage
- Time spent on a computer at home was lower in households in social grades D and E

The children were asked how long they spent using computers at home each week. The time estimations separated time spent playing games from other usage. The questionnaire also explored use at school and in other locations.

Across all children, the average use of computers in the home was 5.6 hours per week. The time breakdown in the home is shown in Figure 17.

Computer usage in the home

Figure 17



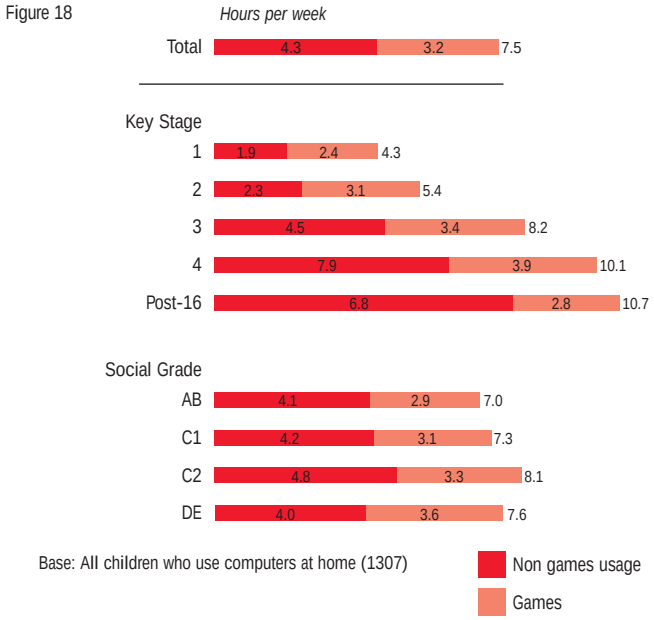
Base: All children (1748)

The average total time per week spent using computers in the home increased from 2.9 hours among those in Key Stage 1, to 9.3 hours for post-16s. There was lower usage among those in social grades D and E. Their average use per week was 4.2 hours compared to 6.2 hours among those in other social grades. However, this difference is mainly due to the lower penetration of computers among children in social grades D and E. If the figures are re-calculated on the basis of children who use computers then the values for all the social grades were similar. They were 7.0 hours per week for children in social grades A and B, 7.3 for children in social grade C1, 8.1 hours for children in social grade C2 and 7.6 hours for children in social grades D and E. (See figure 18).

By Key Stage 3 the balance of time spent on computers in the home had moved from playing games to using the computer for other purposes. Usage of computers for games accounted for 56% of use of children in Key Stage 1, and 45% in Key Stage 3 and fell to 26% for post-16s.

Computer usage in the home

Figure 18



Base: All children who use computers at home (1307)

The total time per week spent using computers in the home was lower among Black/Other respondents than other ethnic groups (4.14 compared with 5.60 for White respondents and 6.97 for Asian respondents). This difference is not due to the lower penetration of computers, for if the figures are re-calculated on the basis of children who use computers, the pattern remains true (6.86 compared with 7.44 for the White group and 9.31 for the Asian group).

4.9 The nature of computer usage at home

- Among those in Key Stages 1 and 2, the main use of computers at home was to play games (88%)
- Homework was quoted most frequently by children in Key Stage 3 and above (85%)
- Boys utilised computers for a wider range of uses than did girls
- The range and sophistication of uses increased with age

The children were asked what type of things they did on the computer at home. Those in Key Stages 1 and 2 were left to come up with their own answers: the question was not prompted. However, those in Key Stages 3 and 4 and post-16s were prompted. Hence, in Figure 19 a total column has not been provided and the two sets of figures have been separated.

Among those in Key Stages 1 and 2, the use of a computer for games was the most frequently given answer, mentioned by almost nine out of ten (89%). This fell to 49% of post-16s. In addition to games, drawing pictures was a frequent use for the younger children (mentioned by 60% of those in Key Stage 1 and 45% of those in Key Stage 2).

There were differences by gender in terms of how the computer was used. Boys were more likely than girls to say they used the computer for:

- Educational CD-ROMs (26% vs 21%)
- Internet use (25% vs 19%)

Girls were more likely than boys to say they used the computer for:

- Drawing pictures (53% vs 46%)
- Writing stories (31% vs 22%)

The use of computers for homework received few mentions for those in Key Stages 1 and 2. However, it was the most frequently quoted use for those in Key Stages 3 and 4 and post-16s (mentioned by 85% of those in these key stages who use a computer at home).

Those in Key Stages 3 and 4 and post-16s who used the computer for homework or study were then asked whether this was work that had been set by their teacher or whether it was for their own interests/needs. In 96% of cases this was for work set by the teacher, while 41% mentioned that they were doing study for their own interests. Included in this figure are the 37% who said that they were studying out of their own interest as well as undertaking work set by the teacher. The older the children, the more likely they were to say that they were doing homework out of their own interest. This was mentioned by 49% of post-16s who were conducting work at home – compared to the average of 41% mentioned above.

The use of a computer for sending e-mails increased rapidly by key stage. It was mentioned by 19% of those in Key Stage 3 but 49% of post-16s.

There were greater gender differences in the use of computers for those in Key Stages 3 and 4 and post-16s than there had been in Key Stages 1 and 2.

Boys were more likely than girls to say they used the computer for:

- Playing games (69% vs 49%)
- Internet access (58% vs 45%)
- Playing CDs (32% vs 24%)
- Accessing general information through databases/ CD-ROMs (27% vs 19%)
- Watching DVDs/movies (11% vs 4%)

Girls were more likely than boys to say they used the computer for:

- Homework/study (88% vs 82%)
- General purposes such as writing letters (28% vs 23%)

Overall, boys had a slightly wider range of uses for the computer than girls. Boys mentioned an average of 3.5 different types of task they used the computer for, while girls mentioned an average of 3.1.

Activities undertaken on the computer at home

Figure 19	Key Stage 1	2	3	4	Post 16
Base: All children using computers at home	220	372	266	220	168
	%	%	%	%	%
Playing games	89	88	69	55	49
Homework/study	4	7	78	88	89
Internet	13	27	42	52	65
General purposes/typing letters	20	26	16	24	39
General info/CD-ROMs	23	24	16	21	35
E-mails	4	9	19	35	49
Drawing pictures	60	45	-	-	-
Playing CDs	-	-	27	30	29
Writing stories	15	30	-	-	-
Chat rooms	-	-	9	16	19

(Key Stages 1-2 prompted. Key Stage 3 and above not prompted.)

Asian and Black/Other children who had a computer at home were more likely than White children to use the computer to send or receive e-mails (45%, 41% and 32% respectively). White children were more likely to use the computer for homework or study (86%, compared with 75% of Black/Other children and 71% of Asian children) and playing games (60%, compared with 53% of Black/Other children and 51% of Asian children).

Those in Key Stages 3 and 4 and post-16s who used their computer for homework or study were asked what type of packages they used. The answers are shown in Figure 20.

Word-processing software was mentioned by 82% – reflecting the fact that the children used computers to assist their writing. Number processing was mentioned less frequently: 39% said that they had used a database or spreadsheet. This increased from 22% of those in Key Stage 3 to 45% in Key Stage 4 and 50% for post-16s.

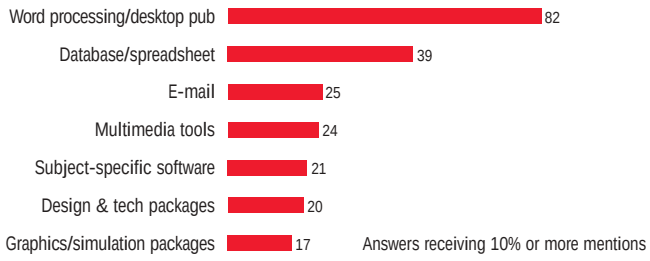
Among those who use computers at home for work or study, children in social grades D and E were less likely than those in other social grades to use subject-specific software such as historical databases. There were no other significant differences by social grade.

Among those who used computers at home for work or study, Black/Other groups were less likely than other groups to use multimedia tools, word processing, graphics/simulation packages or subject-specific software such as historical databases. They were more likely to use databases/spreadsheets and e-mails.

Software packages used for homework/study

Figure 20

All figures as a percentage



Base: Key Stages 3 and above using a computer for homework/study (554)

The majority (92%) said that it was at least "fairly easy" to use the computer packages they have at home for their homework or study: 41% said it was "very easy". The percentage who said "very easy" increased with key stage: 3 = 35%, 4 = 40%, post-16 = 50%.

All children in Key Stages 3 and 4 and post-16s were shown a list of answers and asked whether they worked on the computer at home in any of the ways listed. Some 27% worked on a computer at home with their parents, 25% with a brother or sister, 22% with friends or classmates and 10% with other family members. A total of 18% said they worked on-line with friends or classmates and 1% said they worked on-line with teachers or tutors.

4.10 Barriers to computer usage at home

- The main reasons parents of children in Key Stages 1–4 did not have a computer at home were related to cost (cost factors were more likely to be mentioned by those in social grades D and E)
- When post-16 children were asked why they had not bought a computer, the main factors quoted were lack of money and the cost of the computer
- The barriers to future purchase were similar to reasons for not having bought one already
- For those with a computer, the main 3 issues preventing greater use were sharing, lack of time and lack of Internet access

Those parents of children in Key Stages 1–4 who did not have a computer in the home were asked why they had not purchased a computer and whether there was anything that was restricting them from buying one in the future.

Figure 21 shows that the main reasons were related to cost. This was expressed either as a lack of money or that the cost of a computer would be too high. The cost factor was most likely to be mentioned by those in social grades D and E. Of those in social grades D and E, 83% quoted cost of the computer or lack of money as the main barrier compared to 64% of those of other social grades. Results were similar by key stage.

A secondary reason given was that they had no interest in purchasing a computer. This was more likely to be given by respondents in social grades A, B and C1 (21%) than those in social grades C2, D and E (10%).

Reasons for not purchasing a computer

Figure 21

	Social Grade			
	Total	ABC1	C2	DE
Base: Parents of Key Stages 1-4 with no personal computer/laptop at home	382	71	93	242
	%	%	%	%
Lack of money/cost of computer	75	60	67	83
No interest in getting one	12	21	9	11
Lack of experience with computers	8	6	9	7
Cost of software	5	3	3	6

Answers given by 5% or more

For post-16s, this question was directed to them rather than their parents. There were 24 children who were able to answer this question and this is a small base on which to draw reliable conclusions. However, the results were consistent with those of the parents of children in earlier key stages.

The main factors to be quoted for not having purchased a computer to date were "lack of money" (57%) and "the cost of the computer" (14%). The "cost of the software" (9%) was the third most frequently mentioned answer.

The main reasons for all ethnic groups were related to cost. Another reason given was that there was no interest in purchasing a computer, which was more likely to be given

by the White group (13%) and the Asian group (15%) than Black/Other groups (3%).

Of all households who did not have a personal computer or laptop at home, all but one said that they were not considering buying a computer in the next six months. This suggests that cost barriers, whether perceived or real, will remain for this group for the near future.

Post-16s who were personally thinking of buying a computer in the next six months were asked whether there was something that would restrict whether they would buy the computer. The only factors to be mentioned were "cost" or "lack of money". It should be noted that the base size (eleven people) is very small for this question.

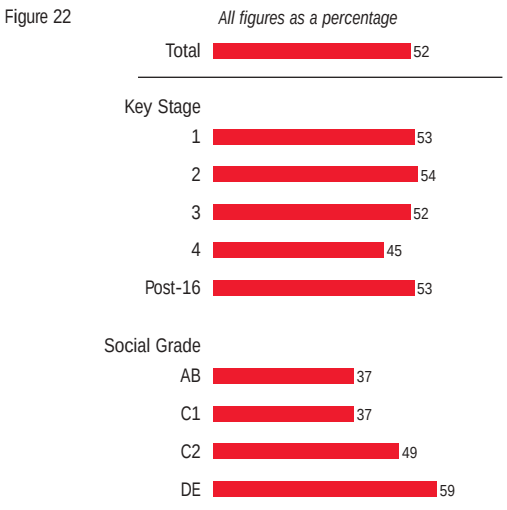
All parents without a computer in the household were then asked whether there were any factors restricting whether they would be able to buy a computer in the future.

Figure 22 summarises the results. Overall, 52% said that there were factors that would prevent them buying a computer in the future. There was a similar percentage for all key stages. However, differences were apparent by social grade. Those in social grades D and E (59%) were more likely to see restrictions than those in social grade C2 (49%) or those in social grades A and B (37%).

Differences were also apparent by ethnicity, with Black/Other respondents more likely to see restrictions than Asian respondents and White respondents (61%, 58% and 51% respectively).

Presence of factors restricting future computer purchase

Figure 22



Base: All parents without a computer in the household (406)

The barriers that were mentioned were dominated by cost factors. Of those mentioning they had barriers, 85% said "lack of money", 18% referred to the "cost of a computer", 6% to "the cost of software", and 4% to "the cost of additional hardware". Respondents in social grades D and E were more likely to be cost conscious: 90% who mentioned barriers referred to lack of money.

The most frequently quoted non-cost factor was "lack of experience using computers", mentioned by 4%.

This suggests that the barriers were not to do with lack of familiarity with computers or concerns over skill levels which have been seen in research among all adults[4]. The percentage who said that they were not interested in buying a computer was also low relative to this previous research. The barriers were strongly related to the cost, or at least the perceived cost, of computers.

Children in Key Stages 3 and 4 and post-16s who used computers for study at home were asked whether there was anything at home that prevented them from using computers more often. The answers are shown in the following table.

Factors restricting access to a computer at home

Figure 23	Total	Key Stage 3	Key Stage 4	Post-16
Base: Those Key Stages 3 and and above who use a computer at home	(654)	(266)	(220)	(168)
Share computer with someone else	22	23	21	21
Lack of time	16	14	17	17
Lack of access to the Internet	9	10	10	8
Lack of interest	7	4	8	10
Price of equipment	7	5	7	11
Quality of software	7	8	6	8
Age of computer	7	7	7	8
Age of software	6	7	4	7
Price of software	5	4	5	8
Quality of computer	5	4	6	4
Lack of skills	5	5	5	4
No reason	44	42	45	44

Note: Answers receiving 5% or more mentions

A similar profile of answers was given by all key stage bands. The main factor restricting additional use at home was that they had to share the computer with someone else (22%). The second most frequently mentioned factor was lack of time (16%). Overall, 44% of home users were unable to think of any reasons limiting their use at home.

4 Russell, N. and Drew, N., Research Surveys of Great Britain (2001) ICT Access and Use. Report on the Benchmark Survey. DfEE Research report RR252. DfEE, London

A further question was then asked to explore whether there were additional computer resources that those in Key Stages 3 and 4 and post-16s who used computers at home would find useful. The question was asked without prompting respondents with a list of possible answers. The main answers are presented in Figure 24.

Reference to the Internet was high on the list, whether this was free access (27%), access at all (26%) or faster access (17%). Those in social grades D and E were more likely than other social grades to mention Internet access (38% vs 22%) and free Internet access (38% vs 24%).

The quality of the computer was raised in various ways: better/faster computer (18%), enhanced memory (12%) and newer computer (11%). Those in social grades A and B (14%) and social grades D and E (15%) were more likely to mention newer computers than those in social grades C1 and C2 (8%). (We know that the age of computers in the household did not differ much by social grade, but households in social grades D and E tended to pay less for their computers and have fewer facilities on them.)

Other factors to be mentioned were peripherals such as a scanner (16%), digital or video camera (15%) and printer (10%).

Software was raised in terms of a better word-processing package (14%), more up-to-date software (14%) and subject-specific software (12%).

Resources that home computer users would find useful

Figure 24	Total	Key Stage 3	4	Post-16
Base: Those Key Stages 3 and above who use a computer at home	654	266	220	168
	%	%	%	%
Free Internet access	27	24	29	29
Internet access	26	31	20	25
Better/faster computer	18	18	20	15
Faster Internet access	17	13	21	19
Scanner	16	17	17	15
Digitalcamera/video camera	15	13	18	13
Better word-processing package	14	13	16	14
More up to date software	14	13	15	14
Enhanced memory	12	9	13	13
Subject-specific software	12	14	13	8
Newer computer	11	12	10	9
Printer	10	13	7	8

Note: Answers receiving 10% or more mentions

Access to the Internet is clearly in demand for those who do not currently have it and they see it as something that would benefit them in their work at home.

All children in Key Stages 3 and 4 and post-16s were asked whether there was anything that prevented them using a computer more often for study at home. Of those with a computer at home 45% did not mention any restrictions.

- 22% said that they had to share the computer with someone else
- 17% referred to lack of time
- 10% mentioned lack of access to the Internet

Those in social grades A and B (31%) were the most likely to mention that they had to share the computer with someone else. The main factor mentioned by those in social grades D and E was that they had lack of access to the Internet (19%).

Black/Other groups were the most likely to mention the price of equipment, lack of skills and the price of software. The White group was more likely to mention lack of interest or lack of time than other ethnic groups.

4.11 Barriers to Internet usage at home

- The main factor limiting Internet access for children in Key Stages 1 and 2 was parents preventing access by using the computer/Internet themselves or not allowing access to the Internet
- Children in Key Stage 3 and above who used the Internet said free/cheap access, easier access and better equipment would encourage them to use it more
- Children in Key Stage 3 and above who used the Internet said others using the equipment, cost of telephone calls and lack of time prevented them using it more often

Parents of children who used the Internet and were in Key Stages 1 and 2 were asked what sort of things prevented their child using the Internet more often. Children in Key Stages 3 and 4 and post-16s were asked this question directly.

The main factor limiting access for the younger children is parents or others in the household preventing access either by using the computer/Internet themselves or parents not allowing the child to use the Internet (10%, 12% and 16% respectively).

The child having lack of time was mentioned by 16%.

There was implicit reference to lack of resources by those parents who said that the child does not own a computer (15%) and that there was no or limited access at school (12%).

The children in Key Stages 3 and 4 and post-16s who said that they used the Internet (in any location) were asked what prevented them from using it more often at home. The question was asked without prompting. The answers are shown in Figure 25.

Factors preventing more regular access to the Internet at home

Figure 25	Total	Key Stage 3	Key Stage 4	Post-16
Base: Those Key Stages 3 and above who use the Internet	567	229	196	142
	%	%	%	%
Others at home wanting to use the Internet	25	22	28	25
Cost of telephone calls	24	18	32	25
Lack of time	20	19	18	24
Other people in the home wanting to access the Internet	19	18	23	17
Speed of connection/computer is too slow	14	11	10	22
Do not own a computer	8	11	8	6
Not allowed access by parents at home	7	8	6	8
Need to improve searching skills	5	5	4	6
Nothing	16	15	14	19

Note: Answers receiving 5% or more mentions

The average number of factors to be mentioned was 1.6 per respondent. This suggests that for each individual there are few limiting factors that come into play. Across the whole sample, however, there is a range of factors. 16% said that nothing prevented more regular access.

The presence of others wanting to use the equipment (25%) or the Internet (19%) and that the child did not own a computer (8%) showed that there was pressure induced by lack of resources. Cost was relevant as 24% mentioned that the cost of the telephone calls was a constraint.

The speed of connection was raised by 14%. Post-16s were more likely to mention this than were the younger children (22% vs 11%).

Respondents in social grades D and E were less likely than those in other social grades to mention the speed of connection (7% vs 16%) or that others in the household wanted to use the equipment (17% vs 27%). They were more likely to mention that they did not own a computer at home (18% vs 5%).

Black/Other groups were more likely to say that the factors preventing more regular access to the Internet at home were that they do not own a computer and they need to improve their searching skills.

Internet users in Key Stages 3 and 4 and post-16s were then asked what additional resources would encourage them to use the Internet more often. They were prompted with a list of possible answers. The results are summarised in Figure 26.

Cost was the most frequently mentioned factor: 40% mentioned free or cheap access. This was more likely to be mentioned by respondents in social grades D and E (51%) than those in other social grades (36%).

Easier access at home was mentioned by 32%. This was more likely to be mentioned by those in Key Stage 3 (39%) and those in social grades D and E (39%).

Easier access at school was more likely to be mentioned by those in Key Stage 3 than those in Key Stage 4 or post-16s (26% vs 20%).

Faster access at home was called for more by post-16s (37%) than those in Key Stages 3 and 4 (29%). Post-16s were also more likely than those in Key Stages 3 and 4 to consider making greater use of the Internet if the school had placed information on the Internet relating to school timetables, syllabus and work schedules (17% vs 12% for Key Stage 4 and 7% for Key Stage 3).

Few children in Key Stages 3 and 4 and post-16s who use the Internet said that there was nothing on the list that would encourage them to make more use of it (11%). Those in social grades D and E (3%) were the least likely to say that there was nothing that would encourage them to make greater use of the Internet.

Additional resources thought to encourage greater use of the Internet

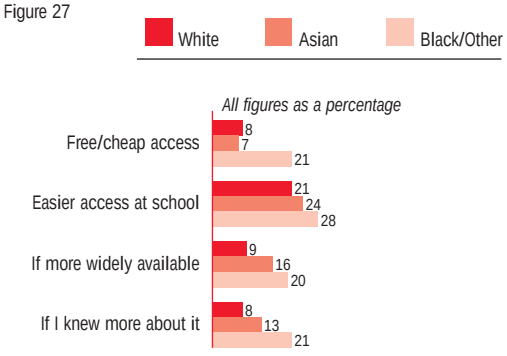
Figure 26	Key Stage Total	3	4	Post-16
Base: Those Key Stages 3 and above who use the Internet	567	229	196	142
	%	%	%	%
Free/cheap access	40	35	42	43
Easier access at home	32	39	27	27
Better equipment allowing faster access	32	29	30	37
Easier access at home	22	26	20	19
If I need it more for schoolwork	21	21	22	18
More detailed information about school/college (e.g.timetables)	11	7	12	17
If it were easier to use	10	11	8	11
If it were more widely available	10	10	9	13
None of these	11	12	8	11

Note: Answers receiving 10% or more mentions

"Free or cheap access", "easier access at school", "if it was more widely available" and "if I knew more about it" were statements more likely to be mentioned by Black/Other groups. The White group was more likely to say "better equipment allowing for faster access". The Asian group was more likely to mention "easier access at home" and "if it was easier to use".

Additional resources that would encourage Internet use

Figure 27



Base: All children who use the Internet on a regular basis

4.12 Conflicts of computer use at home

- 66% of children stated that there were conflicts of use over a home computer
- Conflicts of use were more likely in larger households
- Conflicts were more likely to happen with a parent than other family members
- To resolve the conflict, 30% said they take turns and 25% argue

Children were asked whether there were ever occasions when they wanted to use the computer at home and there was someone else who was using it.

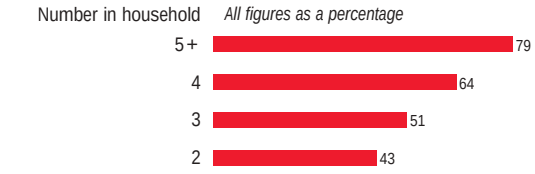
Some 66% of children stated that there were such conflicts of use. The percentage claiming conflict was similar for Key Stages 1 to 4 (69%) but fell to 50% for post-16s. Children in social grades A and B were more likely to claim conflict than those in other social grades (73% vs 64%).

The potential for conflict increased in line with the number of people in the household as is shown in Figure 28.

In households where there were 5 or more people 79% said that there were conflicts. This fell to 43% where there were 2 people in the household.

Child computer users claiming there are times when there is a conflict of use affecting them

Figure 28

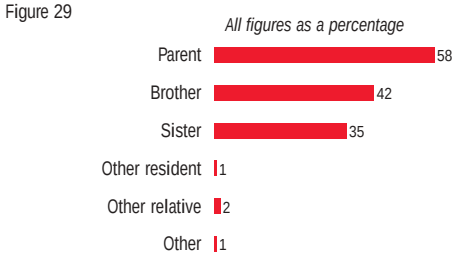


Base: Children who use a computer at home (1285)

Figure 29 shows that conflict was most likely to occur with a parent (58%). Brothers (42%) were more likely to be a source of conflict than sisters (35%). In households in social grades D and E the source of conflict was less likely to be the parent than in other households (48% vs 62%), and more likely to be a sibling.

Who is using computer when the child wants to use it

Figure 29



Base: Children who claim usage conflicts (856)

The children were then asked what normally happened when they wanted to use the computer and someone else was using it.

The main suggestion given by all key stages was that people take turns (30%). This was more likely to be offered by post-16s than Key Stages 1 to 4 (41% vs 28%).

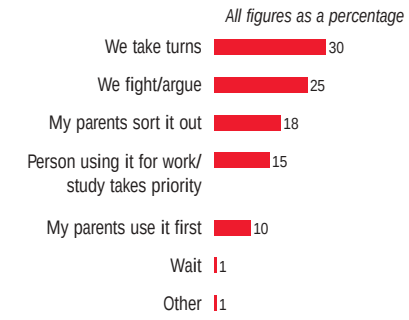
The solution being a fight or argument was mentioned by 25%. This was at a similar level across all key stages but was more likely in households in social grades C2, D and E (29%) than households in social grades A, B and C1 (21%).

Parents were called upon in 18% of households where there were conflicts. This was more likely in Key Stages 1 and 2 (24%), than in Key Stages 3 and 4 (15%) and for post-16s (5%).

Figure 30 presents the data for all children stating there were conflicts of use.

How is conflict resolved?

Figure 30



Base: Children who claim usage conflicts (856)

5 ICT use at School

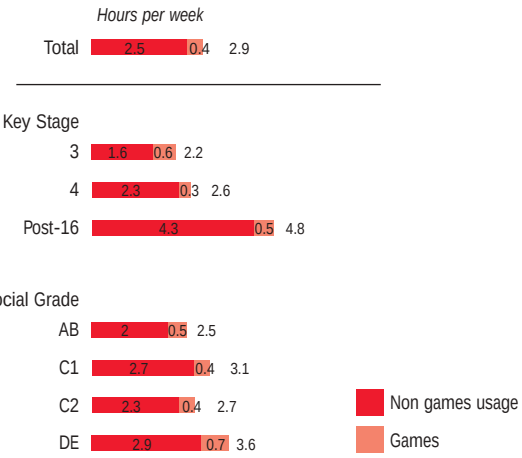
5.1 Time spent using computers at school (Key Stage 3 and above)

- The average weekly computer usage at school was 3.0 hours, of which 0.5 hours was games related
- For post-16s, usage rose to 4.8 hours a week, 10% of which was games related
- Those in social grades D and E, and those with no computer at home, spent longer on a computer at school

For those in Key Stage 2 or higher, the questionnaire explored how many hours were spent using the computer at school per week.

Computer usage at school

Figure 31



Base: All children in Key Stages 3 and above (928)

The average computer usage at school (in lessons, in breaks and before and after school) was 3.0 hours, of which 0.5 hours was games related. For post-16s usage had risen to an average of 4.8 hours per week of which 90% was for purposes other than playing games.

Children in social grades D and E were more likely to spend time on computers at school than other social grades. They spent an average of 3.5 hours per week compared to 2.8 among other social grades.

When looking at computer usage at school, Black/Other groups were more likely to spend time on computers than other groups (4.30 hours per week, compared with 3.08 for the White group and 4.00 for the Asian group).

This shows that school is an important resource for Black/Other groups, bearing in mind the comparatively limited access this group has to computers at home (67%).

Those without a personal computer or laptop at home were likely to spend longer than others using a computer at school. The average for this group was 3.3 hours per week (compared to 2.9 hours among those who had a computer at home). The difference was accounted for in additional time spent playing games (1.2 hours per week for those without a computer at home, 0.3 hours for those with a home computer).

Boys spent more time on computers at school (3.3 hours per week compared with 2.7 for girls). This additional time was spent on playing games (0.6 vs 0.3 hours per week) and other activities (2.7 vs 2.4).

5.2 Usage of computers at school (Key Stages 1 and 2)

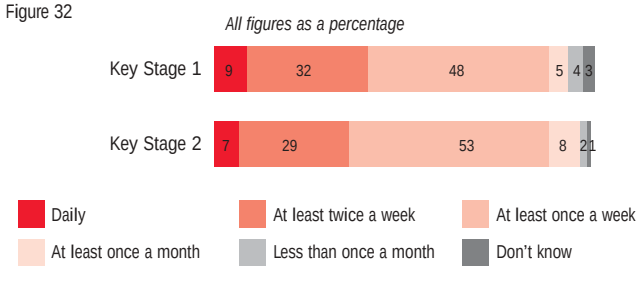
- 89% of those in Key Stage 1 used a computer at school
- Those without a computer at home made more use of computers at school

The pilot research showed that the younger respondents were not able to articulate the time they spent using computers outside the home. The time usage questions were therefore asked in more general terms of this group.

Of those in Key Stage 1, 89% said they used a computer at school. This applied to 94% of those in Key Stage 2. Among users the frequency of use was similar by key stage as shown in Figure 32. In both key stages 89% stated that they used computers at least once a week. Among children in Key Stage 1 a higher percentage than those in Key Stage 2 said that they used them more often than once a week (41% vs 36%).

Claimed frequency of using computers in school

Figure 32



Base: School computer users Key Stage 1 (320), Key Stage 2 (501)

Of those in Key Stages 1 and 2 without a personal computer or laptop in the home, 95% stated that they used a computer at school compared to 92% of those with a computer in their home. In total, those without a computer at home were more frequent users of a computer at school. Some 40% of those without a computer at home said that they used one at school more often than once a week. This applied to 33% of those who had a computer at home.

5.3 Computer activities at school

- The most common use of computers at school for those in Key Stages 1 and 2 was drawing pictures (54%) and playing games (44%)
- The range of uses increased by key stage
- For children in Key Stage 3 and above, writing reports was the most frequently mentioned task

As we have noted, 93% of the children used a computer at school and this was at a similar level across all key stages. Key Stage 1 recorded the lowest likelihood of using a computer at school (89%).

The children were asked what they did on the computer at school. This was asked without prompting for all key stages. Given the different nature of the answers for the younger key stages the report separates the data for those in Key Stages 1 and 2 and those in Key Stages 3 and 4 and post-16s.

Figure 33 shows the data for those in Key Stages 1 and 2. The most common use of computers at school for these key stages is drawing pictures (54%). This was more common in Key Stage 1 (66%) than Key Stage 2 (48%). “Playing games” was mentioned by 44%. Again, this was more common for those in Key Stage 1 (55%) than in Key Stage 2 (39%).

Boys and girls showed a similar profile of uses at school. It was only for “playing games” on the computer that they diverged. This was mentioned by 47% of boys and 30% of girls.

Those in Key Stage 2 were more likely than those in Key Stage 1 to use the computer for the more sophisticated tasks of writing stories (48% vs 27%), typing letters (41% vs 33%), using the Internet (27% vs 4%) and using educational CD-ROMs (26% vs 16%).

Activities undertaken on the computer at school (Key Stages 1 and 2)

Figure 33	Total	Key Stage 1	Key Stage 2	Boys	Girls
Base: All children using computers at school	821	320	501	458	363
	%	%	%	%	%
Drawing pictures	54	66	48	53	55
Playing Games	44	55	39	47	40
Typing letters	39	33	41	40	37
Writing stories	41	27	48	41	42
Using educational CD-ROMs	23	16	26	24	22
Using the Internet	20	4	27	22	18

Note: Answers listed above were those given by 10% or more of respondents

Among those in Key Stages 3 and 4 and post-16s, Figure 34 shows that the range of tasks for which the computer was used tended to increase with key stage. The most frequently mentioned task was writing reports. This was mentioned by 60% of those in Key Stage 3 and above, and was most frequently mentioned by post-16s (70%).

Internet access increased from 44% of those in Key Stage 3 to 54% of post-16s.

Analysing data on a computer increased from 27% of those in Key Stage 3 to 39% in Key Stage 4 and 40% of post-16s.

Boys appeared to be using computers for a wider range of tasks at school or college than did girls. For example, boys were more likely than girls to mention using computers for:

- Writing reports (63% vs 57%)
- Internet use (53% vs 45%)
- Analysing data (38% vs 31%)
- Playing games (13% vs 6%)

Respondents in social grades A and B appeared more likely than those in other social grades to use the computer for Internet access (57% vs 47%). Those in social grades D and E were more likely than others to use the computer to play games (16% vs 7%)

White respondents were more likely than other ethnic groups to say they used the computer for Internet access (51% in Key Stages 3 and 4 and post-16s who used a computer at school, compared with 41% of Black/Other respondents and 31% of Asian respondents).

Activities undertaken on the computer at school (Key Stages 3 and 4 and Post 16)

Figure 34	Key Stage					
	Total	3	4	Post -16	Boys	Girls
Base: All children using computers at school/college	802	353	265	184	404	398
	%	%	%	%	%	%
Schoolwork: writing reports	60	53	60	70	63	57
Schoolwork: analysing data	34	27	39	40	38	31
Schoolwork: other	47	48	53	38	47	46
Internet access	49	44	51	54	53	45
General information (e.g. databases/CD-ROM)	28	23	27	37	29	26
Sending/receiving e-mails	15	10	16	23	17	13
Playing games	10	13	9	6	13	6

Note: Answers listed above were those given by 10% or more of respondents

Most of the computer activity in classes for Key Stages 1 and 2 took place with others. Of those in Key Stages 1 and 2, 20% said that they usually worked on computers alone. However, in Key Stages 3 and 4 and post-16s, the majority said that they usually worked alone: 57% in Key Stage 3, 73% in Key Stage 4, 78% of post-16s.

5.4 Time of day when computer is accessed at school (Key Stages 3 and 4)

- 84% accessed the computer during lessons
- 34% during lunch breaks

Children in Key Stages 3 and 4 and post-16s were asked when they usually accessed computers at school.

Time when computers at school are usually accessed

Figure 35	Key Stage			
	Total	3	4	Post-16
Base: Those in school Key Stages 3 and above who use a computer at school	802	353	265	184
	%	%	%	%
In lessons	84	88	87	73
During lunch breaks	34	37	34	31
During other breaks	19	18	8	35
Before or after school sessions	12	10	12	15

The majority (84%) accessed the computer during lessons. Some 34% said that they used a computer during lunch breaks. Post-16s were more likely than others to say that they used a computer during other breaks. This might refer to times such as study periods when they do not have scheduled activities.

Boys (40%) were more likely than girls (29%) to use a computer during lunch breaks. Use at other times of the day was similar for boys and girls. There were no differences in time of use that could be attributed to whether a child had a computer at home.

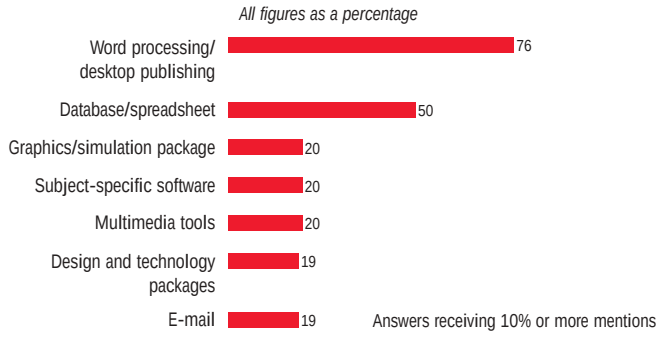
5.5 Software packages used at school

- Word-processing packages were the most commonly used software packages at school for post-16s followed by databases/spreadsheets

Post-16s were asked what type of software packages they used at school. The distribution was similar to that for packages used at home, focusing on word processing and database or spreadsheet packages. Figure 36 presents those answers mentioned by 10% or more.

Post-16s software packages used at school

Figure 36



Base: Post-16s using a computer at school (184)

5.6 Use of ICT by teachers

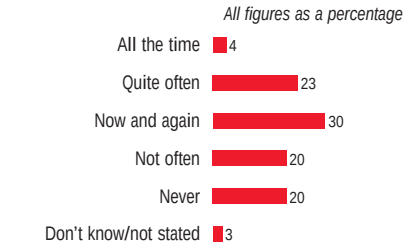
- 2% of children in Key Stages 1and 2 said their teachers used computers quite often or all the time in class
- This rose to 47% of those in Key Stage 3 or above

All children were asked to indicate the use made of computers by teachers during their lessons. The questions asked of the younger children were simpler than those asked of the older children.

Those in Key Stages 1 and 2 were asked how often their teacher made use of computers during lessons. Figure 37 shows that 27% of children said that their teachers used computers either “quite often” or “all the time in class”. This applied to 30% of those in Key Stage 2 and 22% in Key Stage 1.

Frequency of teachers using computers during lessons

Figure 37

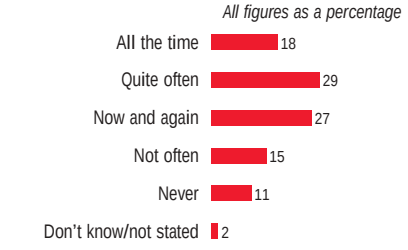


Base: Key Stages 1 and 2 (820)

When the same question was asked of those in Key Stages 3 and 4 and post-16s, a different pattern of answers was evident (see Figure 38).

Frequency of teachers using computers during lessons

Figure 38



Base: Key Stages 3 and above (928)

For children in Key Stages 3 and 4 and post-16s, almost half said that their teacher used computers in lessons at least "quite often". The results were similar by key stage.

Those in Key Stage 2 and above were asked whether their teacher used a computer to prepare information that they could use in class. The majority (83%) said that their teachers did use computers to prepare handouts. The percentage increased by key stage from 73% of those in Key Stage 2 to 95% for post-16s.

When asked what type of equipment the teacher used, the majority (72%) said that this was a desktop computer. Uses of electronic whiteboards and laptop computers appeared to increase from Key Stage 2 up to Key Stage 4 but then declined for post-16s.

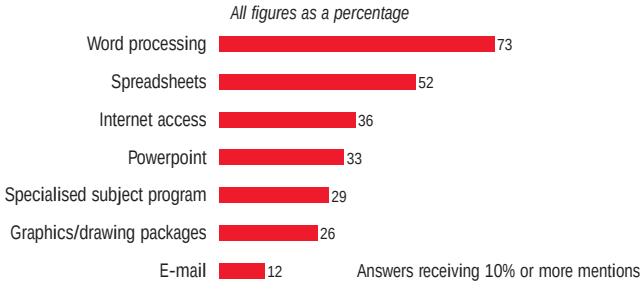
Teachers' use of electronic equipment

Figure 39	Total	Key Stage 2	3	4	Post-16
Base: Children in Key Stages 2 and above whose teachers use ICT for lesson preparation	1119	369	330	251	169
	%	%	%	%	%
Desktop computer	72	73	72	70	73
Electronic whiteboard	24	14	25	34	28
Laptop computer	18	10	16	30	23
Handheld computer	2	2	1	3	1

Those in Key Stages 3 and 4 and post-16s were then asked for more detail about the type of applications their teacher used. Those answers receiving 10% or more mentions are shown in Figure 40.

Applications used by teachers

Figure 40



Base: Key Stages 3 and above where teacher uses ICT to prepare lessons (750)

Word processing (73%) and spreadsheet packages (52%) were the two main applications to be mentioned. In both cases usage was less likely to be mentioned in Key Stage 3 than in Key Stage 4 and post-16 (word processing = 62% vs 80%, spreadsheet = 42% vs 59%).

Usage of graphics or drawing packages was higher for post-16s than in Key Stages 3 and 4 (30% vs 24%).

Usage of the Internet was at a similar level (36%) across the three age bands.

5.7 Other ICT facilities available at school and/or used by children

- Of children who used a computer at school, 80% said there were extra facilities they could use
- The Internet and school web site were the most frequently used facilities

Young people and ICT

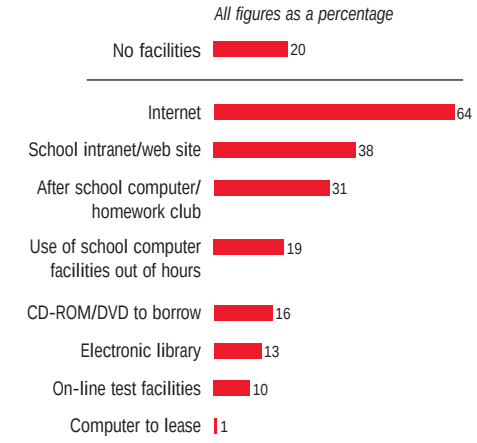
The questionnaire for those in Key Stages 3 and 4 and post-16s explored other types of ICT that the children used at school. Use of the Internet is covered in detail in a separate section. This section looks at the other facilities.

The children were asked whether there were "any computer or on-line facilities that are aimed at helping you undertake school work?"

Of those who used a computer at school, 80% said that there were additional facilities that they could call upon. The results are summarised in Figure 41.

Reported presence of additional computer/on-line facilities to help school work

Figure 41



Base: All children in Key Stages 3 and above who use a computer at school (802)

Use of computer facilities out of school hours was available to a greater extent for post-16s (27%) than those in Key Stage 4 (21%) or Key Stage 3 (12%). The potential to borrow CD-ROMs or DVDs was greater for post-16s (24%) than those in Key Stages 3 and 4 (13%).

Those in social grades D and E were the least likely to mention that their school had an intranet (33% vs 40% among those in social grades A, B, C1 and C2). Those in social grades A and B were the most likely to mention this (47%).

Those in social grades D and E were also the least likely to mention that there were CD-ROMs or DVDs to borrow (12% vs 17% among those in social grades A, B, C1 and C2). They had similar levels of reporting for other facilities listed.

Those who said that each of the facilities was available at their school were then asked how frequently they made use of those facilities. The results are shown in Figure 42.

Frequency of using ICT facilities at school

Figure 42

Base: Those who claim faciities are present at school (in parenthesis)	Very frequently/ all the time	Quite frequently	Now and again/ hardly ever	Never
The Internet (559)	25	25	46	4
School web site (326)	8	14	61	17
Out of hours usage (161)	7	17	43	32
On-line test facilities (90)	5	8	67	19
After school homework/ computer club (272)	5	7	36	52
Electronic library (117)	1	17	62	20
Borrow CD-ROM/DVD (135)	1	2	42	55
Lease computer from school (7)	0	0	0	100

Note: figures are row percentages

The Internet and the school web site were the most frequently used additional facilities.

Usage of facilities out of hours (during school holidays, at the weekend, before or after school) was at least "quite frequent" by 24% of those who said they were available at their school. Those in social grades D and E were most likely to use this facility where it was available: 40% said that they had used it at least "quite frequently".

Although on-line test facilities were not as frequently available as the out of hours service, a higher percentage had made use of this where it was available (80% compared to 67% of those who had used the out of hours service). Those in Key Stage 3 were the most frequent users (29% said they had made at least "quite frequent" use of the service).

Some 80% also said that they had made use of an electronic library: 18% at least "quite frequently".

Out of school homework or computer clubs were used by 48% where they were available: 12% said they used them at least "quite frequently". Those in social grades D and E (21%) and those without a personal computer or laptop at home (22%) were those most likely to say that they used the service at least "quite frequently".

A total of 45% said that they had borrowed CD-ROMs or DVDs where they were available. Most of these said that they used the service "now and again" or "hardly ever". Boys (52%) were more likely than girls (39%) to say that they had used the service.

None of the seven people who said that there were computer-leasing facilities at their school had taken advantage of the service.

5.8 Internet use at school

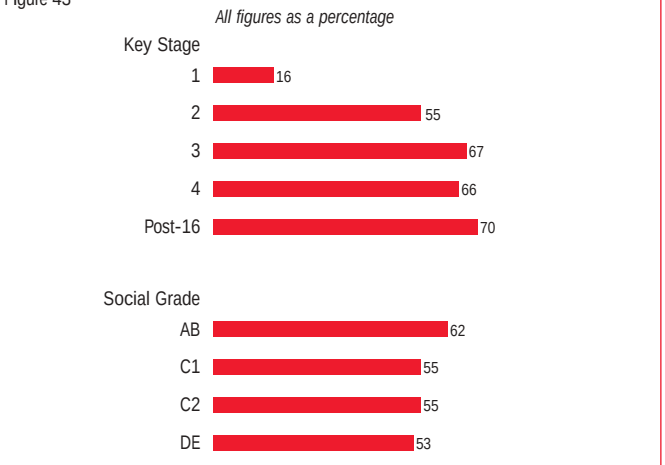
- 56% of children used the Internet at school
- Internet use at school increased with age from 16% at Key Stage 1 to 70% of post-16s

Of all children, 56% said that they used the Internet at school. Figure 43 shows that usage among those in Key Stage 1 was 16%. Once the child had reached Key Stage 3, the likelihood of using the Internet stabilised at around 66–70%: usage among post-16s was 70%.

Children in social grades A and B were the most likely to have accessed the Internet at school (62%).

Internet usage at school

Figure 43

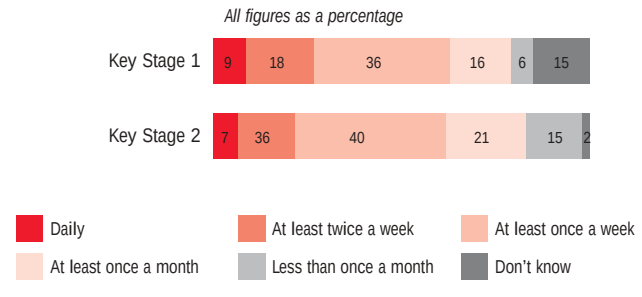


Base: All children (1748)

Of those who used the Internet at school, the percentage in Key Stage 1 who used it at least once a week was similar to that in Key Stage 2 (63% vs 62%).

Frequency of using Internet in school

Figure 44

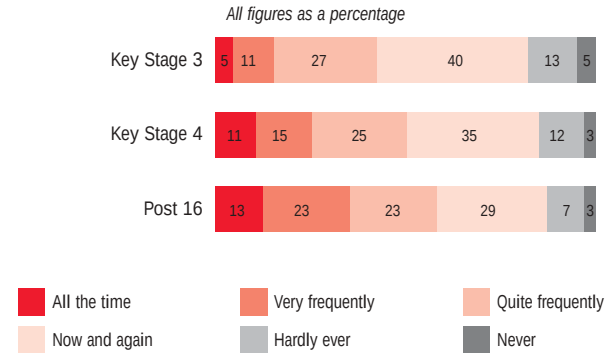


Base: School Internet users Key Stage 1 (33), Key Stage 2 (132)

Beyond Key Stage 3, use of the Internet among those who had access to the Internet in their school increased with key stage. Of those with Internet access in Key Stage 3, 16% stated that they used the Internet either "very frequently" or "all the time". This applied to 26% of those in Key Stage 4 and 36% of post-16s.

Frequency of using Internet in school

Figure 45



Base: Those with access to Internet at school Key Stage 3 (209), Key Stage 4(182) Post 16 (125)

5.9 Barriers to computer/Internet usage at school

- Restrictions in using computers more at school included lack of time, lack of resources and lack of Internet access
- 29% of those in Key Stages 3 and above stated they had difficulties in using a computer at school owing to the lack of adequate facilities

Children in Key Stages 3 and 4 and post-16s were asked what type of things prevented them from making more use of computers at school. This question was not prompted.

The main answers given reflected firstly, the lack of time the child said they had to use the computer (45%) and, secondly, lack of resources covered by explicit references to "limited amount of computers" (23%) and "lack of Internet access" (8%). Lack of resources is implicit in the reference to the need to "share computers with other students" (17%).

The quality (6%) and age (5%) of the computers available and the quality (7%) and age (6%) of the software available appeared as a third tier of factors.

The Asian group were less likely to say lack of time (33% compared with 45% of the White group and 55% of Black/Other groups) and limited amount of computers (15% compared with 23% of the White group and 24% of Black/Other groups).

The answers were consistent across the key stages and social grade.

Restrictions to using a computer more at school

Figure 46

	Key Stage			
	Total	3	4	Post-16
Base: Those in Key Stages 3 and above who use a computer at school	802	353	265	184
	%	%	%	%
Lack of time	45	45	47	43
Limited amount of computers	23	20	23	27
Share computers with other students	17	18	17	17
Lack of access to the Internet	8	7	7	12
Quality of software	7	7	7	7
Quality of computer	6	5	6	8
Age of software	6	5	5	8
Lack of interest	6	5	8	6
Internet filtering/blocking system	6	5	9	6
Teacher preference for more traditional methods	6	6	8	3
Age of computer	5	5	5	5
Nothing	18	21	13	21

Note: Answers receiving 5% or more mentions

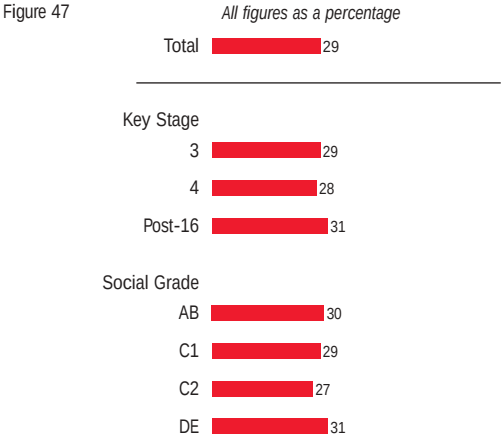
Children in Key Stages 3 and 4 and post-16s were asked whether they ever had difficulty in using a computer in school owing to the lack of adequate facilities. Figure 47 shows that 29% stated that they did have difficulties. Similar percentages were recorded by key stage and by social grade of child.

Black/Other groups were more likely to agree that they do find it difficult to use a computer in school owing to the lack of facilities (46%, compared with 40% of Asian respondents and 27% of White respondents).

Those in private or independent schools were less likely to claim to have facilities that were not adequate than those in state schools (14% vs 30%).

Difficulty in using a computer in school owing to lack of adequate facilities

Figure 47



Base: All in Key Stage 3 and above who use a computer at school (802)

Of those who had experienced difficulties, 9% said they happened all the time or very frequently, 31% said they were quite frequent. The majority (60%) said they happened now and again or hardly ever.

Post-16s were more likely to mention more frequent problems: 45% said they happened at least quite frequently compared to 37% of those in Key Stages 3 and 4. Of all those who used computers at school, 12% reported that difficulties were encountered at least quite frequently.

Frequency with which lack of adequate facilities affects ability to use a computer

Figure 48

	Key Stage			
	Total	3	4	Post-16
Base: Those in Key Stages 3 and and 4 and Post-16s who reported lack of adequate facilities	235	104	74	57
	%	%	%	%
All the time	3	4	2	4
Very frequently	6	5	8	4
Quite frequently	31	29	27	37
Now and again	56	58	56	53
Hardly ever	4	3	7	2
Don't know	*	1	0	0

5.10 Conflicts of use at school

- Children in Key Stages 3 and above resolved conflicts mainly by asking the teacher to intervene (older students were more likely to deal with the situation by working on computers out of school hours)
- Those in Key Stage 2 also solved the conflict by raising it with a teacher (though 46% said there were no conflicts)

Children in Key Stage 3 and above were asked whether they ever found it difficult to use a computer in school owing to lack of facilities. Those who experienced difficulties were asked, without being prompted with a list of answers, as to how they dealt with the situation.

The teacher was reported as being asked to intervene by 34%. The IT supervisor was the other school staff member referred to (14%).

Some 17% said that they would work more with fellow students on the computer – implying that they were sharing the facilities that were available.

Those in Key Stage 4 (29%) and post-16s (33%) were more likely than those in Key Stage 3 (18%) to say that they deal with the situation by working on computers at home out of school hours. Those in social grades D and E were the least likely to mention this (15%). Those in social grades A and B were most likely to refer to this (42%).

Those in social grades A and B were also more likely than other social grades to refer to the possibility of using computers other than at home/the local library (18% vs 7%). Hence, if there are pressures on resources at school, children in social grades A and B appear better placed to call upon other resources to assist them.

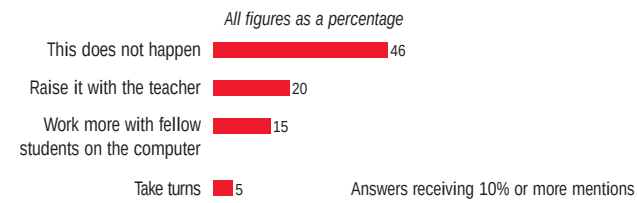
How difficulties are dealt with

Figure 49	Total	Key Stage 3	4	Post-16
Base: Those in Key Stages 3 and above who reported lack of adequate facilities	235	104	74	57
	%	%	%	%
Raise it with the teacher	34	31	45	28
Work more with fellow students on the computer	17	17	14	20
Raise it with the IT supervisor at school/college	14	11	18	16
Wait	2	4	1	0
Do schoolwork on computers at home out of school hours	25	18	29	33
Do schoolwork on computers in local libraries	4	5	3	5
Do schoolwork on computers elsewhere out of school hours	9	8	7	13
Other	6	9	1	6
Don't know/refused	9	13	5	5

Those in Key Stage 2 who worked on computers at school with other people were asked what happened when there was a conflict. The answers are shown in Figure 50.

How Key Stage 2 deal with conflicts when using a computer at school

Figure 50



Base: Children in Key Stage 2 who use computers at school with others

In 46% of cases, the children said that such conflicts did not occur. Where they did occur then they turned either to the teacher to sort them out (20%), worked alongside fellow students (15%) or took it in turns (5%).

6 Frequency of computer and Internet use in any location

6.1 Usage of computers or the Internet in any location

- 99% of children had used computers at home, school or elsewhere. One quarter of those who used them at school did not use them at home (especially those in social grades D and E)
- 23% of those who used computers at school did not use them at home
- 73% of children used the Internet at home, school or elsewhere
- Those in social grades D and E were more likely than those in other social grades to use the Internet at school but not at home

The children were asked whether they used computers or the Internet at school or in other locations.

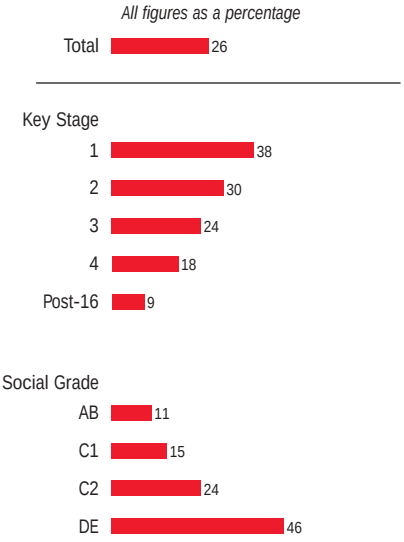
Overall, 99% of children had used computers either at home, school or elsewhere. Hence, computer usage amongst children was almost universal. This usage breaks down as follows:

- School: 93%
- Home: 75%
- Total access at school or home: 98%
- Additional access from other sources: 1%

Of the total sample, 23% used computers at school but not at home. Re-percentaging, 26% of those who used computers at school did not use them at home. Figure 51 shows that this group had a high incidence in social grades C2, D and E (C2 = 24%, D and E = 46%). It also had a high incidence in the younger age groups (Key Stage 1 = 38%, Key Stage 2 = 30%).

Those using a computer at school but not at home

Figure 51 *All figures as a percentage*



Base: Children with access to a computer at school but not at home (396)

Of children in Key Stages 1 and 2, 33% used a computer at another person's house and 5% at a library. The pattern was similar for children in this age group who lived in households in social grades D and E (30% and 3% respectively). For older children (Key Stages 3 and 4 and post-16s) 34% used a computer at another person's home, 17% a public library, 4% an Internet café, 2% a work place and 2% a parent's work place.

Of all the children, 73% had used the Internet at home, school or elsewhere. This breaks down as follows:

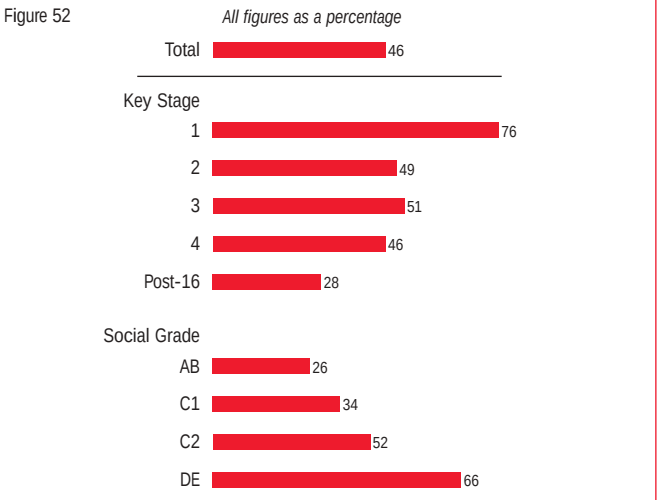
- School: 56%
- Home: 45%
- Total access at school or home: 72%
- Additional access from other sources: 1%

Of the total sample, 26% used the Internet at school but not at home. Looking at those who had access at school, 46% did not have access at home. Of this group, as was the case with access to computers, the majority was in social grades C2, D and E: 66% of those in social grades D and E and 52% of those in social grade C2 who used the Internet at school did not use it at home. The percentage for those in social grades A and B was 26%.

There was also a strong relationship with the key stage of the child. Of those in Key Stage 1 who used the Internet at school 76% did not use it at home. This applied to 28% of post-16s.

Those using the Internet at school but not home

Figure 52



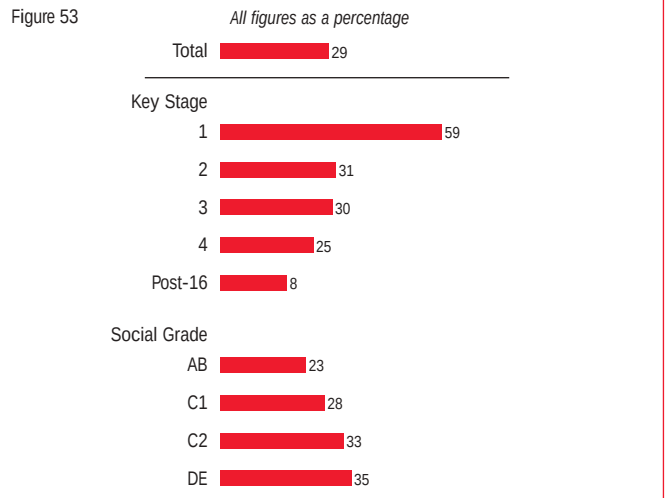
Base: Children with access to the Internet at school but not home (452)

In section 4.2, it was stated that 64% of children had access to the Internet at home. In contrast only 45% actually used the Internet at home. Figure 53 below shows that the majority of the children who had access to the Internet but did not use it were in the early key stages. Of those in Key Stage 1 who had access to the Internet at home, 59% did not use it. This applied to 8% of post-16s. Overall, of those with access who were non-users, 57% were in Key Stages 1 and 2.

There was also a link with social grade but this was not strong. Of children in social grades A and B with access to the Internet, 23% did not use it. This applied to 33% of those in social grade C2 and 35% of those in social grades D and E.

Those with access to the Internet at home but do not use it

Figure 53



Base: Children with home access to the Internet but who are not users (331)

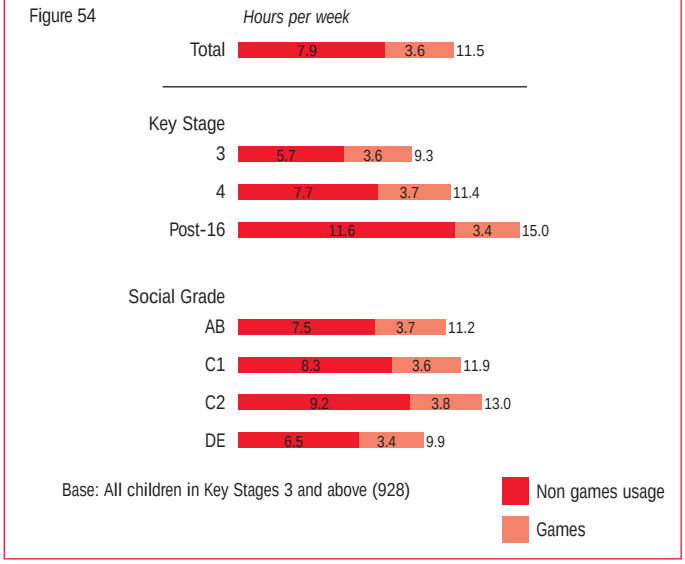
6.2 Total hours of computer usage (in any location)

- The average time per week spent using a computer in any location for those in Key Stage 3 and above was 11.5 hours (3.5 of which were games)
- The percentage of the time spent using computers for activities other than games increased with the age of the child

Figure 54 looks at the total hours spent on computers in any location for those in Key Stage 3 or higher.

Computer usage in any location

Figure 54



Base: All children in Key Stages 3 and above (928)

The average weekly computer use for children in Key Stage 3 or higher was 11.5 hours. Games usage was at a similar level by key stage and by social grade at around 3.5 hours per week. Differences in the usage figures were mainly by the use for other purposes. This was greatest for the post-16s (15.0 hours per week) and lowest for those in Key Stage 3 (9.3 hours per week) and those in social grades D and E (6.5 hours per week).

The difference by social grade was mainly accounted for by the lower penetration of computers in households in social grades D and E. If average weekly computer use is re-calculated on the basis of users of computers then usage increases by social grade: 9.1 hours per week for those in social grades A and B, 9.9 hours for those in social grade C1, 11.3 hours for those in social grade C2 and 11.8 hours for those in social grades D and E. The

percentage of the total time spent on computers that was spent playing games was similar for all social grades at between 35% and 40%.

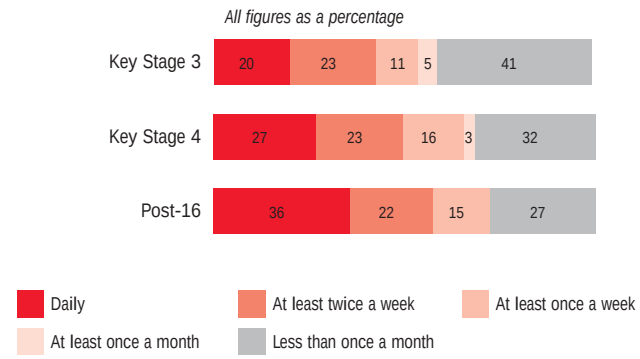
6.3 Frequency of Internet use (in any location)

- 73% of post-16s accessed the Internet at least once a week. This fell to 54% in Key Stage 3, 35% in Key Stage 2 and 15% in Key Stage 1

Those in Key Stages 3 and 4 and post-16 were asked how frequently they used the Internet in any location at the moment. The answers analysed by key stage are shown in Figure 55.

Frequency of using the Internet in any location

Figure 55



Base: All children at Key Stage 3 (380), Key Stage 4 (284), Post-16s (194)

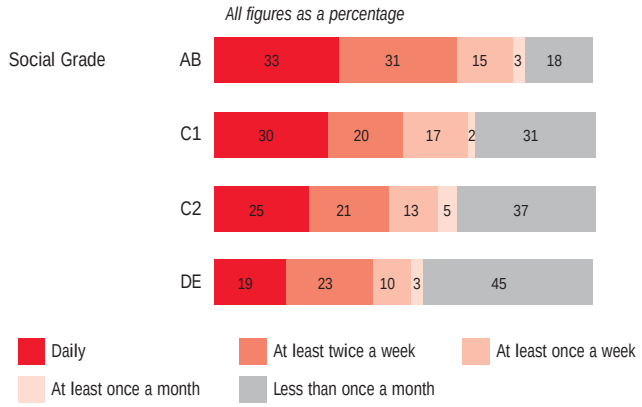
Some 73% of post-16s had Internet access at least once a week. This fell to 54% in Key Stage 3.

A slightly different scale was used for those in Key Stages 1 and 2. However, the percentage claiming to use the Internet at least once a week at either school or home was 35% among those in Key Stage 2 and 15% in Key Stage 1. Those in social grades A and B (42%) were the most likely to claim that they used the Internet at least once a week. This fell to 32% among those in social grade C1, 27% among those in social grade C2 and 21% among those in social grades D and E.

Differences in frequency of Internet use for those in Key Stage 3 and 4 and post-16s were also apparent by social grade, as is shown by Figure 56.

Frequency of using the Internet in any location

Figure 56



Base: All children at Key Stages 3 and above: AB (158), C1 (236), C2 (196), DE (268)

Of children in social grades A and B in Key Stages 3 and 4 and post-16, 79% used the Internet at least once a week. This applied to 52% of those in social grades D and E. These differences are mainly accounted for by those who claim to use the Internet at all. This stands at 84% of those in social grades A and B, 76% in social grade C1, 71% in social grade C2 and 64% in social grades D and E. Among Internet users, the frequency of use was similar by social grades.

7 The nature of Internet usage

7.1 Manner of accessing the Internet

- Of those parents who reported that their child used the Internet, the majority thought they were more likely to access the Internet from home than school (60% vs 38%)
- Children in households in social grades D and E made more use of Internet access at school

The report has shown that, of the total sample, 64% had access to the Internet at home and that 73% had used the Internet at some point (56% at school and 45% at home).

The mode of access for children in Key Stages 1 and 2 was discussed with the parent rather than with the child. Of those parents who reported that their child used the Internet, the majority thought that their child was more likely to access the Internet from a computer at home than at school. A total of 60% referred to a computer at home (44% a shared computer and 16% the child's own computer). Some 38% said that they usually accessed the Internet from a school computer.

In the case of households in social grades D and E, 56% said that their child was more likely to access the Internet at school. This applied to 25% of households in social grades A, B and C1.

Black/Other groups were the least likely to mention that they accessed the Internet from a home computer, but the most likely to say they accessed it from school or college.

Children in Key Stages 3 and 4 and post-16s were asked directly how they used the Internet and how they liked to be able to access the Internet. Those in Key Stages 3 and 4 were more likely than post-16s to say they preferred to use facilities at school (39% vs 25%). Post-16s were more in favour of accessing it from home (79% vs 39%).

Those in social grades D and E were more likely to say that they preferred access from school or college to access from home (50% vs 34%) but, as has been shown, they were less likely to have Internet access at home.

"Another person's home" was mentioned as the preferred source in 7% of cases. However, this received 20% of mentions from those who had no computer at home: school or college received 55% of mentions from this group.

Figure 57 shows how those in Key Stages 3 and 4 and post-16s had ever accessed the Internet.

Method of accessing the Internet (ever used)

Figure 57	Total	Key Stage 3	Key Stage 4	Post-16
Base: Those in Key Stages 3 and above who use the Internet regularly	567	229	196	142
	%	%	%	%
Own personal/laptop computer at home	39	34	40	47
Shared personal computer/laptop at home	30	29	32	31
Any home computer	68	61	70	75
Computer at school	67	65	71	64
Computer somewhere else	17	19	18	15
Mobile/WAP phone	7	6	8	7
Games console	3	4	3	3
Interactive digital TV	3	4	2	3

Children in Key Stage 4 and post-16s were likely to make a greater use of potential sources than those in Key Stage 3. Post-16s were more likely to access the Internet from their own computer at home than other key stages (47% vs 40% in Key Stage 4, 34% in Key Stage 3).

About 30% of all three key stages said they had used shared computers at home to access the Internet.

Those in social grades D and E were the least likely to mention a home computer (44%). This compares to 84% among those in social grades A and B, 71% among those in social grade C1 and 70% among those in social grade C2.

For those without a personal computer or laptop in the home, access at the school was mentioned by 83%. This was greatest from those in Key Stage 4 (71%). It was also the most frequently mentioned source for those in social grades D and E (78%) compared with 64% among other social grades.

Access via a computer in a location other than the home or school was mentioned by 17%: 31% of those without a personal computer or laptop in the home.

The children were also asked how they usually accessed the Internet. This followed a similar pattern to the "ever used" data in Figure 57. However, the answers tended to focus more on the top three answers of:

- Own computer at home (36%)
- Shared computer at home (25%)
- Computer at school (30%)

7.2 Purpose of accessing the Internet

- Children in Key Stages 1 and 2 were most likely to use the Internet for playing games (47%), followed by school projects (39%)
- Those in Key Stage 3 and above were most likely to state that they had accessed the Internet for school/college work (79%) followed by sending e-mails (62%)

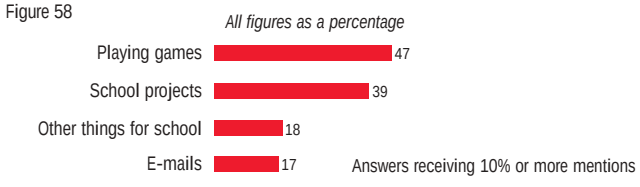
Those in Key Stages 1 and 2 were asked without being prompted what they used the Internet for. This question was prompted for those in Key Stages 3 and above. The results are therefore shown separately below.

Figure 58 shows that the main answer given for Key Stages 1 and 2 was playing games (47%). This was more likely to be mentioned by those in Key Stage 1 (56%) than those in Key Stage 2 (45%).

School projects were mentioned by 39%. These were more likely to be mentioned by those in Key Stage 2 (44%) than those in Key Stage 1 (16%).

Use of the Internet

Figure 58



Base: All in Key Stages 1 and 2 who use the Internet (267)

Those in Key Stage 2 were then asked what they liked doing best on the Internet. Playing games (45%) was the most frequently quoted answer. This was followed by school projects (16%), e-mails (9%), surfing the Net (9%) and doing other things for school (5%). Nothing else was mentioned by more than 5%.

Those in Key Stages 3 and 4 and post-16s who use the Internet regularly were prompted with a list of possible answers and were asked what they had ever accessed the Internet for.

Seeking information for school or college work was the main reason for accessing the Internet for the three key stages. Aside from this, the older the child then the greater was the range of reasons quoted. This applied to issues related to self-study or learning and careers development as well as leisure uses such as downloading games.

Reason for accessing the Internet (ever used)

Figure 59	Total	Key Stage 3	4	Post-16
Base: Those in Key Stages 3 and above who use the Internet regularly	567	229	196	142
	%	%	%	%
Information for school/college work	79	74	83	80
Sending/receiving e-mails	62	47	65	77
Information for study/learning	59	52	59	67
Information for hobbies	41	36	40	47
Surfing	39	34	34	52
Playing/downloading games	39	43	34	38
Listening to/downloading music	36	26	37	49
Chat rooms	32	21	37	40
Careers advice	22	5	20	48
Ordering goods	14	9	15	19

Note: Answers receiving 5% or more mentions

Playing or downloading games was the exception to the pattern in that it appeared to be of greater interest to those in Key Stage 3 (43%) than older children (36%).

There were differences by social grade. Those in social grades D and E who said they were regular Internet users appeared to use the Internet for a narrower range of purposes than other regular Internet users. The two main areas where they recorded a lower likelihood of use were:

- sending and receiving e-mails (53% vs 65% of those in other social grades)
- downloading music (28% vs 39%)

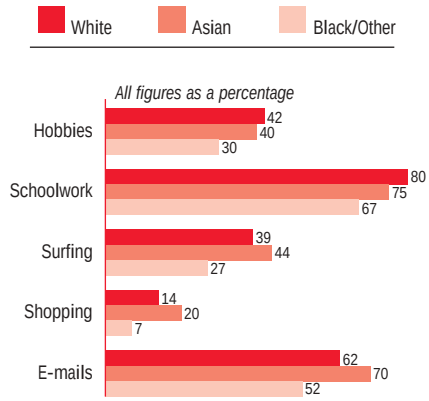
Those in social grade C2 and those in social grades D and E were less likely than those in social grades A, B and C1 to mention that they had used the Internet for shopping or ordering goods (7% vs 20%).

Those in social grades A and B were more likely than other social grades to say that they used the Internet for hobbies (55% vs 37%).

Of those who said they were regular Internet users, Black/Other groups used the Internet for fewer purposes than other regular Internet users. For example, 30% of Black/Other respondents used the Internet to find information for hobbies, compared with 40% of Asian respondents and 42% of White respondents. This pattern was also true for getting information for schoolwork, surfing, shopping, and sending or receiving e-mails.

Use of Internet

Figure 60



Base: All children in Key Stages 3 and above who use the Internet on a regular basis

The children were then asked for what purposes they accessed the Internet on a regular basis.

Reason for accessing the Internet (regularly)

Figure 61	Total	Key Stage 3	4	Post-16
Base: Those in Key Stages 3 and above who use the Internet regularly	567	229	196	142
	%	%	%	%
Information for school/college work	54	50	58	55
Sending/receiving e-mails	41	25	42	61
Information for study/learning	36	31	33	45
Information for hobbies	22	19	21	28
Surfing	22	18	16	33
Playing/downloading games	19	22	15	19
Listening to/downloading music	20	11	21	32
Chat rooms	15	8	15	24
Careers advice	8	2	8	17
Ordering goods	3	3	4	4

Note: Answers receiving 5% or more mentions

The patterns in the data that were established for Figure 59 are apparent again in Figure 61, with information for school or college work, sending and receiving e-mails and information for study or learning being the most frequent reasons. It stresses the greater range of categories that the older children accessed. Looking across the ten categories, those in Key Stage 3 accessed regularly an average of 1.9 categories, Key Stage 4 accessed 2.3 categories and post-16s accessed 3.2 categories.

Differences by social grade were not as large for "regular" access as they were for having "ever" accessed. In terms of the average number of categories mentioned, those in social grades D and E were similar to those in social grade C1 and social grade C2 (2.3 v 2.3 and 2.4). Those in social grades A and B showed a greater range of purposes (2.7). They were also more likely to access the Internet for e-mails (52% vs 38% for other social grades) and information for hobbies (33% vs 19%).

The children were asked whether they ever accessed web sites that were recommended by their teachers. The majority (64%) said that they did make use of such sites. The percentage was higher for post-16s (71%) and for those in social grades D and E (73%).

7.3 Perception of the ease of Internet use

- 78% of all children thought it was at least 'quite easy' to access the Internet

Perceptions of how easy/difficult it is to use the Internet

Figure 62	Total	Key Stage 1	2	3	4	Post-16
Base: Internet users	834	68	199	229	196	142
	%	%	%	%	%	%
Very easy	26	13	20	25	30	33
Quite easy	52	44	48	56	53	53
Quite difficult	17	31	27	16	11	11
Very difficult	3	11	4	1	4	3
Refused/don't know	1	2	1	2	2	1

The majority of the sample (78%) said that they thought it was at least "quite easy" to access the Internet. However, younger children were more likely to think it difficult (42% in Key Stage 1) compared with 31% of those Key Stage 2 and 15% of those in Key Stages 3 and 4 and post-16s.

While there were no overall significant differences in ease of use of the Internet among those in Key Stages 3 and 4 and post-16s by social grade, differences were apparent in Key Stages 1 and 2. Those in social grades A and B in Key Stages 1 and 2 were less likely to say that they had difficulty accessing the Internet than those in other social grades (21% vs 37%) and more likely to say that they found access "very easy" (28% vs 15%).

White and Asian Internet users in Key Stages 3 and 4 and post-16s were more likely to say that finding relevant information on the Internet was very easy (30% of the White group, 25% of the Asian group and 14% of Black/Other groups). This difference was not apparent in Key Stages 1 and 2.

Parents of those in Key Stages 1 and 2 were asked whether they ever helped their children on the Internet. Overall, 59% of parents said that they did. Parents in Social grades A, B and C1 were more likely to claim they helped than parents in social grades C2, D or E (73% vs 56% vs 34%).

7.4 Parents' views of Internet safety

- Three quarters of parents said they were concerned about Internet safety issues
- 43% of parents discussed the appropriate use of the Internet with their child
- 39% of parents had an Internet security system on their computer

All parents were asked several questions in connection with Internet safety to establish:

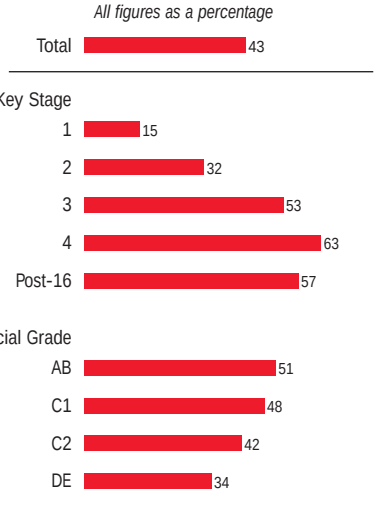
- whether they were concerned about Internet safety issues
- whether they had discussed appropriate use of the Internet with their child
- whether they had an Internet safety system on their computer(s).

Three-quarters of parents said that they were concerned about Internet safety issues. The percentage was similar across all child age groups and by social grade.

Figure 63 shows that 43% of parents had discussed the appropriate use of the Internet with their child. This was low for Key Stage 1 (15%) and Key Stage 2 (32%) compared to parents of older children (57%).

Percentage of parents who have discussed the appropriate use of the Internet with their child

Figure 63



Base: All parents (1748)

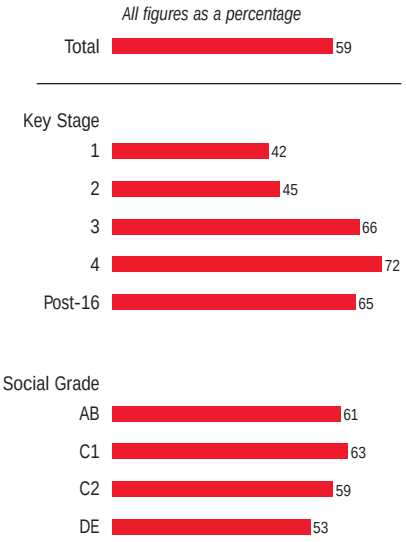
The likelihood of the parents having discussed the issues with the child was higher for those in social grades A, B and C1 (49%) compared to those in social grade C2 (42%) and social grades D and E (34%).

However, some of these differences are accounted for by whether the child accesses the Internet or not. Figure 64 shows the data re-percentaged on whether the child uses the Internet.

This shows that discussions were less likely for children in Key Stages 1 and 2 (45%) than they were for children in Key Stages 3 and 4 and post-16s (68%) and for those in social grades D and E (53%) than other social grades (61%).

Parents who have discussed the appropriate use of the Internet as a percentage of children using the Internet

Figure 64



Base: All parents whose child uses the Internet (1268)

Of those parents who had computers with Internet access, 39% said that they had an Internet security system on their computer. The percentages were similar for each key stage. Parents in social grade C2 were more likely to claim that they had an Internet security system than those in other social grades (47% vs 37%).

The likelihood of the parents having discussed Internet safety and usage issues with the child was similar across ethnic groups. However, parents in Black/Other groups were less likely to believe that their child knew how to use the Internet safely (64%, compared with 83% of the Asian group and 87% of the White group).

8 Parental interest in initiatives

- The highest level of interest in initiatives was for obtaining CD-ROMs/DVDs
- A secondary tier of initiatives were Internet related
- The lowest levels of interest were for renting or buying hardware

Parents were presented with several different hypothetical initiatives related to improving school resources or communications with the school and access to ICT and were asked whether they would be likely to take advantage of each initiative.

Figure 65 shows the percentage of parents who said that they were either very or quite likely to take advantage of various initiatives.

The percentages were highest for those activities related to obtaining CD-ROMs or DVDs to help the child in their school work. Borrowing them from a school library was most popular (81%), followed by buying them (75%) and renting them (69%).

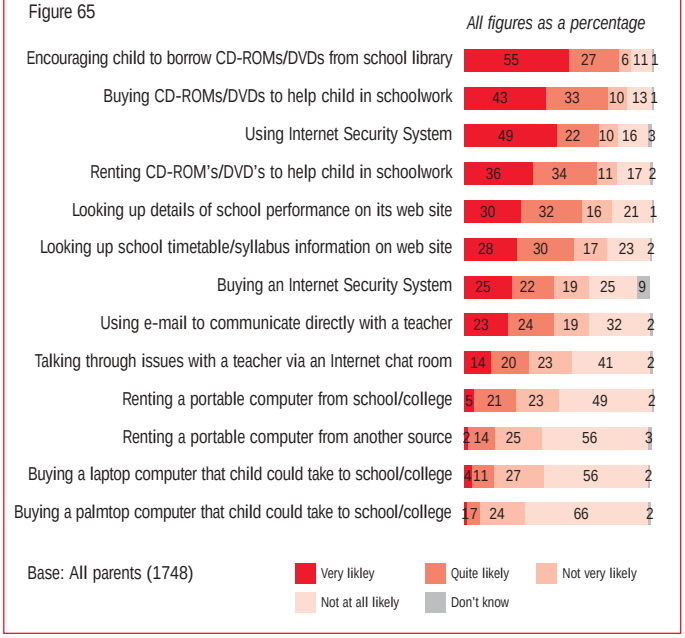
The second tier of initiatives was mainly Internet related. These concerned using an Internet security system (71%), looking up details of the school performance on its web site (62%), looking up school timetable or syllabus information on its web site (59%), buying an Internet security system (47%), using e-mail to talk to a teacher (47%) and talking through issues with a teacher in an Internet chat room (34%).

The lowest levels of interest were recorded for renting or purchasing hardware. This included renting a portable computer from school (26%), renting a portable computer from elsewhere (16%), buying a laptop (15%) and buying a palmtop (8%).

Figure 66 shows how the percentages change when the data is filtered on those households who do not have a personal computer or laptop.The overall rank order is very similar to that for all parents: obtaining CD-ROMs or DVDs come at the top of the list followed by Internet-related issues and finally obtaining computer hardware.

Parents stated likelihood of engaging in initiatives to improve access to ICT/education and school information

Figure 65



Within this there are differences of emphasis.

– Those without computers in the home were less likely than parents with home computers to mention obtaining CD-ROMs or DVDs. For example, encouraging the child to borrow from a school library was mentioned by 68% of those without a computer at home but 85% of those with a computer.

– Those without a computer in the home were less likely than those with a computer to mention Internet-related facilities such as looking up the details of the school performance on its web site (51% vs 64%).

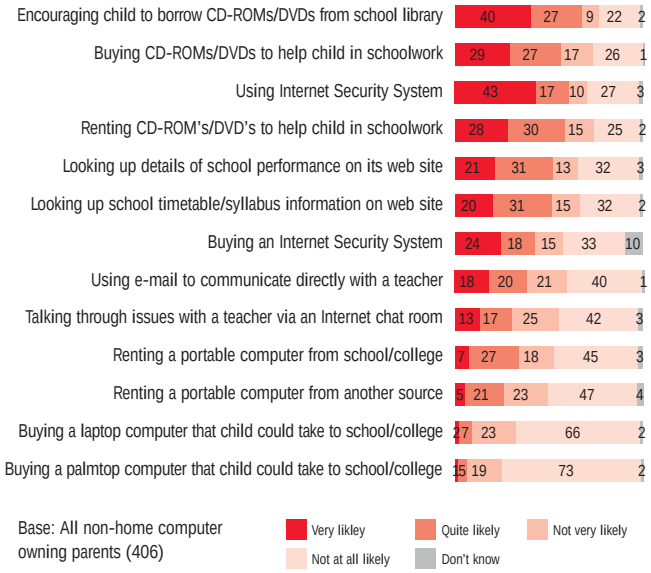
– Those without a computer in the home were more likely than those with a computer to mention renting a portable computer from the school or college (34% vs 24%) and renting a portable computer from another source (26% vs 13%).

The results for those without computers in the home are shown in Figure 66.

Parents stated likelihood of engaging in initiatives to improve access to ICT/ education and school information

Figure 66

All figures as a percentage



Base: All non-home computer owning parents (406)

Interest in propositions varied by ethnicity. Black/Other groups (who were less likely to have a computer at home) were less likely to mention renting or buying CD-ROMs or DVDs. They were more likely to say they would talk to teachers via an Internet chat room, use e-mail to communicate with a teacher and buy an Internet security system.

Parents in households in social grades A and B were more likely to say they would encourage their child to borrow CD-ROMs or DVDs from the school library, buy or rent CD-ROMs or DVDs to help with school work, use e-mail to communicate directly with a teacher and buy a laptop or palmtop to help with their school work.

9 Attitudes towards using computers and the Internet

9.1 Attitudes of parents

Parents were asked a series of questions to establish what they thought about the role of ICT in education. The results for all parents are summarised in Figure 67.

There was a high level of agreement that computers made schoolwork more enjoyable (85%) and that computers helped their child to be more creative (74%).

There was a lower level of agreement with three statements which assessed access to resources. Two thirds (65%) agreed that their child would make more use of the Internet if there were more relevant sites, 59% said that teachers should use more technology in the classroom and 55% said that they thought their child would work better at school if they had greater access to computer facilities.

The majority (62%) disagreed with the statement that using computers restricted their child's ability to talk to and learn from other people. Some 55% disagreed that there is too much emphasis by teachers and tutors on using computers.

There were some differences according to whether there was a male or female parent answering the question. Men were more likely than women to agree that their child would work better at school if they had greater access to computers (57% vs 51%). They were also more likely than women to agree that teachers should make more use of technology in the classroom (66% vs 56%).

The Asian group and Black/Other groups were more likely to agree that their child would work better at school if they had greater access to computer facilities. There was a high level of agreement across all groups that computers make schoolwork more enjoyable.

Parents' level of agreement with statements concerning the role of ICT in education

Figure 67

All figures as a percentage

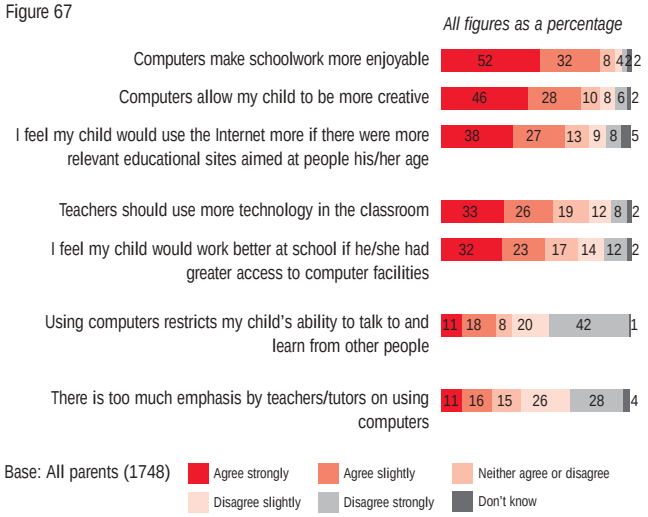


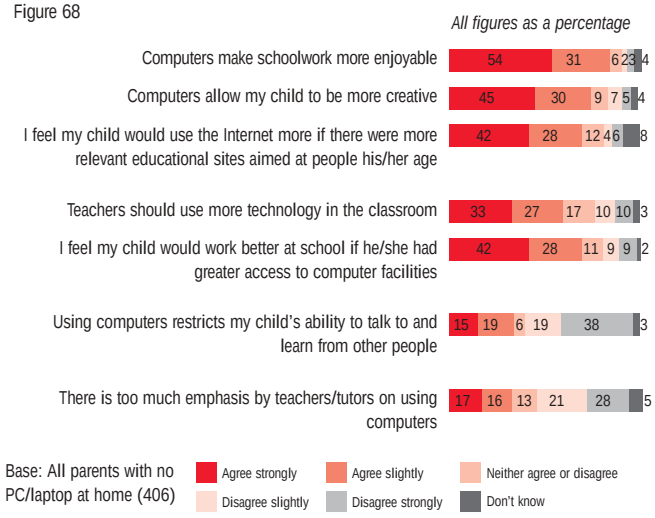
Figure 68 shows that the attitudes of parents without a home computer were broadly similar except that they were more likely than other parents to agree that:

- their child would work better at school if they had greater access to computer facilities (69% vs 51%)
- using a computer restricts their child's ability to talk to and learn from others (34% vs 27%)
- there is too much emphasis by teachers and tutors on using computers (33% vs 25%)

Parents' level of agreement with statements concerning the role of ICT in education

Figure 68

All figures as a percentage



9.2 Attitudes of children

- Attitudes of children towards computers were positive; they stated that computers made schoolwork more enjoyable and easier

All children were asked what effect using computers had on their work.

Those in Key Stage 1 were asked whether using computers made schoolwork more enjoyable: 89% said that they did.

Those in Key Stage 2 and above were shown a screen and were asked what effect, if any, using a computer had on their work. As children in Key Stages 3 and 4 and post-16s were asked the question in a slightly different way (they were first asked whether using a computer made any difference to their work) their answers are shown separately. The results are summarised in Figures 69 and 70.

Perceived impact on schoolwork

Figure 69	Key Stage 2
Base: Those in Key Stage 2 who use a computer at school	501
	%
Makes work more enjoyable	51
Makes work easier	35
Saves time	20
Improves results	13
Makes work less enjoyable	2
No effect/don't know	26

The main perceived benefit to the children in Key Stage 2 was that computers made work more enjoyable (51%) and easier (35%). There were no significant differences according to whether there was a computer at home. Children in social grades D and E were more likely to say that computers made work more enjoyable (56%, compared with 53% of those in social grade C2, 44% of those in social grade C1 and 48% of those in social grades A and B).

Among those in Key Stages 3 and 4 and post-16s the following answers were given.

Perceived impact on schoolwork

Figure 70	Key Stage			
	Total	3	4	Post-16
Base: Those in Key Stages 3 and 4 and Post-16s who use a computer at school	802	353	265	184
	%	%	%	%
Makes work more enjoyable	30	33	28	29
Makes work easier	35	31	35	42
Saves time	33	25	31	48
Improves results	27	23	30	30
Makes work less enjoyable	1	*	1	*
No effect/don't know	43	48	43	35
(= less than 1%)*				

Post-16s were less likely to say that computers had no effect on their work than those in Key Stages 3-4 (35% vs 45%).

Post-16s were more likely to see the impact of using the computer as saving them time than did the younger groups (48% mentioned this as a positive impact compared to 31% of those in Key Stage 4 and 25% in Key Stage 3). They were also more likely to say that it made work easier (42% compared to 32% of those in Key Stages 3 and 4).

As in the sample of parents, children were positive towards computers

86% agreed that they hoped to produce work they were proud of, 82% thought access to the Internet would improve the quality of their work and 81% thought computers allowed them to be more creative

Children in Key Stages 3 and 4 and post-16s were asked whether they agreed or disagreed with a similar list of statements to those that were put to their parents. As with the sample of parents, the children were positive towards computers as is shown in Figures 71 and 72.

The children were particularly likely to agree that computers and the Internet had a positive effect on their work. Some 86% agreed that they had helped them to produce work they were really proud of. A total of 82% thought that access to the Internet would improve the quality of their work, while 81% thought that computers allowed them to be more creative.

Computers were considered to add a sense of enjoyment. Some 80% said that computers made schoolwork more enjoyable and 84% disagreed that using computers was a dull activity.

In terms of resources, 62% said that they would use the Internet more if there were more relevant sites and 61%

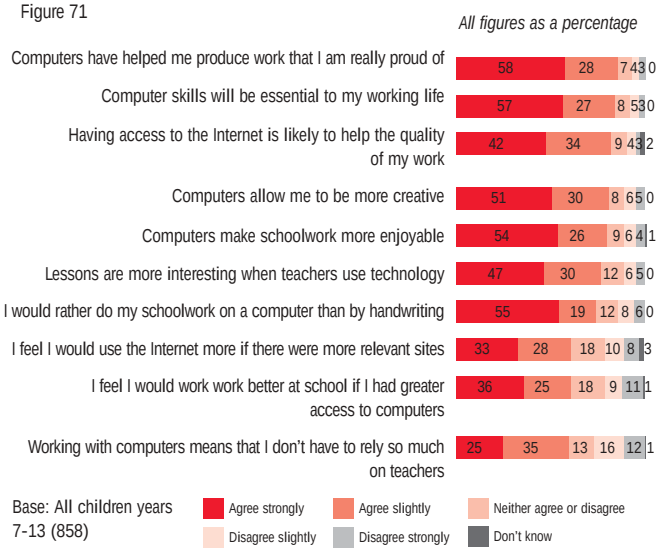
said that they would produce better work if they had greater access to computers.

Children were less certain about whether computers enabled them to learn more quickly. Some 39% agreed that it was harder to learn more quickly with computers than with personal attention from teachers. This was marginally greater than the 36% who disagreed with the statement.

Children were also less certain about the comparison of the Internet and printed material in differentiating between promotional material and information. Some 33% agreed that differentiating was harder on the Internet. This was greater than the 28% who disagreed.

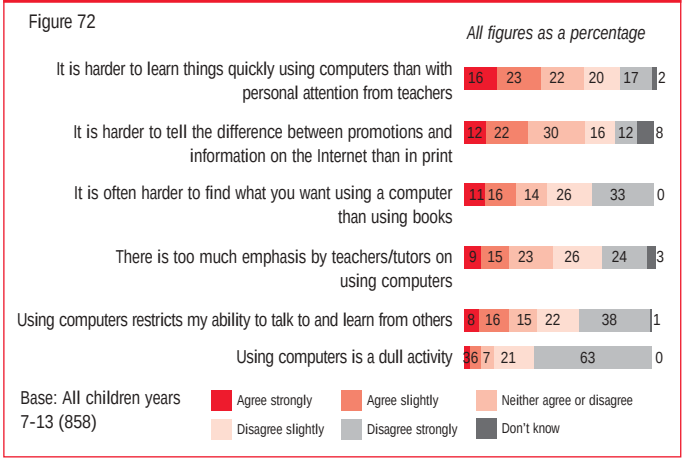
Children's agreement with statements about using computers/ICT (1)

Figure 71



Children's agreement with statements about using computers/ICT (2)

Figure 72



There were considerable similarities between all demographic groups in their attitudes. The sections below highlight areas where differences were apparent by key stage, social grade, presence of computer at home, gender and ethnicity.

Key Stage

Younger respondents were more likely than the older ones to see computers as enjoyable. For example:

- 86% of those in Key Stage 3 said that computers made schoolwork more enjoyable. This applied to 78% at Key Stage 4 and 74% of post-16s.
- 84% of those in Key Stage 3 said that lessons were more interesting when teachers used technology. For Key Stage 4 and post-16s the percentages were 73% and 69% respectively.

Younger respondents reflected that they had less access to computers; 69% said that they would work better at school if they had greater access to computer facilities. For those in Key Stage 4 and post-16s, the percentages were 58% and 50% respectively.

Social Grade

Those in social grades C2, D and E were more likely than other social grades to find working on computers interesting and enjoyable:

- 82% of those in social grades C2, D and E said that lessons were more interesting when the teachers used technology. This compares to 73% of those in social grade C1 and 68% in social grades A and B.
- 85% of those in social grades C2, D and E said that they found that computers made schoolwork more enjoyable, compared to 75% of those in social grades A, B and C1.

The lesser access to computer facilities of those in social grades D and E was reflected in the finding that 70% of those in social grades D and E said that they would work better at school if they had greater access to computer facilities. The comparable figure for those in other social grades was 57%.

Respondents in social grades D and E were more likely than other social grades to agree that it was harder to tell the difference between advertising and promotional material on the Internet than in print (41% vs 30%).

Those in social grades A and B were less likely than other social grades to agree that computers allowed them to be more creative (71% vs 83%) and were less

likely to agree that using computers restricted their ability to talk to and learn from others (18% vs 26%).

Access to computers

Those without access to computers at home were more likely to find computers interesting than those who had access (85% vs 75%). They were also more likely to claim that computers made schoolwork more enjoyable (86% vs 79%).

They were also more likely to agree that if they had more access to computers then they would work better at school (75% vs 58%).

Perhaps because of lack of experience using a computer at home, they were more likely than those with a computer at home to agree that:

- it is often harder to find what you want using a computer than using books (36% vs 25%)
- it was harder to tell the difference between advertising and promotional material on the Internet than in print (40% vs 32%).

Gender

Boys were more likely than girls to say that lessons were more interesting when the teachers used technology (87% vs 70%). They were more likely than girls to disagree that using computers was a dull activity (87% vs 80%).

Boys appeared to welcome the greater freedom that computers gave them more than girls, as shown in their agreement with the following statements:

- Working with computers means that I don't have to rely on the teachers so much (62% of boys vs 53% of girls)
- Computers allow me to be much more creative (84% of boys vs 78% of girls)
- It is harder to learn things quickly using computers than with personal attention from teachers/tutors (35% of boys vs 43% of girls).

Ethnicity

Black/Other groups were more likely than other ethnic groups to agree with the following:

- They would work better at school if they had greater access to computer facilities.
- It is harder to learn things quickly using computers than with personal attention from teachers.
- It is often harder to find what you want using a computer than a book.
- It is harder to tell the difference between such things as adverts/promotion and information on the Internet than in printed material.

Key Stages 1 and 2

Those in Key Stages 1 and 2 were asked simpler questions about what they liked and disliked about computers and the Internet. The main things these children said they liked about computers were that they could play games (41%) and that they could draw pictures (14%).

Those in Key Stage 2 were more likely than those in Key Stage 1 to mention the Internet (11% vs 4%) and the fun of finding out information (11% vs 5%).

In terms of dislikes, 37% were not able to suggest any. The main dislikes were related to the equipment being faulty, such as:

- when it goes wrong (11%)
- when it crashes (8%)
- getting stuck/freezing (5%)
- when it is slow (4%).

Limited access was mentioned by some: 4% said they were not able to use it enough, 3% said there was limited availability. Some 6% said that they found it hard to use a computer and 4% said that it was difficult typing.

Although all those children in Key Stages 1 and 2 were asked to describe the best and worst things about the Internet, the majority of those in Key Stage 1 had not had access and therefore were not able to provide an answer (71%). Therefore the report concentrates on those in Key Stage 2.

Their likes of the Internet were related to information gathering:

- Getting hold of information (23%)
- Looking at different web sites (8%)
- Lots of web sites available (7%)

Some 11% referred to the chance to play/download games off the Internet. Only 4% mentioned that they liked being able to send e-mails. A total of 28% of those in Key Stage 2 were not able to provide an answer.

When those in Key Stage 2 were asked to name the worst things about the Internet, they struggled to

generate answers: 52% were not able to name any “worst things”.

The main issues were speed related, for example it was too slow, or they had to wait (6%) and it takes too long to load (4%).

Some others referred to the fact that there were technical problems, such as the computer being broken (3%), when it crashes (2%), when it gets stuck/freezes (1%) and when the system is busy or too many people are using it (1%).

Other factors mentioned were that it was hard/difficult (3%), difficult to find what you want (3%), access was restricted (2%), not having access to sites (2%), unsuitable web sites (2%) and boring web sites (2%).

Appendix

Technical report

The Pilot

A comprehensive piloting stage took place to develop and test the questionnaire, before the main stage of interviewing took place. The face-to-face pilot took place between 31st August and 2nd September 2001.

The aim of the pilot was to test:

- the understanding of particular words/phrases/ questions and whether there was any misunderstanding or confusion
- the layout and design of the questionnaires
- whether there were any questions that caused particular problems for respondents, especially for the younger children
- the amount of time it took respondents to complete the questionnaires
- whether there was a successful balance between the parents' and the children's questionnaires, and how this could potentially be improved.

The target quota was based upon key stage of child. The quotas set and achieved are shown below.

Pilot Quotas

Key Stage	Set	Achieved
Key Stage 1	9	8
Key Stage 2	9	10
Key Stage 3	9	8
Key Stage 4	9	8
Post-16	9	6
Total	45	40

As well as these quotas, there was a requirement for at least 11 respondents who had a minimum of 2 parents working full or part time; 12 were achieved.

Households were located based on random sample location, with each interviewer allocated 2 sample points within which to interview. From these areas, they were required to complete a total of 9 interviews, as specified by the quota targets.

A full written report of the pilot was produced, with comments to feed into the questionnaire and survey development.

The Main Stage

Sampling methodology

The sampling approach for this study was designed to deliver a representative sample of children aged 5 to 18 years residing in England. We did not include children studying away from home or in tertiary education.

We undertook a random location sampling approach. Sample points were distributed proportionate to population size by region within England. Within each sample point there was disproportionate sampling by key stage of child. There were also limits on the number of households with no one in full time work and gender of child. These were set to match national incidence.

Each interviewer was supplied with a starting address, and addresses were contacted systematically from the starting address, with three doors being left after each successful interview.

At the analysis stage the disproportionate sampling by key stage was corrected by weighting and targets were also set by social grade. The following figure shows the unweighted and weighted sample profiles by key stage of child and social grade.

Age of child/social grade profile

	Achieved 1748	Weighted 1748
	%	%
Key Stage		
1	20	15
2	30	32
3	22	22
4	16	17
Post-16	11	14
Social Grade		
AB	17	15
C1	26	29
C2	24	25
DE	33	31

Sample size

We aimed for a sample size of 1750, to include 1500 young people aged 5 to 16 and 250 aged 17 to 18. This

option was chosen to provide robust sample sizes when looking at basic demographics (age, sex, social grade etc.).

We achieved 1750 interviews in total. However, we had to lose two records – one during the data cleaning process and one parent who decided to refuse after he and his child had completed the interview. This meant that the effective sample was 1748.

Data collection

Face to face CAPI (computer assisted personal interviewing; interviewer administered interview with data collected electronically on a palmtop computer) interviews were conducted in-home with both the child and parent present throughout.

Fieldwork was conducted between Friday 21st September and Monday 29th October 2001 at 229 sample points. Field progress was monitored on a daily basis and feedback was given regularly to the DfES.

Interviewers were given a letter of authorisation from the DfES to show to respondents, to prove this was an official government survey.

Interviewers were briefed on the background to the job, and were given full instructions on who to contact and how to complete the questionnaire.

Knowing that the children were not going to be able to provide all of the information that we required, the interview was split so that the detailed household information on the presence and cost of the ICT equipment was collected from the parent. The parents of the younger children were also asked the more detailed questions about the child's use of ICT in the home. The children were asked about what they used ICT for and what they liked or disliked about using computers. The older children (beyond Key Stage 2) were asked questions about equipment they owned in the home, their own expenditure and more detailed questions on their usage of computers and the Internet.

In order to contact the young people for interview, all fieldwork had to be conducted out of school hours. As we needed to interview both the parent and child together, we had to interview at times when both parties were likely to be at home. We therefore conducted some fieldwork in the late afternoon or early evening and some at weekends.

We interviewed one parent and one child only per household.

Quotas

Quotas were set on the gender of the child and the working status of parents (a minimum quota on those where both parents or a single parent are working full or part time).

Quotas were set and achieved as follows.

Quotas set and achieved

	Set	Achieved
	%	%
Children born between 1/9/94-31/8/96 (Key Stage 1)	14	20.5
Children born between 1/9/90-31/8/94 (Key Stage 2)	29	30.4
Children born between 1/9/87-31/8/90 (Key Stage 3)	22	21.7
Children born between 1/9/85-31/8/87 (Key Stage 4)	14	16.2
Children born between 1/9/83-31/8/85 (Post-16)	20	11.1
Both parents/single parent working full or part time	25 min	26
Any working status of parent	75 max	74

The quotas were set to ensure that we achieved a representative sample in each age group, and that households where the parents are working were not under-represented. The quotas were set in parallel. Post-16 children were over sampled, to ensure we achieved a large enough sample of this group.

Sample classifications

The regional breakdown achieved was evenly spread across England, as shown in the following table:

Standard Region

	Target % of England	Achieved % of England
Yorkshire/Humberside	10.8	10.1
North West	13.4	13.8
West Midlands	10.2	8.4
East Midlands	6.2	9.3
East Anglia	5.5	4.9
South West	11.5	10.5
South East	24.4	18.9
Greater London	11.5	17.6
North	6.5	6.4

We collected classification details regarding both the parents and the children. Interviewers were allowed to interview either parent. This meant that there was a larger sample of mothers than of fathers as the mothers were more likely to be available at the time the interviewer called. Overall, 1291 mothers were interviewed and 457 fathers (74% vs 26%).

We collected other classification details in order to be able to understand who our respondents are, including the following:

Other demographic classifications

	Achieved	Achieved
	No.s	%
Male child	928	53.1
Female child	820	46.9
Social Grade		
AB	304	17.4
C1	452	25.9
C2	413	23.6
DE	579	33.1
Owner occupier	1071	61.3
Rent private	137	7.8
Rent council/HA	518	29.6
Other	22	1.3
White	1515	86.7
Other ethnic origin	233	13.3

Questionnaire coverage

The questionnaire was developed in partnership between Taylor Nelson Sofres–Social and the DfES. The key areas covered were:

- ICT/Internet ownership and access in the household
- Expenditure on ICT and Internet in household
- ICT and Internet usage
- Attitudes towards the educational benefits of ICT and the Internet
- Classification details.

The interview was split between parents and children. The detailed household information on the presence and cost of the ICT equipment was collected from the parent and the parents of the younger children were also asked the more detailed questions about the child's use of ICT in the home. The children were asked about what they used ICT for and what they liked and disliked about using computers. The older children (beyond Key Stage 2) were asked questions about equipment they owned in the home, their own expenditure and more detailed questions on their usage of computers and the Internet.

The parents' expenditure questions were used for the total household expenditure calculations. The expenditure data from the older children's questionnaire were reported separately and included children's expenditure only. (The total annual expenditure analysis excluded all telephone and mobile phone costs.)

Parents and children were asked about their attitudes towards ICT.

Interview length

The average interview length was 35 minutes, though some interviews were considerably shorter (if they had not used or had no ICT equipment) or longer (for older children, or if they had high ICT use) than this.

Coding and code frames

The coding was carried out by staff of TNS's coding department, working to written instructions prepared by the coding supervisor and agreed with the Research Director.

Code frames were prepared for the following questions:

- Q526/632 What is the best thing about games consoles?
- Q527/633 What is the best thing about computers?
- Q528/634 What is the worst thing about computers?
- Q529/635 What is the best thing about the Internet?
- Q530/636 What is the worst thing about the Internet?
- Q778/885 Why do you say it is very easy to access information on the Internet?
- Q778/885 Why do you say it is fairly easy to access information on the Internet?
- Q778/885 Why do you say it is fairly difficult to access information on the Internet?
- Q778/885 Why do you say it is very difficult to access information on the Internet?

All 'other' answers were also looked at, and back coding was undertaken where possible, in order that as many answers as possible were included in a codeframe.

Expenditure analysis

Parents were asked what the household expenditure had been on various ICT facilities. In some cases, such as phone bills, these were asked for a monthly basis. On others, such as hardware purchases, the question was asked for an annual basis. The data was re-calculated to put all expenditure on an annual basis.

Included in the calculations were:

- computers bought in the last year
- peripherals such as printers, scanners, digital cameras bought in the last year
- computer software, games, CD-ROMs bought in the last year
- DVD hardware and software bought in the last year
- other electronic games or software bought in the last year
- annual expenditure on telephone bills and mobile phone costs
- monthly cost of Interactive digital TV subscriptions
- other Interactive digital TV costs in the last year
- annual subscription to an Internet Service Provider.

The individual questions were reported as actual data, including the number of people who said they didn't know how much the household expenditure was for a certain ICT product/facility.

However, when working out the total household expenditure for all ICT products, all respondents saying "don't know" at any of the expenditure questions were given an average score for the particular ICT facility to which it applied. For example, if a respondent didn't know how much they spent on monthly digital TV subscriptions, they were given the average score for these.

Weighting

The sample was designed to be a representative sample of children in full time education in different key stages and social grade. At the analysis stage the disproportionate sampling by key stage was corrected by weighting. The data was weighted independently by key stage and social grade, ensuring the percentages of each were correct.

The following table shows the unweighted and weighted sample profiles by key stage of child and social grade.

Age of child/social grade profile

	Achieved 1748	Weighted 1748
	%	%
Key Stage		
1	20	15
2	30	32
3	22	22
4	16	17
Post-16	11	14
Social Grade		
AB	17	15
C1	26	29
C2	24	25
DE	33	31

Statistical significance

All differences reported in this report are statistically significant at the 95% confidence limit. As shown in the figure below, confidence levels around a single percentage can be calculated using the sample size and the percentage observed.

For example, on a sample size of 100, looking at a percentage of 60, the confidence level is ±3.0%. Hence, if we were to draw several samples from the same population, we would expect to find 95% of the samples giving a value of between 57% and 63%.

Statistical significance

Nomogram level of confidence: 95%

N = percentage observed

	2	5	10	15	20	25	30	35	40	45	50
	98	95	90	85	80	75	70	65	60	55	50
25	5.5	8.5	11.8	14.0	15.7	17.0	18.0	18.7	19.2	19.5	19.6
50	3.9	6.0	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9
100	2.7	4.3	5.9	7.0	7.8	8.5	9.0	9.3	9.6	9.8	9.8
200	1.9	3.0	4.2	4.9	5.5	6.0	6.4	6.6	6.8	6.9	6.9
300	1.6	2.5	3.4	4.0	4.5	4.9	5.2	5.4	5.5	5.6	5.7
400	1.4	2.1	2.9	3.5	3.9	4.2	4.5	4.7	4.8	4.9	4.9
500	1.2	1.9	2.6	3.1	3.5	3.8	4.0	4.2	4.3	4.4	4.4
600	1.1	1.7	2.4	2.9	3.2	3.5	3.7	3.8	3.9	4.0	4.0
700	1.0	1.6	2.2	2.6	3.0	3.2	3.4	3.5	3.6	3.7	3.7
800	1.0	1.5	2.1	2.5	2.8	3.0	3.2	3.3	3.4	3.4	3.5
900	0.9	1.4	2.0	2.3	2.6	2.8	3.0	3.1	3.2	3.3	3.3
1000	0.9	1.4	1.9	2.2	2.5	2.7	2.8	3.0	3.0	3.1	3.1
1200	0.8	1.2	1.7	2.0	2.3	2.5	2.6	2.7	2.8	2.8	2.8
1400	0.7	1.1	1.6	1.9	2.1	2.3	2.4	2.5	2.6	2.6	2.6
1600	0.7	1.1	1.5	1.7	2.0	2.1	2.2	2.3	2.4	2.4	2.5
1800	0.6	1.0	1.4	1.6	1.8	2.0	2.1	2.2	2.3	2.3	2.3
2000	0.6	1.0	1.3	1.6	1.8	1.9	2.0	2.1	2.1	2.2	2.2

In a similar way the following table shows the difference between two percentages that is required for the difference to be considered significant at the 95% level. The columns relate to the pooled percentage. This is the average of the two percentages being compared. For example, if one group recorded 50% from a sample of 900 and another 60% from a sample of 600 then the pooled percentage is 54%.

Hence, if there are two groups each with a sample size of 500 and the pooled percentage is 20%, then there needs to be a difference of at least 5% between the two percentages for this to be considered significant at the 95% level.

Testing for significant differences between percentages

	10%	20%	30%	40%	50%
Sample size					
25	16.6	22.2	25.4	27.2	27.7
50	11.8	15.7	18.0	19.2	19.6
100	8.3	11.1	12.7	13.6	13.9
200	5.9	7.8	9.0	9.6	9.8
300	4.8	6.4	7.3	7.8	8.0
400	4.2	5.5	6.3	6.8	6.9
500	3.7	5.0	5.7	6.1	6.2
600	3.4	4.5	5.2	5.5	5.7
700	3.1	4.2	4.8	5.1	5.2
800	2.9	3.9	4.5	4.8	4.9
900	2.8	3.7	4.2	4.5	4.6
1000	2.6	3.5	4.0	4.3	4.4
1200	2.4	3.2	3.7	3.9	4.0
1400	2.2	3.0	3.4	3.6	3.7
1600	2.1	2.8	3.2	3.4	3.5
1800	2.0	2.6	3.0	3.2	3.3
2000	1.9	2.5	2.8	3.0	3.1

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