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Young People and ICT 2002

Findings from a survey conducted in Autumn 2002

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Introduction

In July 2002 the Department for Education and Skills (DfES) commissioned NFO System Three to undertake the second Young People and ICT survey, which updates the baseline Young People and ICT survey conducted in autumn 2001. The survey explored the attitudes and experiences of young people aged 5-18 and their parents, in relation to the use of information and communications technology (ICT) at home and at school. Parents of 3-4-year-olds were also interviewed. The research was undertaken in England during September and October 2002.

Findings

The main findings reported in this summary are based on 5-18-year-olds and their parents. Findings relating to parents of 3-4-year-olds are reported in a separate section at the end of the summary.

1.1 Access to ICT at home

Household access to most forms of ICT equipment has increased since 2001. The proportions of households that owned ICT equipment were:

- mobile phone 92%
- games console 77%
- DVD player 43%
- Interactive digital TV 33%
- Digital camera 23%
- WAP/3G phone 21%
- Palmtop computer 5%

81% of households had access to a personal or laptop computer in the home, compared with 78% in 2001. There was a strong relationship between access to ICT in the home and social grade of the household's chief income earner, with ownership levels higher for a majority of items among those in higher social grades. Parents aged 35+ in social class AB were the group most likely to have a computer at home (96%). Those aged under 35, in social class DE and with no educational qualifications, were the least likely (33% overall). Access to a home computer increased with key stage, with 68% of those in Key Stage 1 having a computer, rising to 87% of those in Key Stage 4 and post-16s.

68% of households had access to the Internet at home, compared with 64% in 2001.

Like access to a computer, Internet access at home increased in line with social grade, educational qualifications of the parents and key stage, rising from 56% of those in Key Stage 1 to 76% of post-16s. 92% of AB households, compared with 78% of C1, 64% of C2 and 43% of DE households, had access to the Internet.

82% of households with Internet access at home accessed the Internet via a telephone line using a modem, although the proportion using ADSL/broadband increased from 6% in 2001 to 10% in 2002.

Financial barriers, mentioned by 63% of respondents, remained the overriding factor that prevented parents who did not have a computer at home from buying one.

Presence of a computer at home, and in particular, a computer that had Internet access, enhanced a child's perception of their computing skills.

1.2 Young people's use of computers

98% of young people aged 5-18 used computers at home, at school or elsewhere, and there is no evidence of change in patterns of use since 2001.

92% of children used computers at school and 75% used them at home. 49% of young people used computers in a location other than at home or at school.

22% of 5-18-year-olds used computers at school but not at home.

On average, young people in Key Stage 3 and above spent around 10 hours using computers in the week prior to the survey. Of these, 6 hours were spent using computers at home, 3 hours using them at school and 1 hour using them elsewhere. About a third of the time was accounted for by games playing.

1.3 Young people's use of the Internet

84% of young people used the Internet at home, at school or elsewhere, compared with 73% in 2001. The proportion of young people using the Internet has increased since 2001, both at home, from 45% to 56%, and at school, from 56% to 71%.

26% of young people used the Internet at school but not at home.

The proportion of young people that used the Internet generally increased with age, from 42% of those in Key

Stage 1 to 84% at Key Stage 2, 94% at Key Stage 3, 97% at Key Stage 4 and 96% among post-16s.

1.4 Use of computers for schoolwork

In 2002, children of all ages undertook a wider range of computer activities at home than in 2001.

Among children in Key Stage 2 who used a computer at home, 40% – compared with 7% in 2001 – said that they did homework on the computer.

Among those in Key Stage 3 and above who used a computer at home, 90% used it for schoolwork. The subjects in which this group was most likely to do homework on a computer were English, science, history and ICT.

Among children in Key Stage 2 who used computers at school, 56% said that teachers used computers in English lessons, with science lessons mentioned by 43%, and mathematics lessons by 41%.

At Key Stage 3 and above, computers were most widely used in ICT lessons, mentioned by 87% of respondents who took this subject. Computers were also widely used in English (52%), design and technology (49%), science (47%) and mathematics lessons (43%).

As in 2001, the main factors that prevented greater use of computers at school among those in Key Stage 3 and above were lack of time, mentioned by 36% of respondents, and the limited number of computers, mentioned by 25%.

1.5 Attitudes towards computers and the Internet

As in 2001, the attitudes of both parents and children towards computers were generally positive.

54% of parents without a computer at home felt that their child would achieve better results at school if they had access to a computer at home. Among parents with access to a computer at home, 41% felt that this helped their child achieve better results at school. Among both groups, only 1% thought that access to a computer led to, or would lead to, their children achieving worse results at school.

76% of children in Key Stages 1 and 2 said that using computers made schoolwork more fun and 89% of those in Key Stage 3 and above said that they enjoyed using computers.

87% of children in Key Stage 3 and above felt that computers would be at least ‘quite important’ in their future working lives.

57% of parents said that they thought their child knew how to use the Internet safely. This proportion was lowest among parents of children in Key Stage 1 (15%) and highest among parents of children in Key Stage 4 (88%).

82% of young people in Key Stage 3 and above who were aware of Internet safety issues agreed that it was very important to be aware of these issues.

1.6 Early years and ICT

Among parents of 3-4-year-olds, 64% had a personal or laptop computer at home.

84% of parents of 3-4-year-olds with a computer at home (45% of all parents of 3-4s) said that their child used a computer at home.

56% of parents of 3-4-year-olds had Internet access at home.

70% of parents of 3-4-year-olds who attended an early years setting said that their child used computers in at least one of the settings that they attended.

2 Introduction

2.1 Background

A key strand of the Government's education strategy is to stimulate and support the use of information and communications technology (ICT) in teaching and learning as a means of raising educational standards. The cornerstone of the strategy is the ICT in Schools Programme, which supports the Government's vision for delivering higher standards of education and increasing employability through the use of ICT.

The first Young People and ICT Survey was undertaken in September and October 2001 to create a baseline of the attitudes and experiences of young people aged 5-18 and their parents with regard to the use of ICT both in and out of school. Young People and ICT 2002 is the second survey in the series.

Fieldwork was conducted in September and October 2002, using CAPI (computer-assisted personal interviewing). 2073 interviews were completed, 1804 paired interviews with both parent and child (aged 5-18) and 269 interviews with parents of 3-4-year-olds.

2.2 Survey objectives

The key aims of the research were to:

- examine the extent and pattern of use of ICT by young people, both in and out of school, particularly educational use
- examine the extent of ICT penetration in the home and wider out-of-school environment, and young people's access to these technologies
- identify as far as possible the impact of ICT on learning and attainment
- explore the change over time in the above measures through comparison between the 2001 and 2002 survey findings
- explore differences in ownership, use and attitudes between sub-groups within the survey population, in particular in relation to ethnicity, age, key stage, gender, special educational needs (SEN), disability, socio-economic background, region and urban/rural location.

3 Survey method

As *Young People and ICT* is a time-series, it is essential that a comparable research approach is maintained. The methodological approach used in this survey replicated that used in 2001, as far as possible. The survey was conducted using face-to-face paired interviews in the home with a sample of young people in England aged between 5 and 18 in full-time education and with one of their parents. Young people studying away from home and those in tertiary education, were not included. In addition, this year interviews were undertaken with a sample of parents of 3- and 4-year-olds. The research was undertaken in England during September and October 2002, that is, during the same months as the baseline survey.

Fieldwork was conducted using CAPI (computer-assisted personal interviewing). 2073 interviews were completed, 1804 paired interviews with both parent and child (aged 5-18), and 269 interviews with parents of 3-4-year-olds.

The sampling approach undertaken delivered a representative sample of the target population, allowing reliable and robust conclusions to be drawn in relation to several key variables. One of these key variables is the key stage of the child, which is defined as follows:

Figure 3.1: Definition of key stage of child

Date of birth	Age	School year	Key stage
1/9/97 – 31/8/99	3-5	Early years	Foundation
1/9/95 – 31/8/97	5-7	1-2	1
1/9/91 – 31/8/95	7-11	3-6	2
1/9/88 – 31/8/91	11-14	7-9	3
1/9/86 – 31/8/88	14-16	10-11	4
1/9/84 – 31/8/86	16-18	12-13	Post-16

Throughout the report we refer to social grade, which is based on the chief income earner in the household - that is, the person with the largest income, whether from employment, pensions, state benefits, investments or any other source.

Figure 3.2: Definition of social grade

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 unskilled manual workers
E	Those at lowest level of subsistence	State pensioners or widows (no other earner), casual or lowest grade workers

In terms of sub-group analysis, the report focuses mainly on results by key stage and gender of the child; social grade of the household; and access to computers/the Internet at home.

Other sub-group differences were explored in relation to:

- gender and age of the parent
- ethnicity of the child and parent
- the parent's educational attainment
- whether the child has SEN
- whether the child has a disability
- whether the child lives in a single parent household
- number of children in the household
- region
- and rurality.

Notable sub-group differences in terms of these variables are highlighted in the report.

Multivariate analysis techniques (multiple regression and CHAID) were also used, for a number of key measures, to further explore relationships between variables in the survey data. The key findings of the multivariate analysis are presented within the relevant chapters.

With regard to analysis by ethnicity, the sample sizes for different ethnic groups were insufficient to permit reliable reporting. Comments on differences by ethnicity are therefore restricted to the findings of the multivariate analysis.

Further details of the research method are provided in the Appendix.

Note on reporting of survey data

The following should be noted about data presented in tables and charts in this report:

- the base shown is, in all cases, the unweighted base for the group concerned
- a '*' symbol denotes a percentage of less than 0.5% (but not zero)
- zero is represented by '0'
- percentages for single-response questions do not always add to exactly 100 because of rounding or because of the omission of answer categories such as 'Don't know'
- because the survey used a quota, rather than random, sampling design, tests for the statistical significance of findings are not strictly valid. This means that any assessment of the validity of changes over time involves judgement on the part of the researcher and this should be borne in mind when interpreting findings.

4 Young people's use of computers and the Internet – An overview

4.1 Computer use

The baseline survey established that almost all young people used computers either at home, at school, or elsewhere. The 2002 survey confirms this finding and shows no evidence of change in the use of computers at home, at school and elsewhere (Figure 4.1). As in the baseline survey, more than 90% of children said that they used computers at school and 75% that they used them at home. 49% of young people used computers in a location other than at home or at school.

Schools continued to enable access to computers for most of the young people who did not enjoy home access. 22% of the sample, which equates to 90% of those without access to a computer at home, used computers at school but not at home.

Computer use – 2002 vs. 2001

Figure 4.1	2001	2002
Base: All young people	1748	1804
	%	%
At home	75	75
At school	93	92
Elsewhere	n/a	49
Anywhere	99	98
School, not home	23	22

Figure 4.2 breaks down computer use in 2002 by key stage. Whilst use of computers at home increased with key stage, use at school and elsewhere was highest among those in Key Stage 3.

Computer use by key stage

Figure 4.2	Total	KS1	KS2	KS3	KS4	Post-16
Base: All young people	1804	273	557	446	283	245
	%	%	%	%	%	%
At home	75	64	74	78	80	81
At school	92	85	91	97	94	91
Elsewhere	49	30	44	61	55	49
Anywhere	98	96	99	99	99	98
School, not home	22	32	23	21	19	16

4.2 Use of computers other than at home or at school

40% of children in Key Stages 1 and 2 and 57% of those in Key Stage 3 and above, used computers somewhere other than at home or at school.

A large part of this use is accounted for by young people using computers at other people's homes. 34% of children in Key Stages 1 and 2, and 46% of those in Key Stage 3 and above, used computers at other people's homes. Use of computers in public places was less widespread, particularly among younger children, although 19% of children in Key Stage 3 and above used computers in a public library.

4.3 Time spent using computers

The amount of time spent using computers by young people in Key Stage 3 and above was measured by asking respondents how many hours they had spent using computers at home, at school and elsewhere in the seven days prior to the survey. As in the baseline survey, time spent playing games was separated from time spent on other activities.

Figure 4.3 shows the average amount of time spent using computers by location. Results are shown for the 2001 and 2002 surveys.

Time spent using computers in the seven days prior to the survey (mean hours) – Key Stage 3+: 2002 vs. 2001

Figure 4.3	2001	2002
Base: All young people in KS3+	858	974
At home	7.2	5.7
At school	3.0	2.8
Elsewhere	1.3	1.1
Total	11.5	9.5

The results indicate a decline in time spent using computers since the baseline survey. For school use, this can be explained by the slightly earlier fieldwork start in the 2002 survey, which meant that, for respondents interviewed at the beginning of the survey, the seven days prior to the survey would fall mainly or partly before the beginning of term. Indeed, the average number of hours spent on a computer in the week prior to the survey by those interviewed from mid-September onwards was 3.0, the same as in 2001.

The most striking discrepancy between the two surveys is in time spent using a computer at home, which the

results suggest has fallen by around 20%. There is, however, little else in the survey findings that suggests a genuine trend in this direction. On the contrary, the results suggest that as many young people were using computers at home as in 2001, and that they were using them for a wider range of activities than before. Bearing the general trend in mind, these results should be treated with caution and should not be seen at this stage to represent a downward trend in use.

In spite of the overall difference between time spent in the 2001 and 2002 surveys, the relative time spent on games and other activities was similar in the two surveys, with around a third of time spent playing games. In 2001, 3.6 of the 11.5 hours were spent playing games; in 2002, 3.1 of the 9.5 hours were spent playing games.

Figure 4.4 shows how time spent using computers in any location varied by gender within key stage.

Time spent using computers in the seven days prior to the survey (mean hours) by gender and key stage – Key Stage 3+

Figure 4.4		Base	Not games	Games	Total
Base: All young people in KS3+					
All	– Boys	498	6.8	4.2	11.0
	– Girls	476	6.1	1.9	8.0
	– All	974	6.4	3.1	9.5
KS3	– Boys	231	4.8	4.4	9.2
	– Girls	215	3.9	2.0	5.9
	– All	446	4.3	3.2	7.6
KS4	– Boys	141	7.3	4.0	11.3
	– Girls	142	7.0	2.2	9.2
	– All	283	7.2	3.1	10.2
Post-16	– Boys	126	10.4	4.2	14.6
	– Girls	119	9.6	1.3	10.9
	– All	245	10.0	2.8	12.8

As Figure 4.4 shows, the amount of time spent using computers increased with key stage, ranging from 7.6 hours in the week prior to the survey among those in Key Stage 3 to 12.8 hours among post-16s. Boys spent more time than girls using computers at all key stages, although much of this difference is accounted for by boys spending more time than girls playing games.

4.4 Use of the Internet

In the baseline survey, 73% of young people used the Internet at home, at school or elsewhere. In the 2002 survey, this proportion increased to 84%. As Figure 4.5 shows, Internet use increased both at home and at school.

Among young people who did not access the Internet at home, around six in ten, which equates to 26% of the total sample, gained experience of the Internet at school.

Internet use by location – 2002 vs. 2001

Figure 4.5	2001	2002
Base: All young people	1748	1804
	%	%
At home	45	56
At school	56	71
Elsewhere	n/a	19
Anywhere	73	84
School, not home	26	26

Figure 4.6 breaks down Internet use in 2002 by key stage. As with computer use, use of the Internet at home increased with key stage, peaking among those in Key Stage 4 and post-16s. Use at school and elsewhere was highest among children in Key Stage 4.

Internet use by key stage

Figure 4.6	Total	KS1	KS2	KS3	KS4	Post-16
Base: All young people	1804	273	557	446	283	245
	%	%	%	%	%	%
At home	56	30	32	62	70	70
At school	71	23	72	81	88	83
Elsewhere	19	1	5	34	35	30
Anywhere	84	42	84	94	97	96
School, not home	26	12	32	29	26	23

4.5 Use of the Internet other than at home or at school

19% of children used the Internet somewhere other than at home or at school. This proportion was lowest among children in Key Stage 1 (1%) and highest among those in Key Stage 4 (35%). Among those in Key Stage 3 and above, 18% accessed the Internet at another person's home, 11% in a public library, and 2% in an Internet café.

4.6 Young people's aptitude in using computers

Parents of children in Key Stages 1 and 2 were asked to assess their child's aptitude in using computers, relative to other children of their age, on a five-point scale ranging from "non-existent" through to "expert". Young people in Key Stage 3 and above were invited to assess their own skills level, using the same scale, but not in relation to other people of their own age (Figure 4.7).

It is worth noting that this question is a self-assessment, and so may reflect confidence in computing more closely than actual skills levels.

Young people's aptitude in using computers – by key stage

Figure 4.7	KS1	KS2	KS3	KS4	Post-16
Base: All young people	273	557	446	283	245
	%	%	%	%	%
Non-existent	4	1	1	*	2
Beginner level	53	38	22	7	12
Intermediate level	24	44	53	55	46
Advanced level	9	10	19	33	37
Expert	1	1	4	4	3
Don't know	10	5	2	*	0

The results show a broadly consistent progression through the key stages, from a majority of parents assessing Key Stage 1 children as novices, to around 90% of those in Key Stage 4 and post-16s assessing their skills level as intermediate or above. Post-16s were more likely than those in Key Stage 4 to assess their skills level as 'advanced' or 'expert', but also more likely to rate their level as 'non-existent' or 'beginner'.

Assessment of skills levels varied by the gender of the child. At Key Stage 1 and 2, parents were more likely to rate boys' skills as being 'intermediate' or higher than girls' skills. At Key Stage 3 and above, boys were more likely than girls to rate their skills level as 'advanced' or 'expert' (Figure 4.8).

Young people's aptitude in using computers – by gender

Figure 4.8	KS1 & 2		KS3+	
	Boys	Girls	Boys	Girls
Base: All young people	426	404	498	476
	%	%	%	%
Non-existent	2	2	1	1
Beginner level	39	46	15	15
Intermediate level	41	34	47	57
Advanced level	11	9	31	24
Expert	1	1	5	2
Don't know	6	8	1	1

Whether or not the child had access to a computer at home also had a considerable bearing on how they or their parent assessed their skills level (Figure 4.9). Those who had access to a computer at home perceived their ICT skills as more advanced, relative to those without access.

Young people's aptitude in using computers – by home computer access

Figure 4.9	KS1 & 2		KS3+	
	Computer at home		Computer at home	
	Yes	No	Yes	No
Base: All young people	624	206	818	156
	%	%	%	%
Non-existent	1	4	1	2
Beginner level	38	57	12	30
Intermediate level	43	21	52	52
Advanced level	12	9	30	10
Expert	1	3	4	2
Don't know	5	14	*	4

Findings from multivariate analysis

Multivariate analysis was conducted to examine correlations between a child's perception of their computing skills and a range of other variables. This analysis indicated that the presence of a computer at home, and in particular, a computer that has Internet access, is key to explaining a child's perception of their computing skills. Additionally, the role of parents is clearly important, with both the parent's education level, and their perception of their own ICT skills level, significant factors in pupils' perceptions of their skills levels. There was also a positive association between a child being black or Asian and high self-assessed ICT skills.

Factors that were related to children having low ICT skills levels were the child being identified as having SEN, low parental educational attainment and parents assessing themselves as having no ICT skills.

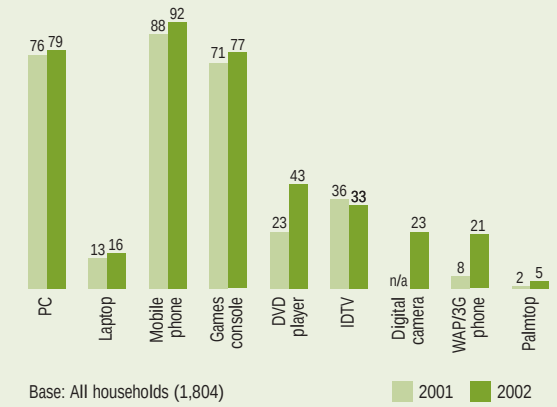
5 ICT in the home

5.1 Household access to ICT

Parents were asked what types of ICT they had in their homes. Figure 5.1 shows the results for all households alongside those from the baseline survey.

Access to ICT at home

Figure 5.1 *All figures as a percentage*



As in 2001, almost all households had access to at least one type of ICT. Access levels for individual technologies have increased, with the exception of interactive digital TV. The apparent fall in access to the latter might result from the collapse of a major digital television supplier. It might also be explained by a change in wording in the current survey, whereby respondents were asked whether they had interactive digital TV "with Internet access", a qualifier which was not included in 2001.

For items where penetration was already relatively high, such as computers, mobile phones and games consoles, increases in penetration were relatively small. However, access to the less established technologies, such as DVD players, WAP phones and palmtop computers, has increased considerably. Digital cameras, which were not covered in the baseline survey, were present in 23% of households in 2002.

As the baseline survey identified, there is a strong relationship between access to ICT in the home and the social grade of the household's chief income earner, with ownership levels higher among those in higher social grade households. Ownership was particularly low among DE households, relative to other groups (Figure 5.2). The one exception to this general trend was for games consoles, ownership of which was highest among C2 households (83%), and lowest among AB households (70%).

Household access to ICT – by social grade

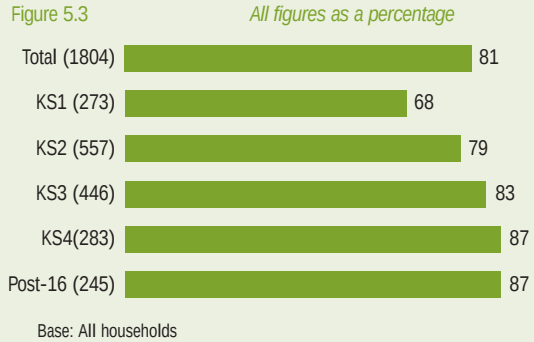
Figure 5.2	Total	AB	C1	C2	DE
Base: All young people	1804	379	479	417	529
	%	%	%	%	%
Personal computer	79	93	86	81	60
Laptop computer	16	36	17	11	3
PERSONAL OR LAPTOP COMPUTER (NET)	81	95	88	82	61
Mobile phone	92	95	92	93	88
Games console	77	70	77	83	78
DVD player	43	46	47	45	34
Interactive digital TV	33	33	36	37	26
Digital camera	23	37	27	22	11
WAP/3G phone	21	27	25	21	14
Palmtop computer	5	12	5	2	1
None of these	1	*	*	1	2

5.2 Household access to computers

The proportion of households that had access to a personal or laptop computer in the home increased from 78% in 2001 to 81% in 2002. As Figure 5.3 shows, access to a home computer increased with key stage from 68% of Key Stage 1 to 87% of post-16s.

Access to a computer at home by key stage of child

Figure 5.3 *All figures as a percentage*



Among households that owned computers, 68% had one computer, 32% two or more. The proportion that owned two or more computers increased with social grade, with 17% of DE households that owned computers owning two or more, rising to 53% of AB households.

Findings from multivariate analysis

Multivariate analysis was conducted to examine correlations between computer ownership and a range of other variables. The analysis suggested that the following variables were related to computer ownership: social

grade, highest education qualification of parent, marital status of parent and age of child and parents. Social grade and parental qualifications proved to be the most powerful predictors of computer ownership.

Parents aged 35 and over in social grade AB were the most likely to have a computer at home (96%). Parents in social grade DE with no educational qualifications were the least likely to do so (50%). Within this group, those who were under 35 were less likely to have a computer at home than those aged 35 and over (33% compared with 57%).

The age of the parent also affected computer ownership, with computer ownership increasing with age.

5.3 Computers in the home

81% of households had a PC or laptop in the home. In the large majority of these households (91%), at least one computer in the household was used on a regular basis. Where this was the case, respondents were asked a series of questions about each computer in the household, including how it had been paid for, for what purposes it had been bought, and where it was situated in the home.

How computers were paid for

83% of households, compared with 80% in 2001, had bought their main computer using household money. Where computers had not been bought with household money, they were most commonly paid for by friends or relatives.

Single parents (19%) and those in DE households (15%) were particularly likely to say that friends or relatives had paid for their main computer and were correspondingly less likely to have bought the computer themselves (72% and 78% respectively). Among each group, however, the proportion buying for themselves had increased since last year.

Reasons for obtaining a computer

Parents were asked to select, from a list of reasons for purchase, why they had obtained each computer in the home. Where they gave more than one reason, they were then asked to state the main reason. This question was new to the 2002 survey.

Figure 5.4 shows the proportions of parents citing each purpose as (a) a reason for purchase and (b) the main reason for purchase, for at least one computer in the home.

Reasons for obtaining a computer

Figure 5.4	All reasons	Main reason
Base: All households with a computer at home that was used regularly	1307	1307
	%	%
Parents' work purposes	47	30
Parents' recreational/leisure use	52	15
Household tasks	22	2
Parents' use of e-mail	37	2
Children's school/college work	82	54
Children's recreational/leisure use	66	13
ANY CHILD-RELATED PURPOSE (NET)	90	65

The results show that children's needs play an important part in parents' decisions to buy computers. 90% of parents said that their children's educational or leisure needs were among the reasons for buying a computer and 65% that they were the main reason. The proportion of parents citing child-related reasons for acquiring a computer increased with key stage, ranging from 78% among parents of Key Stage 1 children to 95% of parents of children in Key Stage 4 and post-16s.

Parents were more likely to say that they had acquired a computer for their children's school/college work than for their leisure use, the relative importance of school/college work increasing with the age of the child.

Analysis by social grade shows that the lower the social grade, the more likely a parent was to say that their children's needs were the main driver behind acquiring a computer. This is largely because, among ABC1s, by definition 'white-collar' households, children's needs were more likely to compete with parents' own work-related needs. 76% of those in DE households with a computer said that their children's educational or leisure needs were the main reason for buying at least one computer, compared with only 9% who gave their work as a main reason. Among AB households, on the other hand, similar proportions of parents cited their own work (53%) and child-related reasons (52%).

Where computers were located in the home

Parents were asked about the location of each computer in the home. 67% had a computer in a communal area, such as a living room, shared study or shared bedroom, whilst 18%, compared with 20% in 2001, said that the child taking part in the interview had a computer in their own bedroom[1].

[1] The slight fall in the percentage of children who had a computer in their own bedroom may result from a change in definition of shared bedrooms, which were defined as a communal area in the 2002 survey, but not in the baseline survey.

26% had a computer in another private area, such as another family member's bedroom or study. As was found in 2001, the proportion of children that had a computer in their own bedroom increased with the key stage of the child, ranging from 9% of those in Key Stage 1 to 30% of post-16s.

5.4 Internet access at home

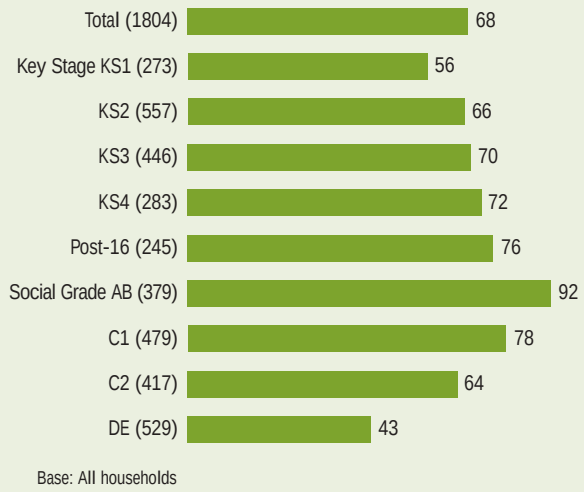
In the baseline survey, 64% of households had access to the Internet. In the 2002 survey, this proportion increased to 68%.[2]

Among those with a computer in the household, 81% had access to the Internet, whilst 12% of households with no computer accessed the Internet at home via another source, usually a digital TV.

Internet access at home increased in line with key stage of the child and, in particular, with social grade (Figure 5.5). There is no evidence at this stage of the gap closing between AB and DE households, 92% and 43% with access in 2002, compared with 87% and 41% in 2001.

Access to the Internet at home by key stage of child and social grade

Figure 5.5 *All figures as a percentage*



Base: All households

Findings from multivariate analysis

Multivariate analysis was conducted to examine correlations between Internet access in the home and a range of other variables.

Social grade, age of parents and educational qualifications proved to be the most powerful factors in explaining Internet access. However, other factors were also significant. The analysis suggested that Asians were less likely to have Internet access than white respondents; households with SEN pupils were much less likely than those without to have access to the Internet; region and area deprivation also had a small, but significant effect on Internet access.

Within social grades C1, C2 and DE, highest educational qualification was a key predictor of Internet access at home. Internet access rose from 48% for those in social grades C1 and C2 with no qualifications, to 71% with NVQ 1 to 4, to 92% with NVQ 5. In social grade DE, the key distinction was between those with no qualifications (26%) and those with some qualifications (42%).

Multivariate analysis suggested that the following variables were related to Internet access among computer owners: social grade, whether the child had SEN, the parent's level of education and the parent's age. All of these variables proved to be reasonably powerful predictors.

Social grade proved to be the first, and therefore the most powerful discriminator, followed by the parent's level of education. For example, 94% of those in social grade AB with a computer had access to the Internet, compared with 59% of those in social grade DE. Among ABs, 95% of those with NVQ level 3 qualifications and above had Internet access, compared with 91% of those with lower than NVQ level 3. Among C1 computer owners, Internet access averaged 83%, but varied between 66% for those with no qualifications and 87% for those with at least NVQ level 1.

5.5 Mode of access to the Internet

93% of respondents who said that they had Internet access at home accessed the Internet through a personal computer. The other main modes of access were through a laptop computer (13%); an interactive digital TV (11%) and a WAP/3G phone (8%). Among households with Internet access, but without a personal or laptop computer at home, 75% accessed the Internet via interactive digital TV, 26% via a WAP/3G phone.

The large majority of those with Internet access at home (82%) accessed the Internet via a telephone line using a

[2] The figure for Internet access is derived from a number of points in the questionnaire at which the parent or child mentioned Internet access in the home and covers access via any media, not only access via a computer.

modem, although the proportion using ADSL/broadband increased from 6% in 2001 to 10% in 2002. Households in urban areas (12%) were more likely than those in rural areas (5%) to use ADSL/broadband. Among those accessing the Internet via a telephone line, 23% had a separate line for the Internet.

5.6 Young people's use of ICT in the home

Figure 5.6 shows the proportions of children in the 2001 and 2002 surveys that used ICT on a regular basis.[3]

Young people's use of ICT at home – 2002 vs. 2001

Figure 5.6	2001	2002
Base: All young people	1748	1804
	%	%
Games console	59	62
Mobile phone	41	44
DVD player	12	26
Interactive digital TV	26	21
WAP/3G phone	2	5
Digital camera	n/a	3*
Palmtop computer	1	1
None of these	13	7

* asked of those in Key Stage 3 and above only

Usage levels have generally increased slightly, with the largest increase in use of DVD players, from 12% to 26%, which reflects the increase in household penetration of DVD players, from 23% in 2001 to 43% in 2002. 83% of young people used at least one of the items listed on a regular basis.

Figure 5.7 shows usage levels by the key stage of the child.

Young people's use of ICT at home – by key stage

Figure 5.7	KS1	KS2	KS3	KS4	Post-16
Base: All young people	273	557	446	283	245
	%	%	%	%	%
Games console	47	67	68	64	50
Mobile phone	7	22	59	76	73
DVD player	17	21	29	35	31
Interactive digital TV	12	21	25	22	26
WAP/3G phone	*	1	4	12	13
Digital camera	n/a	n/a	4	8	7
Palmtop computer	*	*	1	*	1

[3] Usage levels for young people in Key Stages 1 and 2 are based on a question asked of the parent, those for Key Stage 3 and above on a question asked of the young person.

Broadly speaking, use of ICT equipment increased with age, with usage levels highest among those in Key Stage 4 and post-16s. Use of games consoles peaked among those in Key Stages 2 and 3 and use of interactive digital TV was at a similar level among those from Key Stage 2 upwards.

These patterns of use are slightly at odds with the patterns established in the baseline survey, where usage levels tended to be higher among post-16s than among those in Key Stage 4. In the absence of corroborating evidence, it would be premature to regard this as representing a trend, rather than a 'blip' resulting from sampling variance.

The baseline survey identified a strong relationship between the gender of the child and use and ownership of games consoles and mobile phones; the former being more popular among boys, the latter among girls. This relationship held true in 2002 across different age groups, with use of games consoles peaking among boys in Key Stage 3 (89%) and use of mobile phones among girls in Key Stage 4 (85%).

Ownership of ICT equipment other than computers

Ownership of ICT among young people increased slightly in 2002 for most types of ICT, as would be expected, given that levels of household ownership have increased. Games consoles (43%, compared with 40% in 2001) and mobile phones (36%, compared with 34% in 2001) remain the only items widely owned by young people. However, ownership levels for DVD players (6%) and WAP phones (4%) have doubled since the baseline survey. 64% of young people owned at least one piece of ICT equipment.

Figure 5.8 shows ownership levels of games consoles, mobile phones, DVD players and WAP phones by key stage and gender of the child.

Young people's ownership of ICT at home – by key stage and gender

Figure 5.8	Key Stage					Gender	
	KS1	KS2	KS3	KS4	Post-16	M	F
Base: All young people	273	557	446	283	245	924	880
	%	%	%	%	%	%	%
Games console	27	45	50	47	34	60	24
Mobile phone	0	12	52	68	69	30	41
DVD player	1	3	5	15	9	10	2
WAP/3G phone	*	*	4	10	11	4	4

Ownership of mobile phones and WAP/3G phones increased with key stage, whilst ownership of DVDs peaked at Key Stage 4, before falling away slightly among post-16s. Ownership of games consoles peaked earlier, at Key Stage 3. The proportion of young people owning at least one piece of ICT equipment increased with key stage, ranging from 28% of those in Key Stage 1 to 88% of post-16s.

5.7 Young people and computers in the home

Use of computers among young people

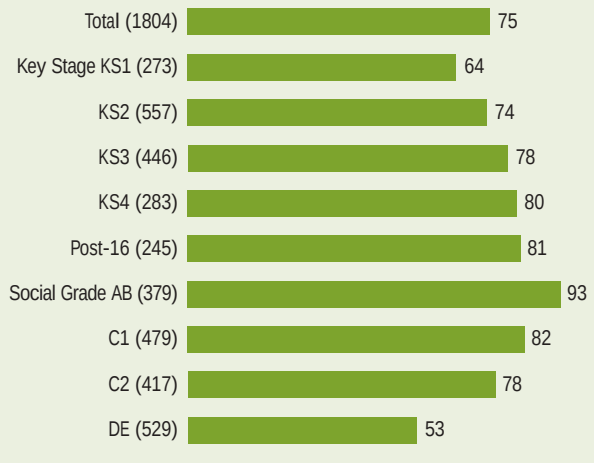
In households, including those without access to a computer, 75% of young people used a computer at home, the same proportion as in 2001. In households that had access to a computer, 93% of young people used a computer at home, a slightly lower proportion than in 2001 (96%).

As the baseline survey established, levels of home computer use in all households were similar among boys (74%) and girls (76%) and increased with the age of the child. In line with ownership patterns, use also increased with social grade (Figure 5.9).

68% of children with special educational needs and 72% of those with a disability used a computer at home.

Use of computers at home by key stage of child and social grade

Figure 5.9 *All figures as a percentage*



Base: All children

Ownership of computers among young people

In order to establish the extent to which young people have sole access to a computer at home, a question in the 2002 survey asked whether or not the young person was the only person who used the computer. As this question was not asked in the 2001 survey, results are presented only for the 2002 survey.

9% of young people who used a computer at home were the only users of at least one computer in the home. This proportion increased with key stage, ranging from 3% of those in Key Stage 1 to 16% of post-16s. As would be expected, the likelihood of a child having sole access to a computer at home was higher among households with single children. 18% of children in these households had sole access, compared with 8% of those in households with two children, 5% of those in households with three children, and 4% in households with four or more children.

Ownership of computers among older children was established by asking those in Key Stage 3 and above who used a computer at home whether they owned the computer that they used most often. Overall, 28% of this group said that they owned this computer, the same proportion as in 2001. Among those in Key Stage 3, 21% owned the computer, compared with 31% of those in Key Stage 4 and 37% of post-16s. The likelihood of children sharing computers with siblings tended to increase with the number of children in the household: among single children, 41% said that they owned the computer that they used most often, whilst among those in households with four or more children, this proportion fell to 17%.

Time spent using computers

As a measure of the volume of young people's computer use in the home, parents of children in Key Stages 1 and 2 were asked how long their child had spent using a computer in the seven days prior to the survey. The same question was asked directly of young people in Key Stage 3 and above. As in the baseline survey, time spent playing games was separated from time spent on other activities.

Across the sample as a whole, including those without a computer in the home, young people had spent an average of 4 hours using a computer in the week prior to the survey, with just under half of this time spent playing games. This compares with an overall average of 5.6 hours in the baseline survey.

Figure 5.10 shows the 2001 and 2002 results by key stage. Whilst time spent increased with key stage in both surveys, the number of hours spent was lower in the current survey across all key stages. (See note of caution regarding these data in section 4.3).

Time spent using computers at home in the seven days prior to the survey (mean hours by activity): 2002 vs. 2001

Figure 5.10

Base: All young people

	2001				2002			
	Base	Not games	Games	Total	Base	Not games	Games	Total
		%	%	%		%	%	%
Total	1748	3.2	2.4	5.6	1804	2.2	1.7	3.9
KS1	262	1.3	1.6	2.9	273	0.5	0.9	1.3
KS2	558	1.7	2.3	4.0	557	1.0	1.2	2.3
KS3	392	3.2	2.5	5.7	446	2.3	2.4	4.7
KS4	297	4.8	3.1	7.9	283	3.7	2.4	6.1
Post-16	239	6.8	2.5	9.3	245	5.3	2.0	7.3

At each key stage, boys spent more time using computers at home than girls. However, much of this difference was accounted for by boys spending more time than girls playing games on computers.

Use of computers in the home with other people

Children in Key Stages 1 and 2 who used computers at home were asked to say with whom they used them.

53% of respondents said that they used a computer on their own and 52% that they used one with their parents. 31% used a computer with siblings and 5% with other family members. 10% said that they used a computer at home with their friends.

Parents of children in Key Stages 1 to 4 whose child used a computer at home were asked how often they used computers at home with their child. 69% said that they used computers with their child, 40% doing so at least once a week and 7% every day. The proportion of parents that used computers with the child decreased the older the child, from 78% of parents of children in Key Stage 1 to 55% in Key Stage 4.

Computer activities at home

Young people who used a computer at home were asked what types of things they did on the computer. In order to maintain comparability with the baseline survey, children in Key Stages 1 and 2 were asked the question unprompted, whilst older children were asked to choose their answers from a list of activities.

Activities undertaken by those in Key Stages 1 and 2 in the baseline and 2002 surveys are shown in Figure 5.11.

Activities undertaken on the computer at home – Key Stages 1 & 2 – 2002 vs. 2001

Figure 5.11	2001			2002		
	Total	KS1	KS2	Total	KS1	KS2
Base: All children in KS1 & 2 who use a computer at home	592	220	372	581	172	409
	%	%	%	%	%	%
Playing games	88	89	88	88	87	88
Drawing pictures	49	60	45	55	62	52
Using educational CD-ROMs	24	23	24	31	32	30
Typing letters	24	20	26	31	23	34
Writing stories	26	15	30	27	18	31
Using the Internet	23	13	27	30	14	36
Homework/study	6	4	7	31	8	40
Using e-mail	7	4	9	12	7	14

For the most part, the pattern of results in the two surveys is similar, with playing games and drawing pictures still the two most popular activities among both age groups. There is evidence of children's repertoire of activities broadening, with increasing proportions using e-mail, the Internet and educational CD- ROMs. Much more striking, however, is the very substantial increase in the proportion of children in Key Stage 2 reporting that they do homework on a computer, from 7% in 2001 to 40% in 2002.

Parents of children in Key Stages 1 and 2 who said that they used a computer at home with their child were asked what activities they did. Among parents of children in Key Stage 1, the activities most commonly mentioned were playing games (47%) and using educational programs or CD- ROMs (42%). Among parents of children in Key Stage 2, homework again emerged as an important activity for this age group, mentioned by 45%. Homework was also the main computer activity in which parents of children in Key Stages 3 and 4 became involved.

Figure 5.12 shows activities undertaken by those in Key Stage 3 and above in the current and baseline surveys.

The results suggest that children in Key Stage 3 and above are broadening their repertoire of computer activities.

As in 2001, school or college work was the activity undertaken most widely, mentioned by 90% of respondents, compared with 85% in 2001. Most of this increase is accounted for by an increase in the proportion of those in Key Stage 3 saying that they used

a computer at home for school or college work, from 78% in 2001 to 88% in 2002.

Activities undertaken on the computer at home – Key Stage 3+: 2002 vs. 2001

Figure 5.12	2001				2002			
	Total	KS3	KS4	Post -16	Total	KS3	KS4	Post -16
Base: All children in KS3+ who use a computer at home	654	266	220	168	760	337	226	197
	%	%	%	%	%	%		
School/college work	85	78	88	89	90	88	91	93
Playing games	59	69	55	49	70	83	61	56
Using the Internet	52	42	52	65	67	61	71	76
Playing CDs	28	27	30	29	48	45	50	51
Using CD-ROMs	23	16	21	35	42	35	47	47
Using e-mail	33	19	35	49	45	33	50	62
Typing letters	25	16	24	39	33	25	38	45
Visiting chat rooms	14	9	16	19	17	12	20	24

Girls were more likely than boys to do school or college work on a computer at home (95% and 86%), as was found in the baseline survey. Otherwise the tendency for boys to use computers for a wider range of activities than girls was less marked than in 2001. Whilst in the baseline survey, the average number of activities mentioned was 3.5 for boys and 3.1 for girls, in 2002 the equivalent figures were 4.8 and 4.7 respectively.

Use of home computers to do school or college work

Young people in Key Stage 3 and above who did school or college work on a computer at home were asked a number of questions about the work they did. These included:

- how many hours per week they spent doing this work
- whether the work they did was set by a teacher or done on their own initiative
- for which subjects they did homework
- what software packages they used for this work
- whether or not they experienced difficulties using these packages.

On average, children in Key Stage 3 and above who did school or college work on a computer at home spent 3.1 hours per week on this work. This time increased with age, with those in Key Stage 3 doing an average of 2.1 hours; Key Stage 4 an average of 3.4 hours; and post-16s an average of 4.9 hours.

As in 2001, almost all (95%) of this group said that the school or college work they did included work set by teachers. The proportion that said that they did work for their own interest or needs increased from 41% in 2001 to 48% in 2002. Among post-16s, who were most likely to do school or college work on their own initiative, this proportion rose from 49% to 59%.

A new development in the 2002 survey was to ask young people about their use of computers, both at home and at school, on a subject basis. In terms of home use, those using computers for school or college work were asked how often they did so in a range of subjects. Figure 5.13 shows, for each subject, the proportions saying that they (a) ever used computers and (b) used them 'all the time' or 'quite often'. Respondents who said that they were not taught the subject concerned have been excluded from the base for each subject.

Frequency of doing school/college work on a computer at home by subject – Key Stage 3+

Figure 5.13	Base	Ever	All the time/ quite often
Base: Children in Key Stage 3+ who used computers at home for school/college work and were taught the subject			
		%	%
English	624	77	35
Science	622	58	19
ICT	598	55	30
History	561	55	19
Geography	551	43	15
Design & Technology	575	37	15
RE	568	30	8
Modern foreign languages	573	29	7
Art	555	27	8
Mathematics	618	26	6
Humanities	478	21	8
Music	536	11	3
PE	573	7	2

Young people were particularly likely to do English homework on a computer at home. 77% of those who used computers at home for school or college work, and who studied English, mentioned doing English homework on a computer. Science, history and ICT were also all mentioned by more than half of respondents. The subjects for which computers were least likely to be used

for homework were music (11%) and PE (7%). In all subjects, where young people used computers to do homework, they tended to do so 'quite often' or 'now and again', rather than 'all the time'.

Those in Key Stage 3 and above who did school or college work on a computer at home were asked what software packages they usually used for this work. Since the response options were changed in the 2002 survey, the results are not directly comparable with those from the baseline survey. Results are therefore shown for the 2002 survey only, broken down by key stage (Figure 5.14).

Software packages used at home for school/college work – by key stage

Figure 5.14	Total	KS3	KS4	Post-16
Base: All children in Key Stage 3+ who did school/college work on a computer at home	684	296	207	181
	%	%	%	%
Word processing packages	84	76	92	88
Spreadsheet packages	54	43	65	62
Database packages	36	26	45	43
Graphics/simulation packages	31	29	32	33
E-mail	30	21	38	37
Desktop publishing packages	23	18	31	22
Multimedia tools	19	16	26	18
Subject-specific software	17	18	17	16
Design & technology packages	15	11	19	14

Answers given by 10% or more of respondents

Word processing packages were the most widely used type of software, mentioned by 84% of respondents, followed by spreadsheet software mentioned by 54%. Database software, graphics or simulation packages and e-mail were all used by around a third of respondents.

Young people in Key Stage 4 and post-16s tended to use a wider range of packages than those in Key Stage 3. Use also varied to some extent by social grade, with those in higher social grades using a wider repertoire of software.

As in last year's survey, there was little evidence that children were restricted in doing their school/college work at home by the software available on their computer. 94% said that it was very or fairly easy for them to do their work using the software available, 39% saying that it was very easy for them to do so. This compares with figures of 92% and 41% respectively in 2001. Post-16 students (55%), and those in AB households (48%) were particularly likely to answer 'very easy' to this question.

Respondents in Key Stage 3 and above were asked whether they worked at home in any of the ways shown in Figure 5.15. This question was asked with a more restricted answer list in 2001. Comparing the results across the two years, the most notable difference is evidence of more parental involvement in the 2002 survey.

Ways in which young people did school/college work at home – by key stage

Figure 5.15	Total 2001	Total 2002	KS3	KS4	Post-16
Base: All children in Key Stage 3+ who did school/college work on a computer at home	644	760	337	226	197
	%	%	%	%	%
Sitting with parents	27	37	47	35	16
Sitting with classmates/friends	22	24	20	31	23
Sitting with brother/sister	25	21	23	23	16
Using e-mail	n/a	19	13	23	28
Working on line with others	18	17	11	21	22
Sending school/college work via attachments	n/a	11	5	12	23
Accessing resources from school/college intranet/internet	n/a	11	7	13	15

Answers given by 10% or more of respondents

5.8 Barriers to computer use at home

Reasons for not buying computers

Parents in households that did not have a computer were asked why they had not bought one.

The findings were similar to those in the baseline survey[4]. Financial barriers, such as lack of money or the cost of a computer, mentioned by 63% of respondents (compared with 75% in 2001), were the overriding factors that prevented parents from buying a computer. The only other reason given by more than 10% of respondents was that they were not interested in having a computer (14%, compared with 12% in 2001). As in the 2001 survey, parents in DE households were most likely to say that they could not afford to buy a computer. 75% of this group said that they had not bought a computer for financial reasons, compared with 55% of those in C2 households, 43% of those in C1 households and 40% of those in AB households.

[4] The question was asked of all parents in households that did not have a computer in 2002, but excluded parents of post-16s in 2001.

Conflicts over computer use at home

As in the baseline survey, the questionnaire explored the extent to which children's access to computers at home was restricted by availability of the computer(s). Parents of children in Key Stages 1 and 2 were asked whether their child ever wanted to use a computer at home, but was unable to do so because another person was using it. Where this occurred, they were asked how often this happened, who was involved, and how the situation was resolved. The same set of questions was asked of children in Key Stage 3 and above. In comparing results with those from the baseline survey, it should be noted that, for Key Stages 1 and 2, the results from the baseline survey are based on questions asked of the child, rather than of the parent.

66% of respondents, the same proportion as in the 2001 survey, said that conflicts of this nature occurred. Of these, 78% said that they happened at least once a week and 24% that they happened on a daily basis.

As would be expected, the likelihood of experiencing conflict increased with the number of children in the household, the proportion reporting conflicts ranging from 49% of children in households with one child, to 79% of those in households with four or more.

In terms of social grade, conflicts were most commonly reported in AB households (70%) and least so in DE households (61%). This may be a reflection of the higher likelihood of parents in AB households using computers themselves, therefore competing with their children for time on the computer.

Where conflicts occurred, they were resolved in a variety of ways, with people taking turns being the solution most commonly mentioned (32%). Parents resolving the situation, arguments or fighting, and work or study taking priority were each mentioned by 19% of respondents. 13% of respondents said that parents took priority in these circumstances.

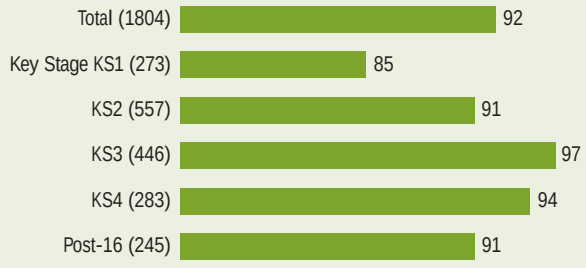
6 ICT at school

6.1 Young people's use of computers in schools

92% of young people in the sample said that they used computers at school or college. This is in line with the figure of 93% reported in 2001. Figure 6.1 shows the proportions saying that they used computers at school by key stage. Whilst these differ slightly between the two surveys, the fluctuations are not sufficient to suggest genuine change and more likely result from sampling variation. Averaging the figures across the two surveys, the broad conclusion is that the proportions using computers are similar for each of the key stages, with the exception of Key Stage 1, where use is slightly less widespread.

Use of computers at school by key stage of child

Figure 6.1 *All figures as a percentage*



Base: All children

The amount of use of computers at school was measured differently for younger and older children. Those in Key Stages 1 and 2 were asked how often they used computers, whilst those in Key Stage 3 and above were asked how many hours they had spent using computers in school or college in the week prior to the survey.

89% of children in Key Stages 1 and 2 who used computers at school said that they did so at least once a week, the same proportion as in the baseline survey. The proportion of Key Stage 1 pupils saying that they used computers on a daily basis increased from 9% in 2001 to 14% in 2002.

As in 2001, children without access to a computer at home reported more frequent use of computers at school than those who had access to a computer at home, 45% of the former saying that they used them at least twice a week, compared with 33% of the latter.

Frequency of using computers at school Key Stages 1 & 2: 2002 vs. 2001

Figure 6.2

	2001			2002		
	Total	KS1	KS2	Total	KS1	KS2
Base: All children in KS1 & 2 who use a computer at school	821	320	501	738	231	507
	%	%	%	%	%	%
Daily	8	9	7	10	14	8
At least twice a week	30	32	29	26	28	25
At least once a week	51	48	53	53	44	57
At least once a month	7	5	8	6	6	6
Less than once a month	3	4	2	3	5	3
Don't know	1	3	1	2	3	1

Figure 6.3 shows, for the 2001 and 2002 surveys, the average number of hours that children in Key Stage 3 and above had spent using computers at school in the week prior to the survey.

Time spent using computers at school in previous seven days (mean hours by activity) – Key Stage 3+: 2002 vs. 2001

Figure 6.3

Base:		2001			2002		
All KS3+	Base (2001/2002)	Not games	Games	Total	Not games	Games	Total
Total	858/974	2.5	0.5	3.0	2.4	0.3	2.8
KS3	380/446	1.6	0.6	2.2	1.5	0.3	1.9
KS4	284/283	2.3	0.3	2.7	2.8	0.3	3.1
Post-16	194/276	4.3	0.5	4.8	3.9	0.4	4.2

On average, pupils reported spending 2.8 hours using computers at school or college in the week prior to the survey, which is broadly in line with the 3.0 hours reported in 2001. Around 12% of use was games-related, a slightly lower proportion than in 2001 (16%). Total use increased with key stage, ranging from just under two hours per week for those in Key Stage 3 to over four hours for post-16s. Conversely, the proportion of time spent on games decreased with key stage, those in Key Stage 3 spending 17% of their time on computers playing games, falling to 8% among post-16s.

The 2001 survey found that young people without access to a computer at home spent longer using computers at school than those who had home access. However, the average difference was only around half an hour and, once time spent playing games was removed, use was

higher among those with a computer at home. The 2002 survey also suggests that those without access to a computer at home spent more time using computers at school than those with access. Average use of a computer at school for this group was 3.7 hours in the week prior to the survey, compared with 2.6 for those with a home computer. This difference is more or less maintained once games use is removed, the respective averages being 3.3 and 2.3 hours.

6.2 Circumstances in which computers are used in school

Children who used computers at school were asked where and with whom they used them.

Where young people use computers at school

Figure 6.4 shows where children in each key stage said that they used computers at school. This question was included in the survey for the first time in 2002.

Where children use computers at school – by key stage

Figure 6.4	KS1	KS2	KS3	KS4	Post-16
Base: All children who use a computer at school	644	760	337	226	197
	%	%	%	%	%
Classroom	54	30	11	10	13
Special computer room	49	76	76	79	76
Library	6	5	12	10	17
Corridor	1	3	*	-	-

At Key Stage 1, computers tended to be used either in the classroom (54%) or in a special computer room (49%). Few children said that they used computers in either libraries or corridors. Older children were more likely to use computers in a special computer room, although classroom use was still relatively common at Key Stage 2. Use of computers in libraries was more common at Key Stage 3 and above, particularly among post-16s, 17% of whom said that they used computers in the school or college library.

With whom young people use computers at school

Children in Key Stages 1 and 2 were asked with whom they used computers in school. 59% of children said they used computers with friends in their class, with 28% saying that they used them with teachers, 23% on their own, and 19% with a pupil chosen by the teacher. Working independently was slightly more common in Key Stage 2 than in Key Stage 1, as was working with a pupil chosen by the teacher. The opposite was true for working with a teacher. Boys were more likely than girls to say that they worked with a pupil chosen by a teacher, whilst girls were more likely to work with a friend.

These results were broadly similar to those found in the 2001 survey.

Children in Key Stage 3 and above, as would be expected, were more likely than younger children to work independently on computers. 73% said that they worked on computers on their own, with the proportion that did so increasing with key stage, from 64% at Key Stage 3 and 78% at Key Stage 4 to 85% of post-16s. 32% said that they worked in pairs and 11% that they worked in groups of 3 or more, with those in Key Stage 3 most likely to work in pairs and post-16s most likely to work in groups.

Among children who said that they worked on computers with others, 93% said that they usually worked with other students, 17% that they usually worked with a teacher or tutor.

6.3 Computer activities at school

All children who said that they used a computer at school were asked what types of things they did on the computer. This question was asked unprompted for all key stages, as in the 2001 survey. Figure 6.5 shows the main activities mentioned by those in Key Stages 1 and 2. Overall results are shown for the 2001 and 2002 surveys, with results broken down by key stage.

Activities undertaken on the computer at school – Key Stages 1 & 2: 2002 vs. 2001

Figure 6.5	2001			2002		
	Total	KS1	KS2	Total	KS1	KS2
Base: All children in KS1 & 2 who use a computer at school	821	320	501	738	231	507
	%	%	%	%	%	%
Drawing pictures	54	66	48	63	72	59
Playing games	44	55	39	53	67	47
Writing stories	41	27	48	46	28	54
Typing letters	39	33	41	41	32	45
Using educational CD-ROMs	23	16	26	31	22	35
Using the Internet	20	4	27	34	8	45
Homework	n/a	n/a	n/a	13	5	17

The hierarchy of activities across the two years was similar, although in each case the proportion of children mentioning the activity was higher than in 2001. Internet use, in particular, was more widespread. Although much more prevalent in Key Stage 2, Internet use increased at both key stages.

As in 2001, drawing pictures and playing games were more widespread among children in Key Stage 1 than those in Key Stage 2, whilst writing stories, typing letters and using educational CD- ROMs were more widespread among the older group. The profile of activities carried out by boys and girls was similar.

Young people in Key Stage 3 and above were asked a similar question. Figure 6.6 shows the main activities mentioned in 2001 and 2002, with results for 2002 broken down by key stage. In the 2002 survey, a category "creative writing/essays" was added.

Activities undertaken on the computer at school – Key Stage 3+: 2002 vs. 2001

Figure 6.6	Total		2002		
	2001	2002	KS3	KS4	Post-16
Base: All children in KS3+ who use a computer at school	821	919	430	266	223
	%	%	%	%	%
Schoolwork: writing reports	60	51	43	55	64
Schoolwork: creative writing/essays	n/a	58	54	64	57
Schoolwork: analysing data	34	37	28	47	46
Schoolwork: other	47	40	42	40	36
Using the Internet	49	57	49	63	66
Using databases/CD-ROMs	28	40	34	46	47
Using e-mail	15	20	13	23	31
Playing games	10	20	26	18	8

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

The pattern of responses in the two surveys was again broadly similar.

Post-16s and students in Key Stage 4 undertook a wider range of computer activities than those in Key Stage 3. The latter were most likely to play games on a computer at school, but less likely than older students to mention most other activities. Post-16s and those in Key Stage 4 had a similar profile of computer use, although the former were more likely to write reports and use e-mail, the latter to do creative writing and play games.

Activities undertaken by boys and girls were largely similar, although boys were somewhat more likely than girls to write reports (54% and 48%), analyse data (40% and 34%) and play games (23% and 16%).

Activities varied to some extent by social grade, particularly between those from AB and DE households. In particular, students from AB households were more likely than those in DE households to use computers at school for analysing data (44% and 30%); accessing general information through databases and CD- ROMs (48% and 36%); using e-mail (25% and 14%); and using the Internet (64% and 51%).

6.4 Software packages used at school

In the 2001 survey, post-16s who used computers at school were asked what type of software packages they used. In the 2002 survey, this question was asked of all those in Key Stage 3 and above. In addition, proprietary packages were given as examples in some cases in 2002, but not in 2001. For this reason, results are not compared with those from 2001.

Figure 6.7 shows responses given by at least 10% of respondents, broken down by key stage.

Software packages used at school – by key stage

Figure 6.7	Total	KS3	KS4	Post-16
Base: All children in Key Stage 3+ use computers at school for school/college work	826	378	243	205
	%	%	%	%
Word processing	75	65	83	87
Spreadsheets	61	49	79	62
Database	44	32	56	52
Graphics/simulation packages	39	34	46	37
Desktop publishing	26	19	38	24
Design & technology packages	26	24	30	23
Subject-specific software	22	20	26	20
E-mail	16	13	19	19
Multimedia tools	17	13	21	21
Don't know	10	17	5	3

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

Word processing packages were the most frequently mentioned, followed by spreadsheet, database and graphics packages. Those in Key Stage 4 used the widest range of packages. This finding is not surprising, given that post-16s specialise in a relatively small range of subjects. Students in Key Stage 3 were much more likely than older students to say that they did not know which types of package they used.

6.5 Use of ICT by teachers

Use of computers to prepare information for use in class

Children in Key Stage 2 who used computers at school were asked whether or not their teacher used a computer to prepare information for use in class, with the example given of printed worksheets. Those in Key Stage 3 and above were asked what proportion of their teachers used computers in this way.

Among those in Key Stage 2, 76%, compared with 73% in 2001, said that their teacher used a computer to prepare information for use in class. 11% said that they did not know whether or not their teacher prepared material in this way.

Among students in Key Stage 3 and above who used computers at school, 98% said that at least some of their teachers prepared material for lessons on a computer. 81% said that at least half of their teachers used computers in their preparation, and 55% that the majority did so. The proportion of children that said that the majority of their teachers used a computer to prepare information for use in class increased with key stage, ranging from 50% in Key Stage 3 to 67% of post-16s.

Types of equipment and applications used

Young people in Key Stage 2 who used a computer at school were asked what kind of computer their teacher used. 77% said that their teacher used a desktop computer, 13% mentioned a laptop computer, and 9% an electronic whiteboard or digital projector. These results are not directly comparable with those from the baseline survey.

Those in Key Stage 3 and above who said that their teacher used a computer to prepare information for use in lessons were asked what type of ICT equipment and applications their teacher used. Results are not comparable with the baseline survey, since the base of those answering the question changed in 2002.

85% reported that teachers used desktop computers, 33% mentioned electronic whiteboards/digital projectors and 27% laptops.

Word processing (75%) and spreadsheet packages (57%) were the most frequently mentioned applications. Other applications mentioned by over 30% of students were presentation packages (44%); Internet access (41%); graphics or drawing packages (36%); databases (35%); and specialised subject programmes (32%).

Applications used by teachers – Key Stage 3+

Figure 6.8	Total	KS3	KS4	Post-16
Base: All children in Key Stage 3+ whose teachers use a computer to prepare information for use in lessons	900	414	265	221
	%	%	%	%
Word processing	75	69	83	77
Spreadsheets	57	52	65	59
Internet access	41	39	44	44
Presentation packages	44	42	46	46
Specialised subject programmes	32	28	39	31
Graphics/drawing packages	36	32	43	35
E-mail	12	9	15	16
Video conferencing	5	3	8	8
Databases	35	29	45	33
Don't know	13	17	10	9

Note: Answers listed above were those given by 5% of respondents or more

Being set homework involving the use of computers

Parents of children in Key Stage 2 and children in Key Stage 3 and above were asked how often teachers set homework where they suggested that the child could use a computer or the Internet.

Figure 6.9 shows the proportions of children in each key stage that were set homework where the teacher suggested that they use a computer or the Internet.

Frequency with which teachers set homework and suggested that children used a computer/the Internet – by key stage

Figure 6.9	Total	KS2	KS3	KS4	Post-16
Base: All young people in Key Stage 2 and above	1531	557	446	283	245
	%	%	%	%	%
Ever	73	44	89	94	91
All the time	9	2	10	13	24
Quite often	28	8	39	43	40
Now and again	24	18	29	28	19
Not often	12	15	11	10	8
Never	23	48	9	5	9
Don't know	3	6	2	1	0
Not stated	1	3	0	0	0

73% of respondents said that teachers sometimes suggested using a computer or the Internet to do homework, around half of this group said that this happened 'quite often' or 'all the time'. Children in Key Stage 3 and above were twice as likely as parents of

those in Key Stage 2 to say that teachers suggested that they used a computer or the Internet in their homework.

Those without a computer at home were less likely to say that teachers set homework where they suggested using a computer or the Internet. 50% said that this happened, compared with 78% of those with a computer at home.

6.6 Use of ICT by subject

Young people in Key Stage 2 and above were asked how often computers were used in lessons by subject. Those in Key Stage 2 were asked only about computer use in English, mathematics and science, whilst those in Key Stage 3 and above were asked about use across the curriculum. These questions were asked for the first time in the 2002 survey.

In each case, one of the response options available was that the child was not taught the subject. The results shown exclude those who said that they were not taught the subject. However, since respondents were not prompted with this answer, it is possible that the base for each subject includes children who did not study the subject concerned.

Figure 6.10 shows the frequency with which computers were used among children in Key Stage 2 in English, mathematics and science.

Incidence and frequency of computer use in lessons by subject – Key Stage 2

Figure 6.10		Ever use	All the time/ quite often
Base: Children in KS2 who use computers at school and are taught the subject			
	Base	%	%
English	505	56	18
Science	501	43	14
Mathematics	506	41	14

English lessons were the most likely to involve the use of computers (56%), with science lessons mentioned by 43% and mathematics lessons by 41%.

Young people in Key Stage 3 and above who used computers in school were asked about use of computers in lessons across the curriculum. The results in Figure 6.11 again exclude those children who said that they were not taught the subject concerned.

Frequency of computer use in lessons by subject – Key Stage 3+

Figure 6.11		Ever use	All the time/ quite often
Base: All KS3+ who use computers at school and are taught the subject			
	Base	%	%
ICT	819	87	75
English	851	52	20
Design & technology	789	49	25
Science	836	47	16
Mathematics	840	43	12
Modern foreign languages	778	33	7
Geography	756	31	11
History	766	29	11
Art	766	23	8
RE	781	20	6
Music	738	18	6
Humanities	635	17	5
PE	792	5	1

The subject in which computers were most widely used was, not surprisingly, ICT, mentioned by 87% of respondents. PE was least frequently mentioned, by 5%. In most subjects, computers tended to be used occasionally rather than frequently. ICT was an obvious exception, 75% of students saying that computers were used all the time or quite often. Computer use was also relatively frequent in design and technology and in English.

Use of computers in lessons by subject – Key Stage 3+

Figure 6.12		Total	KS3	KS4	Post-16
Base: All KS3+ who use computers at school and are taught the subject					
	Base	%	%	%	%
ICT	819	87	89	88	78
English	851	52	52	55	44
Design & technology	789	49	46	57	41
Science	836	47	41	58	44
Mathematics	840	43	44	41	40
Modern foreign languages	778	33	33	37	24
Geography	756	31	35	21	20
History	766	29	32	28	20
Art	766	23	23	24	22
RE	781	20	23	19	13
Music	738	18	20	17	12
Humanities	635	17	15	21	12
PE	792	5	2	8	9

Figure 6.12 shows the proportions of respondents who said that computers were used in each subject.

Generally speaking, those in Key Stages 3 and 4 were more likely to say that computers were used in lessons than post-16s. Usage levels in Key Stages 3 and 4 were similar for most subjects, with the exception of design and technology (46% in Key Stage 3, 57% in Key Stage 4) and science (41% and 58% respectively). Use of computers in PE was largely restricted to those in Key Stage 4 and post-16s.

6.7 Barriers to use of computers at school

Perceived barriers to using computers more often at school

Young people in Key Stage 3 and above who used computers at school were asked to say what, if anything stopped them from using a computer at school more often (Figure 6.13).

As in the baseline survey, the main factors that prevented greater use of computers were lack of time, mentioned by 36%, and the limited number of computers, mentioned by 25%. 9% of respondents mentioned teachers preferring to use traditional teaching methods as a barrier. 23% of respondents could not think of any barriers.

Barriers to using computers more at school – 2002 vs. 2001

Figure 6.13	2001	2002
Base: Children in Key Stage 3+ who use computers at school		
	%	%
Lack of time	45	36
Limited number of computers	23	25
Share computers with other students	17	n/a
Lack of access to Internet	8	4
Quality of software	7	2
Lack of interest	6	5
Age of software	6	2
Quality of computer	6	4
Filtering/blocking system by Internet provider	6	3
Teacher preference for more traditional methods	6	9
Age of computer	5	2
None of these	18	23

Answers given by 5% or more in 2001

Responses varied by key stage, with those in Key Stage 3 more likely than others to mention lack of time, and older children to mention resourcing issues, principally a lack of computers, but also the age and quality of software and hardware. Students who did not have access to a computer at home were more likely than those with access to mention lack of skills as a barrier (8% and 2%).

Resourcing issues were explored by asking those in Key Stage 3 and above who used computers at school how often they found it difficult to use a computer at school because facilities were inadequate. The results were similar to those in the 2001 survey. 26% said that this had happened, compared with 29% in 2001.

Suitability of skills level at which ICT use is pitched

Evidence from other research projects evaluating the ICT in Schools Programme[5] indicates that some teachers underestimate the ICT capability of pupils, with the result that they teach skills that pupils already possess. The issue of whether schools are pitching ICT skills at an appropriate level for children in different stages of education was explored in the survey.

Parents of pupils in Key Stage 1 were asked how often:

- the computer work which their child did at school was too basic for their child
- the work was too advanced
- the work taught their child new skills.

At Key Stage 2, children were asked whether they ever learned new things about how to use computers that they didn't know before. At Key Stage 3 and above, young people were asked how often the computer work that they did at school taught them new skills.

Parents of children in Key Stage 1 were more likely to say that the computer work that their child did at school was sometimes too basic (44%) than that it was too advanced (33%). 61% said that their child learned new computer skills at school, most saying that this happened at least 'quite frequently'. For each of these questions, a substantial minority of parents did not feel that they knew enough about the work that their child did to give an answer.

[5] Becta/DfES, 2001: ImpaCT2 Emerging Findings.

As might be expected, ownership of a computer at home had some bearing on parents' perceptions. Those with a computer at home were more likely than non-owners to feel that the work that their child did was sometimes too basic (48% and 33%). Non-owners were more likely than owners to say that their child learned new computer skills at school 'very frequently' or 'all the time' (27% and 10%).

Among children in Key Stage 2 who used a computer at school, 86% said that they sometimes learned new computer skills at school. Computer access at home had little bearing on responses, 87% of those with a computer at home and 82% of those with no computer saying that they learned new skills.

Young people in Key Stage 3 and above were asked how often the computer work they did at school taught them new skills. Figure 6.14 shows the results by key stage and gender of the child.

How often computer work at school teaches young person new skills, by key stage and gender – Key Stage 3+

Figure 6.14	Total	KS3	KS4	Post-16	Boys	Girls
Base: All children in Key Stage 3+	974	446	283	245	498	476
	%	%	%	%	%	%
Never	4	2	4	7	5	3
Hardly ever	12	9	11	20	15	9
Now and again	34	33	36	35	31	37
Quite frequently	31	36	31	22	30	32
Very frequently	9	9	10	10	10	9
All the time	5	7	5	4	5	6
Ever	92	93	94	90	92	93
Don't know	3	4	2	2	3	4

92% of respondents said that they learned new computer skills at school, 46% that they did so at least 'quite frequently'. The likelihood for respondents to say that they were learning new computer skills declined as students progressed through school, although, even among the post-16 group, the majority were learning new skills at least occasionally. Boys were slightly less likely than girls to say that they learned new computer skills at school.

Those without access to a computer at home were more likely than those with access to say that they learned new computer skills at school very frequently or all the time (21% and 14%).

7 Young people and the Internet

More children had access to the Internet at home at the time of the 2002 survey (68%) than in 2001 (64%). Internet use among young people also increased, from 73% using the Internet either at home, at school or elsewhere in 2001 to 84% using it in 2002. Usage has increased both at home and at school, and across all key stages.

7.1 Frequency of using the Internet

Frequency of Internet use among young people in Key Stage 3 and above increased with age (Figure 7.1). These data are not comparable with the equivalent data from the baseline survey.

Frequency of Internet use – Key Stage 3+

Figure 7.1	Total	KS3	KS4	Post-16
Base: All children in Key Stage 3+	974	446	283	245
	%	%	%	%
Daily	27	18	31	39
At least twice a week	28	26	30	28
At least once a week	19	24	15	15
At least once a month	10	11	10	6
Less than once a month	7	8	6	4
Never	9	12	7	8

7.2 Reasons for using the Internet

Children in Key Stages 1 and 2 who used the Internet at home were asked, without being prompted, why they used it (Figure 7.2). Results are not directly comparable with those from the baseline survey, since the list of responses into which answers were coded was changed in 2002.

The most popular reason for accessing the Internet among this group was in order to play games, followed by doing schoolwork or school projects. Use of the Internet to support hobbies and interests and for e-mail was also reasonably widespread.

Internet games were equally popular among the two age groups. This was also true for e-mail. Whilst children in Key Stage 1 were slightly more likely than those in Key Stage 2 to use the Internet to support their hobbies and interests, the latter were much more likely to use the Internet for school-related work.

Reasons for using the Internet – Key Stages 1 & 2

Figure 7.2	Total	KS1	KS2
Base: All Children in KS1 & 2 who use the Internet at home	305	61	244
	%	%	%
Playing games	60	59	60
Finding information for school work	41	19	47
Finding information for hobbies/interests	40	46	38
School projects	34	14	39
E-mails	24	25	24
SCHOOL WORK/SCHOOL PROJECTS (NET)	54	25	62

Answers given by 5% or more

Although base sizes for the groups are small, those from DE households (50 respondents) were much more likely than average to say both that they played games on the Internet (80% DE, compared with 60% of all respondents) and that they used chat rooms (10%, compared with 2%).

Young people in Key Stage 3 and above who used the Internet were asked for which purposes they used it on a regular basis (Figure 7.3).

Activities undertaken when accessing the Internet – Key Stage 3+: 2002 vs. 2001

Figure 7.3	Total		2002		
	2001	2002	KS3	KS4	Post-16
Base: All children in KS3+ who use the Internet	615	876	388	262	226
	%	%	%	%	%
Information for school/college work	54	83	80	87	84
E-mails	41	46	36	49	63
Information for study/learning	36	49	45	53	52
Information for hobbies/interests	22	44	43	44	49
Surfing	22	39	38	38	43
Listening to/downloading music/MP3s	20	32	23	38	39
Playing/downloading games	19	34	42	28	25
Chat-rooms/IRC/Usenet	15	19	14	21	26
Information regarding career advice and options after school	8	16	6	20	33
Shopping/ordering after school	3	8	4	8	16

Note: Answers listed above were those given by 3% of respondents or more

The hierarchy of activities across the two years was similar, although the proportions mentioning most activities were much higher in 2002 than in 2001. The proportion of children saying that they used the Internet for school or college work increased from 54% in 2001 to 83% in 2002. These increases might, in part, result from

a change in the questionnaire in 2002. In 2001, respondents were first asked which activities they ever did and then which of these they did on a regular basis. In 2002, the first question was omitted.

Patterns of use by key stage were generally similar to those found in the baseline survey. As in 2001, use of the Internet for schoolwork was prominent among all key stages. Among the other activities mentioned, use of the Internet for career advice, shopping, e-mail and visiting chat rooms all increased considerably with age. Playing games on the Internet, on the other hand, decreased with age.

Not surprisingly, children who had access to the Internet at home were much more likely than those without access to undertake activities not related to their schoolwork. For example, 56% of those with Internet access at home used it to send or receive e-mails, compared with 14% without access; 37% of those with access used it to download music, compared with 14% without access; and 23% of those with access used it to visit chat rooms, compared with 5% without access. Those with Internet access at home were also somewhat more likely than those without access to search for information for school or college work (85% and 77%) and information for study or learning (54% and 45%).

Among young people who used the Internet in Key Stage 3 and above, 69% said that they used web sites recommended by teachers. The proportion that did so increased with key stage, from 65% of those in Key Stage 3, to 70% in Key Stage 4, and 77% among post-16s. Girls (74%) were more likely than boys (65%) to say that they used web sites that their teachers recommended.

7.3 Internet safety

Both parents and young people in Key Stage 3 and above were asked a series of questions to gauge their awareness, attitudes and behaviour in relation to Internet safety.

Parents' views on Internet safety

Parents were asked if they:

- were concerned about Internet safety issues
- had ever discussed appropriate Internet use with their child
- thought that their child knew how to use the Internet safely
- knew where to find information about Internet safety.

Those with Internet access at home were also asked about their use of filtering software and other safeguards to prevent their child from visiting unsuitable Internet sites.

Results for the first four of these questions are shown in Figure 7.4, by key stage.

Internet safety – parents – by key stage

Figure 7.4	Total	KS1	KS2	KS3	KS4	Post-16
Base: All parents	1804	273	557	446	283	245
	%	%	%	%	%	%
Concerned	80	77	82	80	82	76
Discussed with child	42	11	28	61	61	58
Child knows how to use safely	57	15	39	75	88	86
Know where to get information	38	37	38	39	41	34

80% of parents said that they were concerned about Internet safety issues, compared with 75% in the baseline survey. As in 2001, the level of concern with Internet safety was similar across different sub-groups within the sample.

42% of parents said that they had discussed appropriate use of the Internet with their child. Perhaps surprisingly, given the increase in use of the Internet among young people since the baseline survey, this proportion has not increased since 2001 (43%). Parents of children in Key Stage 3 and above were much more likely than parents of primary age children to have discussed Internet safety with their child.

The likelihood of parents discussing Internet safety with their children was also strongly dependent on them having access to the Internet at home. 53% of those with access at home had talked to their child, compared with 19% without access.

57% of parents said that they thought their child knew how to use the Internet safely. This proportion again varied considerably depending on the age of the child, ranging from 15% of parents whose child was in Key Stage 1, to 88% of parents of children in Key Stage 4, and 86% of parents of post-16s. In the baseline survey, this question was asked only of parents of post-16s, 85% of whom said that they thought their child knew how to use the Internet safely.

Among those with access to the Internet at home, 64% thought that their child knew how to use the Internet safely, compared with 44% of those without access.

38% of parents said that they knew where to get information about safe Internet use. The proportion that

knew where to access this information increased with social grade, ranging from 30% in DE households to 52% in AB households, and was higher among men than among women (51% and 34%). Among those with access to the Internet at home, 45% said that they knew where to get information about safe Internet use, compared with 24% of those without home access.

Among parents who had a computer at home that was used regularly, 43% had filtering software on at least one computer. 66% of this group said that they used this software. This proportion increased to 73% among parents of children in Key Stage 3, 84% among those whose child had special educational needs and 79% among those whose child had a disability. Among those who did not currently use filtering software, 59% said that they were very or fairly likely to do so in the future. This proportion rose to 87% among parents of children in Key Stages 1 and 2.

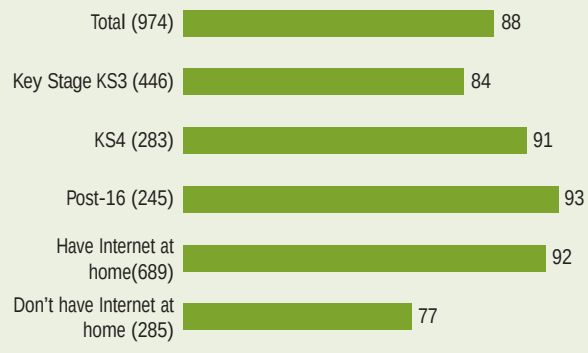
40% of parents with access to the Internet at home said that they had safeguards, other than filtering software, to prevent their child from finding unsuitable material on the Internet. Parents of children in Key Stage 2 were most likely to say that they had safeguards (49%), and those whose child was in Key Stage 4 were least likely to say so (28%). Other than filtering software, the main types of safeguard mentioned were parental supervision (38%) and passwords (23%).

Young people's views on Internet safety

Among young people in Key Stage 3 and above, 88% said that they were aware of Internet safety issues. Awareness was higher among older children and those with access to the Internet at home (Figure 7.5).

% aware of internet safety issues by key stage and home access to the Internet

Figure 7.5 *All figures as a percentage*



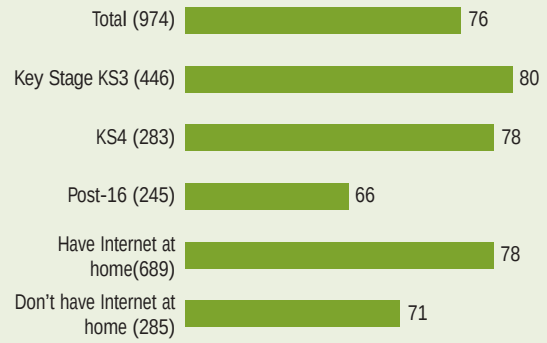
Base: All children in Key Stage 3+

Those who were aware of Internet safety issues were asked how important they felt it was that young people were aware of these issues when using the Internet. 98% agreed that it was at least 'fairly important' to be aware of these issues, 82% regarding it as 'very important'.

76% of young people in Key Stage 3 and above who were aware of Internet safety issues said that they had received advice and guidance on using the Internet safely. As Figure 7.6 shows, young people without access to the Internet at home were slightly less likely than those with access to have received such guidance. Post-16s were less likely to have received advice than those in Key Stages 3 and 4.

% who have received guidance on Internet safety issues by key stage and home access to the Internet

Figure 7.6 *All figures as a percentage*



Base: All children in Key Stage 3+ aware of Internet safety issues

Advice on safe Internet use came in equal measure from parents and teachers. Among those who had received advice, 67% said that their parents had advised them, while 70% had received guidance from teachers. Among those with access to the Internet at home, 76% had received guidance from their parents, compared with 36% of those without home access. However, 89% of young people without access to the Internet at home who had received guidance said that they had been advised at school or college, compared with 64% of those with home access.

The proportion that had received advice at school or college increased with age, with the opposite true of those who received advice at home.

All children in Key Stage 3 and above were asked whether their school had any rules about using the Internet. 87% said that their school did have such rules, 8% that there were no rules and 6% that they were not sure.

8 Home-school links

The survey explored how parents and schools interact, both by using ICT and in relation to their child's use of ICT for schoolwork. More specifically, it examined parental awareness and use of school web sites; on-line communication between teachers and parents; ICT support provided by schools; and the extent to which parents buy or hire equipment to help with the child's schoolwork. Much of this information is new to the 2002 survey. However, comparisons are made with the baseline survey findings, where applicable.

8.1 Awareness and use of school web sites

Parents were asked if their child's school had its own web site. 67% said that their child's school had a web site, 10% said that their child's school did not have a web site, whilst 22% did not know.

Parents of post-16s (84%) and of secondary school students (78%) were more likely than parents of primary school children (54%) to say that their child's school had a web site. Those with access to a PC or laptop at home (71%) were also more likely than those without access (53%) to say that their child's school/college had a web site.

24% of parents who said that their child's school/college had a web site had visited the site. This figure was fairly consistent across all key stages. 31% of those with Internet access at home, compared with 7% without access, had visited the site.

The likelihood of parents to have visited their child's school/college web site also increased with social grade, with 11% of those in DE households doing so, rising to 42% among parents in AB households.

Parents who had visited their child's school or college web site were asked why they had done so. The most common specific reason for visiting the web site was to look up details of school or college performance, with 35% of parents citing this reason. 21% had done so in order to look up syllabus or timetable information and 15% in order to contact the school/college directly. 11% of parents had viewed the site in order to look up the homework timetable for their child, and 5% to look up holiday or term dates.

8.2 On-line communication with teachers and parents

All parents were asked if they had used the Internet or e-mail to discuss school-related issues, either with teachers or with other parents.

The vast majority of parents (95%) had no experience of using the Internet or e-mail in this way. 4% of parents had done so to e-mail a child's teacher, 1% had discussed school-related issues with a teacher, and 1% with a parent, via an Internet chat room.

8.3 ICT support provided by schools and colleges

In the 2002 study, parents were asked whether their child's school or college provided ICT-related guidance or support in a number of ways.

23% of parents stated that their child's school or college offered training in the use of computers, and 15% that it offered support or guidance in using ICT with their children. 13% said that their child's school/college provided access to computers for parental use. 19% of parents did not know if these facilities were available, whilst 50% of the sample said that their child's place of learning did not offer any of these types of ICT support.

8.4 Purchasing and hiring of ICT equipment to help with child's school/college work

All parents of children in Key Stage 3 and above were asked if they had:

- bought a laptop or palmtop computer that their child could take to school or college
- rented a portable computer from their child's school/college or from another source
- bought, rented or encouraged their child to borrow CD-ROMs or DVDs to assist with their school or college work
- subscribed to an on-line information service.

70% of parents had not done any of these things. None had subscribed to an on-line information service and less than 1% had rented a portable computer from their child's school or college or from another source. 3% had bought a laptop or palmtop for their child to take to school or college. However, 27% had bought, rented or encouraged their child to borrow CD-ROMs or DVDs to assist with their school or college work, the proportion increasing with social grade, from 16% in DE households to 40% in AB households. Parents with a computer in the home (31%) were considerably more likely than those without access (4%) to have bought, rented or encouraged their child to borrow CD-ROMs or DVDs to assist with their school or college work.

All young people in Key Stage 3 or above who had access to a laptop computer at home were asked if they would be in favour of, or against, the idea of taking their laptop to school/college to use it alongside existing school/college facilities. In 2001, 55% of respondents said they were in favour of taking a laptop to school/college. In 2002, this figure rose to 68%.

9 Attitudes towards the role of computers in learning and child development

The survey examined the attitudes of parents and young people towards computers, with a particular focus on the use, role and impact of computers in learning. Although the questions asked of both parents and young people covered broadly similar ground to attitudinal questions asked in the baseline survey, the questions were rephrased in 2002. As a result, the findings are not directly comparable with those from the baseline survey.

9.1 Attitudes of parents

Parents' perceptions of how using computers influences their child's development

Parents were asked whether they felt that using computers:

- made their child more or less creative
- helped or hindered their child's development of social skills
- helped or hindered their child's development of writing skills (for children in Key Stages 1 to 4 only).

Parents in households with a computer were also asked if they felt that their child was more or less enthusiastic about books as a result of having access to a computer at home.

In each case parents were offered a neutral option as a possible response.

56% of parents felt that using computers made their child more creative, 8% that it made them less creative and 31% felt that it made no difference. The proportion that felt that using computers benefited their child's creativity increased with the key stage of the child, ranging from 47% of parents of children in Key Stage 1 to 69% of parents of post-16s. Parents of younger children were more likely to feel that using computers had no impact on their child's creativity.

24% of parents felt that using computers helped their child's development of social skills, 13% that it hindered them. 59% felt that using computers made no difference to their child's development of social skills. The likelihood for a parent to think that using computers benefited their child's social skills increased with the age of the child, with 19% of parents of children in Key Stage 1 holding this view, rising to 42% of parents of post-16s.

Among parents of children in Key Stages 1 to 4, 33% felt that computers helped their child's development of writing skills, compared with 21% seeing them as a hindrance in this respect. 43% of respondents felt that using computers made no difference to their child's development of writing skills. The results by key stage were broadly similar.

Among parents who had a computer at home, 11% thought that their child had become more enthusiastic about books, and 13% that they had become less enthusiastic, as a result of having access to a computer at home. 74% felt that having access to a computer at home made no difference to the child's attitude towards books.

Parents' perceptions of the role of computers in learning

Parents were also asked their views on a number of issues relating to the use of computers in learning.

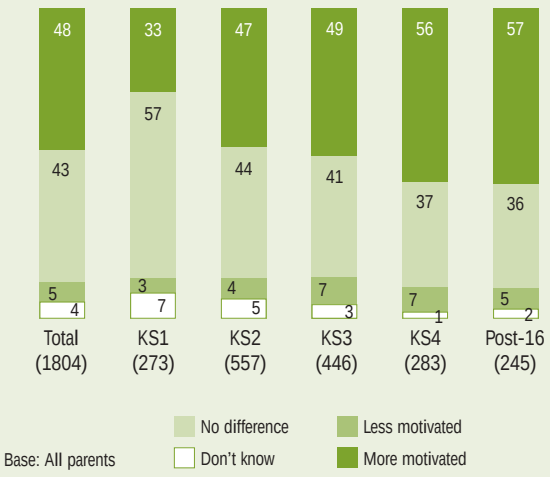
All parents were asked their opinions on the amount of use teachers made of computers in the classroom and what impact they felt that using computers had on their child's motivation in their schoolwork.

28% of parents were unable to express an opinion about the amount of use that teachers made of computers in the classroom. 45% felt that teachers had the balance right and 22% that teachers made insufficient use of computers, whilst only 5% thought that they used them too much.

48% of parents believed that using computers made their child more motivated in their schoolwork, compared with only 5% who thought that the opposite was true. The proportion who felt that using computers improved their child's motivation increased with key stage, ranging from 33% of those whose child was in Key Stage 1, to 57% of parents of post-16s. In line with earlier findings, parents of younger children tended to be more neutral on this issue (Figure 9.1).

Parents' perceptions of the impact of using computers on their children's motivation in their schoolwork – by key stage

Figure 9.1 *All figures as a percentage*



Perceptions of the impact of having access to a home computer on performance at school

Parents who had a computer at home were asked what impact they felt having access to a computer at home had on their child's results at school. Similarly, those without a computer were asked if they felt that their child would achieve better results at school if they had access to a computer at home.

Among parents who had a computer at home, 41% felt that their child achieved better results at school as a consequence of having access to a computer, whilst only 1% thought that their child got worse results. 51% believed that having a computer made no difference to their child's performance.

Computers were again more widely perceived to have a positive impact on older children than on younger children. The proportion of parents saying that home access to a computer benefited their child's performance increased with key stage, ranging from 26% of parents of children in Key Stage 1 to 61% of parents of post-16s. Results by gender of the child were broadly similar, with the exception that, at Key Stage 1, 32% of parents of boys regarded computers as having a positive impact on their child's performance at school, compared with 18% of parents of girls.

Among parents who did not have a computer at home, 54% thought that their child would get better results if they had access to a computer at home, only 1% that they would get worse results. 36% felt that having a computer would make no difference to their child's performance. Those in DE households (61%) were particularly likely to think that having access to a computer at home would lead to their child getting better results at school.

Educational web sites

Parents were asked if they were aware of any educational web sites and if they thought their children would use these web sites more if they had more information about where to find them.

45% of parents were aware of educational web sites. Awareness was higher among parents of secondary school children (49%) and post-16s (48%) than among parents of primary school children (42%). Among those with access to the Internet at home, awareness increased to 57%, compared with 20% among those without access.

67% of parents thought that their children would use educational web sites more if they had more information about where to find them. 18% thought they would be no more likely to do so, whilst 15% did not know. Parents of children in Key Stage 3 (75%) were most likely to feel that their children would use educational web sites more if they had more information about where to find them, parents of those in Key Stage 1 (50%) were least likely to do so.

9.2 Attitudes of children in Key Stages 1 and 2

Children in Key Stage 2 who used a computer at school were asked whether they felt that using computers at school or for schoolwork:

- made schoolwork more or less fun
- saved time or made things take longer
- made schoolwork harder or easier
- helped them to get better results.

Those in Key Stage 1 were asked only the first of these questions.

76% of children in Key Stages 1 and 2 felt that using computers made schoolwork more fun. Only 6% thought the opposite. Opinions were similar among the two age groups, although those in Key Stage 1 (10%) were more likely than those in Key Stage 2 (4%) to say that computers made schoolwork less fun. Boys and girls had

similar views, whilst those who did not have a computer at home (84%) were more likely than those that did (73%) to feel that using computers made schoolwork more fun.

47% of children in Key Stage 2 thought that using computers at school made no difference to the amount of time that things took to do. The remainder were evenly divided between those who thought that things took longer with a computer (23%) and those who thought that computers saved time (26%).

The large majority of children in Key Stage 2 felt that using computers at school either made schoolwork easier (47%) or had no impact on how easy or difficult schoolwork was (41%). Only 9% felt that using computers made schoolwork harder.

49% of children in Key Stage 2 felt that using computers at school helped them to get better results. 43% said that using computers made no difference to their results, while only 2% thought that using computers made their results worse. Boys (58%), and those who did not have access to a computer at home (62%), were more likely than girls (41%) and those with access to a home computer (46%), to say that using computers at school helped them to get better results.

9.3 Attitudes of children in Key Stage 3 and above

Young people in Key Stage 3 and above were asked a series of questions, exploring their views on the use of computers at school or college, their enjoyment of computers more generally and their perception of the importance of computers to their working life in the future.

Enjoyment of computers

89% of young people in Key Stage 3 said that they enjoyed using computers, 51% that they enjoyed using them 'a lot'. Results were very similar for each key stage. Boys were, however, more enthusiastic than girls about computers, 57% saying that they enjoyed using computers a lot, compared with 45% of girls. This difference in level of enjoyment was apparent at all key stages. Children who did not have a computer at home were less likely than those with access to say that they enjoyed using computers (77% and 91%).

Social impact of using computers

Young people in Key Stage 3 and above were asked whether they felt that using computers encouraged them to talk to and learn from other people, or discouraged them from doing so. 44% thought that using computers did encourage them to talk to and learn from other people, whilst only 7% felt that computer use discouraged them. Opinions were broadly similar among all sub-groups.

Enjoyment of using computers at school

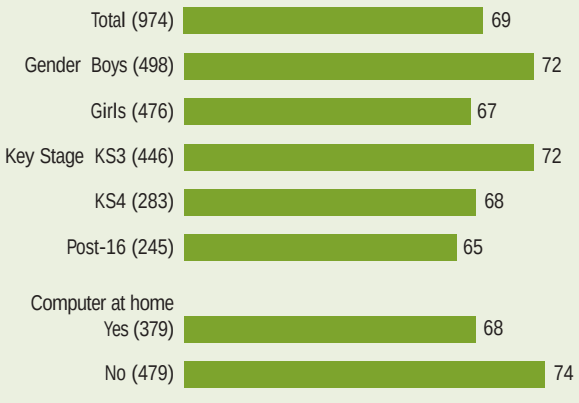
In order to establish whether children's enjoyment of computers and ICT extended to using them at school or for schoolwork, they were asked whether:

- using computers made schoolwork more or less enjoyable
- they preferred doing school or college work on a computer or by writing it out by hand.

69% of children in Key Stage 3 and above said that they found that computers made schoolwork more enjoyable, only 4% saying that they made schoolwork less enjoyable. Boys, younger children and those without access to a computer at home were particularly likely to say that computers made schoolwork more enjoyable (Figure 9.2).

Proportion of children in key Stage 3+ who think using computers makes schoolwork more enjoyable

Figure 9.2 *All figures as a percentage*



Base: All children in Key Stage 3+

54% of those in Key Stage 3 and above said that they preferred doing schoolwork on a computer and 14% said that they preferred handwriting. 31% had no preference. Boys were more likely than girls to say that they preferred using a computer for schoolwork, with girls being less likely to express a preference. As Figure 9.3 shows, this gender difference became less apparent the older the child.

Whether prefer doing schoolwork on a computer or by handwriting

Figure 9.3

Base: All children in Key Stage 3+			Prefer computer	Prefer handwriting	No preference
		Base	%	%	%
Total		974	54	14	31
KS3	- Boys	231	65	12	22
	- Girls	215	38	15	46
	- Total	446	52	13	34
KS4	- Boys	141	62	14	23
	- Girls	142	47	16	37
	- Total	283	54	15	30
Post-16	- Boys	126	63	12	25
	- Girls	119	55	18	27
	- Total	245	59	15	26

Perceived impact of using a computer on children's motivation in their school/college work

Figure 9.4

Base: All children in Key Stage 3+			More motivated	Less motivated	No difference
		Base	%	%	%
Total		974	48	6	44
KS3	– Boys	231	55	8	35
	– Girls	215	40	6	5
	– Total	446	48	7	43
KS4	– Boys	141	48	5	46
	– Girls	142	49	5	44
	– Total	283	49	5	45
Post-16	– Boys	126	41	6	51
	– Girls	119	52	6	40
	– Total	245	47	6	46

Perceptions of the impact of using computers on performance at school

In order the explore whether children in Key Stage 3 and above felt that using computers affected their schoolwork, respondents were asked whether using computers:

- made them more or less motivated in their schoolwork
- made it easier or harder for them to produce work of which they were proud
- made it easier or harder for them to understand and learn about the subject they were studying.

48% of children in Key Stage 3 and above thought that using computers made them more motivated in their schoolwork. Only 6% felt that using computers made them less motivated. Analysis by gender within key stage (Figure 9.4) shows that, whilst boys in Key Stage 3 were more likely than girls at this level to find that computers had a motivating effect, the pattern was reversed among post-16s.

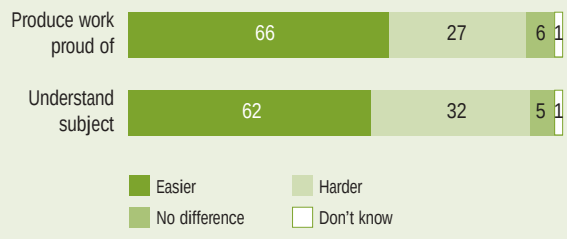
66% of children felt that using computers made it easier for them to produce work of which they were proud, and 62% that it made it easier to understand and learn about the subject that they were studying. Very few felt that computers were a hindrance in these respects (6% and 5% respectively).

Children in Key Stage 4 (71%) and post-16s (72%) were more likely than those in Key Stage 3 (61%) to feel that computers helped them to produce work of which they were proud (Figure 9.5). Boys were more likely than girls to agree that this was the case at Key Stage 3 (67% and 54%) and particularly at Key Stage 4 (81% and 60%). At post-16 level, however, the views of boys and girls were similar.

Boys were also slightly more likely than girls (65% and 58%) to think that using computers made it easier for them to understand and learn about the subject they were studying, whilst girls were more likely to feel that computers made no difference in this respect.

Whether computers make it easier to produce work of which children are proud/understand about subject – Key Stage 3+

Figure 9.5 *All figures as a percentage*



Base: All children in Key Stage 3+ (974)

Attitudes towards use of ICT by teachers

In order to explore how young people in Key Stage 3 and above felt about their teachers' use of ICT, they were asked their opinion on:

- the amount of emphasis that teachers placed on using computers in teaching

- whether lessons were more or less interesting when teachers used ICT.

66% of children felt that teachers placed the right amount of emphasis on using computers in teaching. 17% felt that too little emphasis was placed on using computers, whilst 11% felt that too much emphasis was placed on using them. Boys were more likely than girls to feel that too little emphasis was placed on using computers, particularly at Key Stage 3.

56% of young people said that they found lessons more interesting when teachers used ICT. 36% felt that it made no difference and only 7% felt that the use of ICT made lessons less interesting. The differences between the views of boys and girls were more marked in relation to this issue. At all key stages, boys were more likely than girls to say that they found lessons more interesting when teachers used ICT (63% vs. 49% overall).

Perceptions of whether performance at school would improve with greater access to computer facilities

Respondents were asked whether they felt that they would do better or worse at school if they had greater access to computer facilities at school or college, and at home.

40% of children in Key Stage 3 and above felt that they would work better at school with improved access to computer facilities on site. A further 56% felt that improved access would make no difference to their performance. The older the child, the less likely they were to feel that having greater access to computer facilities at school would result in them working better. However, boys were more likely than girls at all key stages to feel that their work would benefit from improved access to computer facilities.

Attitudes also varied according to whether the child had access to a computer at home. Those without access (55%) were more likely than those with access (37%) to feel that they would work better if they had greater access to computer facilities at school.

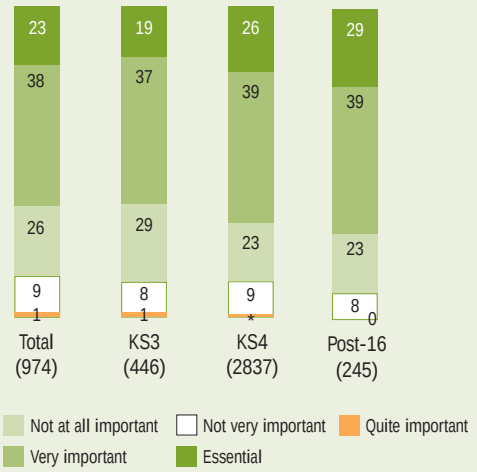
Among those in Key Stage 3 and above, 33% felt that they would work better at school if they had greater access to computer facilities at home, 63% saying that it would make no difference. Predictably, whether or not the child had access to a computer at home was a key determinant of children's opinions on this issue. Whilst only 28% of those with a computer at home felt that they would benefit from having greater access to computer facilities at home, this proportion rose to 60% among those without access at home.

Perceived importance of computers to working life in the future

Finally, young people in Key Stage 3 and above were asked how important they felt computers would be to their working life in the future. Figure 9.6 shows results by key stage.

Young people's perceptions of the importance of computers in their future working lives – by key stage

Figure 9.6 *All figures as a percentage*



Base: All children in Key Stage 3+

87% of young people in Key Stage 3 and above felt that computers would be at least 'quite important' in their future working lives and 23% thought that they would be essential. The proportion that regarded computers as being essential increased with key stage, ranging from 19% of those in Key Stage 3 to 29% of post-16s. Those with access to a computer at home were more likely than those without access to perceive computers as essential to their future (24% and 16%).

10 Early years and ICT

Parents of 3-4-year-old children were included in the 2002 survey for the first time. The interviews were conducted with the parent only, since the child was considered too young to participate. The questionnaire incorporated questions from the questionnaire for parents of 5-18-year-olds and explored new areas of particular relevance to this age group. In this section, where data are comparable with those from the main part of the survey, figures are compared with those for parents of all 5-18-year-olds and with parents of children in Key Stage 1. Findings from the interviews with parents of 3-4-year-olds are referred to as 'Foundation Stage' in the figures.

10.1 Household ownership of ICT

All parents of 3-4-year-olds were asked to identify which ICT items they had in their homes. The list used to identify equipment was the same as that used in the main part of the survey, with the addition of a range of electronic toys. Figure 10.1 shows ownership of ICT equipment, excluding electronic toys.

Household access to ICT

Figure 10.1	Foundation	KS1	KS1 – Post-16s
Base: All households	269	273	1804
	%	%	%
Personal computer	60	66	79
Laptop	15	15	16
PERSONAL OR LAPTOP COMPUTER (NET)	64	68	81
Mobile phone	84	88	92
Games console	58	58	77
DVD	34	38	43
Interactive digital TV	32	29	33
Digital camera	23	19	23
WAP/3G phone	15	16	21
Palmtop	3	5	5

The profile of ICT ownership for this group is similar to that for parents of children in Key Stage 1, with parents of 3-4-year-olds slightly less likely to own most items. There was a strong relationship between access to ICT in the home and social grade, with ownership higher for the majority of items among higher social grades.

10.2 Access to computers and the Internet at home

64% of households had a personal or laptop computer in the home, compared with 68% of those with a 5-6-year-old and 81% of all households with 5-18-year-olds. Among households with 3-4-year-olds that had a computer, the large majority owned just one (84%), with 14% owning two, and 2% owning three or more.

80% of households that used a computer regularly paid for their main computer using household expenditure, whilst 6% borrowed or loaned a computer from their employer. This finding is similar for households with 5-18-year-olds.

63% of parents of 3-4-year-olds (compared with 78% of parents of 5-6-year-olds gave reasons associated with their children's education or leisure for buying a computer; 53% for recreational use and 38% for educational use. Parents with a four year old (73%) were more likely than those with a three year old (51%) to say that their children's needs were among their reasons for buying a computer. It should be noted that, where parents said that they bought computers for their children to use, this did not necessarily mean the child whom the interview concerned.

The main reason for not buying a computer was a lack of resources, mentioned by 61% of respondents without a personal or laptop computer. 20% of parents expressed no interest in buying a computer and 11% cited a lack of experience with computers. The reasons given were similar to those given by parents of 5-18-year-olds, although parents of 3-4-year-olds were more likely than others to mention a lack of experience with computers (11%, compared with 4% of parents of children in Key Stage 1).

56% of households with 3-4-year-olds had Internet access at home, compared with 55% of households where the interviewed child was 5-6 years old, and 68% of all households in the sample.

10.3 Children's use of computers in the home

Among parents of 3-4-year-olds, who had access to a computer in the home, 84% said that their child used a computer at home. This equates to 45% of all children aged 3-4, and compares with 51% of children aged 5-6, and 69% of those aged 5-18. The majority of children aged 3-4 who used a computer at home used it at least once a week.

82% of parents whose child used a computer at home said that they sometimes used a computer with the child.

Among those who did so, 37% said that they undertook joint activities with the child; 31% that they watched over the child; and 33% said that they did both.

46% of parents of 3-4-year-olds who used a computer at home said that there were times when the child wished to use the computer at home, but found that someone else was using it. Among those who said that this happened, 71% said that one of the parents would be using the computer; 51% that a brother or sister would be using it.

When this situation arose, 40% of parents reported that they took turns to use the computer; 34% that the parents resolved the situation; and 27% that the person using the computer for work or study took priority.

When asked to assess the level of experience their child had in using computers, 25% said that the child had no experience at all, whilst 59% said that they had some experience and 15% that they had a good deal of experience. As would be expected, four year olds (80%) were more likely than three year olds (68%) to have experience of using a computer.

10.4 Ownership and use of electronic toys

Parents of 3-4-year-olds were asked which of a range of electronic toys they had in the home and which, if any, their child used (Figure 10.2).

Electronic toys: household access and child's use

Figure 10.2	Have in home	Child uses
Base: All parents of children aged 3-4	269	269
	%	%
Any	75	69
Calculators / toy calculators	50	29
Musical keyboards	42	38
Remote controlled vehicles	39	33
Toy computers	36	31
Electronic activity centres	25	22
Computer-controlled toys	8	5
Other electronic toys	33	26
None of these	25	31

75% of households had at least one of the items on the list. The item most frequently mentioned was a calculator/ toy calculator, with 50% of households owning one. Other popular toys included musical keyboards, remote controlled vehicles and toy computers.

There was some variation in ownership levels by social grade, with C2 and DE households being more likely than AB and C1 households to have a toy computer (43% and 27%), but less likely to have a calculator/ toy calculator (45% and 57%), other electronic toys (28% and 39%) or musical keyboards (39% and 45%).

Households where the child whom the interview concerned was a boy were more likely than those where the child was a girl to own a remote controlled vehicle (49% and 27%).

There were also differences between households with and without access to a computer in the home, in terms of their ownership of electronic toys. Households with no computer were more likely than those with a computer (43% and 32%) to own a toy computer, but less likely to own most other types of electronic toy.

69% of 3-4-year-olds used electronic toys. Boys (73%) were more likely to use them than girls (65%). The most commonly used were musical keyboards (38%), remote controlled vehicles (33%) and toy computers (31%). Boys were more likely than girls to use remote controlled vehicles (45% and 18%) and toy computers (36% and 26%). Girls were slightly more likely than boys to use electronic activity centres, musical keyboards and calculators.

Among children who used electronic toys, most used them at least twice a week (33%) or daily (28%). 74% used them on their own, 40% with their parents, and 26% with their brothers or sisters.

Parents whose child used electronic toys at home were asked to say (without being prompted) what they thought were the benefits of their child using these toys. The main benefits mentioned were that the toys enabled or helped the child to learn (40%); that the child gained experience in using ICT (34%); and that using the toys helped the child's co-ordination skills (18%). When asked to say what they thought the drawbacks of using these toys were, 54% of parents could think of none. The most common drawbacks mentioned were the child using the toys excessively (10%); getting lazy or over-relying on computers (8%); and not getting sufficient exercise (6%).

10.5 Parents' purchasing of educational software

Parents of children who used a computer at home were asked what types of educational software, if any, they had bought for the child to use on their home computer. 52% of parents had bought some kind of educational material. The most common types of software bought were numeracy software (46%) and literacy software (43%).

Types of educational software bought

Figure 10.3	Total
Base: All parents of children aged 3-4 who use a computer in the home	122
	%
Any educational software	52
Numeracy	46
Literacy	43
Art and design	30
Science	12
Geography/history	10
None	36
Don't know	2
Not stated	10

Answers given by 10% or more

Among parents with a computer, but who had not bought any educational software, 78% said that were aware of the availability of such material. When asked how likely they would be to buy such material in the future, 65% said they were very or fairly likely to do so, and 26% that they were very likely to do so.

10.6 Children's use of ICT in early years settings

Children in the sample primarily attended reception classes (39%) or nursery school (28%). 18% attended a nursery class in a primary or infants' school, and 16% pre-school or playgroup.

Where their children were attending an early years setting, parents were asked whether or not their child used ICT in this setting. Overall, 70% of parents said that their child used ICT in at least one of the settings that they attended. ICT was being used most widely in reception classes (78%), nursery schools (74%) and nursery classes in primary or infant schools (68%).

22% of parents whose children attended an early years setting where they used ICT said that their children were using ICT on a daily basis. 16% said that they were using it at least twice a week and 20% that they were using it at least once a week. 35% of parents did not know how often ICT was being used.

All parents whose children attended early years education settings were also asked whether they had received any support or guidance from the establishment to assist them in using ICT with their child and, if not, whether they considered it important that this type of provision be available. Whilst the large majority (90%) had not received any such guidance, it is clear that many parents would welcome it. Among those who had received no advice, 77% thought that such advice was at least fairly important, with 40% considering it very important.

10.7 Parents' attitudes towards ICT

All parents were asked their views of the impact of using computers, on children of their child's age, in terms of the following factors: independence, inquisitiveness, persistence, creativity, confidence, sociability, perceptiveness and how articulate they are.

Parent's view of impact of using ICT

Figure 10.4	More	Less	Neither	Don't know
Base: All parents of children aged 3-4	269	269	269	269
	%	%	%	%
Inquisitive	72	2	20	5
Confident	63	2	28	6
Creative	61	10	25	5
Independent	54	4	37	5
Perceptive	53	5	31	11
Articulate	50	10	33	7
Persistent	49	3	37	11
Sociable	24	37	33	5

The majority of parents felt that computers made children more inquisitive (72%), confident (63%), creative (61%), independent (54%), perceptive (53%) and articulate (50%). Just under half felt that ICT use made their child more persistent. However, a substantial minority (37%) felt that using ICT could reduce children's sociability.

Parents were also asked how important they felt it was that children of their child's age were exposed to ICT:

- as a means of acquiring basic ICT skills
- as an aid to learning more generally
- for recreational or leisure purposes.

As Figure 10.5 shows, parents were much more likely to see exposure to ICT as important in relation to building ICT skills and learning more generally than as a recreational tool.

How important that children aged 3-4 are exposed to ICT

Figure 10.5	Basic ICT skills	Learning aid	Recreation/ leisure
Base: All parents of children aged 3-4	269	269	269
	%	%	%
Essential	24	20	6
Very important	32	32	18
Quite important	29	33	31
Not very important	12	13	35
Not at all important	3	2	6
ESSENTIAL/VERY IMPORTANT (NET)	56	52	25
NOT VERY/NOT AT ALL IMPORTANT (NET)	15	14	42

Technical appendix

Introduction

Since Young people and ICT is a time-series, it is essential that a comparable research approach is maintained. The methodological approach used in this survey therefore largely replicated that used in 2001. The survey was conducted using face-to-face paired interviews at home with a sample of young people in England aged between 5 and 18 in full-time education and one of their parents. Young people studying away from home and those in tertiary education were not included. In addition, interviews were undertaken with a sample of parents of 3- and 4-year-olds. The research was undertaken in England, using computer-assisted interviewing (CAPI), during September and October 2002, the time of year when the baseline survey was conducted.

Definition of ICT

The definition of ICT used in the research, and presented to respondents at the beginning of the interview, was as follows:

For interviews with 5-18-year-olds and their parents:

Technologies, including:

- Computers (desktops, laptops and handhelds) and peripherals
- Digital TV
- Games consoles (e.g. Playstation, Nintendo 64)
- Internet-enabled mobile phones
- On-line services, including: Internet, e-mail, video conferencing, chatrooms and newsgroups.

For interviews with parents of 3-4-year-olds:

- Audio entertainment, such as: TV; tape recorders; video recorders; CD players; DVD players
- Remote control equipment
- Calculators
- Cameras, such as: instant (Polaroid) cameras; digital cameras; video cameras
- Computers and related equipment, for instance: CD-ROMs; DV-ROMs; educational software; writing; drawing
- Games Consoles, such as: Gameboys; Game Girl; Nintendo; Game Cube
- Telephones and mobile phones – real and toy
- Toys: computer-controlled; radio controlled; talking; activity centres; musical keyboards.

Sample design

The sampling technique adopted, as in the baseline survey, was random location sampling, a well-established and sophisticated form of quota sampling. Interviewers are set quotas on variables known to affect the likelihood of a person being found at home (e.g. working status), as a means of minimising availability bias, and observe rules concerning spacing of interviews.

Stratification and selection of sampling points

Selection of sampling points was carried out as follows:

- all EDs in England were divided into four strata within each Government Office Region, according to the proportion of the adult population with Black ethnicity (Up to 5%, >5-10%, >10-20%, >20%)
- within these strata, EDs were sorted by their MOSAIC[6] code
- 262 EDs were then selected within each sample cell with probability proportionate to population size. EDs in strata with >5% penetration of Black adults were over-sampled by a factor of two as a means of boosting the sample size of respondents of Black and Asian ethnicity.

Sample size and respondent selection

The target sample size for the study was 2,000 interviews. For the sample of 5-18-year-olds, interviewers were instructed to interview one parent and one child. For the sample of 3-4-year-olds, interviewers were to interview the parent only, in relation to the selected child. Quotas were set on gender and key stage of the child and on the parents' working status. Interviewers were at liberty to interview either parent in two parent households.

[6] MOSAIC is a geodemographic classification of residential postcodes in Great Britain. It uses a combination of census, electoral roll, housing and financial data to classify households into 12 lifestyle groups. These groups in turn break down into 52 sub-groups.

Questionnaire development

The questionnaire was developed from the baseline survey questionnaire. In response to changing policy needs, new areas were added to the questionnaire and existing areas removed or reduced.

As in the baseline survey, the questionnaire was divided between parents and children, with the exception that the interview for Foundation stage children was conducted with the parent only. Parents were asked detailed household information on the presence of ICT equipment in the household and about their interaction with schools; parents of younger children were also asked more detailed questions about their child's use of ICT in the home and at school. Younger children were asked straightforward questions about their use of ICT in the home and at school. Older children, beyond Key Stage 2, were asked about the equipment they owned in the home and more detailed questions on their use of computers and the Internet in the home and at school. Both parents and children were asked about their attitudes towards ICT and parents and older children about Internet safety. The classification section was asked of parents at the end of the interview.

The average interview length was around 30 minutes, although the length varied according to the age of the child and the extent to which respondents owned and used ICT.

Pilot survey

A pilot survey was carried out in order to test the survey procedures and questionnaire. The pilot interviews were carried out in Lambeth, Sheffield, East Devon and Leicester between 9th and 15th August, 2002. Quotas were set on the key stage and ethnicity of the young person. A total of 26 interviews was achieved, with at least four interviews conducted for each of the six key stages. A number of changes were made to the questionnaire as a result of the pilot exercise.

Main fieldwork stage

Fieldwork was conducted between 4th September and 21st October 2002 by fully-trained interviewers from NFO System Three's national field force, using CAPI. Given the nature of the survey population, fieldwork was conducted in the late afternoons and evenings during the week and at weekends.

Achieved sample

2,073 interviews were completed in total, 1,804 with children aged 5-18 and one of their parents and 269 with parents of children aged 3-4. As the table below shows, the achieved sample was broadly in line with the target quotas set. Although the quota of post-16s fell short of target, this group was purposively over-sampled in order to ensure adequate representation, since young people in this age group are a difficult group to reach in research. In spite of the purposive over-sampling of areas with a high penetration of Black adults, the final sample did not include a sufficient number of children or parents from ethnic minority groups, in particular Black or Mixed, to permit robust analysis of these groups.

Quotas set and achieved

	Set	Achieved
	%	%
Gender of child		
Boy	50.0	51.7
Girl	50.0	48.3
Key stage of child		
Foundation level	12.5	13.0
Key Stage 1	12.5	13.2
Key Stage 2	25.0	26.9
Key Stage 3	20.0	21.5
Key Stage 4	12.5	13.7
Post-16	17.5	11.8
Working status of parents		
Both parents/single parent working full- or part-time	62.5	60.6

Profile of weighted sample by social grade and region

	%
Social grade	
A	3
B	18
C1	27
C2	24
D	16
E	12
Region	
East Midlands	2
East of England	12
London	12
North East	6
North West	15
South East	16
South West	9
West Midlands	11
Yorks & Humber	11

The profile of the weighted sample by social grade and region is shown above.

Re-contact survey

During the course of fieldwork a number of errors were identified in the CAPI programme, affecting a small proportion of data items. As a result, it was decided to attempt to re-contact respondents by telephone or, where a telephone number was unavailable, by post, in order to minimise the data loss from these errors. Of the 483 respondents identified for re-contact, 355 (73%) were successfully re-contacted, 328 by telephone and 27 by post.

Weighting

The survey data were weighted at the analysis stage to correct for the disproportionate sampling of EDs, to boost areas with a high incidence of minority ethnic population, and to bring the profile of children by key stage in line with DfES population estimates. Further weighting was deemed unnecessary, since the profile of the sample after weighting by the ethnicity and key stage weights was sufficiently close to estimates of the actual population profile in terms of variables such as region and social class.

The target weights set were as follows:

Target weights

	%
Ethnicity weight	
Respondents in EDs where the proportion of population with black ethnic origin was:	
Up to 5%	90.1
>5-10%	4.6
>10-20%	3.4
>20%	1.9
Key stage of child weight	
Foundation Stage (3-4)	13.1
KS1 (5-7)	13.4
KS2 (7-11)	27.9
KS3 (11-14)	21.6
KS4 (14-16)	14.2
Post-16 (16-18)	9.8

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