ICT in Schools Survey 2004

Findings from a survey conducted in Spring 2004

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ICT in Schools Survey 2004

1 Summary

1.1 Background

This report contains the findings of the 2004 survey of Information and Communications Technology (ICT) in Schools in England. This survey covers provision and usage of ICT in maintained primary, secondary and special schools in England, as at the year end 31 March 2004. This is the latest in a series of such surveys which have been carried out annually since 1998.

1.2 Computers in school

The majority of computers in primary, secondary and special schools were used for teaching and learning. The mean number of computers used mainly for this purpose was 31.6 in primary schools, 218.2 in secondary schools and 33.6 in special schools. The mean ratio of computers:pupils in 2004 was 1:7.5 in primary schools, 1:4.9 in secondary schools and 1:3.0 in special schools. The mean number of pupils per computer has fallen steadily (i.e. improved) since 1998 in primary schools (from 17.6 in 1998 to 7.5 in 2004) and secondary schools (from 8.7 in 1998 to 4.9 in 2004). In special schools, where the mean number of pupils per computer has always been lower, there has been less change over the period (from 4.5 in 1998 to 3.0 in 2004).

The government's published targets were that by 2004, the ratio of computers to pupils should average 1:5 in secondary schools and 1:8 in primary schools. There was no specific target for special schools. The 2004 ICT in Schools survey shows that this average target has been met. Overall 63% of primary and secondary schools met their respective computer:pupil ratio targets.

The mean number of computers per school used for management and administration has also increased in 2004, to 6.0 per school in primary schools, 45.6 per school in secondary schools and 10.6 per school in special schools.

In primary schools, 47% of computers used for teaching and learning were over 3 years old, compared with 35% of computers in secondary schools and 47% in special schools.

Schools were asked how many computers they had in each of the following locations: classrooms, ICT suites, study/developmental areas, staff rooms/staff offices, administrative areas and other areas. Primary and special schools were quite similar in terms of where their computers were located, with the great majority of them having computers in classrooms (98% of primary and 99% of special schools) and in administrative areas (88% of primary and 93% of special schools). Most primary and special schools also had computers in ICT suites (77% of primary and 69% of special schools) and in staff rooms/offices (61% of primary and 77% of special schools).

Among secondary schools, the most common location for computers was ICT suites (98%). The great majority of secondary schools had computers in classrooms (96%), administrative areas (95%) and staff rooms/offices (93%). Secondary schools were more likely than primary or special schools to have computers in ICT suites, staff rooms/offices and study/developmental areas.

Almost all schools had a network in place: 91% of primary schools, more than 99% of secondary schools and 93% of special schools. Secondary schools were more likely to be networked for both teaching and learning and management/ administration than primary and special schools.

Among both primary and secondary schools, the smallest schools were least likely to be making full use of networking technologies. Only 82% of the smallest primary schools had a network, compared with at least 90% of the larger categories. Among those that had networks, 70% of the largest primary schools were networked in all teaching and learning areas, compared with 56% of the smallest schools.

Among secondary schools, 63% of the smallest schools were networked in all teaching and learning areas, compared with 78% of the largest schools. Similarly, 59% of the smallest secondary schools had a network that integrated curriculum and management functions, compared with 75% of the largest schools. A large differential in network usage between the smallest and largest secondary schools was also found in use of wireless technology (38% vs. 65%), hosting an intranet (67% vs. 83%), and accessibility from beyond the school premises (14% vs. 42%).

1.3 Other ICT equipment

As well as computers, schools were asked about their ownership of a range of other equipment and facilities, including interactive whiteboards and other ICT peripherals.

The proportion of schools with interactive whiteboards increased in primary schools from 48% in 2003 to 63% in 2004; in secondary schools from 82% in 2003 to 92% in 2004, and in special schools from 53% in 2003 to 71% in 2004. The mean number of interactive whiteboards per school was 2.0 in primary schools, 7.5 in secondary schools and 2.6 in special schools. Smaller primary and secondary schools were less likely than larger schools to have any interactive whiteboards.

The great majority of schools had digital projectors, printers, scanners, and digital cameras/digital video cameras. Few primary or special schools had video conferencing facilities, but these were more common in secondary schools (36% in 2004 had these facilities).

Schools were also asked about specialist equipment and software for pupils with Special Educational Needs (SEN). Special schools were most likely to be equipped with hardware for pupils with SEN, such as voice output communication aids, specialist peripherals and equipment and specialist accessories. 63% of special schools, 35% of secondary schools and 19% of primary schools had such equipment. Similarly special schools were more likely than primary or secondary schools to be equipped with software for pupils with SEN, such as symbol software, screen readers, prediction software, speech recognition or switch software. 76% of special schools had specialist software, compared with 47% of secondary and 28% of primary schools. Just over half of special schools (51%) had furniture for pupils with SEN, such as special chairs, desks and rise and fall tables. 21% of secondary and 18% of primary schools also had some of this equipment.

1.4 Internet and email

More than 99% of primary, secondary and special schools were connected to the Internet. Non-broadband connections were declining, however dial-up modems and ISDN connections were still common in primary and special schools, but few secondary schools connected to the Internet this way. The proportion of secondary schools using broadband connections (2Mbps[1] or higher) increased from 68% in 2002 to 90% in 2004. In primary schools, the increase in use of broadband (2Mbps or higher) over the same period was from 11% to 30%, while in special schools, use of broadband connections increased from 11% in 2002 to

40% in 2004. In 2004, 8% of primary schools, 28% of secondary schools and 12% of special schools had broadband connections of 8Mbps or higher.

The smallest schools were least likely to have the means to make best use of the Internet, particularly among primary schools. 80% of the smallest primary schools were using a non-broadband Internet connection, compared with only 18% of the largest schools. Similarly, only 1% of the smallest primary schools had a broadband connection of 8Mbps or higher, compared with 18% of the largest schools. Although not so great, a similar differential was seen among secondary schools. 19% of the smallest secondary schools had a sub-2Mbps Internet connection, compared with 6% of the largest schools.

'Main' email accounts which were generally titled 'admin@schoolname.sch.uk' or something similar were widespread. 97% of primary schools had one, along with 98% of secondary schools and 96% of special schools.

Schools were asked about the provision of email accounts funded by the LEA or school for school leaders, teaching staff, support staff and pupils. School leaders were most likely to be provided with a personal email account – 90% of secondary schools, 84% of special schools and 77% of primary schools reported that all their school leaders were provided with an email account. Levels for teaching staff were nearly as high – 84% of secondary, 74% of special and 70% of primary schools reported that all their teaching staff were provided with a personal email account. Support staff were less likely to be provided with email accounts, particularly in primary and special schools – 71% of secondary, 50% of special and 39% of primary schools reported that all their support staff had email accounts. For all categories of staff, secondary schools were most likely to report that their staff were provided with email accounts funded by the school or LEA.

Secondary schools were also most likely to report that all pupils were provided with an email account (personal or shared) – 60% of secondary schools reported that all their pupils were provided with such an account, compared with 38% of primary schools and 33% of special schools.

[1] 'Mbps' = Megabits per second

1.5 ICT-related staff confidence and training

A range of questions were asked about ICT-related staff training and professional development. The questions distinguished between different categories of staff. In primary, secondary and special schools, around 9 out of 10 responded that their school leaders and teachers had received appropriate levels of professional advice and support on ICT, and guidance on the use of ICT. School leaders were less likely than teachers to have received professional development in ICT-related basic skills or practice. The proportion of schools saying that none of their staff had received each type of training or professional development was low, ranging from 3%-7%.

Schools were asked how many staff in their school were very confident, confident or not confident in using ICT in their job. The question was asked separately for school leaders, teaching staff and support staff. A similar question has been asked about teachers in all previous ICT in schools surveys. Note that these figures were the view of the survey respondent (headteacher or ICT co-ordinator), not the teachers' own self-assessment. In 2004, the proportions of teaching staff who were considered to be very confident or confident in using ICT were 85% in primary schools, 81% in secondary schools and 86% in special schools. Unlike in earlier years, there was no further increase in teacher confidence in 2004.

Schools were asked to indicate from a list of options, what were the main sources of ICT-related professional advice and support used by staff in their school. In all school types, colleagues were most commonly selected, by around 9 out of 10 schools.

Schools were also asked about their main sources of ICT technical support. In primary schools, the main source of technical support was the LEA, used by 60% of schools. Reliance on the LEA has fallen over time, from 73% of primary schools in 2002. 38% of primary schools said they used their own ICT support staff, an increase from 27% in 2002. The school's own teaching staff remained an important source of technical support, used by 52% of primary schools. Secondary schools were much more likely than primary or special schools to say that they used their own ICT support staff – used by 94% of secondary schools (up from 88% in 2002). As a result, the other categories of support were all less likely to be used in secondary schools than in other types of school. In special schools, over half (55%) said they used their own ICT support staff. The LEA remained an important

source of support in special schools, used by 60%, although this had decreased from 71% in 2002.

Schools were asked how many members of staff had access to a computer at home, which included computers loaned to them by the school. The question was also included in the 2002 and 2003 surveys. Almost all school leaders had access to a computer at home, as did the great majority of teaching staff. There were no significant changes in this measure between 2003 and 2004.

1.6 Use of ICT in school

Respondents (headteacher or ICT co-ordinator) were asked how many school leaders, teaching staff and support staff in their school made regular use of ICT for teaching and learning, and for management/administration.

Reported use of ICT for teaching and learning was very widespread among school leaders and teaching staff. 83% of school leaders in primary schools were reported to make regular use of ICT for teaching and learning, compared with 92% of teachers in primary schools. Proportions of staff reported to use ICT regularly for teaching and learning were lower in secondary schools, at 72% of school leaders and 70% of teaching staff. It should be noted that not all school leaders, particularly in secondary schools, would do any teaching, which may have affected these proportions. In special schools, the proportions of school leaders and teachers reported to use ICT for teaching and learning were similar to those in primary schools, at 78% of school leaders and 91% of teachers.

Schools were less likely to report that support staff made regular use of ICT for teaching and learning, compared with school leaders and teaching staff.

Use of ICT for management and administration was most widespread among school leaders – more than 90% of school leaders made use of ICT in this way. The proportions of teaching staff reported to make regular use of ICT for management and administration were lower at 67% of teachers in special schools, 58% of teachers in secondary schools and 52% of teachers in primary schools.

Schools were asked whether the extent to which ICT was used in a range of curriculum areas and, in primary schools, in the foundation stage was 'substantial', 'some' or 'little/none'. These questions were also included in the 2002 and 2003 surveys.

Staff in primary and special schools were most likely to make substantial use of ICT in English and Mathematics lessons, as well as ICT lessons as might be expected. The proportion of primary and special schools reporting substantial use of ICT has generally increased since 2003 in most curriculum subjects.

In secondary schools, the highest level of substantial use of ICT (apart from ICT itself) was for design and technology teaching. The proportion of secondary schools saying they made substantial use of ICT increased for all subject areas since 2003.

1.7 Perceived impact of ICT

ICT was generally perceived to have a positive impact on helping pupils with Special Educational Needs (SEN) to access the National Curriculum. This was particularly the case for special schools, where more than seven out of ten claimed ICT had a substantial impact and almost all the others said it had some impact.

Schools were asked whether they made use of ICT to support pupils not able to attend school. Use of ICT for this purpose was most widespread in secondary schools (31%) and least widespread in primary schools (3%).

Similarly schools were asked about their use of ICT to help re-integrate pupils with attendance and behavioural problems. Use of ICT for this was also most common in secondary schools, presumably due to the fact that they have more instances of pupils with such problems than primary or special schools.

Schools were asked about the impact of ICT on teacher workloads generally, and on the need for teachers to undertake routine administrative and clerical tasks. The majority opinion was that ICT has led to some reduction in teacher workloads (held by 69% of respondents in primary schools, 66% in secondary schools and 65% in special schools) and the need to undertake routine tasks (57% of respondents in primary schools, 71% in secondary schools and 62% in special schools).

Since 2002, schools have been asked whether their ICT facilities are made available to pupils and the local community outside of school hours. The trend has been for an increasing proportion of primary, secondary and special schools to make them available to pupils out of hours, but this pattern is not seen in making them available to the local community. In 2004 for the first time schools were asked about making ICT facilities available to staff out of hours and more than 9 out of 10 schools did this.

1.8 Management and funding

Respondents were asked whether their school has an ICT leadership group, or a senior manager with designated responsibility for ICT. Secondary schools were most likely to have such a group/person – 86% of them did, compared with 76% of primary schools and 71% of special schools

The vast majority of schools (more than 9 out of 10 of primary, secondary and special schools) had a school improvement plan that included a strategy for implementing, evaluating and reviewing the use of ICT.

Schools were asked how much they had spent on ICT in the 2003-2004 financial year, to include expenditure on network infrastructure, computers, peripherals, software and content, training, ICT-related telecoms services, ISPs and technical support. The question wording was made more explicit in the 2004 survey, as to what categories of ICT expenditure should be included, which may account for some of the difference compared with earlier years.

The mean annual expenditure per school was highest in secondary schools at £88,200 per school (up from £75,300 in 2002 and £65,000 in 2003). In special schools, mean annual expenditure was £18,500 per school (compared with £15,100 in 2002 and £13,600 in 2003). In primary schools, mean annual expenditure was £14,700 per school (compared with £12,900 in 2002 and £11,200 in 2003).

Mean expenditure per pupil also increased in 2004. Expenditure per pupil was highest in special schools (£297 per pupil), followed by secondary schools (£91 per pupil) and lowest in primary schools (£69 per pupil).

As would be expected, the total expenditure on ICT per school increased with school size. In primary schools it increased from a mean of £7,200 in the smallest group of schools to a mean of £23,700 in the largest schools. In secondary schools the mean total expenditure on ICT increased from £39,600 in the smallest schools to £138,200 in the largest schools.

In primary schools, the mean expenditure per pupil was highest in the smallest group of schools at £93 per pupil (falling to £57 per pupil in the largest schools). In secondary schools, although the mean spend per pupil

did vary slightly between the school size bands, there was not a consistent pattern in expenditure per pupil according to school size.

Schools were asked for the main ways in which they dispose of obsolete or broken ICT equipment. Among primary schools, the most common responses were that old equipment was disposed of as refuse (56%), or sold or given away (43%). Secondary schools were most likely to cascade old equipment within the school (64%), with nearly as many saying that equipment was disposed of as refuse (60%). Among special schools the most common responses were that old equipment was disposed of as refuse (55%) or cascaded within the school (52%). Around a third of primary, secondary and special schools used a vendor for recycling or disposal.

1.9 Key differences according to 'e-confidence'

A composite measure of 'e-confidence' was derived for primary and secondary schools in this survey, by scoring results across a range of measures including ownership of ICT equipment, networking, Internet access, staff confidence, and use of ICT in English, Maths and Science. Schools were divided into segments according to their scores on this composite measure. It should be noted that there was no measure of quality of ICT usage available from the survey data. This resulted in four e-confidence groups for primary and secondary schools, ranging from least to most e-confident.

Key differences according to e-confidence were:

• Schools belonging to the more e-confident segments were more likely to report that their staff had received appropriate levels of professional advice and support on ICT than schools in the less e-confident segments.

• The more e-confident schools tended to report higher levels of substantial use of ICT, across curriculum areas.

• The more e-confident a school was, the more likely they were to say that ICT had a substantial impact on helping pupils with SEN to access the National Curriculum.

• Among secondary schools, the more e-confident schools were more likely to use ICT to support pupils unable to attend school.

• In both primary and secondary schools the most e-confident segment were most likely to say that they used ICT for to help re-integrate pupils with attendance and behavioural problems.

• The more e-confident a primary or secondary school was, the more likely it was to report that ICT has led to a reduction in teacher workloads and in the need for teachers to do routine administrative tasks.

• In primary schools, the more e-confident schools were more likely to make ICT facilities available outside of school hours to pupils, the local community and staff.

• Among secondary schools, the more e-confident were more likely to make ICT facilities available to the local community, but there was no significant difference by e-confidence for making facilities available to staff and pupils.

• In both primary and secondary schools, the more e-confident segments were more likely to have an ICT leadership group.

• In secondary schools, the more e-confident were more likely to say that their school improvement plan includes an ICT strategy.

• For both primary and secondary schools, the more e-confident the school the greater the amount spent on ICT in the last financial year. Mean expenditure per pupil also increased with increasing e-confidence.

2 Introduction

2.1 Background

This report contains the findings of a survey of Information and Communications Technology (ICT) provision and usage in schools in England as at the year end 31 March 2004. This report is also available online at www.dfes.gov.uk/rsgateway. The figures for 2004, apart from those published in Statistical First Release SFR 27/2004 Information and Communications Technology in Schools in England: 2004, are new and published here for the first time. The figures in this document are final and update those published as provisional in the SFR. Figures for 2004 and comparable figures for 1998-2003, where these are available, are shown in the tables.

The aim of this survey is to identify and illustrate progress in key aspects of ICT usage (including for teaching and learning, management and administration) by schools thereby providing information to inform policy development at national, regional and local level. In particular the survey's findings will be used to:

- Measure progress towards ICT targets announced by the Prime Minister:
  - by 2004 computer to pupil ratio targets of 1: 8 in primary schools and 1: 5 in secondary schools.
  - by 2006 all schools connected to the Internet by Broadband.
- Inform understanding of the infrastructure required to meet the Public Service Agreement Key Stage 3 ICT strategy target for 2007 (85% of 14 year olds achieving level 5 or above) and a range of other initiatives and programmes.
- Understand the extent to which different forms of ICT are used in schools. This will inform the development of embedding ICT in teaching and learning.

Taylor Nelson Sofres (TNS) Social were commissioned by the Department for Education and Skills to carry out the 2004 survey of ICT in Schools, the first time an external contractor had carried out the survey.

2.2 Overview of methodology

The survey was conducted in maintained primary, secondary and special schools in England. A stratified random sample of primary, secondary and special schools was selected by the Department for Education and Skills. Questionnaires were sent out to 2,426 primary schools, 2,628 secondary schools and 1,000 special schools. Schools had the option of completing the paper questionnaire and sending it back to TNS Social, or completing the survey via a web-based questionnaire.

In total 2,430 schools completed the questionnaire, an overall response rate of 40%. This comprised 1,079 primary schools (44% response rate), 893 secondary schools (34% response rate) and 458 special schools (46% response rate).

The achieved sample was weighted to match the population of schools by government office region and school size band.

Full details of the survey methodology are included in Section 11.

2.3 Interpreting the tables

The bases stated in this report are unweighted but percentages are shown weighted.

In most tables, percentage figures should be read vertically. For example, in Table 3.11, the first percentage figure shown (98%) is based on the population group indicated above it, that is, primary schools. This result can be read as follows: '98% of primary schools had computers in classrooms'. The base at the bottom of the table (1,079) shows the number of primary schools responding to this question. Where percentage figures should be read vertically, the base appears at the bottom of the table.

In other tables, percentage figures should be read horizontally. For example, in Table 3.1 the first percentage figure shown (14%) can be read as follows: '14% of primary schools had 20 or fewer computers'. The base to the right of the table (1,079) shows the number of primary schools responding to this question. Where percentage figures should be read horizontally, the base appears to the right of the table.

Due to rounding, percentage figures in tables may not add up exactly to 100% but may total between 98% and 102%.

It is important to note the unweighted bases when drawing comparisons. The table below gives an indication of the confidence intervals to apply to different percentage results for different sample sizes within this report. These 95% confidence levels are the limits within which we can be 95% confident that the true answer will lie (in other words only a 1 in 20 chance that the true answer will lie outside this range).

To take an example from the table, for a percentage result of 50% on a sample of 500, there is a 95% chance that the true result will lie within ± 4%, that is, between 46% and 54%. (These confidence limits assume a simple random sample and no adjustment has been made for the effects of stratification or weighting. Such an adjustment would increase the confidence limits slightly.)

Sample size	Approximate 95% confidence limits for a percentage result of:		
	10% or 90% +/–	30% or 70% +/–	50% +/–
100	8	13	14
250	4	6	6
500	3	4	4
1,000	2	3	3
2,000	1	2	2

The following symbols have been used in tables in this report:

* to indicate a percentage value of less than 0.5%

- to indicate a percentage value of 0.

2.4 Trend tables

A set of tables is included in Appendix A, showing trends over time in findings from the ICT in schools surveys. Tables include figures from the 1998 survey onwards, where a particular question has been included in several years. These tables also include figures for 'all schools', whereas the analysis in the main report is shown separately for primary, secondary and special schools.

The trend tables are as follows:

Table A1 Key figures – primary and secondary schools (1998-2004)

Table A2 Key figures – special schools and all schools (1998-2004)

Table A3 Computers used mainly or solely for teaching and learning purposes (1998-2004)

Table A4 Computers used mainly or solely for management and administration purposes (1999-2004)

Table A5 Presentation technologies and peripherals per school (2002-2004)

Table A6 Internet connections (1998-2004)

Table A7 Teacher confidence and access to ICT (1998-2004)

Table A8 Email access and wider access to ICT (2002-2004)

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3 Computers in school

3.1 Total computers

All schools responding to the survey had some computers. The mean total number of computers was 37.5 for primary schools, 262.6 for secondary schools and 43.8 for special schools.

The actual number of computers per school varied greatly, as shown in Tables 3.1-3.3.

Table 3.1: Number of computers per primary school

Number of computers	20 or fewer	21-30	31-40	41-50	51 or more	All	Base (primary schools)
% with this total	14	24	25	18	18	100	1079

Table 3.2: Number of computers per secondary school

Number of computers	100 or fewer	101-200	201-300	301-400	401 or more	All	Base (secondary schools)
% with this total	7	24	38	20	11	100	893

Table 3.3: Number of computers per special school

Number of computers	20 or fewer	21-30	31-40	41-50	51 or more	All	Base (special schools)
% with this total	14	24	20	17	28	100	458

Schools were asked separately about the numbers of desktops, laptops, tablets (an A4-sized laptop with a touch sensitive screen that is operated by a stylus like a personal digital assistant (PDA)), and handhelds (including PDAs but not data loggers or calculators). Almost all the computers schools had at the time of the survey were either desktops or laptops. Chart 3A shows the mean number of each type of computer in primary, secondary and special schools in 2004.

The mean number of desktops and laptops per school has increased year on year since 2002 in primary, secondary and special schools, as Charts 3B and 3C show.

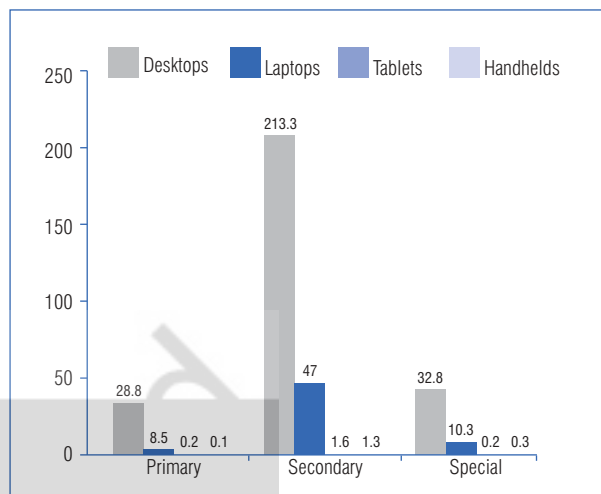*Chart 3A: Mean number of computers per school*

Chart 3B: Mean number of desktop computers per school
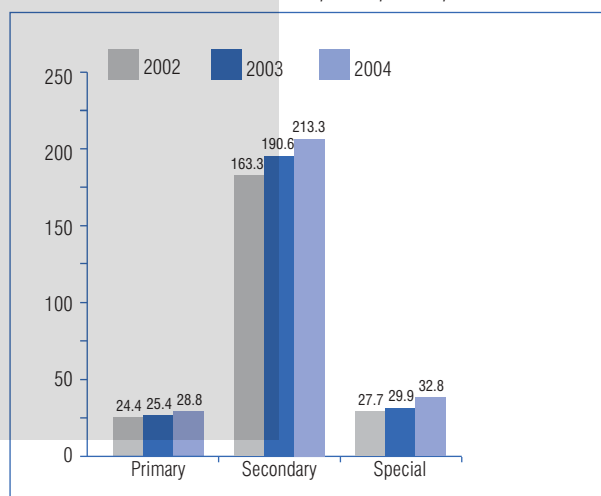
Chart 3C: Mean number of laptop computers per school
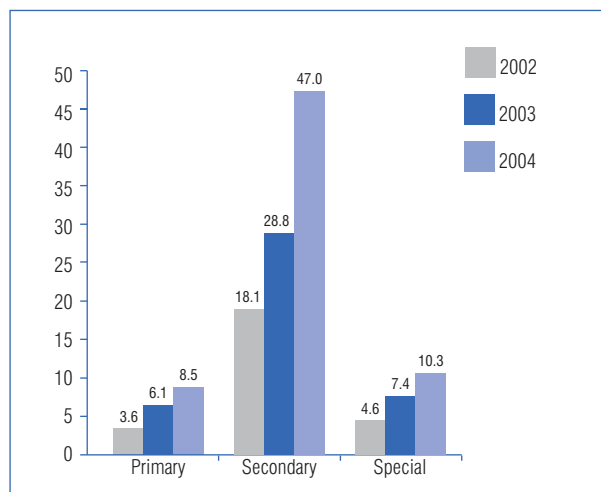
3.2 Computers used for teaching/learning

The majority of computers in primary, secondary and special schools were used for teaching and learning. The number of computers used mainly for this purpose continued to show year on year increase in 2004.

Chart 3D: Mean number of computers per school used for teaching and learning, by year
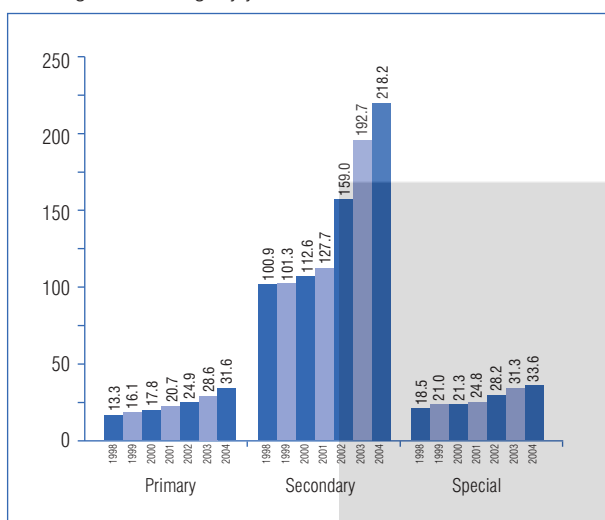
The mean number of computers per school which were used for teaching and learning in primary, secondary and special schools is shown in Table 3.4. A detailed table showing trends since 1998 is included in Appendix A.

Table 3.4: Mean number of computers used for teaching and learning

	Primary schools	Secondary schools	Special schools
Mean number of computers used for teaching/learning	31.6	218.2	33.6
Of which are Desktops (mean)	26.1	186.9	27.6
Of which are Laptops (mean)	5.1	28.8	5.0
Base	*1079*	*893*	*458*

3.3 Pupils per computer

The mean number of pupils per computer (used for teaching and learning) has been steadily falling over the last seven years in primary and secondary schools. In special schools there has always been a lower ratio of computers to pupils, and there has been little change in the period.

Chart 3E: Mean number of pupils per computer used for teaching and learning, by year
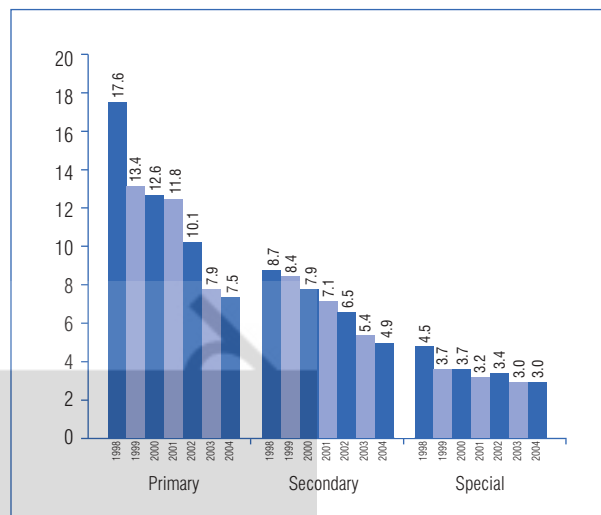
In primary schools overall, the mean number of pupils per computer in 2004 was 7.5, against the government's target of less than 8. The actual number of pupils per computer did vary from school to school, as shown in Table 3.5.

Table 3.5: Pupils per computer in primary schools

Pupils per computers	Fewer than 5	5.00-5.99	6.00-6.99	7.00-7.99	8.00-8.99	9 or more	*All*	*Base (primary schools)*
% of schools with this total	14	14	17	18	14	23	*100*	*1079*

In secondary schools overall the mean number of pupils per computer in 2004 was 4.9, against the government's target of less than 5. Again the actual number of pupils per computer varied considerably from school to school, as shown in Table 3.6.

Table 3.6: Pupils per computer in secondary schools

Pupils per computers	Fewer than 3	3.00-3.99	4.00-4.99	5.00-5.99	6.00-6.99	7 or more	*All*	*Base (secondary schools)*
% of schools with this total	9	23	31	19	9	8	*100*	*893*

In special schools the mean number of pupils per computer in 2004 was 3.0. The breakdown of pupils per computer is shown in Table 3.7.

Table 3.7: Pupils per computer in special schools

Pupils per computer	Fewer than 2	2.00-2.99	3.00-3.99	4.00-4.99	5 or more	All	Base (special schools)
% of schools with this total	28	26	25	10	11	100	458

Primary and secondary schools were grouped into five size bands, depending on the number of pupils in the school. The size bands were selected so that each contained roughly one fifth of primary/secondary schools. The size bands used for analysis were the same as those used in constructing the sample (see Section 11). Table 3.8 shows a breakdown of the number of pupils per computer (used for teaching and learning), and the mean number of pupils per computer, by school size band.

Among primary schools, the larger schools tended to have a higher mean number of pupils per computer. The mean number of pupils per computer increased from 5.6 in the smallest schools, to 8.9 in the largest schools. In the group of largest primary schools (those with 336 or more pupils), more than two in five schools had 9 or more pupils to each computer, compared with only 3% of the smallest schools (those with up to 125 pupils).

In secondary schools there was no clear trend in the mean number of pupils per computer according to school size. However among the smallest schools (up to 653 pupils), 20% had fewer than three pupils per computer, compared with only 4% of the largest two categories of schools (1044-1280 pupils and 1281 or more).

3.4 Computer:pupil ratio targets

3.4.1 Introduction

The government's published targets were that by 2004, the ratio of computers (excluding those used for management/administration) to pupils should average 1:5 in secondary schools, and 1:8 in primary schools. There was no specific target for special schools. According to the 2004 survey of ICT in schools, the mean computer:pupil ratios were 1:7.5 in primary schools and 1:4.9 in secondary schools, so the published target for the average computer:pupil ratio has been met. 63% of both primary and secondary schools met their respective computer:pupil ratio targets.

This section considers further the characteristics of those primary and secondary schools that met the target ratios, compared with those that did not.

3.4.2 Primary schools

Table 3.9 gives a profile of primary schools that met or did not meet the target computer:pupil ratio, showing the percentage of schools that met or did not meet the target

Table 3.8: Pupils per computer by school size band

	Primary schools						Secondary schools					
	1-125 %	126-196 %	197-241 %	242-335 %	336 + %	All %	1-653 %	654-865 %	866-1043 %	1044-1280 %	1281 + %	All %
Fewer than 3	6	1	–	–	–	2	20	8	9	4	4	9
3 - 3.99	14	2	1	1	1	4	20	31	17	25	20	23
4 - 4.99	21	9	4	2	4	8	27	28	36	32	35	31
5 - 5.99	23	19	18	7	3	14	18	15	19	22	20	19
6 - 6.99	16	21	22	15	12	17	5	11	9	11	10	9
7 - 7.99	10	21	19	24	19	18	4	4	7	3	3	4
8 - 8.99	7	10	17	19	18	14	3	2	1	2	4	2
9 or more	3	16	19	32	43	23	4	*	2	1	3	2
All	100	100	100	100	100	100	100	100	100	100	100	100
Mean pupils per computer	5.6	7.1	7.5	8.5	8.9	7.5	4.7	4.6	5.1	4.8	5.1	4.9
Base (Schools)	247	213	219	224	176	1079	168	180	183	170	192	893

by school funding status (voluntary aided, community, voluntary controlled or foundation[2]). The table also shows the mean figures for pupil:teacher ratio, number of pupils, percentage of pupils with Special Educational Needs (SEN), percentage of pupils eligible for free school meals, percentage of pupils classified as minority ethnic origin, percentage of pupils achieving level 5 in mathematics, and spend on ICT per pupil. The table also shows the breakdown of all primary schools, for comparison purposes.

Table 3.9: Computer:Pupil ratio target – primary schools

	Schools that met target %	School that didn't meet target %	*All primary schools* %
School funding status:			
Voluntary aided	23	17	21
Community	57	67	61
Voluntary controlled	18	12	16
Foundation	2	4	3
All funding statuses	*100*	*100*	*100*
	Mean	Mean	Mean
Mean pupil:teacher ratio	22	23	22
Mean number of pupils	198	288	231
Mean % of pupils with SEN	18%	17%	18%
Mean % of pupils eligible for free school meals	14%	16%	15%
Mean % of pupils classified as minority ethnic origin	10%	16%	12%
Mean % of pupils level 5 in mathematics	31%	29%	30%
Mean spend on ICT per pupil	£78	£54	£69
Base (schools)	*680*	*396*	*1079*

As Table 3.9 shows, the differences between primary schools that met or did not meet the computer:pupil ratio target in respect of these factors were generally small.

Schools that met the target were more likely to be voluntary aided or voluntary controlled, and less likely to be community schools (see Chart 3F).

Chart 3F: Funding statuses of primary schools that met or didn't meet the computer:pupil ratio target
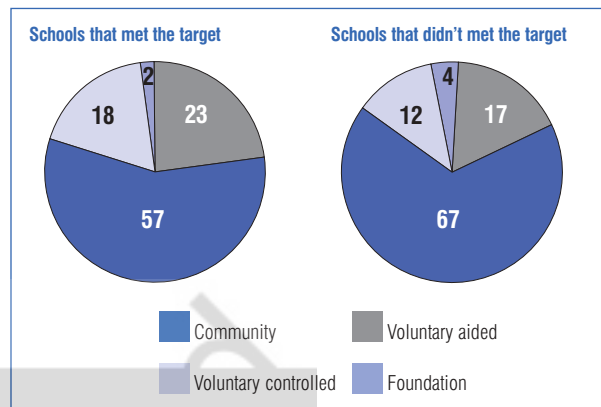
Schools that met the target were smaller on average (with a mean of 198 pupils, compared with 288 pupils in schools that did not meet the target), and their mean spend on ICT per pupil was higher (£78 per pupil, compared with £54 per pupil in schools that did not meet the target).

The ICT in schools survey did not collect information on other factors that have been shown to be associated with better ICT learning opportunities in schools, such as quality of leadership within the school and quality of ICT teaching.[3] The ICT in schools survey also did not collect other information that might influence spend on ICT, such as the school's total income, other spending priorities, or the school's assessment of reasons for their level of spend on ICT. Therefore it is not possible to say from this survey why the schools that met the target were able to spend more on ICT, but it is likely that factors such as ICT leadership and the general attitude towards ICT within the school were influential in the school's decision to spend more on ICT.

3.4.3 Secondary schools

Table 3.10 shows the profile of secondary schools that met or didn't meet the computer:pupil ratio target, by school funding status and specialist status.[4] The table also shows the mean figures for pupil:teacher ratio, number of pupils, percentage of pupils with Special Educational Needs (SEN), percentage of pupils eligible for free school meals, percentage of pupils classified as minority ethnic origin, percentage of pupils achieving level 5+ GCSEs (grades A*-C), and spend on ICT per

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[2] See Section 11.8 for definition of school funding statuses.

[3] Primary Schools – ICT and Standards: An analysis of national data from Ofsted and QCA by Becta, Becta 2003.

[4] See Section 11.8 for definition of school funding statuses.

pupil. Figures for all secondary schools are also shown for comparison purposes.

Table 3.10: Computer:Pupil ratio target – secondary schools

	Schools that met target %	School that didn't meet target %	*All secondary schools %*
School funding status:			
Voluntary aided	19	15	17
Community	62	64	63
Voluntary controlled	4	5	4
Foundation	15	16	16
All funding statuses	*100*	*100*	*100*
Specialist status:			
Not specialist	41	57	47
Technology college	25	8	18
Other specialist status	34	35	35
All specialist statuses	*100*	*100*	*100*
	Mean	Mean	Mean
Mean pupil:teacher ratio	17	18	17
Mean number of pupils	944	989	961
Mean % of pupils with SEN	17%	15%	16%
Mean % of pupils eligible for free school meals	15%	12%	14%
Mean % of pupils classified as minority ethnic origin	16%	14%	15%
Mean % of pupils level 5 in mathematics	54%	56%	55%
Mean spend on ICT per pupil	£102	£72	£91
Base (schools)	*564*	*328*	*893*

There were few differences in the school funding status profile between secondary schools meeting or not meeting the ratio target (see Chart 3G).

Chart 3G: Funding statuses of secondary schools that met or didn't meet the computer:pupil ratio target
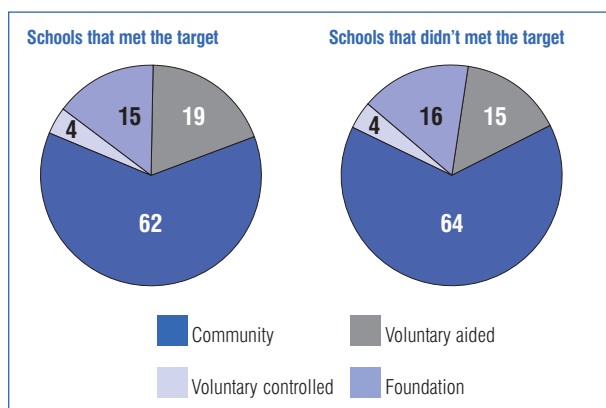
The main difference was in terms of specialist status. Specialist schools receive additional capital funding to enhance their facilities in the subjects related to the school's specialism, and recurrent funding to implement their specialist school development plans. Schools that met the target were much more likely to be technology colleges (25%, compared with 8% of those not meeting the target). There was no difference between those meeting or not meeting the target in the proportion of schools with other specialist statuses (see Chart 3H).

Chart 3H: Specialist statuses of secondary schools that met or didn't meet the computer:pupil ratio target
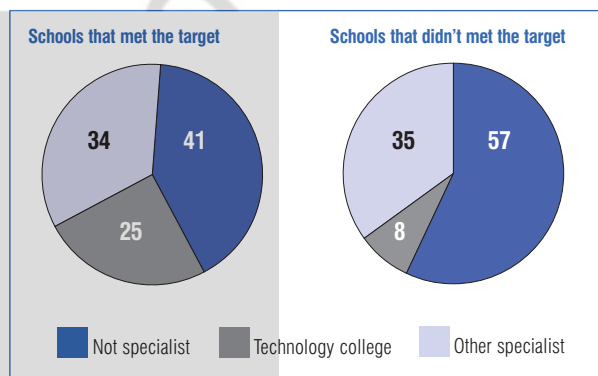
Secondary schools that met the ratio target had slightly fewer pupils, and higher proportions of pupils with SEN, pupils eligible for free school meals and pupils classified as minority ethnic origin, but these differences were not statistically significant. There was also no significant difference in the proportion of pupils gaining five or more GCSEs.

As for primary schools, spend on ICT per pupil was a key difference between schools that met and didn't meet the target. Schools that met the target spent a mean of £102 per pupil on ICT in the previous year, compared with £72 among schools that did not meet the target.

As noted above the ICT in schools survey did not collect information on other factors associated with better ICT learning opportunities in schools,[5] or other information that might influence spend on ICT, so it is not possible to say from this survey *why* the schools that met the target spent more on ICT. It is likely that issues such as ICT leadership and the general attitude towards ICT within the school were influential factors.

[5] Secondary Schools – ICT and Standards: An analysis of national data from Ofsted and QCA by Becta', Becta 2003.

3.5 Computers used for management and administration

Computers are also used in schools for management and administration functions. In the 2004 survey, the number of computers used for this purpose was calculated by deducting computers used for teaching and learning from the total number of computers. In previous years, questions have been asked specifically about the numbers of computers used for management and administration. It should be noted that this change in methodology may affect comparisons over time.

There has been an upward trend in recent years in the number of computers schools have for this purpose.

Chart 3I: Mean number of computers used for management/administration, by year
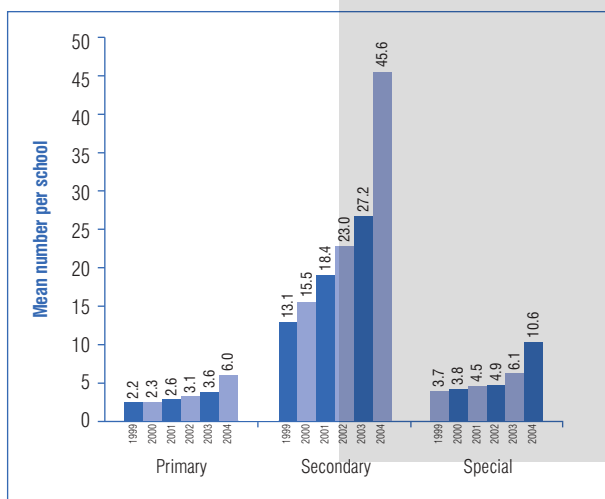
In 2004 the mean number used for management and administration was 6.0 in primary schools, 45.6 in secondary schools and 10.6 in special schools. A full table showing trends since 1999 is included in Appendix A.

3.6 Computers over 3 years old

As the total number of computers used for teaching and learning has increased over time in schools, the number of computers over 3 years old has also increased. So the total increase is due to the fact that schools are not only acquiring new computers, but are also continuing to use older equipment.

Chart 3J: Mean number of computers (teaching and learning) per school over 3 years old, by year
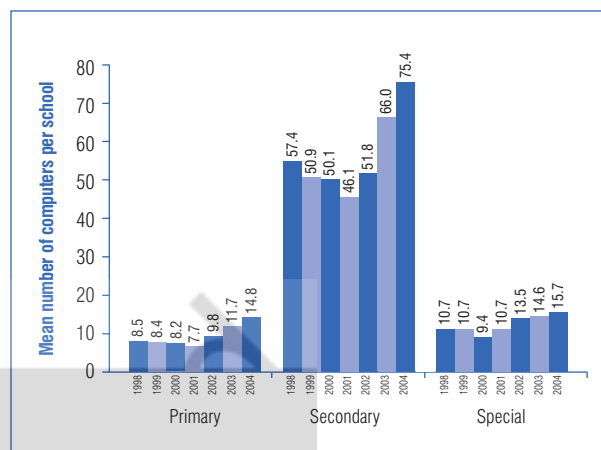
The mean number of computers used for teaching and learning which were over three years old was 14.8 for primary schools, 75.4 for secondary schools and 15.7 for special schools.

The trend in the percentage of computers over 3 years old within the total number used for learning and teaching is shown in Chart 3K. The actual number of computers over 3 years old in secondary schools had increased significantly since 2003 (from a mean of 66.0 to 75.4 per school).

In primary schools 47% of the total computers were over 3 years old, up from 41% in 2003, while in secondary schools the proportion over 3 years old was unchanged at 35% against 34% in 2003 (although the actual *number* over 3 years old in secondary schools increased). As in 2003, 47% of computers in special schools were more than 3 years old. Again a detailed trend table is included in Appendix A.

Chart 3K: Percentage of computers (teaching and learning) per school over 3 years old, by year
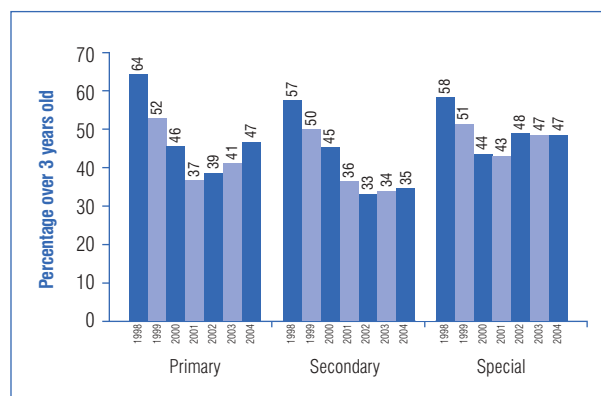
3.7 Computers by location

Computers can be found in many areas within schools. Schools were asked how many computers they had in each of the following locations: classrooms, ICT suites, study/developmental areas, staff rooms/staff offices, administrative areas, and other areas. Table 3.11 shows the proportion of each primary, secondary and special schools with any computers in each location.

Primary and special schools were quite similar in terms of where their computers were located, with the great majority of them having computers in classrooms (98% of primary and 99% of special schools) and in administrative areas (88% of primary and 93% of special schools). Most primary and special schools also had computers in ICT suites (77% of primary and 69% of special schools) and in staff rooms/offices (61% of primary and 77% of special schools).

Among secondary schools, the most common location for computers was ICT suites (98%). The great majority of secondary schools had computers in classrooms (96%), administrative areas (95%) and staff rooms/offices (93%). Secondary schools were more likely than primary or special schools to have computers in ICT suites, staff rooms/offices and study/developmental areas.

Table 3.11: Proportion of schools with computers in different locations

	Primary schools %	Secondary schools %	Special schools %
Any computers in classrooms	98	96	99
Any computers in administrative areas	88	95	93
Any computers in ICT suites	77	98	69
Any computers in staff rooms/offices	61	93	77
Any computers in study/developmental areas	42	83	47
Any computers in other areas	59	62	61
Base (schools)	*1079*	*893*	*458*

As might be expected, the mean number of computers in different locations varied by school type, with the largest numbers in secondary schools (in line with their higher numbers overall), as shown in Table 3.12. The patterns were consistent in that relatively large numbers of computers were found in classrooms and ICT suites in all school types, with smaller numbers in the other areas.

Table 3.12: Mean number of computers per school in each location

	Primary schools %	Secondary schools %	Special schools %
Mean number			
in classrooms	15.6	73.3	22.3
in ICT suites	12.6	113.0	8.0
in study/ developmental areas	1.7	17.5	1.6
in staff rooms/offices	1.5	20.2	3.2
in administrative areas	2.2	16.3	3.8
in other areas	3.7	24.1	5.4
Base (schools)	*1079*	*893*	*458*

3.8 Networks

Almost all schools had a network in place: 91% of primary schools, more than 99% of secondary schools and 93% of special schools.

The extent to which the school was networked did vary, as shown in Table 3.13. Secondary schools were more likely to be networked for both teaching and learning and management/administration than primary and special schools.

Table 3.13: Extent of networking in different areas

Extent of areas networked:	Primary schools		Secondary schools		Special schools	
	Teaching & learning areas %	Management & admin areas %	Teaching & learning areas %	Management & admin areas %	Teaching & learning areas %	Management & admin areas %
All areas	62	71	69	90	65	76
Some areas	36	19	31	9	30	20
None	2	10	–	*	5	5
All	*100*	*100*	*100*	*100*	*100*	*100*
Base (schools)	*976*	*976*	*890*	*890*	*426*	*426*

* = less than 0.5% but greater than 0.

Networks were used by schools for a variety of functions. In 55% of primary schools, 68% of secondary schools and 56% of special schools the network integrated curriculum and management functions.

Networks were also commonly used to host an intranet. 50% of primary schools, 76% of secondary and 55% of special schools used their network for this.

In some schools the network made use of wireless technology, either wholly or in part. This was the case in 21% of both primary and special schools and 54% of secondary schools.

Table 3.14: Networking by school size band

	Primary schools						Secondary schools					
	1-125 %	126-196 %	197-241 %	242-335 %	336+ %	*All* %	1-653 %	654-865 %	866-1043 %	1044-1280 %	1281+ %	*All* %
% with a network[1]	82	90	92	93	95	*91*	>99	99	>99	>99	>99	*>99*
% networked in all teaching and learning areas[2]	56	55	59	67	70	*62*	63	68	65	72	78	*69*
% networked in all management and administration areas[2]	53	69	66	72	78	*71*	87	91	91	89	92	*90*
% network integrates curriculum and management functions[2]	48	57	55	56	58	*55*	59	61	72	72	75	*68*
% network uses wireless technology[2]	17	13	23	21	29	*21*	38	52	55	60	65	*54*
% network hosts an intranet[2]	39	50	47	58	55	*50*	67	80	78	74	83	*76*
% network accessible from beyond the school premises[2]	8	12	10	14	14	*12*	14	26	31	31	42	*29*
[1]Base (schools)	*247*	*213*	*219*	*224*	*176*	*1079*	*168*	*180*	*183*	*170*	*192*	*893*
[2]Base (schools with a network)	*204*	*193*	*201*	*210*	*168*	*976*	*167*	*178*	*183*	*170*	*192*	*890*

For a minority of schools, it was possible to access their networks from beyond the school premises. This was particularly likely to be the case for secondary schools, where 29% claimed this was possible, compared with 12% of primary schools and 11% of special schools.

There was considerable variation in use of networks according to school size, in both primary and secondary schools, as Table 3.14 shows.

Among both primary and secondary schools, the smallest schools were least likely to be making full use of networking technologies. Only 82% of the smallest primary schools had a network, compared with at least 90% of the larger categories. Among those that had networks, 70% of the largest primary schools were networked in all teaching and learning areas, compared with 56% of the smallest schools.

Among secondary schools, 63% of the smallest schools were networked in all teaching and learning areas, compared with 78% of the largest schools. Similarly, 59% of the smallest secondary schools had a network that integrated curriculum and management functions, compared with 75% of the largest schools. A large differential in network usage between the smallest and largest secondary schools was also found in use of wireless technology (38% vs. 65%), hosting an intranet (67% vs. 83%), and accessibility from beyond the school premises (14% vs. 42%).

3.9 Segmentation of schools on 'e-confidence'

A composite measure of 'e-confidence' was derived for primary and secondary schools in this survey, by scoring results across a range of measures including ownership of ICT equipment, networking, Internet access, staff confidence, and use of ICT in English, Maths and Science. Schools were divided into segments according to their scores on this composite measure (see Section 11.9 for full details).

It should be noted that there was no measure of quality of ICT usage available from the survey data.

This resulted in four e-confidence groups for primary and secondary schools, ranging from least to most e-confident. The e-confidence measure is used in analysis at appropriate points throughout this report.

Table 3.15 shows the profile of the segments in primary schools, according to some of the items used to create the composite measure. As these items were used to create the composite measure they do not represent 'findings', but are shown in order to describe the difference between the e-confidence segments in respect of these items.

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Table 3.15: Primary schools e-confidence segments

	Segment 1 Least e-confident	Segment 2	Segment 3	Segment 4 Most e-confident
Pupils per computer	8.6	7.7	7.0	6.5
School meets computer to pupil ratio target	42%	62%	72%	78%
All teaching and learning areas networked	36%	57%	67%	86%
Non-broadband Internet connection	57%	45%	42%	29%
Substantial use of ICT in Maths	14%	45%	74%	93%
Substantial use of ICT in English	24%	58%	77%	96%
Percentage of school leaders confident/very confident in using ICT	83%	92%	95%	97%
Percentage of teachers confident/ very confident in using ICT	74%	83%	89%	94%
Base: (schools)	*268*	*295*	*278*	*238*

A breakdown of the e-confidence segments in primary schools by school funding status, mean number of pupils, mean percentage with special educational needs, mean percentage eligible for free school meals, and mean percentage level 5 in maths (chosen as a representative measure of performance) is shown in Table 3.16.

Table 3.16: Primary schools e-confidence segments by school-level factors

	Segment 1 Least e-confident	Segment 2	Segment 3	Segment 4 Most e-confident
School funding status:				
Voluntary aided	19	23	20	20
Community	62	58	58	66
Voluntary controlled	16	17	17	12
Foundation	3	2	4	2
All funding statuses	*100*	*100*	*100*	*100*
Mean number of pupils	237	325	216	237
Mean percentage of pupils with SEN	18%	17%	18%	18%
Mean percentage of pupils eligible for free school meals	15%	14%	14%	16%
Mean percentage of pupils level 5 in maths	28%	31%	29%	32%
Base: (schools)	*268*	*295*	*278*	*238*

There were no significant differences in school funding status, number of pupils, percentage of pupils with SEN, percentage eligible for free school meals, or percentage of pupils achieving level 5 in maths, according to e-confidence segment.

For secondary schools, Table 3.17 shows the profile of the segments, according to some of the items used to create the composite measure.

Table 3.17: Secondary schools e-confidence segments

	Segment 1 Least e-confident	Segment 2	Segment 3	Segment 4 Most e-confident
Pupils per computer	5.6	5.4	4.4	3.7
School meets computer to pupil ratio target	41%	54%	76%	92%
All teaching and learning areas networked	47%	63%	83%	89%
8Mbpc[6] + broadband Internet connection	18%	25%	30%	41%
Substantial use of ICT in Maths	10%	36%	54%	76%
Substantial use of ICT in English	8%	18%	30%	49%
Percentage of school leaders confident/very confident in using ICT	82%	89%	91%	94%
Percentage of teachers confident/ very confident in using ICT	68%	80%	85%	90%
Base: (schools)	*251*	*247*	*230*	*165*

A breakdown of the e-confidence segments in secondary schools by school funding status, specialist status, mean number of pupils, mean percentage with special educational needs, mean percentage eligible for free school meals, and mean percentage achieving 5+ A*-C at GCSE (chosen as a representative measure of performance) is shown in Table 3.18.

Table 3.18: Secondary schools e-confidence segments by school-level factors

	Segment 1 Least e-confident	Segment 2	Segment 3	Segment 4 Most e-confident
School funding status:				
Voluntary aided	18	18	18	17
Community	64	61	62	65
Voluntary controlled	5	4	4	4
Foundation	13	18	16	14
All funding statuses	*100*	*100*	*100*	*100*
Specialist status:				
Technology college	10	10	21	39
Other specialist school	34	35	39	30
Not specialist	56	55	40	31
All specialist statuses	*100*	*100*	*100*	*100*
Mean number of pupils	942	965	945	1007
Mean percentage of pupils with SEN	16%	16%	16%	16%
Mean percentage of pupils eligible for free school meals	14%	14%	15%	16%
Mean percentage 5+ A*-C at GCSE	53%	54%	55%	56%
Base: (schools)	*251*	*247*	*230*	*165*

There were no significant differences in the e-confidence profile of secondary schools according to school funding status.

The most e-confident schools were far more likely to have specialist status – only 31% of the most e-confident group were not specialist schools, compared with 56% of the least e-confident group. As might be expected, the most e-confident schools were particularly likely to be technology colleges – 39% of the most e-confident group were technology colleges, compared with 10% of the least e-confident.

There were no significant differences between the e-confidence groups in the mean number of pupils, percentage of pupils with special educational needs, or percentage eligible for free school meals.

The percentage of pupils gaining 5 or more A*-C at GCSE appears to increase slightly with e-confidence, from 53% of the least e-confident group to 56% of the most e-confident group. However this apparent difference is too small to be statistically significant.
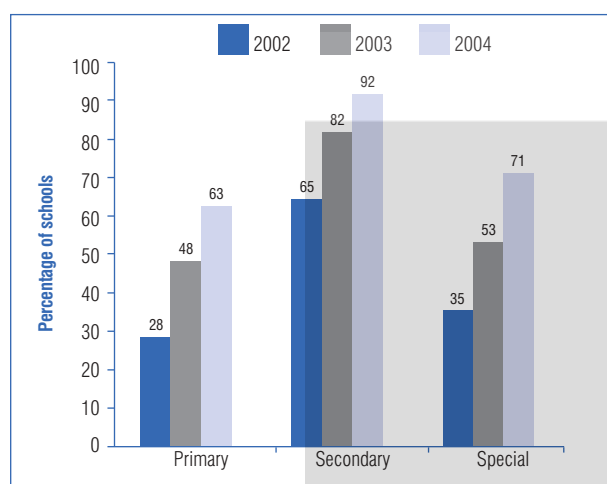
[6] 'Mbps' = Megabits per second.

4 Other ICT equipment

4.1 Interactive whiteboards

The percentage of schools with interactive whiteboards continued to increase. 63% of primary schools had at least one, as did 92% of secondary schools and 71% of special schools.

Chart 4A: Percentage of schools with interactive whiteboards

The mean number of interactive whiteboards per primary school was 2.0, in secondary schools it was 7.5 and special schools the mean was 2.6. Table 4.1 shows how the number of whiteboards per school varied in primary, secondary and special schools.

Table 4.1: Number of interactive whiteboards per school

	Primary schools %	Secondary schools %	Special schools %
None	37	8	29
1-2	38	22	36
3-5	15	23	21
6-10	8	24	10
11-20	3	17	3
21 or more	-	6	1
All	*100*	*100*	*100*
Mean number per school	2.0	7.5	2.6
Mean number per school with any whiteboards	3.1	8.2	3.7
Base (schools)	*1079*	*893*	*458*

The mean number among schools which had any interactive whiteboards was 3.1 for primary schools, 8.2 for secondary schools and 3.7 for special schools.

Table 4.2 shows the number of interactive whiteboards per school for primary and secondary schools, broken down by school size band.

As the table shows, smaller schools were less likely than larger schools to have interactive whiteboards. In primary schools, the proportion with no whiteboards ranged from 55% among the smallest schools (up to 125 pupils), to 24% among the largest schools (336 or more pupils).

Table 4.2: Number of interactive whiteboards by school size band

	Primary schools					Secondary schools				
	1-125 %	126-196 %	197-241 %	242-335 %	336+ %	1-653 %	654-865 %	866-1043 %	1044-1280 %	1281+
None	55	42	32	30	24	11	13	4	8	5
1-2	34	40	41	40	35	28	25	17	20	19
3-5	10	12	19	17	16	29	19	25	19	21
6-10	1	6	8	9	14	22	24	28	25	22
11-20	-	-	-	4	11	9	13	20	20	22
21 or more	-	-	-	-	-	*	5	6	8	11
All	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*
Mean number per school	0.8	1.4	1.8	2.3	3.6	4.7	6.1	8.3	8.4	10.3
Mean number per school with any whiteboards	1.9	2.4	2.7	3.3	4.8	5.2	7.0	8.6	9.2	10.9
[1]Base (schools)	*247*	*213*	*219*	*224*	*176*	*168*	*180*	*183*	*170*	*192*

* = less than 0.5% but greater than 0.

In secondary schools the trend was less clear, but there was still evidence of a differential – 11% of the smallest and 13% of the next smallest secondary schools had no whiteboards, compared with only 5% of the largest schools.

The larger schools were also more likely to have more whiteboards. The mean number per school with any whiteboards increased from 1.9 in the smallest primary schools to 4.8 in the largest primary schools. Similarly in secondary schools, the mean number of whiteboards among schools with any increased from 5.2 in the smallest schools to 10.9 in the largest schools.

4.2 Digital projectors

The percentage of schools with digital projectors increased in primary, secondary and special schools since 2002. In both primary and special schools there was an increase of more than thirty percentage points indicating that acquiring digital projectors has been a priority in these schools.

Chart 4B: Percentage of schools with digital projectors
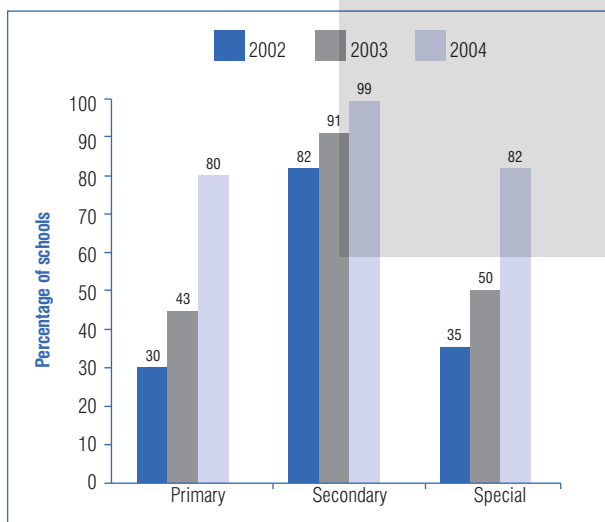
The mean number of digital projectors across all schools was 2.6 for primary schools, 12.8 for secondary schools and 3.1 for special schools (Table 4.3). The mean numbers of digital projectors among schools with any were 3.2, 12.9 and 3.8 respectively. Nearly half of secondary schools (46%) had more than 10 digital projectors.

Table 4.3: Number of digital projectors per school

	Primary schools %	Secondary schools %	Special schools %
None	20	1	18
1-2	47	4	41
3-5	20	17	24
6-10	10	32	13
11-20	4	31	3
21 or more	-	15	1
All	*100*	*100*	*100*
Mean number per school	2.6	12.8	3.1
Mean number per school with any digital projectors	3.2	12.9	3.8
Base (schools)	*1079*	*893*	*458*

4.3 Printers

Almost all schools said that they had some printers, as Table 4.4 shows. Around half of primary schools (49%), three-quarters of special schools (76%) and 91% of secondary schools had more than 10 printers.

Table 4.4: Number of printers per school

	Primary schools %	Secondary schools %	Special schools %
None	1	1	2
1-2	2	*	1
3-5	17	1	3
6-10	32	7	19
11-20	39	21	46
21-50	10	52	28
51 or more	*	18	2
All	*100*	*100*	*100*
Mean number per school	11.6	35.0	18.2
Base (schools)	*1079*	*893*	*458*

* = less than 0.5% but greater than 0.

4.4 Scanners

The majority of schools had at least one scanner. 92% of primary schools had one or more, as did 99% of secondary schools and 95% of special schools (Table 4.5).

Generally schools tended to have a relatively small number of scanners, compared with the other equipment. 79% of primary schools along with 55% of special schools had only one or two. Even in secondary schools, only 13% had more than ten scanners.

Table 4.5: Number of scanners per school

	Primary schools %	Secondary schools %	Special schools %
None	8	1	5
1-2	79	16	55
3-5	11	39	32
6-10	2	30	7
11-20	1	12	1
21 or more	-	1	-
All	100	100	100
Mean number per school	1.6	6.3	2.8
Base (schools)	*1079*	*893*	*458*

4.5 Digital cameras/digital video cameras

Almost all schools had at least one digital camera or digital video camera. In primary schools there has been a steady increase since 2002 in the proportion of schools with these resources; in secondary and special schools the proportion with digital cameras/digital video cameras has remained at the very high level observed in 2002 (Chart 4C, Table 4.6).

Chart 4C: Percentage of schools with digital cameras/digital video cameras
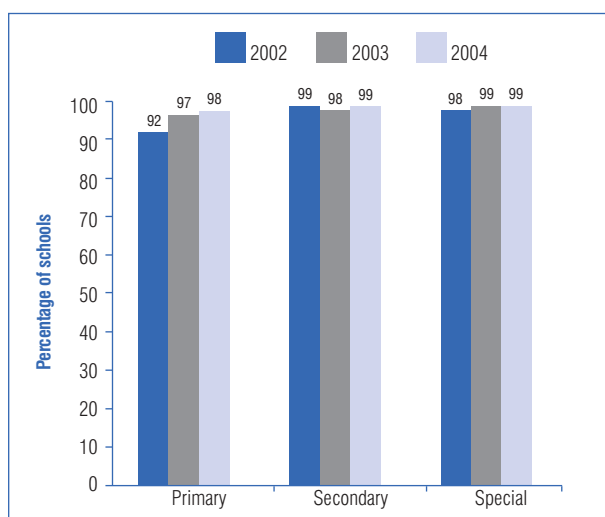
Table 4.6: Number of digital cameras/digital video cameras per school

	Primary schools %	Secondary schools %	Special schools %
None	2	1	1
1-2	60	11	16
3-5	31	31	31
6-10	6	36	33
11-20	1	17	14
21 or more	*	3	5
All	100	100	100
Mean number per school	2.6	7.9	7.3
Base (schools)	*1079*	*893*	*458*

* = less than 0.5% but greater than 0.

4.6 Video conferencing facilities

There has been little change in the take-up of video-conferencing since 2002. The only increase seen over the period has been for secondary schools, where the proportion with any such facilities increased from 27% in 2002 to 36% in 2004 (Chart 4D).

Chart 4D: Percentage of schools with video conferencing facilities
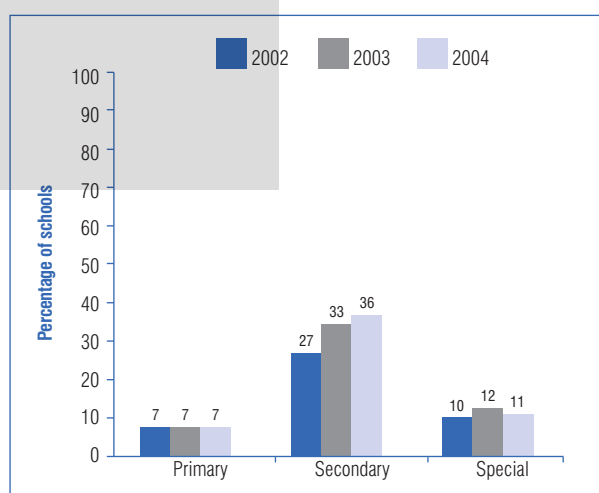
4.7 Specialist equipment for pupils with special needs

Special schools were most likely to be equipped with hardware for pupils with Special Educational Needs (SEN), such as voice output communication aids, specialist peripherals and equipment and specialist accessories. 63% of special schools, 35% of secondary schools and 19% of primary schools had such equipment (Chart 4E).

Similarly special schools were more likely than primary or secondary schools to be equipped with software for pupils with SEN, such as symbol software, screen readers, prediction software, speech recognition or switch software. 76% of special schools had specialist software, compared with 47% of secondary and 28% of primary schools.

Just over half of special schools (51%) had furniture for pupils with SEN, such as special chairs, desks and rise and fall tables. 21% of secondary and 18% of primary schools also had some of this equipment.

Chart 4E: Specialist equipment for pupils with SEN and disabilities

	Primary %	Secondary %	Special %
Hardware	19	35	63
Software	28	47	76
Furniture	18	21	51
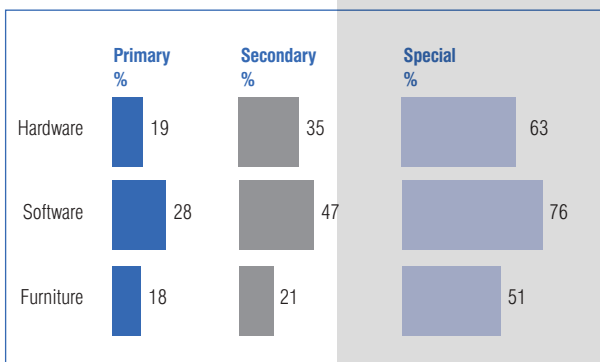
5 Internet and email

5.1 Access to the Internet

More than 99% of primary, secondary and special schools were connected to the Internet at the time of the survey (April/May 2004). A detailed table on trends in Internet access is included in Appendix A.

Non-broadband connections were declining, however dial-up modems and ISDN connections were still common in primary and special schools, but few secondary schools connected to the Internet this way. The proportion of secondary schools having broadband connections (2Mbps[7] or higher) increased from 68% in 2002 to 90% in 2004. In primary schools, the increase in use of broadband (2Mbps or higher) over the same period was from 11% to 30%, while in special schools, use of 2Mbps+ broadband connections increased from 11% in 2002 to 40% in 2004.

Charts 5A to 5C show the trend in methods of connection to the Internet (non-broadband, ADSL[8] and 2 Mbps+ broadband) over the last three years in primary, secondary and special schools.

Chart 5A: Fastest Internet connection – primary schools
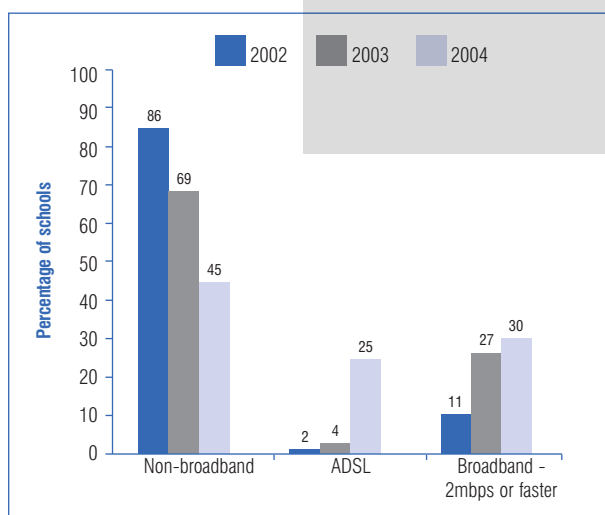
In 2004 (unlike in earlier years), schools were asked whether their non-ADSL broadband connection was 2Mbps up to 8Mbps, or 8Mbps or higher. In primary schools, 22% had a connection speed of 2Mbps up to 8Mbps, and 8% had 8Mbps or higher.

Chart 5B: Fastest Internet connection – secondary schools
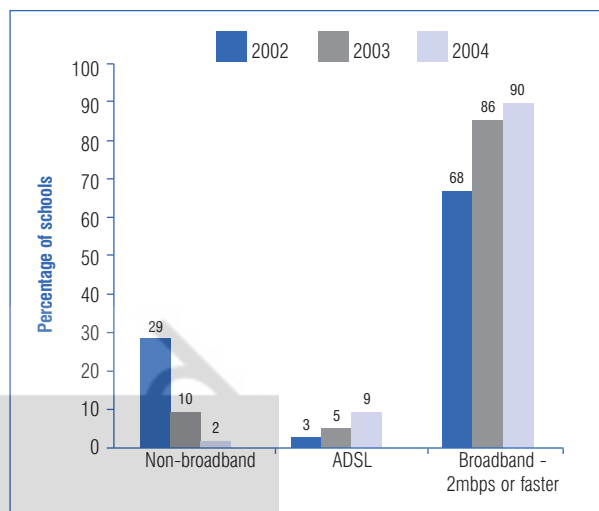
In secondary schools, the breakdown of non-ADSL broadband connections was that 62% had a connection speed of 2Mbps up to 8Mbps, and 28% had 8Mbps or higher.

Chart 5C: Fastest Internet connection – special schools
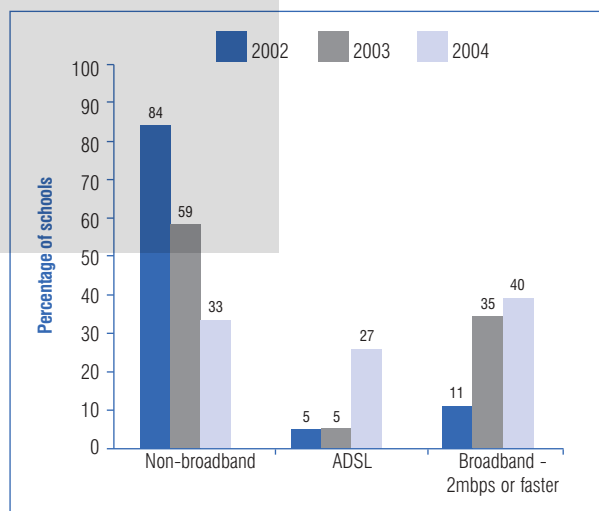
In special schools, 28% had a connection speed of 2Mbps up to 8Mbps, and 12% had 8Mbps or higher.

Table 5.1 shows schools' fastest Internet connection, according to school size bands, for primary and secondary schools.

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[7] 'Mbps' = Megabits per second.

[8] 'ADSL' = Asymmetrical Digital Subscriber Line, which has speeds of up to two Mbps (download) and 256Kbps (Kilobits per second) (upload).

Table 5.1: Fastest internet connection by school size band

	Primary schools						Secondary schools					
	1-125 %	126-196 %	197-241 %	242-335 %	336+ %	*All* %	1-653 %	654-865 %	866-1043 %	1044-1280 %	1281+ %	*All* %
Non-broadband	80	56	38	34	18	*45*	5	1	1	-	2	*2*
Broadband – ADSL	14	21	31	31	27	*25*	14	10	7	8	4	*9*
Broadband – 2 Mbps up to 8Mbps	5	17	24	27	37	*22*	60	64	59	65	63	*62*
Broadband – 8Mbps or higher	1	6	7	8	18	*8*	21	26	33	27	31	*28*
All	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*
[1]Base (schools connected to the internet)	*247*	*213*	*219*	*223*	*175*	*1077*	*168*	*179*	*183*	*170*	*192*	*892*

The smallest schools were least likely to have the means to make best use of the Internet, particularly among primary schools. 80% of the smallest primary schools were using a non-broadband Internet connection, compared with only 18% of the largest schools. Similarly, only 1% of the smallest primary schools had a broadband connection of 8Mbps or higher, compared with 18% of the largest schools.

Although not so great, a similar differential was seen among secondary schools. 19% of the smallest secondary schools had a sub-2Mbps Internet connection, compared with 6% of the largest schools.

5.2 Measures taken by schools to prevent access to undesirable materials via the Internet

Schools tended to take more than one measure to ensure unsuitable materials were not accessed. Almost all schools used a filtered or restricted Internet service (Chart 5D).

Secondary schools were most likely to have acceptable use policies in place - 81% had them. In primary and special schools supervised access was common, being used by 70% and 69% respectively. However 63% of secondary schools also used this method of controlling Internet access.

Chart 5D: Measures taken to prevent access to undesirable materials on the Internet
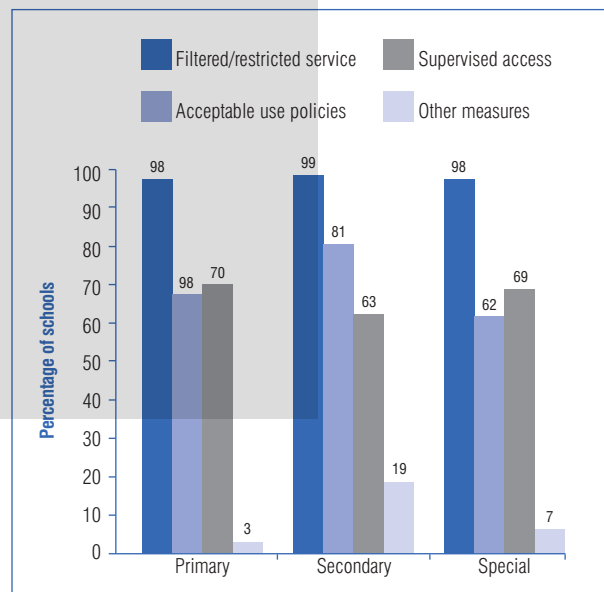
5.3 Main school email

'Main' email accounts which were generally titled 'admin@schoolname.sch.uk' or something similar were widespread. 97% of primary schools had one, along with 98% of secondary schools and 96% of special schools.

These accounts were usually checked frequently, particularly in secondary schools (Table 5.2).

Table 5.2: Frequency of checking main e-mail account

	Primary schools %	Secondary schools %	Special schools %
At least once a day	77	87	82
Several times a week	16	9	12
Once a week or less	6	4	4
All	100	100	100
Base (schools with main e-mail account)	1042	872	439

5.4 Provision of email accounts for staff/pupils

As Table 5.3 shows, email accounts funded by the LEA or school were common.

School leaders were most likely to be provided with a personal email account – 90% of secondary schools, 84% of special schools and 77% of primary schools reported that all their school leaders were provided with an email account. Levels for teaching staff were nearly as high – 84% of secondary, 74% of special and 70% of primary schools reported that all their teaching staff were provided with a personal email account. Support staff were less likely to be provided with email accounts, particularly in primary and special schools – 71% of secondary, 50% of special and 39% of primary schools reported that all their support staff had email accounts. For all categories of staff, secondary schools were most likely to report that their staff were provided with email accounts funded by the school or LEA.

Secondary schools were also most likely to report that all pupils were provided with an email account (personal or shared) – 60% of secondary schools reported that all their pupils were provided with such an account, compared with 38% of primary schools and 33% of special schools.

Table 5.3: Provision of email account funded by LEA or school

How many members of staff/pupils in the school are provided with an email account funded by the school or LEA?	Primary schools %	Secondary schools %	Special schools %
School leaders (personal account)	100	100	100
All school leaders	77	90	84
Some school leaders	10	6	10
Few or none	12	4	6
Teaching staff (personal account)	100	100	100
All teaching staff	70	84	74
Some teaching staff	10	9	14
Few or none	20	7	13
Support staff (personal account)	100	100	100
All support staff	39	71	50
Some support staff	21	19	22
Few or none	41	10	27
Pupils (personal or shared account)	100	100	100
All pupils	38	60	33
Some pupils	21	11	20
Few or none	41	30	46
Base (schools)	1079	893	458

6 ICT-related staff confidence and training

6.1 Staff training

A range of questions were asked about ICT-related staff training and professional development. The questions distinguished between school leaders, teachers, teaching assistants, ICT technicians and other support staff. Respondents were asked to indicate from a list, which categories of staff in their school had received appropriate levels of training/guidance in each case.

There was no opportunity on the questionnaire for schools to mark 'does not apply' for any category of staff; for example if the school did not have an ICT technician. This means that answers about ICT technicians are potentially misleading, as it is not possible to distinguish between schools with no ICT technician, and schools with an ICT technician who has not received appropriate levels of training. For the other categories of staff, it is assumed that all schools would have had at least one staff member in each category. For this reason, figures for training and professional development for ICT technicians are not shown in this report.

In primary schools, around 9 out of 10 responded that their school leaders and teachers had received appropriate levels of professional advice and support on ICT, and guidance on the use of ICT (Table 6.1). School leaders were less likely than teachers to have received professional development in ICT-related basic skills or practice.

The proportion of primary schools saying that none of their staff had received each type of training or professional development was very low, at 3-5%.

Table 6.1: ICT-related staff training – primary schools

Percentage of schools who report that their staff have received appropriate levels of each type of training:	Professional advice and and support on ICT %	Guidance on the use of ICT %	Professional development in ICT-related basic skills %	Professional development in ICT-related practice %
School leaders	88	90	83	78
Teachers	91	93	88	85
Teaching assistants	62	63	68	46
Other support staff	55	52	52	48
No staff have received this training	4	4	3	5
Base (primary schools answering each question)	*1072*	*1058*	*1031*	*858*

Note: schools could give more than one answer to these questions so percentages sum to more than 100%.

In secondary schools, the proportion saying that their teachers had received appropriate levels of professional advice and support on ICT, guidance on the use of ICT, and professional development in ICT-related basic skills was similar to that in primary schools at around 9 out of 10 (Table 6.2).

The proportion of secondary schools who said teachers had received professional development in ICT-related *practice* was lower than for the other forms of training at 73%.

Secondary schools were less likely to say that school leaders had received each type of professional development, than that teachers had.

Table 6.2: ICT-related staff training – secondary schools

Percentage of schools who report that their staff have received appropriate levels of each type of training:	Professional advice and and support on ICT %	Guidance on the use of ICT %	Professional development in ICT-related basic skills %	Professional development in ICT-related practice %
School leaders	82	83	76	64
Teachers	87	91	86	73
Teaching assistants	51	58	60	36
Other support staff	53	57	55	39
No staff have received this training	5	5	5	7
Base (secondary schools answering each question)	*871*	*864*	*835*	*737*

Note: schools could give more than one answer to these questions so percentages sum to more than 100%.

Levels were lowest for professional development in ICT-related practice, with 7% of secondary schools saying that none of their staff had received this.

There was a difference by the e-confidence segments for both primary and secondary schools. The more e-confident a school was (using the composite measure of ICT ownership, Internet access, staff confidence level and ICT usage in Maths, English and science), the more likely they were to say that different types of staff have received the various types of training and support. Table 6.3 below shows the example of any staff then specifically school leaders and teaching staff. It can be seen that schools belonging to the more e-confident segments were more likely to report that their staff had received appropriate levels of professional advice and support on ICT than schools in the less e-confident segments.

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Table 6.3: Received professional advice and support on ICT by e-confidence segment

| | Segment 1 | Segment 2 | Segment 3 | Segment 4 |
	Least e-confident	⟶		Most e-confident
Primary				
School leaders	76	89	91	94
Teachers	79	90	95	97
Any staff	88	97	98	97
Secondary				
School leaders	70	84	85	91
Teachers	74	89	91	95
Any staff	89	96	97	98
Bases: Primary schools	*264*	*294*	*278*	*238*
Secondary schools	*237*	*243*	*226*	*165*

In special schools, the picture was similar to that in primary schools (Table 6.4). Schools were most likely to say that teachers had received each type of training/support, with levels of around 9 out of 10 for professional advice and support on ICT, guidance on the use of ICT and professional development in ICT-related basic skills.

Table 6.4: ICT-related staff training

Percentage of schools who report that their staff have received appropriate levels of each type of training:	Professional advice and and support on ICT %	Guidance on the use of ICT %	Professional development in ICT-related basic skills %	Professional development in ICT-related practice %
School leaders	87	88	81	75
Teachers	90	92	89	81
Teaching assistants	73	75	74	58
Other support staff	54	53	46	48
No staff have received this training	5	5	5	6
Base (special schools answering each question)	*457*	*447*	*433*	*353*

Note: schools could give more than one answer to these questions so percentages sum to more than 100%.

6.2 Staff confidence in using ICT

Schools were asked how many staff in their school were very confident, confident or not confident in using ICT in their job. The question was asked separately for school leaders, teaching staff and support staff. A similar question has been asked about teachers in all previous ICT in schools surveys. Note that these figures were the view of the survey respondent (headteacher or ICT co-ordinator), not the teachers' or support staff's own self-assessment.

In 2004, the proportions of teaching staff who were considered to be very confident or confident in using ICT were 85% in primary schools, 81% in secondary schools and 86% in special schools.

Unlike in earlier years, there was no further increase in teacher confidence in 2004, as Chart 6A shows. A detailed table including full trend data on this question is included in Appendix A.

Chart 6A: Teaching staff confidence in using ICT in their job
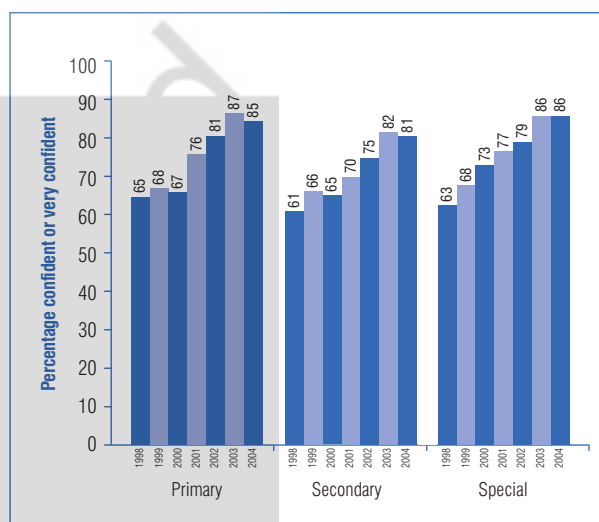
There was a slight decline in the percentage of teaching staff reported to be very confident or confident in 2004 in primary and secondary schools, although this decline was not statistically significant. The fact that these confidence ratings did not increase in 2004 in any type of school may reflect the growing number of ICT opportunities in schools, such as the introduction of interactive whiteboards, which each require teachers to develop new skills.

Among the different categories of staff, school leaders were most likely to be rated as confident or very confident in using ICT, and support staff least likely, as Table 6.5 shows.

Table 6.5: ICT confidence of categories of staff

Percentage reported to be 'very confident' or 'confident' in using ICT in their job	Primary schools %	Secondary schools %	Special schools %
School leaders	92	89	93
Teaching staff	85	81	86
Support staff	66	72	69
Base (schools answering this question)	*1034*	*746*	*427*

6.3 Sources of ICT-related professional advice and support

Schools were asked to indicate from a list of options, what were the main sources of ICT-related professional advice and support used by staff in their school.

In all school types, colleagues were most commonly selected, by around 9 out of 10 schools. Primary schools were more likely than secondary or special schools to use LEA advisers (60%). Secondary schools were the most likely to use national strategy consultants (43%), government agencies (35%), online communities (29%) and subject associations (26%) (Chart 6B).

Chart 6B: Main sources of ICT-related professional advice and support used by staff
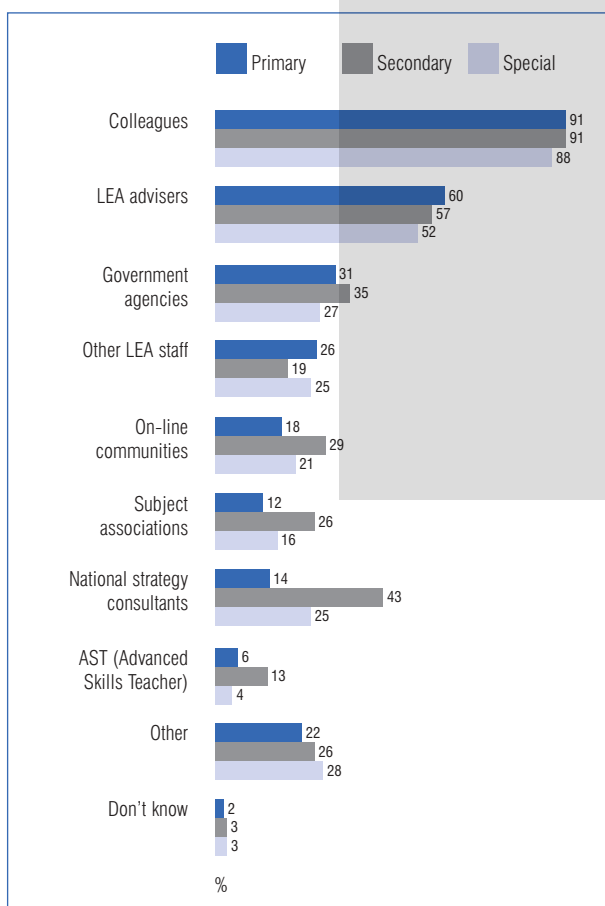
6.4 Sources of ICT technical support

Questions on the main sources of ICT technical support used in schools have been included in the ICT in schools survey since 2002.

In primary schools, the main source of technical support was the LEA, used by 60% of schools. Reliance on the

LEA has fallen over time, from 73% of primary schools in 2002. 38% of primary schools said they used their own ICT support staff, an increase from 27% in 2002. The school's own teaching staff remained an important source of technical support, used by 52% of primary schools (Table 6.6).

Table 6.6: Main sources of technical support

Percentage of schools using each type of technical support:	Primary schools			Secondary schools			Special schools		
	2002 %	2003 %	2004 %	2002 %	2003 %	2004 %	2002 %	2003 %	2004 %
LEA	73	69	60	50	51	47	71	63	60
Other external service supplier	40	40	46	45	42	40	38	43	44
Other school or FE college	8	11	11	4	2	3	5	7	7
School's own ICT support staff	27	29	38	88	92	94	51	49	55
School's own teaching staff	52	46	52	45	38	36	50	51	50
Other sources	14	12	8	8	6	6	12	11	7
Base (schools)	840	930	1079	790	810	893	360	420	458

Note: schools could give more than one answer to these questions so percentages sum to more than 100%.

Secondary schools were much more likely than primary or special schools to say that they used their own ICT support staff – used by 94% of secondary schools (up from 88% in 2002). As a result, the other categories of support were all less likely to be used in secondary schools than in other types of school.

In special schools, over half (55%) said they used their own ICT support staff. The LEA remained an important source of support in special schools, used by 60%, although this had decreased from 71% in 2002.

6.5 Staff computer access at home

Schools were asked how many members of staff had access to a computer at home, which included computers loaned to them by the school. The question was also included in the 2002 and 2003 surveys.

Table 6.7: Staff access to a computer at home

Percentage with access to a computer at home:	Primary schools			Secondary schools			Special schools		
	2002 %	2003 %	2004 %	2002 %	2003 %	2004 %	2002 %	2003 %	2004 %
School leaders	95	98	99	95	97	98	96	97	98
Teaching staff	91	93	93	80	85	87	91	94	93
Support staff	71	74	76	58	65	63	64	70	71
Base (schools)	*840*	*930*	*1079*	*790*	*810*	*893*	*360*	*420*	*458*

Almost all school leaders had access to a computer at home, as did the great majority of teaching staff. There were no significant changes in this measure between 2003 and 2004.
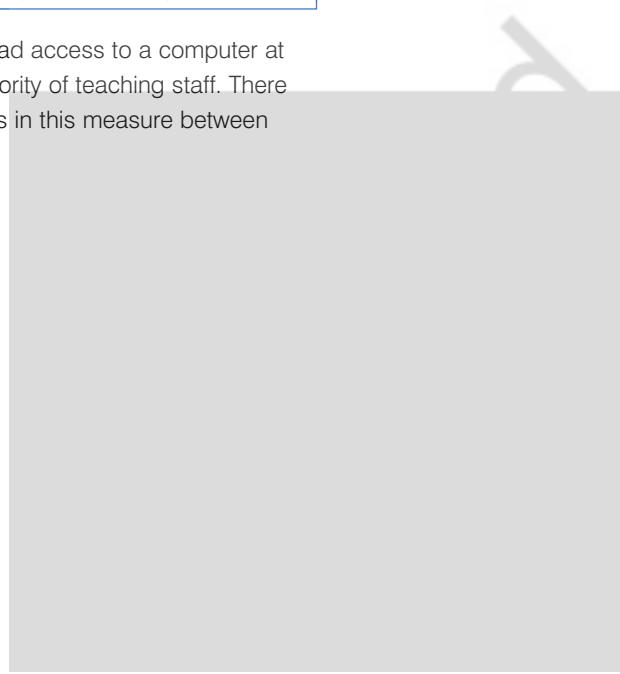
7 Use of ICT in school

7.1 Use of ICT for teaching and learning

Respondents (headteacher or ICT co-ordinator) were asked how many school leaders, teaching staff and support staff in their school made regular use of ICT for teaching and learning.

Reported use of ICT for teaching and learning was very widespread among school leaders and teaching staff. More than 9 out of 10 schools reported that some of their teaching staff made use of ICT for teaching and learning, and around 9 out of 10 that at least one of their school leaders did.

83% of all school leaders in primary schools were reported to make regular use of ICT for teaching and learning, compared with 92% of all teachers in primary schools. Proportions of staff reported to use ICT for teaching and learning were lower in secondary schools, at 72% of school leaders and 70% of teaching staff. It should be noted that not all school leaders, particularly in secondary schools, would do any teaching, which may have affected these proportions. In special schools, the proportions of school leaders and teachers reported to use ICT for teaching and learning were similar to those in primary schools, at 78% of school leaders and 91% of teachers.

Schools were less likely to report that support staff made regular use of ICT for teaching and learning, compared with school leaders and teaching staff. The proportion of support staff reported to make regular use of ICT for teaching and learning ranged from 46% in secondary schools to 64% in special schools (Table 7.1).

Table 7.1: Use of ICT for teaching and learning

	Primary schools	Secondary schools	Special schools
School leaders			
Mean total number per school	2.1	6.0	3.2
Percentage making regular use of ICT for teaching and learning	83%	72%	78%
Percentage of schools with *any* school leader making use of ICT for teaching and learning	90%	89%	90%
Teaching staff			
Mean total number per school	9.4	57.1	11.8
Percentage making regular use of ICT for teaching and learning	92%	70%	91%
Percentage of schools with *any* school leader making use of ICT for teaching and learning	98%	94%	97%
Support staff			
Mean total number per school	10.6	27.3	22.3
Percentage making regular use of ICT for teaching and learning	55%	46%	64%
Percentage of schools with *any* school leader making use of ICT for teaching and learning	86%	80%	90%
Base (schools answering this question)	*1007*	*724*	*419*

7.2 Use of ICT for management and administration

Respondents (headteacher or ICT co-ordinator) were also asked how many school leaders, teaching staff and support staff in their school made regular use of ICT for management and administration.

As Table 7.2 shows, use of ICT for management and administration was most widespread among school leaders, with at least 95% of schools reporting that at least one school leader made use of ICT in this way. The overall proportion of school leaders reported to use ICT for management and administration was greater than 90% in primary, secondary and special schools.

The proportions of teaching staff reported to make regular use of ICT for management and administration were lower than for school leaders, at 67% of teachers in special schools, 58% of teachers in secondary schools and 52% of teachers in primary schools.

Secondary schools were more likely than other categories of school to say that support staff made use of ICT for management and administration – 53% of support staff in secondary schools, compared with 29% of support staff in special schools and 26% in primary schools.

Table 7.2: Use of ICT for management and administration

	Primary schools	Secondary schools	Special schools
School leaders			
Mean total number per school	2.1	6.0	3.2
Percentage making regular use of ICT for management and administration	91%	92%	91%
Percentage of schools with *any* school leader making use of ICT for management and administration	97%	95%	96%
Teaching staff			
Mean total number per school	9.4	57.1	11.8
Percentage making regular use of ICT for management and administration	52%	58%	67%
Percentage of schools with *any* school leader making use of ICT for management and administration	77%	91%	84%
Support staff			
Mean total number per school	10.6	27.3	22.3
Percentage making regular use of ICT for management and administration	26%	53%	29%
Percentage of schools with *any* school leader making use of ICT for management and administration	66%	79%	65%
Base (schools answering this question)	*1005*	*723*	*420*

7.3 Use of ICT in curriculum areas

Schools were asked whether the extent to which ICT was used in a range of curriculum areas and, in primary schools, in the foundation stage was 'substantial', 'some' or 'little/none'. These questions were also included in the 2002 and 2003 surveys.

Staff in primary schools were most likely to make substantial use of ICT in English and Mathematics lessons, as well as ICT lessons as might be expected (Table 7.3). The proportion of schools reporting substantial use of ICT has generally increased since 2003 in most curriculum subjects.

Table 7.3: Use of ICT in areas of the curriculum – primary schools

	2002			2003			2004		
	Subst-antial %	Some %	Little/none %	Subst-antial %	Some %	Little/none %	Subst-antial %	Some %	Little/none %
Art & Design	9	74	17	12	68	20	14	68	18
Citizenship	n/a	n/a	n/a	1	27	72	2	43	55
Design & Technology	4	45	50	3	57	39	7	60	34
English	59	41	1	60	40	-	63	36	1
Geography	8	70	22	14	75	12	23	66	11
History	11	71	18	18	72	10	29	63	8
ICT	90	9	1	91	9	1	84	14	1
Mathematics	40	56	4	47	51	2	56	42	3
Modern foreign languages	1	4	96	1	4	95	1	11	89
Music	2	34	64	2	45	52	4	46	50
PSHE	n/a	n/a	n/a	n/a	n/a	n/a	2	40	58
Physical education	-	3	97	-	4	96	*	14	86
Religious education	1	36	63	3	49	48	6	59	35
Science	17	75	8	24	71	5	37	59	4
Foundation stage	n/a	n/a	n/a	n/a	n/a	n/a	45	42	14

Note: 'Little/none' includes 'Not applicable'.
* = less than 0.5% but greater than 0.

In secondary schools, the highest level of substantial use of ICT (apart from ICT itself) was for design and technology teaching. The proportion of secondary schools saying they made substantial use of ICT increased for all subject areas since 2003 (Table 7.4).

Table 7.4: Use of ICT in areas of the curriculum – secondary schools

	2002			2003			2004		
	Subst-antial %	Some %	Little/none %	Subst-antial %	Some %	Little/none %	Subst-antial %	Some %	Little/none %
Art & Design	13	60	27	17	63	20	26	62	12
Citizenship	n/a	n/a	n/a	4	50	46	8	52	41
Design & Technology	54	42	3	62	35	3	66	30	3
English	16	64	19	19	69	12	24	63	14
Geography	20	65	15	22	66	12	30	61	9
History	11	61	28	15	65	20	21	63	16
ICT	98	1	1	99	1	-	99	*	1
Mathematics	24	59	17	31	57	11	41	51	8
Modern foreign languages	17	57	26	20	60	20	28	55	17
Music	23	48	29	24	51	25	29	49	22
PSHE	n/a	n/a	n/a	n/a	n/a	n/a	7	50	44
Physical education	2	31	67	3	38	59	7	45	48
Religious education	5	50	45	6	55	38	11	53	36
Science	33	61	6	41	54	4	49	46	5

Note: 'Little/none' includes 'Not applicable'.
* = less than 0.5% but greater than 0.

In special schools, as in primary schools, the highest levels of substantial ICT use (apart from in ICT lessons) were for English and Mathematics. Again the proportion of special schools reporting substantial use of ICT has generally increased since 2003 in most curriculum subjects (Table 7.5).

Table 7.5: Use of ICT in areas of the curriculum – special schools

	2002			2003			2004		
	Subst-antial %	Some %	Little/none %	Subst-antial %	Some %	Little/none %	Subst-antial %	Some %	Little/none %
Art & Design	13	59	28	14	64	22	23	62	16
Citizenship	n/a	n/a	n/a	5	53	42	9	57	34
Design & Technology	11	52	36	16	57	27	20	57	23
English	61	34	5	59	39	2	58	39	3
Geography	8	59	33	9	70	21	19	64	17
History	9	56	35	11	65	24	21	62	17
ICT	92	6	2	91	7	2	87	11	2
Mathematics	42	52	6	47	47	6	48	46	5
Modern foreign languages	6	30	64	7	34	60	9	33	58
Music	7	41	52	11	48	41	12	50	38
PSHE	n/a	n/a	n/a	n/a	n/a	n/a	12	55	33
Physical education	1	12	87	1	11	87	3	22	76
Religious education	3	43	54	4	47	49	9	57	35
Science	20	64	16	25	66	9	35	59	6
Foundation stage	n/a	n/a	n/a	n/a	n/a	n/a	32	42	26

Note: 'Little/none' includes 'Not applicable'.

7.4 Use of ICT in curriculum areas, by e-confidence

Table 7.6 shows the proportions of primary and secondary schools making substantial use of ICT in the different curriculum areas, by e-confidence segment.

Table 7.6: Substantial use of ICT in areas of the curriculum, by e-confidence segment

	Primary schools e-confidence segments				Secondary schools e-confidence segments			
	Seg 1 Least e-confident	Seg 2	Seg 3	Seg 4 Most e-confident	Seg 1 Least e-confident	Seg 2	Seg 3	Seg 4 Most e-confident
Art & Design	4	9	17	28	17	23	32	36
Citizenship	1	2	2	5	4	6	14	8
Design & Technology	1	4	7	17	48	62	75	88
English	24	58	77	96	8	18	30	49
Geography	9	15	27	44	17	26	32	50
History	9	19	34	57	9	15	25	41
ICT	70	82	89	96	97	>99	>99	>99
Mathematics	14	45	74	93	10	36	54	76
Modern foreign languages	1	–	1	1	11	23	35	49
Music	1	2	3	10	22	25	34	38
PSHE	–	1	2	5	1	5	10	12
Physical education	–	*	*	1	2	7	9	11
Religious education	2	2	7	14	5	7	12	25
Science	7	22	45	78	20	44	62	81
Base (schools)	268	295	278	238	251	247	230	165

As the table shows, the more e-confident schools tended to report higher levels of substantial use of ICT, across curriculum areas. This was particularly apparent for maths, English and science as substantial use of ICT in these subjects was one of the items used to create the scores on the composite e-confidence measure. However, a similar differential was also apparent for most other subjects such as history and geography.

7.5 Use of ICT to deliver alternative curricula

Secondary and special schools were asked whether they made use of ICT to deliver alternative curricula, that is, non-national curriculum learning such as using ICT in career planning, target setting, and researching jobs and FE courses. Use of ICT for these purposes was most widespread in secondary schools (75%), as Table 7.7 shows.

Table 7.7: Use of ICT to deliver alternative curricula

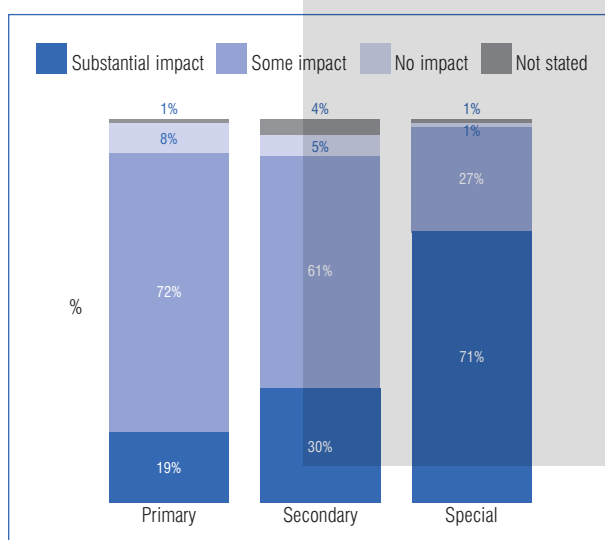|	Secondary schools %	Special schools %
Yes	75	61
No	25	39
All	100	100
Base (schools)	893	458

8 Perceived impact of ICT

8.1 Impact of ICT on helping pupils with SEN

ICT was generally perceived to have a positive impact on helping pupils with Special Educational Needs (SEN) to access the National Curriculum. This was particularly the case for special schools, where more than seven out of ten claimed ICT had a substantial impact and almost all the others said it had some impact. In the majority of primary and secondary schools ICT was thought to have some impact, although a significant minority of primary and secondary schools also perceived it as having a substantial impact (Chart 8A).

Chart 8A: Impact of ICT on helping pupils with SEN to access the national curriculum

There was a difference in perceptions of the impact that ICT had on helping students with SEN by the e-confidence segments for both primary and secondary schools. The more e-confident a school was (using the composite measure of ICT ownership, Internet access, staff confidence level and ICT usage in Maths, English and science), the more likely they were to say that ICT had a substantial impact on helping these pupils to access the National Curriculum (Table 8.1).

Table 8.1: Impact of ICT on helping pupils with SEN to access national curriculum by e-confidence segment

	Segment 1 Least e-confident %	Segment 2 %	Segment 3 %	Segment 4 Most e-confident %
Primary				
Substantial impact	8	13	21	35
Secondary				
Substantial impact	20	23	36	47
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

8.2 Use of ICT for pupils not able to attend school and pupils with behavioural problems

Schools were asked whether they made use of ICT to support pupils not able to attend school.

Use of ICT for this purpose was most widespread in secondary schools (31%) and least widespread in primary schools (3%), as Table 8.2 shows.

Table 8.2: Use of ICT to support pupils unable to attended school

	Primary schools %	Secondary schools %	Special schools %
Yes	3	30	14
No	96	69	86
All	*100*	*100*	*100*
Base (schools)	*1079*	*893*	*458*

Table 8.3 shows the proportion of schools that said they made use of ICT to support pupils unable to attend school, by e-confidence segment.

Table 8.3: Use of ICT to support pupils unable to attend school by e-confidence segment

	Segment 1 Least e-confident %	Segment 2 %	Segment 3 %	Segment 4 Most e-confident %
Primary				
Yes	2	3	4	5
Secondary				
Yes	22	26	34	44
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

Among secondary schools, the more e-confident schools were more likely to use ICT to support pupils unable to attend school – 44% of the most e-confident group said that they did this, compared with 22% of the least e-confident group.

Similarly schools were asked about their use of ICT to help re-integrate pupils with attendance and behavioural problems.

As Table 8.4 illustrates, use of ICT for this was also most common in secondary schools, presumably due to the fact that they have more instances of pupils with such problems than primary or special schools.

Table 8.4: Use of ICT to help re-integrate pupils with attendance and behavioural problems

	Primary schools %	Secondary schools %	Special schools %
Yes	16	48	31
No	84	51	69
All	*100*	*100*	*100*
Base (schools)	*1079*	*893*	*458*

Table 8.5 shows the proportion of schools that said they made use of ICT to help re-integrate pupils with attendance and behavioural problems, by e-confidence segment.

Table 8.5: Use of ICT to help re-integrate pupils with attendance and behavioural problems by e-confidence segment

	Segment 1 Least e-confident %	Segment 2 %	Segment 3 %	Segment 4 Most e-confident %
Primary				
Yes	11	16	14	24
Secondary				
Yes	38	46	56	57
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

Among both primary and secondary schools the least e-confident segment were least likely to say that they used ICT for this purpose (11% of primary schools, 38% of secondary), and the most e-confident segment were most likely to (24% of primary schools, 57% of secondary).

8.3 Impact of ICT on teacher workloads and need to undertake routine tasks

Schools were asked about the impact of ICT firstly on teacher workloads generally. The majority opinion was that ICT has led to some reduction in teacher workloads in primary, secondary and special schools (Table 8.6). (A similar question was included in the 2002/2003 surveys, but the answer categories were different so the results are not directly comparable.)

Table 8.6: Impact of ICT on teacher workloads

	Primary schools %	Secondary schools %	Special schools %
Substantial reduction	9	7	10
Some reduction	60	59	55
Little/no change	23	26	24
Increase	9	9	10
All	*100*	*100*	*100*
Base (schools)	*1079*	*893*	*458*

There were differences across the four e-confidence segments for both primary and secondary schools. As Table 8.7 shows, the more e-confident primary or secondary schools were more likely to think that ICT has led to a reduction in teacher workloads.

Table 8.7: Impact of ICT on teacher workloads by e-confidence segment

	Segment 1	Segment 2	Segment 3	Segment 4
	Least e-confident %	%	%	Most e-confident %
Primary Substantial or some reduction	57	69	69	78
Secondary Substantial or some reduction	57	68	69	71
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

Schools were also asked about the impact of ICT on the need for teachers to undertake routine administrative and clerical tasks (Table 8.8).

Table 8.8: Impact of ICT on the need for teachers to undertake routine administrative and clerical tasks

	Primary schools %	Secondary schools %	Special schools %
Substantial reduction	11	14	14
Some reduction	46	57	48
Little/no change	37	23	31
Increase	6	7	8
All	*100*	*100*	*100*
Base (schools)	*1079*	*893*	*458*

Again opinions of the four e-confidence segments for both primary and secondary schools varied. As Table 8.9 shows, the more e-confident primary or secondary schools were, the more likely they were to respond that ICT has reduced the need for teachers to do routine administrative and clerical tasks.

Table 8.9: Impact of ICT the need for teachers to undertake routine administrative and clerical tasks by e-confidence segment

	Segment 1	Segment 2	Segment 3	Segment 4
	Least e-confident %	%	%	Most e-confident %
Primary Substantial or some reduction	46	56	60	65
Secondary Substantial or some reduction	62	72	74	76
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

8.4 Availability of computers to pupils/families by loan schemes

Table 8.10 shows the percentage of schools which reported making computers available to pupils or families through loan schemes or other arrangements. This was an activity most common among secondary schools.

Table 8.10: Whether school makes computers available to pupils/families through loan schemes

	Primary schools %	Secondary schools %	Special schools %
Yes	6	20	12
No	94	80	88
All	*100*	*100*	*100*
Base (schools)	*1079*	*893*	*458*

It is not possible to track this information over time as in 2002 and 2003 schools were asked about loan schemes for staff and/or pupils, whereas in 2004 the definition was tightened to only ask about loan arrangements for pupils and families.

As Table 8.11 illustrates, the most e-confident segments for both primary and secondary schools were the most likely to offer such loan schemes.

Table 8.11: Whether school makes computers available to pupils/families through loan schemes by e-confidence segment

	Segment 1 Least e-confident %	Segment 2 %	Segment 3 %	Segment 4 Most e-confident %
Primary				
Yes	4	5	6	10
Secondary				
Yes	13	18	23	31
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

8.5 Availability of facilities out of hours to pupils, staff, local community

Since 2002, schools have been asked whether their ICT facilities are made available to pupils and the local community outside of school hours. The trend has been for an increasing proportion of primary, secondary and special schools to make them available to pupils out of hours, but this pattern is not seen in making them available to the local community. In 2004 for the first time schools were asked about making ICT facilities available to staff out of hours and more than 9 out of 10 schools did this (Table 8.12).

Table 8.12: ICT facilities available out of school hours to pupils, staff and the local community

	Primary schools			Secondary schools			Special schools		
	2002 %	2003 %	2004 %	2002 %	2003 %	2004 %	2002 %	2003 %	2004 %
Pupils	41	42	55	89	92	94	35	33	52
Staff			94			97			91
Local community	15	18	17	50	53	42	6	7	6
Base (schools)	*840*	*930*	*1079*	*790*	*810*	*893*	*360*	*420*	*458*

In primary schools, the more e-confident schools were more likely to make ICT facilities available outside of school hours to pupils, the local community and staff. In secondary schools, the more e-confident were more likely to make ICT facilities available to the local community, but there was no significant difference by e-confidence for making facilities available to staff and pupils (Table 8.13).

Table 8.13: ICT facilities available out of school hours to pupils, staff and the local community, by e-confidence segment

	Segment 1 Least e-confident %	Segment 2 %	Segment 3 %	Segment 4 Most e-confident %
Primary				
Pupils	41	55	59	67
Staff	91	94	95	98
Local community	12	14	19	24
Secondary				
Pupils	92	93	95	96
Staff	97	97	97	98
Local community	32	36	48	57
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

9 Management and funding

9.1 ICT leadership group and implementation strategy

Respondents were asked whether their school has an ICT leadership group, or a senior manager with designated responsibility for ICT. Secondary schools were most likely to have such a group/person – 86% of them did, compared with 76% of primary schools and 71% of special schools (Table 9.1).

Table 9.1: ICT leadership group and implementation strategy

	Primary schools %	Secondary schools %	Special schools %
School has an ICT leadership group (or senior manager with designated responsibility)	76	86	71
School improvement plan includes an ICT strategy	95	91	92
Base (schools)	*1080*	*893*	*458*

The vast majority of schools (more than 9 out of 10 of primary, secondary and special schools) had a school improvement plan that included a strategy for implementing, evaluating and reviewing the use of ICT.

In primary and secondary schools, those belonging to the more e-confident segments were more likely to have an ICT leadership group. In secondary schools, the more e-confident were more likely to say that their school improvement plan includes an ICT strategy (Table 9.2).

Table 9.2: ICT leadership group and implementation strategy by e-confidence segment
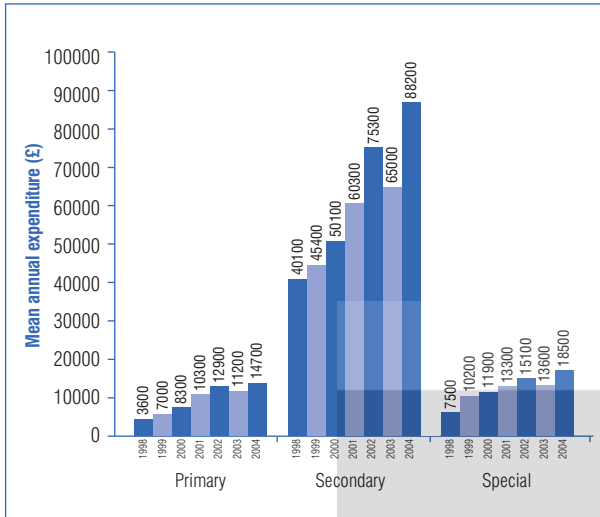
	Segment 1 Least e-confident %	Segment 2 %	Segment 3 %	Segment 4 Most e-confident %
Primary School has an ICT leadership group (or senior manager with designated responsibility)	72	74	79	80
School improvement plan includes an ICT strategy	95	92	96	97
Secondary School has an ICT leadership group (or senior manager with designated responsibility)	81	83	87	95
School improvement plan includes an ICT strategy	88	89	94	95
Bases: Primary schools	*268*	*295*	*278*	*238*
Secondary schools	*251*	*247*	*230*	*165*

9.2 Expenditure on ICT

Schools were asked how much they had spent on ICT in the 2003-2004 financial year, to include expenditure on network infrastructure, computers, peripherals, software and content, training, ICT-related telecoms services, ISPs and technical support. Reported expenditure on ICT per school increased in 2004, following the general upward trend since 1998, as Chart 9A shows.

The question wording was made more explicit in the 2004 survey, as to what categories of ICT expenditure should be included, which may account for some of the difference compared with earlier years.

Chart 9A: Mean annual expenditure on ICT

The range of reported expenditure on ICT by schools was wide, as the Table 9.4 shows. Among primary schools, around one in seven spent £5,000 or less on ICT in the year to March 2004. Only 2% reported spending more than £50,000. Special schools followed a similar pattern to primary schools, although the proportion spending £5,000 or less was slightly lower at 8%, and the proportion spending more than £50,000 slightly higher at 6%.

Table 9.4: Annual expenditure on ICT by schools 2004

	Primary schools %	Secondary schools %	Special schools %
Up to £5,000	14	2	8
£5,001 to £10,000	30	1	28
£10,001-£20,000	36	7	34
£20,001-£50,000	19	27	24
£50,001-£100,000	2	34	6
£100,001-£200,000	-	22	-
£200,001 or more	-	7	-
All	*100*	*100*	*100*
Base (schools answering this question)	*978*	*826*	*414*

The mean annual expenditure per school was highest in secondary schools at £88,200 per school, compared with £18,500 per special school and £14,700 per primary school (Table 9.3).

Table 9.3: Mean annual expenditure on ICT by schools, 1998-2004

	1998	1999	2000	2001	2002	2003	2004
Primary							
Mean expenditure per school (£)	3,600	7,000	8,300	10,300	12,900	11,200	14,700
Mean expenditure per pupil (£)	15	32	37	42	59	56	69
Secondary							
Mean expenditure per school (£)	40,100	45,400	50,100	60,300	75,300	65,000	88,200
Mean expenditure per pupil (£)	46	53	56	66	81	69	91
Special							
Mean expenditure per school (£)	7,500	10,200	11,900	13,300	15,100	13,600	18,500
Mean expenditure per pupil (£)	91	132	154	166	333	259	297

Among secondary schools, 7% reported spending more than £200,000, with a couple of schools reporting spending around £400,000. At the opposite end of the scale, 10% of secondary schools spent less than £20,000 on ICT in the year.

Table 9.5 shows the mean annual expenditure on ICT and mean expenditure per pupil, by school size bands.

As would be expected, the total expenditure on ICT increased with school size in both primary and secondary schools.

In primary schools, the mean expenditure per pupil decreased from £93 per pupil in the smallest schools, to £57 per pupil in the largest schools. In secondary

The mean expenditure per pupil also increased in 2004. Expenditure per pupil was highest in special schools and lowest in primary schools.

Table 9.5: Medan annual expenditure on ICT by school size band

	Primary schools					Secondary schools				
	1-125 %	126-196 %	197-241 %	242-335 %	336+ %	1-653 %	654-865 %	866-1043 %	1044-1280 %	1281+ %
Mean expenditure per school in 2003-04 (£)	7,200	11,100	14,100	17,500	23,700	39,600	61,800	95,600	100,600	138,200
Mean expenditure per pupil in 2003-04 (£)	£93	£69	£65	£62	£57	£90	£81	£102	£88	£92
Base (schools answering this question)	*225*	*189*	*204*	*204*	*156*	*146*	*163*	*173*	*160*	*184*

schools, although the spend per pupil did vary slightly between the school size bands, there was not a consistent pattern in expenditure per pupil according to school size.

Total spend on ICT and per pupil differed by the segments of e-confidence for both primary and secondary schools, as Table 9.6 illustrates.

Table 9.6: Mean annual expenditure on ICT by schools

	Segment 1	Segment 2	Segment 3	Segment 4
	Least e-confident	→		Most e-confident
Primary				
Mean expenditure per school (£)	12,600	13,900	14,600	18,200
Mean expenditure per pupil (£)	56	64	75	85
Secondary				
Mean expenditure per school (£)	63,600	79,800	95,000	125,500
Mean expenditure per pupil (£)	69	82	97	126
Bases: Primary schools	*237*	*268*	*261*	*213*
Secondary schools	*224*	*235*	*208*	*159*

For both primary and secondary schools, the more e-confident the school (using the composite measure of ICT ownership, Internet access, staff confidence level and ICT usage in Maths, English and science) the greater the amount spent on ICT in the last financial year.

However, it should be noted that the ICT in schools survey did not collect information on a wide range of factors that have been shown to be associated with better ICT learning opportunities in schools, such as quality of leadership within the school and quality of ICT teaching.[9,10] The ICT in schools survey also did not collect other information that might influence spend on ICT, such as the school's total income, other spending priorities, or the school's assessment of reasons for their level of spend on ICT. Therefore it is not possible to say from this survey why the more e-confident schools were able to spend more on ICT, but it is likely that factors such as ICT leadership and the general attitude towards ICT within the school were influential in both the higher e-confidence rating and in the school's decision to spend more on ICT.

9.3 Disposal of obsolete or broken ICT equipment

Schools were asked for the main ways in which they dispose of obsolete or broken ICT equipment. Answers are shown in Chart 9B.

Among primary schools, the most common responses were that old equipment was disposed of as refuse (56%), or sold or given away (43%).

Secondary schools were most likely to cascade old equipment within the school (64%), with nearly as many saying that equipment was disposed of as refuse (60%).

Among special schools the most common responses were that old equipment was disposed of as refuse (55%) or cascaded within the school (52%).

Around a third of primary, secondary and special schools used a vendor for recycling or disposal.

Chart 9B: Disposal of obsolete/broken ICT equipment
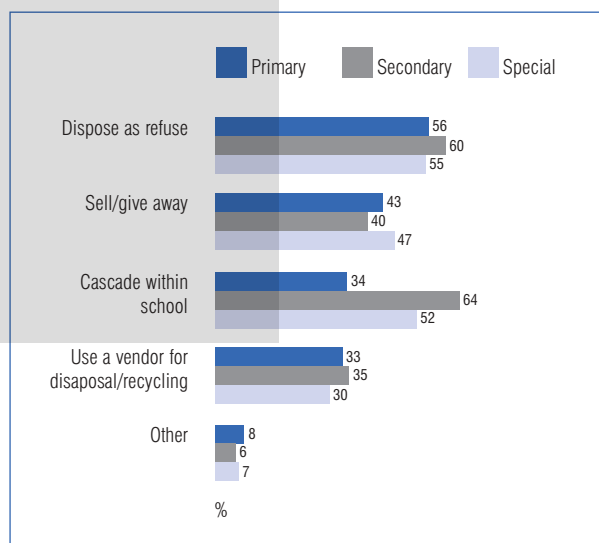
9.4 Transferring data files

Schools are regularly required to transfer large data files such as Common Transfer Files (which contain information on pupils which is passed on when they transfer between schools) and PLASC (the Pupil Level Annual School Census). School to school data transfer sites (for example www.teachernet.gov.uk/s2s) and LEA data transfer sites are available to facilitate data transfer between schools or from the school to the LEA.

[9] 'Primary Schools – ICT and Standards: An analysis of national data from Ofsted and QCA by Becta', Becta 2003.

[10] 'Secondary Schools – ICT and Standards: An analysis of national data from Ofsted and QCA by Becta', Becta 2003.

Schools were asked whether they make use of either of these ways to transfer files. Answers are shown in Table 9.7.

Table 9.7: Use of data transfer sites

	Primary schools %	Secondary schools %	Special schools %
School makes use of			
School-to-school transfer site	58	43	32
LEA data transfer site	81	75	74
Neither of these	7	14	18
All	*100*	*100*	*100*
Base (schools answering this question)	*1079*	*893*	*458*

Use of both school-to-school transfer sites and LEA data transfer sites was most common among primary schools.

Among primary schools, the smaller schools tended to be more likely to use these methods of data transfer; among secondary schools there was not a consistent pattern of use according to school size (Table 9.8).

Table 9.8: Use of data transfer sites, by school size

	Primary schools size band					Secondary schools size band				
	1-125 %	126-196 %	197-241 %	242-335 %	336+ %	1-653 %	654-865 %	866-1043 %	1044-1280 %	1281+ %
School makes use of										
School-to-school transfer site	67	57	55	62	51	42	41	39	43	47
LEA data transfer site	87	86	83	82	69	70	77	79	76	72
Neither of these	3	7	5	4	15	21	10	12	10	15
All	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*
Base (schools)	*247*	*213*	*219*	*224*	*176*	*168*	*180*	*183*	*170*	*192*

10 Summary of key findings by sector

The key findings in this report are as follows:

Primary schools

- The mean number of computers used mainly for teaching and learning per school was 31.6. The mean ratio of computers:pupils was 1:7.5, down from 1:17.6 in 1998.

- The government target that the computer:pupil ratio should average 1:8 or less has been met in primary schools.

- Overall 63% of primary schools met the computer:pupil ratio target. Those that met the target spent more per pupil on ICT (mean £78 per pupil) than those that did not meet the target (mean £54 per pupil).

- 47% of computers used for teaching and learning were over 3 years old.

- The mean number of computers used mainly for management and administration in primary schools was 6.0.

- 91% of primary schools had a network in place.

- The proportion of primary schools with interactive whiteboards increased from 48% in 2003 to 63% in 2004. The mean number of interactive whiteboards per primary school in 2004 was 2.0.

- More than 99% of primary schools were connected to the Internet. 30% had a broadband connection (2Mbps or higher). 8% had a high-speed broadband connection (8Mbps or higher).

- 85% of teaching staff were reported to be very confident or confident in using ICT in their job.

- The mean annual expenditure per school on ICT was £14,700, compared with £12,900 in 2002 and £11,200 in 2003.

- The mean annual expenditure on ICT per pupil was £69.

Secondary schools

- The mean number of computers used mainly for teaching and learning per school was 218.2. The mean ratio of computers:pupils was 1:4.9, down from 1:8.7 in 1998.

- The government target that the computer:pupil ratio should average 1:5 or less has been met in secondary schools.

- Overall 63% of secondary schools met the computer:pupil ratio target. Those that met the target spent more per pupil on ICT (mean £102 per pupil) than those that did not meet the target (mean £72 per pupil).

- 35% of computers used for teaching and learning were over 3 years old.

- The mean number of computers used mainly for management and administration in secondary schools was 45.6.

- More than 99% of secondary schools had a network in place.

- The proportion of secondary schools with interactive whiteboards increased from 82% in 2003 to 92% in 2004. The mean number of interactive whiteboards per secondary school in 2004 was 7.5.

- More than 99% of secondary schools were connected to the Internet. 90% had a broadband connection (2Mbps or higher). 28% had a high-speed broadband connection (8Mbps or higher).

- 81% of teaching staff were reported to be very confident or confident in using ICT in their job.

- The mean annual expenditure per school on ICT was £88,200, compared with £75,300 in 2002 and £65,000 in 2003.

- The mean annual expenditure on ICT per pupil was £91.

Special schools

- The mean number of computers used mainly for teaching and learning per school was 33.6. The mean ratio of computers:pupils was 1:3.0, down from 1:4.5 in 1998.

- 47% of computers used for teaching and learning were over 3 years old.

- The mean number of computers used mainly for management and administration in special schools was 10.6.

- 93% of special schools had a network in place.

- The proportion of special schools with interactive whiteboards increased from 53% in 2003 to 71% in 2004. The mean number of interactive whiteboards per special school in 2004 was 2.6.

- 63% of special schools had specialist hardware for pupils with Special Educational Needs (SEN), such as voice output communication aids, specialist peripherals and equipment and specialist accessories. 76% of special schools had specialist software such as symbol software, screen readers, prediction software, speech recognition or switch software.

- More than 99% of special schools were connected to the Internet. 40% had a broadband connection (2Mbps or higher). 12% had a high-speed broadband connection (8Mbps or higher).

- 86% of teaching staff were reported to be very confident or confident in using ICT in their job.

- The mean annual expenditure per school on ICT was £18,500, compared with £15,100 in 2002 and £13,600 in 2003.

- The mean annual expenditure on ICT per pupil was £297.

11 Methodology

11.1 Introduction

The ICT in Schools survey collects data on the availability and use of ICT from maintained primary, secondary and special schools in England. For 2004, the survey collected data on the position at 31 March 2004 or, in the case of expenditure on ICT, the financial year 2003-2004. For 2003 and earlier years the survey collected similar data.

The figures for 2004, apart from those published in Statistical First Release SFR 27/2004 Information and Communications Technology in Schools in England: 2004 are new and published here for the first time. Figures for 2004 and comparable figures for 1998-2003, where these are available, are shown in the tables and charts.

11.2 Survey design and sample

The ICT in Schools survey is a sample survey. The sample is a stratified random sample with maintained primary, secondary and special schools selected from Government Office Regions and, for primary and secondary schools, (pre-determined) school size bands. The sample was selected by the Department for Education and Skills from its records of all maintained schools in England.

Participation is voluntary. For 2004, questionnaires were sent to a total of 2,426 primary schools, 2,628 secondary schools and 1,000 special schools. Completed questionnaires were returned by 1,079 primary schools, 893 secondary schools and 458 special schools. Response rates were 44%, 34% and 46% for primary, secondary and special schools respectively (see Table 11A).

All sampled schools were sent a paper copy of the questionnaire, with a covering letter, and were asked to complete it and return it by post to TNS Social. In 2004, for the first time, schools were also given the option of completing the survey via a web-based questionnaire. Up to two written reminders were sent to non-responding schools, and non-responding schools were telephoned to re-negotiate deadlines or encourage response.

A copy of the questionnaire is included in Appendix B.

Table 11A shows a breakdown of response and non-response by primary, secondary and special schools.

Table 11A: Response and non-response by primary, secondary and special schools

	All schools		Primary schools		Secondary schools		Special schools	
	n	%	n	%	n	%	n	%
Sampled schools	6054	*100*	2426	*100*	2628	*100*	1000	*100*
Unproductive responses:								
Address problems/ school closed down	6	*	1	*	3	*	2	*
Refusal by post	71	*1*	20	*1*	40	*2*	11	*1*
Refusal by telephone	472	*8*	165	*7*	232	*9*	75	*8*
Other unproductive	14	*	3	*	9	*	2	*
All unproductive responses	518	*9*	189	*8*	284	*11*	90	*9*
Productive responses:								
Productive by post	1851	*31*	911	*38*	598	*23*	342	*34*
Productive by web	579	*10*	168	*7*	295	*11*	116	*12*
All productive responses	2430	*40*	1079	*44*	893	*34*	458	*46*
No response	3061	*51*	1158	*48*	1451	*55*	452	*45*

11.3 Data validation and error correction

Returns from schools were checked for validity in terms of a set of validation rules designed to detect inconsistencies and discrepancies. Where possible schools were re-contacted to check any invalid data and correct any errors.

11.4 Annual Schools Census

Information on numbers of schools and pupils from the Department's Annual Schools Census was used to define the school size bands used in the survey and to derive computer to pupil ratios from the sample and estimates of totals over all schools.

11.5 Estimates

Weighted estimates were derived from the data returned by schools; the weights were the numbers of schools in the Government Office Regions and school size bands. The weighted estimates are shown in the tables. Bases shown in the tables in this report are unweighted and show the size of the sample in each sub-group.

Tables 11B and 11C show separately for primary and secondary schools the composition of the achieved sample of schools (unweighted number and %) by Government Office Region and school size band, together with the composition following the application of the corrective weights (weighted %). For comparison purposes, the population numbers and percentages for all primary or secondary schools by Government Office Region and size band are also shown.

Table 11B: Primary schools by region and school size

	Responding primary schools			All primary schools	
	Achieved sample (unweighted)	Un-weighted %	Weighted %	Number	%
Government Office Region					
North East	59	5	5	933	5
North West	138	13	15	2,613	15
Yorks & Humber	132	12	11	1,905	11
East Midlands	102	9	10	1,716	10
West Midlands	105	10	11	1,875	11
Eastern	128	12	12	2,065	12
Inner London	38	4	4	694	4
Outer London	67	6	6	1,128	6
South East	179	17	15	2,696	15
South West	131	12	11	1,970	11
Size band (pupils)					
1-125	247	23	20	3555	20
126-196	213	20	20	3495	20
197-241	219	20	20	3519	20
242-335	224	21	20	3513	20
336 or more	176	16	20	3513	20
Base (schools)		1079	1079		17,595

Table 11C: secondary schools by region and school size

	Responding secondary schools			All secondary schools	
	Achieved sample (unweighted)	Un-weighted %	Weighted %	Number	%
Government Office Region					
North East	62	7	6	206	6
North West	111	12	14	474	14
Yorks & Humber	81	9	10	327	10
East Midlands	83	9	9	316	9
West Midlands	111	12	12	413	12
Eastern	104	12	13	424	13
Inner London	25	3	4	129	4
Outer London	96	11	8	271	8
South East	147	16	15	499	15
South West	73	8	10	328	10
Size band (pupils)					
1-653	168	19	20	679	20
654-865	180	20	20	677	20
866-1043	183	20	20	679	20
1044-1280	170	19	20	677	20
1281 or more	192	22	20	675	20
Base (schools)		893	893		3,387

Size bands were not calculated for special schools. Table 11C shows the regional composition of the achieved sample of special schools, together with the weighted sample and the population of special schools by region.

Table 11D: Special schools by region

	Responding secondary schools			All secondary schools	
	Achieved sample (unweighted)	Un-weighted %	Weighted %	Number	%
Government Office Region					
North East	29	6	6	61	6
North West	81	18	17	182	17
Yorks & Humber	38	8	9	92	9
East Midlands	38	8	8	79	8
West Midlands	56	12	12	129	12
Eastern	46	10	9	98	9
Inner London	33	7	6	66	6
Outer London	36	8	8	81	8
South East	75	16	16	170	16
South West	26	6	9	90	9
Base (schools)		458	458		1,048

11.6 Statistical sampling error

Statistical sampling error arises because a sample of schools has been selected from the population. It is helpful to know the extent of the sampling error when interpreting the figures, particularly when there are only small differences between figures. Small differences may arise entirely because of sampling error. The confidence limits reflect the sampling error. There is a probability of 0.95 that the 95% confidence interval, which is the difference between the upper and lower confidence limits, contains the true value.

11.7 Confidence limits and statistical significance

For the key figures, weighted estimates and 95% confidence limits for 2004 (and for earlier years where available) are shown in the key figures table (Table A1). For each key figure there is a probability of 0.95 that the 95% confidence interval, which is the difference between the upper and lower confidence limits, contains the true value.

For example, for primary schools in 2004, the estimate of the number of computers used for teaching and learning per school was 31.6. We can be confident that the range 30.6 to 32.5 will contain the true value of the number of computers used for teaching and learning per school because the 95% confidence limits are 30.6 and 32.5. Our confidence derives from the 95% probability that this range covers the true value.

In the report text, where differences between sub-groups or between years are commented on, they are significant at the 95% confidence level, unless otherwise stated.

11.8 School funding status definitions

Maintained schools, under the School Standards and Framework Act 1998, fall under three categories:

- Community
- Foundation
- Voluntary (Community and Aided)

All types of school have a lot in common – they work in partnership with each other and with the local education authority (LEA), they receive their funding from the LEA and they deliver the National Curriculum. However, there are some distinct characteristics:

- **Community:** LEA employs the staff, owns the school land and buildings and has responsibility for school admissions.
- **Foundation Schools:** Governing body employs the staff and has responsibility for admissions, school land and buildings are owned by the governing body or charitable foundation.
- **Voluntary Aided:** Governing body employs the staff and decides admission, school land and buildings are normally owned by a charitable foundation. The governing body also contributes towards the capital running costs of the school. Most aided schools are linked either to the Church of England or Roman Catholic Church, but some are linked to other faith groups and a few are non-denominational.
- **Voluntary Controlled:** LEA employs the staff and has responsibility for admissions. The land and buildings are owned by a charitable foundation. Almost always church schools.

11.9 'E-confidence' segments derivation

The e-confidence segmentation of primary and secondary schools is based on a scoring system which reflects the number of areas in which a school is scoring highly in ICT ownership and use. The segmentation was not carried out for special schools because some of the information required was not available for these schools.

A point is awarded for above average ownership (per pupil) of the following items:

- Desktops
- Laptops
- Electronic interactive whiteboards
- Digital projectors
- Printers
- Scanners
- Digital cameras

Due to overall very low ownership of the following items a point is awarded for any ownership of the following:

- Tablets
- Handhelds
- Video Conferencing Facilities

A further point is available for a lower than average proportion of computers that are over 3 years old giving a total of 11 available points.

Points were also awarded for the following characteristics:

- q5b Point awarded for networks in all areas
- q5c Point awarded for having wireless Internet and intranet (1 point) each
- q6b 2 points awarded for 8Mbps broadband/ 1 point for ADSL/2 Mbps
- q10e Staff confidence level created for each school – then point awarded if score higher than average
- q9a ICT usage score created for Maths/ English & Science and a point awarded if higher than average

This results in a total score of 18 being available – 11 coming from the ownership questions, and 7 from the rest of the questionnaire.

The next stage was to balance the scoring system out so that the following categories have an equal weighting:

- ICT ownership
- Internet (q5b/q5c/q6b)
- Confidence level (q10e)
- ICT usage in Maths/English/Science (q9a)

The scores on each of these 4 categories were examined, and re-scaled so that a school would score 0,1,2 or 3 on each one – giving an overall maximum score of 12 points. The scores on this new scale were then used to split the schools out into 4 segments based on their ICT ownership, confidence and usage.

Appendix A – Trend tables

Table A1: Key figures – Primary and secondary schools

	1998	1999	2000	2001	2002	2003	2004
Primary							
Expenditure on ICT							
Mean expenditure per school (£)	3,600	7,000	8,300	10,300	12,900	11,200	14,700
LCL[1]	-	-	-	-	*12,200*	*10,700*	*14,100*
UCL[2]	-	-	-	-	*13,500*	*11,800*	*15,400*
Computers used mainly for teaching and learning							
Mean number of pupils[3] per computer	17.6	13.4	12.6	11.8	10.1	7.9	7.5
LCL[1]	-	-	-	-	*9.8*	*7.7*	*7.3*
UCL[2]	-	-	-	-	*10.4*	*8.0*	*7.6*
Mean number of computers per school	13.3	16.1	17.8	20.7	24.9	28.6	31.6
LCL[1]	-	-	-	-	*24.1*	*28.0*	*30.6*
UCL[2]	-	-	-	-	*25.7*	*29.3*	*32.5*
% of teaching staff confident in use of ICT	65	68	67	76	81	87	85
LCL[1]	-	-	-	-	*79*	*85*	*83*
UCL[2]	-	-	-	-	*83*	*88*	*87*
Secondary							
Expenditure on ICT							
Mean expenditure per school (£)	40,100	45,400	50,100	60,300	75,300	65,000	88,200
LCL[1]	-	-	-	-	*72,300*	*62,500*	*83,400*
UCL[2]	-	-	-	-	*78,300*	*67,500*	*93,000*
Computers used mainly for teaching and learning							
Mean number of pupils[3] per computer	8.7	8.4	7.9	7.1	6.5	5.4	4.9
LCL[1]	-	-	-	-	*6.3*	*5.3*	*4.7*
UCL[2]	-	-	-	-	*6.6*	*5.5*	*5.0*
Mean number of computers per school	100.9	101.3	112.6	127.7	159.0	192.7	218.2
LCL[1]	-	-	-	-	*155.2*	*188.6*	*211.2*
UCL[2]	-	-	-	-	*162.7*	*196.7*	*225.2*
% of teaching staff confident in use of ICT	61	66	65	70	75	82	81
LCL[1]	-	-	-	-	*74*	*81*	*78*
UCL[2]	-	-	-	-	*76*	*83*	*84*
Bases: Primary	-	-	-	-	*840*	*930*	*1079*
Secondary	-	-	-	-	*790*	*810*	*893*

1   Lower 95% confidence limit.
2   Upper 95% confidence limit.
3   Full-time equivalent pupils.

Table A2: Key figures – Special schools and all schools

	1998	1999	2000	2001	2002	2003	2004
Special							
Expenditure on ICT							
Mean expenditure per school (£)	7,500	10,200	11,900	13,300	15,100	13,600	18,500
LCL[1]	-	-	-	-	*14,200*	*12,700*	*17,000*
UCL[2]	-	-	-	-	*16,000*	*14,500*	*20,100*
Computers used mainly for teaching and learning							
Mean number of pupils[3] per computer	4.5	3.7	3.7	3.2	3.4	3.0	3.0
LCL[1]	-	-	-	-	*3.2*	*2.8*	*2.9*
UCL[2]	-	-	-	-	*3.6*	*3.1*	*3.2*
Mean number of computers per school	18.5	21.0	21.3	24.8	28.2	31.1	33.6
LCL[1]	-	-	-	-	*26.7*	*29.8*	*31.3*
UCL[2]	-	-	-	-	*29.6*	*32.8*	*35.9*
% of teaching staff confident in use of ICT	63	68	73	77	79	86	86
LCL[1]	-	-	-	-	*77*	*85*	*82*
UCL[2]	-	-	-	-	*81*	*87*	*89*
All							
Expenditure on ICT							
Mean expenditure per school (£)	9,400	13,100	15,000	18,100	n/a	n/a	26,400
LCL[1]	-	-	-	-	-	-	*24,800*
UCL[2]	-	-	-	-	-	-	*28,100*
Computers used mainly for teaching and learning							
Mean number of pupils[3] per computer	13.8	11.2	10.5	9.7	n/a	n/a	6.9
LCL[1]	-	-	-	-	-	-	*7.0*
UCL[2]	-	-	-	-	-	-	*6.8*
Mean number of computers per school	27.1	29.5	32.6	37.3	n/a	n/a	60.4
LCL[1]	-	-	-	-	-	-	*63.6*
UCL[2]	-	-	-	-	-	-	*57.2*
% of teaching staff confident in use of ICT	63	67	66	73	n/a	n/a	85
LCL[1]	-	-	-	-	-	-	*83*
UCL[2]	-	-	-	-	-	-	*86*
Bases: Special	*-*	*-*	*-*	*-*	*360*	*420*	*458*
All schools	*-*	*-*	*-*	*-*	*-*	*-*	*2430*

1 Lower 95% confidence limit.
2 Upper 95% confidence limit.
3 Full-time equivalent pupils.

Table A3: Computers used mainly or solely for teaching and learning

	1998	1999	2000	2001	2002	2003	2004
Primary							
Mean number of computers per school	13.3	16.1	17.8	20.7	24.9	28.6	31.6
Of which:							
Percentage over 3 years old	64	52	46	37	39	41	47
Mean number over 3 years old	8.5	8.4	8.2	7.7	9.8	11.7	14.8
Mean number of pupils per computer	17.6	13.4	12.6	11.8	10.1	7.9	7.5
Secondary							
Mean number of computers per school	100.9	101.3	112.6	127.7	159.0	192.7	218.2
Of which:							
Percentage over 3 years old	57	50	45	36	33	34	35
Mean number over 3 years old	57.4	50.9	50.1	46.1	51.8	66.0	75.4
Mean number of pupils per computer	8.7	8.4	7.9	7.1	6.5	5.4	4.9
Special							
Mean number of computers per school	18.5	21.0	21.3	24.8	28.2	31.3	33.6
Of which:							
Percentage over 3 years old	58	51	44	43	48	47	47
Mean number over 3 years old	10.7	10.7	9.4	10.7	13.5	14.6	15.7
Mean number of pupils per computer	4.5	3.7	3.7	3.2	3.4	3.0	3.0
All schools							
Mean number of computers per school	27.1	29.5	32.6	37.3	n/a	n/a	60.4
Of which:							
Percentage over 3 years old	59	51	45	37	n/a	n/a	40
Mean number over 3 years old	16.0	15.0	14.8	13.7	n/a	n/a	24.2
Mean number of pupils per computer	13.8	11.2	10.5	9.7	n/a	n/a	6.9
Bases: Primary	*-*	*-*	*-*	*-*	*840*	*930*	*1079*
Secondary	*-*	*-*	*-*	*-*	*790*	*810*	*893*
Special	*-*	*-*	*-*	*-*	*360*	*420*	*458*
All schools	*-*	*-*	*-*	*-*	*-*	*-*	*2430*

Table A4: Computers used mainly or solely for management and administrative purposes

	1999	2000	2001	2002	2003	2004
Primary						
Mean number of computers per school	2.2	2.3	2.6	3.1	3.6	6.0
Of which:						
Percentage over 3 years old	33	27	29	29	27	n/a
Mean number over 3 years old	0.7	0.6	0.7	0.9	1.0	n/a
Secondary						
Mean number of computers per school	13.1	15.5	18.4	23.0	27.2	45.6
Of which:						
Percentage over 3 years old	36	29	31	32	30	n/a
Mean number over 3 years old	4.7	4.6	5.6	7.4	8.3	n/a
Special						
Mean number of computers per school	3.7	3.8	4.5	4.9	6.1	10.6
Of which:						
Percentage over 3 years old	31	29	27	29	27	n/a
Mean number over 3 years old	1.2	1.1	1.2	1.4	1.6	n/a
All schools						
Mean number of computers per school	4.0	4.4	5.1	n/a	n/a	12.3
Of which:						
Percentage over 3 years old	35	29	30	n/a	n/a	n/a
Mean number over 3 years old	1.4	1.3	1.5	n/a	n/a	n/a
Bases: Primary	*-*	*-*	*-*	*840*	*930*	*1079*
Secondary	*-*	*-*	*-*	*790*	*810*	*893*
Special	*-*	*-*	*-*	*360*	*420*	*458*
All schools	*-*	*-*	*-*	*-*	*-*	*2430*

Table A5: Presentation technologies and peripherals per school

	2002	2003	2004
Primary schools			
% with interactive whiteboards	28	48	63
Mean number of units per school	0.4	1.0	2.0
% with digital projectors	30	43	80
Mean number of units per school	0.4	0.6	2.6
% with digital cameras/ digital video cameras	92	97	98
Mean number of units per school	1.6	2.1	2.6
% with video conferencing facilities	7	7	7
Mean number of units per school	0.2	0.1	0.2
Secondary schools			
% with interactive whiteboards	65	82	92
Mean number of units per school	2.1	4.3	7.5
% with digital projectors	82	91	99
Mean number of units per school	2.4	4.1	12.8
% with digital cameras/ digital video cameras	99	98	98
Mean number of units per school	4.5	6.4	7.9
% with video conferencing facilities	27	33	36
Mean number of units per school	0.4	0.6	0.9
Special schools			
% with interactive whiteboards	35	53	71
Mean number of units per school	0.6	1.3	2.6
% with digital projectors	35	50	82
Mean number of units per school	0.5	0.7	3.1
% with digital cameras/ digital video cameras	98	99	99
Mean number of units per school	4.3	5.6	7.3
% with video conferencing facilities	10	12	11
Mean number of units per school	0.2	0.2	0.3
All schools			
% with interactive whiteboards	n/a	n/a	68
Mean number of units per school	n/a	n/a	2.9
% with digital projectors	n/a	n/a	83
Mean number of units per school	n/a	n/a	4.2
% with digital cameras/ digital video cameras	n/a	n/a	98
Mean number of units per school	n/a	n/a	3.6
% with video conferencing facilities	n/a	n/a	11
Mean number of units per school	n/a	n/a	0.3
Bases: Primary	*840*	*930*	*1079*
Secondary	*790*	*810*	*893*
Special	*360*	*420*	*458*
All schools	*–*	*–*	*2430*

Table A6: Internet connections

	1998	1999	2000	2001	2002	2003	2004
Primary							
Percentage of schools connected to the Internet	17	62	86	96	>99	>99	>99
Fastest Internet connection:							
Non-broadband (dial-up modems, ISDN, ISDN2)	n/a	n/a	n/a	n/a	86	69	45
ADSL, cable modem, satellite, other up to 2 Mbps	n/a	n/a	n/a	n/a	2	4	25
Broadband (2Mbps or faster *but less than 8Mbps*)	n/a	n/a	n/a	n/a	11	27	22
Broadband (8 Mbps or faster)	n/a	n/a	n/a	n/a	n/a	n/a	8
Secondary							
Percentage of schools connected to the Internet	83	93	98	>99	>99	>99	>99
Fastest Internet connection:							
Non-broadband (dial-up modems, ISDN, ISDN2)	n/a	n/a	n/a	n/a	29	10	2
ADSL, cable modem, satellite, other up to 2 Mbps	n/a	n/a	n/a	n/a	3	5	9
Broadband (2Mbps or faster *but less than 8Mbps*)	n/a	n/a	n/a	n/a	68	86	62
Broadband (8 Mbps or faster)	n/a	n/a	n/a	n/a	n/a	n/a	28
Special							
Percentage of schools connected to the Internet	31	60	92	97	>99	>99	>99
Fastest Internet connection:							
Non-broadband (dial-up modems, ISDN, ISDN2)	n/a	n/a	n/a	n/a	84	59	33
ADSL, cable modem, satellite, other up to 2 Mbps	n/a	n/a	n/a	n/a	5	5	27
Broadband (2Mbps or faster *but less than 8Mbps*)	n/a	n/a	n/a	n/a	11	35	28
Broadband (8 Mbps or faster)	n/a	n/a	n/a	n/a	n/a	n/a	12
All schools							
Percentage of schools connected to the Internet	28	66	88	97	>99	>99	>99
Fastest Internet connection:							
Non-broadband (dial-up modems, ISDN, ISDN2)	n/a	n/a	n/a	n/a	79	n/a	38
ADSL, cable modem, satellite, other up to 2 Mbps	n/a	n/a	n/a	n/a	2	n/a	22
Broadband (2Mbps or faster but less than 8Mbps)	n/a	n/a	n/a	n/a	18	n/a	29
Broadband (8 Mbps or faster)	n/a	n/a	n/a	n/a	n/a	n/a	11
Bases: Primary	-	-	-	-	*840*	*930*	*1079*
Secondary	-	-	-	-	*790*	*810*	*893*
Special	-	-	-	-	*360*	*420*	*458*
All schools	-	-	-	-	*1990*	*2160*	*2430*

Table A7: Teacher confidence and access to ICT

	1998	1999	2000	2001	2002	2003	2004
Primary							
Percentage of teachers 'confident' or 'very confident' in using ICT in their job	65	68	67	76	81	87	85
Percentage of staff with access to a computer at home:							
School leaders	n/a	n/a	n/a	n/a	95	98	99
Teaching staff	n/a	n/a	n/a	n/a	91	93	93
Support staff	n/a	n/a	n/a	n/a	71	74	76
Secondary							
Percentage of teachers 'confident' or 'very confident' in using ICT in their job	61	66	65	70	75	82	81
Percentage of staff with access to a computer at home:							
School leaders	n/a	n/a	n/a	n/a	95	97	98
Teaching staff	n/a	n/a	n/a	n/a	80	85	87
Support staff	n/a	n/a	n/a	n/a	58	65	63
Special							
Percentage of teachers 'confident' or 'very confident' in using ICT in their job	63	68	73	77	79	86	86
Percentage of staff with access to a computer at home:							
School leaders	n/a	n/a	n/a	n/a	96	97	98
Teaching staff	n/a	n/a	n/a	n/a	91	94	93
Support staff	n/a	n/a	n/a	n/a	64	70	71
All schools							
Percentage of teachers 'confident' or 'very confident' in using ICT in their job	63	67	67	73	n/a	n/a	85
Percentage of staff with access to a computer at home:							
School leaders	n/a	n/a	n/a	n/a	n/a	n/a	99
Teaching staff	n/a	n/a	n/a	n/a	n/a	n/a	92
Support staff	n/a	n/a	n/a	n/a	n/a	n/a	75
Bases: Primary	-	-	-	-	*840*	*930*	*1079*
Secondary	-	-	-	-	*790*	*810*	*893*
Special	-	-	-	-	*360*	*420*	*458*
All schools	-	-	-	-	*-*	*-*	*2430*

Table A8: Email access and wider access to ICT

	2002	2003	2004
Primary schools			
% of schools with 'all' of the following having an email account provided by school or LEA:			
School leaders	77	78	77
Teaching staff	62	60	70
Support staff	32	34	39
Pupils	n/a	n/a	38
% of schools with ICT facilities available use out of school hours:			
By pupils	41	40	55
By staff	n/a	n/a	94
By the local community	15	18	17
Secondary schools			
% of schools with 'all' of the following having an email account provided by school or LEA:			
School leaders	81	86	90
Teaching staff	71	76	84
Support staff	55	62	71
Pupils	n/a	n/a	60
% of schools with ICT facilities available use out of school hours:			
By pupils	89	92	94
By staff	n/a	n/a	97
By the local community	50	53	42
Special schools			
% of schools with 'all' of the following having an email account provided by school or LEA:			
School leaders	77	82	84
Teaching staff	65	68	74
Support staff	38	45	50
Pupils	n/a	n/a	33
% of schools with ICT facilities available use out of school hours:			
By pupils	35	33	52
By staff	n/a	n/a	91
By the local community	6	7	6
All schools			
% of schools with 'all' of the following having an email account provided by school or LEA:			
School leaders	n/a	n/a	80
Teaching staff	n/a	n/a	72
Support staff	n/a	n/a	45
Pupils	n/a	n/a	41
% of schools with ICT facilities available use out of school hours:			
By pupils	n/a	n/a	61
By staff	n/a	n/a	95
By the local community	n/a	n/a	20
Bases: Primary	*840*	*930*	*1079*
Secondary	*790*	*810*	*893*
Special	*360*	*420*	*458*
All schools	*1990*	*2160*	*2430*

Appendix B – Questionnaire

Status: Voluntary

Action by: 14 May 04

Our Ref: 103589

Office use only

Information and Communications Technology in Schools Survey: year end 31 March 2004

Maintained Primary, Secondary and Special Schools

Estab Code

106-109

School Contact Name *(for enquiries)*

Role within school
(please tick one)

School Contact E-mail Address *(if applicable)*

Headteacher

110

ICT Co-ordinator

School Telephone Number *(including STD code)*

Other

Please complete this important survey, which will be used widely within the DfES when developing new policies that will shape future plans for ICT in schools.

All data will be treated confidentially within TNS and DfES, and will be used for statistical purposes only.

Please return your completed questionnaire (in the envelope provided) to:
TNS at Westgate, London W5 1UA.

This questionnaire can also be completed online at http://ICTinSchools.tns-global.com.

Your school's individual log-in is:

department for
education and skills
creating opportunity, releasing potential, achieving excellence

tns

Notes on completing this questionnaire:

- This questionnaire is available as a web questionnaire via the web link provided; please complete EITHER the web version OR this paper version.

- Please answer all the questions unless otherwise directed.

- Most of the questions have boxes beside them.
  Please give your answer by ticking the box like this:

  Yes ✔

  No ☐

- Numbers should be entered to the right,
  e.g. 99 should be entered in a three-digit box as follows:

  ☐ 9 9

- Where numbers are required, enter '0' if nil

Validation:

We will check that you have completed all of the answers and that they are broadly comparable with answers from other schools. The purpose of these checks is to highlight any missing or unusual data. Please keep a copy of your form as we may contact you about any such data.

We will use data on pupil and teacher numbers from the Annual Schools' Census to help us interpret any data returned by your school using this questionnaire.

If you require any further assistance then please contact our Survey Helpline on 0800 0187012

General notes:

Unless stated to the contrary, for this survey:

'Staff' refers to school leaders, teaching staff and school support staff.

'School leaders' refers to heads, deputy heads and assistant heads.

'Teaching staff' includes teachers on short-term paid absence (e.g. maternity leave/sick leave/secondment) for less than one term, and relief teachers providing cover for long-term paid absence.

'School support staff' refers to:

- Nursery nurses, nursery assistants, literacy and numeracy support staff, special needs support staff, ethnic minority pupils support staff, matrons/nurses/medical staff, librarians, ICT technicians, laboratory assistants, design technology assistants, home economics and craft technicians;

- Welfare assistants, learning mentors employed at the school; and

- Administrative officers, secretaries, bursars or other admin/clerical staff.

The following should not be counted as 'school support staff': any premises related staff such as caretakers, canteen staff and/or lunchtime supervisors; or any unpaid or voluntary workers.

Advice and guidance on a range of ICT-related issues can be found on Becta's ICT advice site (http://www.ictadvice.org.uk).

Once you have completed this questionnaire, please post it back to TNS in the envelope provided. It does not need a stamp.
THANK YOU FOR YOUR HELP

Section 1: Computers

PLEASE NOTE:

In counting the number of computers available in the school:

- **Include** those currently assigned to individual staff or pupils
- **Include** specialist computers used in CAD/CAM, art & design, etc.
- **Exclude** equipment that is permanently broken, for which there is no compatible software, or which are privately owned by staff or pupils

In counting the **types of computers** available in the school:

- '**tablet PCs**' are a new form of portable computer – an A4-sized laptop, with a touch-sensitive screen that is operated by a stylus like a PDA. They should not be confused with handheld 'PDAs'
- '**handheld computers**' include PDAs but not data loggers or calculators

1a Please give details of the computers available in your school.

205
Card 2

Please write in number:

Total number of computers

206-208

Of these, how many are:　Desktops

209-211

Laptops

212-214

Tablets

215-217

Handhelds

218-220

Note: *The sum of individual types above should be equal to the figure given at 1a) for total computers*

1b Of the computers recorded in 1a), how many are used mainly or solely for teaching and learning?

Please write in number:

Total number of computers used mainly for teaching/learning

221-223

Of these, how many are:　Desktops

224-226

Laptops

227-229

Tablets

230-232

Handhelds

233-235

Note: *The sum of individual types above should be equal to the figure given at 1b) for total computers*

Of the total for 1b), how many are over three years old?

236-238

1c **How many computers are there in each of the following areas in your school?**
Equipment that is not assigned to a particular room (e.g. a pool of portable computers) but to a year or department should be recorded under the most appropriate option (e.g. classrooms)

Please write in number:

In classrooms	239-241
In ICT suites	242-244
In study/developmental areas	245-247
In staff rooms/staff offices	248-250
In administrative areas	251-253
In other areas	254-256

Note: *The sum of individual types above should be equal to the figure given at 1a) for total computers*

Section 2: Presentation technologies

PLEASE NOTE:
In counting the number of 'digital projectors' the total should:
- **Include** projectors that are currently connected to an interactive whiteboard or other device
- **Exclude** equipment that is permanently broken

2 **In total, how many of the following are available in your school:**

Please write in number:

Electronic interactive whiteboards	257-259
Digital projectors	260-262

Section 3: Peripherals

PLEASE NOTE:
In counting the number of peripherals:
- 'video conferencing facilities' - include both fixed and mobile units
- **Exclude** equipment that is permanently broken, for which there is no compatible software, or which is privately owned by staff or pupils

3 **In total, how many of the following are available in your school:**

Please write in number:

Printers	263-265
Scanners	266-268
Digital cameras/Digital video cameras	269-271
Video conferencing facilities (include all facilities)	272-2745

Section 4: Communication aids

PLEASE NOTE:
- **peripherals** includes trackballs, graphic tablets and joysticks
- **equipment** includes Brailers, CCTV, key guards and switches
- **accessories** includes wheelchair mounts, trolleys and rests

4a Is your school equipped with any of the following aids for pupils with special educational needs and disabilities?

*Please tick **one** box on each line*

305
Card 3

	Yes	No	
i) Hardware (e.g. voice output communication aids, specialist peripherals and equipment, and specialist accessories)	1	2	306
ii) Software (e.g. symbol software, screen readers, prediction software, speech recognition software or switch software)	1	2	307
iii) Furniture (e.g. special chairs, desks, rise and fall tables)	1	2	308

4b How much impact does ICT have on helping pupils in your school with SEN to access the national curriculum?

*Please tick **one** box*

Substantial impact	1	309
Some impact	2	
Little or no impact	3	

Section 5: Networking

5a Does your school have a network in place?

A 'network' links together computers in a building or across a campus

310

*Please tick **one** box*

Yes | 1 → *Continue with **5b***

No | 2 → *Go to Section **6***

5b To what extent is the school networked in the following areas:

*Please tick **one** box on each line*

	All	Some	None	
Teaching and learning areas?	1	2	3	311
Management and administration areas?	1	2	3	312

5c Which of the following apply to the network?

Please tick all that apply

The network integrates curriculum and management functions	1	313
The network makes use (wholly or in part) of wireless technology	2	
The network hosts an intranet 3 *An 'intranet' is a private network or internet site which allows local sharing and access to materials*	3	
The network is accessible from beyond the school premises	4	
Or tick: **None of these**	5	

Section 6: Internet connectivity

6a How many computers are there in each of the following areas in your school?   314

Please tick **one** *box*   **Yes** ☐ 1 ➝ *Continue with* **6b**

No ☐ 2 ➝ *Go to Section* **7**

6b What is the principal means of connecting to the Internet?
If more than one applies, please tick the box relating to the fastest connection in your school

Please tick **one** *box*   **i) A non-broadband connection** ☐ 1   315
(includes dial-up modems that run at 56kbps,
or ISDN/ISDN2 which run at 128 kbps)

ii) A broadband connection of the following type: ADSL 2 ☐ 2

2 Mbps or higher (but less than 8 Mbps) 3 ☐ 3

8 Mbps or higher 4 ☐ 4

6c What measures does your school have in place to prevent access to undesirable
materials on or undesirable contacts via the Internet?

Please tick all that apply   **Filtered or restricted Internet service** ☐ 1   316
(includes walled garden services that limit internet
access to pre-selected websites, filtering software that
blocks access to unsuitable material on the internet,
and filtered services performed at least in part,
by the school's Internet Service Provider)

Supervised access 2 ☐ 2

Acceptable use policies 3 ☐ 3

Other measures 4 ☐ 4

Or tick: **None of these** ☐ 5

Section 7: E-mail

7a   STAFF: How many computers are there in each of the following areas in your school?

*Please tick **one** box on each line*

	All	Some	Few/None	
School leaders	1	2	3	317
Teaching staff	1	2	3	318
Support staff	1	2	3	319

7b   PUPILS: How many pupils in your school are provided with an e-mail account (personal or shared) funded by the school or LEA?

*Please tick **one** box*

	All	Some	Few/None	
Pupils	1	2	3	320

7c   Does your school have a 'main' e-mail account (for example, 'admin@schoolname.sch.uk')?

321

*Please tick **one** box*

Yes	1	→ *Continue with **7d***
No	2	→ *Go to Section **8***

7d   How frequently is this account monitored?

*Please tick **one** box on each line*

Regularly (i.e. at least once a day)	1	322
Frequently (i.e. several times a week)	2	
Rarely (i.e. once a week or less often)	3	

Section 8: Information management

PLEASE NOTE:

In counting the number of peripherals:

- **Common Transfer Files** contain information on pupils which is passed on when they transfer between schools
- **PLASC** is the Pupil Level Annual School Census which is data collected which is matched by LEAs and the DfES to Key Stage attainment to analyse performance by pupils and help school improvement strategies
- **A School to School data transfer site** for example www.teachernet.gov.uk/s2s
- **An LEA data transfer site** transfers data between the school and local LEA for similar purposes

8   Does your school make use of either of the following ways to transfer files such as the common transfer file, PLASC files etc?

Please tick all that apply

School-to-School transfer site	1	323
An LEA data transfer site 2	2	
Or tick: **No, neither of these 3**	3	

Section 9: Use of ICT in school

9a **To what extent is ICT used in the following curriculum areas?**
Include usage:
• by teachers in researching and preparing lessons
• by teachers and pupils within the lesson itself; and
• by pupils for homework, research and revision

*Please tick **one** box on each line*

	Substantial	Some	Few/None	Not applicable	
Art & Design	1	2	3	4	324
Citizenship	1	2	3	4	325
Design & Technology	1	2	3	4	326
English	1	2	3	4	327
Geography	1	2	3	4	328
History	1	2	3	4	329
Information & Communications Technology	1	2	3	4	330
Mathematics	1	2	3	4	331
Modern Foreign Languages	1	2	3	4	332
Music	1	2	3	4	333
Personal & Social Health Education	1	2	3	4	334
Physical Education	1	2	3	4	335
Religious Education	1	2	3	4	336
Science	1	2	3	4	337

9b **To what extent is ICT used in the Foundation Stage?**

*Please tick **one** box*

Foundation Stage	1	2	3	4	338

9c **How many staff are employed in your school at present?**
Please use head counts, not FTEs. Please count each person once only – 'School leaders' refers to the main role of the staff concerned even when they have teaching responsibilities. Exclude visiting staff.

Please write in number:

School leaders   339-341

Teaching staff   342-344

Support staff   345-347

9d How many staff in your school make regular use (i.e. several times a week) of ICT:
If none for any category of staff, please write in '0'

FOR TEACHING AND LEARNING
Please write in number:

School leaders		348-350
Teachers		351-353
Teaching assistants		354-356
Other support staff		357-359

FOR MANAGEMENT AND ADMINISTRATION
Please write in number:

School leaders		360-362
Teachers		363-365
Teaching assistants		366-368
Other support staff		369-371

9e Does your school make use of ICT to:
*Please tick **one** box on each line*

	Yes	No	
i) support pupils not able to attend school?	1	2	372
ii) help re-integrate pupils with attendance and behavioural problems?	1	2	373
iii) deliver alternative curricula *(non national curriculum learning, such as using ICT in career planning, target setting, researching jobs and FE courses)*	1	2	374

9f Please indicate the impact of ICT on the following:
*Please tick **one** box on each line*

	Substantial reduction	Some reduction	Little/No change	Increase	
On teacher workloads in your school?	1	2	3	4	375
On the need for teachers to undertake routine administrative and clerical tasks?	1	2	3	4	376

Section 10: Continuing Professional Development (CPD)

10a Overall, which of the following staff in your school have received appropriate levels of professional advice and support on ICT?
Please tick all that apply

School leaders	1	377
Teachers	2	
Teaching assistants	3	
ICT technicians	4	
Other support staff	5	
Or tick: **None of these**	6	

10b Overall, which of the following staff in your school have received appropriate levels of guidance on the use of ICT?
Guidance includes signposts to relevant opportunities, resources and sources of information

Please tick all that apply

School leaders	1
Teachers	2
Teaching assistants	3
ICT technicians	4
Other support staff	5
Or tick: **None of these**	6

406

10c Overall, which of the following staff in your school have received appropriate levels of ICT related professional development?
Please tick all that apply in each column

Professional development in ICT-related:
basic skills 407 *practice* 408

	basic skills	practice
School leaders	1	1
Teachers	2	2
Teaching assistants	3	3
ICT technicians	4	4
Other support staff	5	5
Or tick: **None of these**	6	6

10d What are the main sources of ICT-related professional advice and support used by staff in your school?
Please tick all that apply

Colleagues	1
An advanced Skills Teacher (AST)	2
Online communities	3

(an 'online community' is a peer group which makes use of ICT to commuinicate, for example, to share best practice)

Subject associations	4
National strategy consultants	5
LEA advisers	6
Other LEA staff	7
Government Agencies (such as Becta, Ofsted, QCA)	8
Other source	9
Don't know	10

409

10e Please show how many staff in your school are very confident, confident, or not confident in using ICT in their job
Please write in number

	Very confident	Confident	Not confident
Number of school leaders who are	410-412	413-415	416-418
Number of teaching staff who are	419-421	422-424	425-427
Number of support staff who are	428-430	431-433	434-436

Section 11: Access to ICT outside of school

11a Does your school make computers available for assignment to pupils/families through loan schemes or other arrangements?

*Please tick **one** box*

Yes ☐ 1   437

No ☐ 2

11b How many current members of staff have access to a computer at home (including computers loaned to them by the school)?

	Please write in number:			*OR TICK: Don't know*	
School leaders				☐ 1	441
	438-440				
Teaching staff				☐ 1	445
	442-444				
Support staff				☐ 1	449
	446-448				

11c Are your school's ICT facilities available during out of school hours for use by:
('Out of hours' access means before school, during lunchtime, after school, or during school holidays)

*Please tick **one** box on each line*

	Yes	No	
Pupils?	☐ 1	☐ 2	450
Staff?	☐ 1	☐ 2	451
The local community?	☐ 1	☐ 2	452

Section 12: Technical support

12 What are the main sources of ICT technical support currently used in your school?
(Technical support provided as part of a 'managed service' should be recorded under the 'other external service supplier' category)

Please tick all that apply

LEA ☐ 1   453

Other external service supplier ☐ 2

Other school(s) or FE college(s) ☐ 3

School's own ICT support staff ☐ 4

School's own teaching staff ☐ 5

Other sources ☐ 6

Section 13: Expenditure on ICT

13 How much (in £s) did your school spend on ICT in the 2003-2004 financial year (including expenditure on network infrastructure, computers, peripherals, software & content, training, ICT-related telecoms services, ISPs, technical support)?

£ ☐ , ☐☐☐ , ☐☐☐   454-460

Section 14: Strategic issues

14a Does your school have an ICT leadership group (or a senior manager with designated responsibility for ICT)?

*Please tick **one** box*   Yes ☐ 1   461

No ☐ 2

14b Does your school improvement plan include a strategy for implementing, evaluating and reviewing the use of ICT?

*Please tick **one** box*   Yes ☐ 1   462

No ☐ 2

14c What are the main ways in which your school disposes of obsolete/broken ICT equipment?

Please tick all that apply   Cascade within the school ☐ 1   463

Sell or give away ☐ 2

Use a vendor for recycling or disposal ☐ 3

Dispose as refuse ☐ 4

Other ☐ 5

Section 15: Completion time

15 How long did you spend completing this form?

Please write in: ☐☐☐ minutes   464-466

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE
Please return it in the envelope provided to:
TNS
WESTGATE
LONDON W5 1UA

Acknowledgements

This study was carried out by Taylor Nelson Sofres (TNS) Social, on behalf of the Department for Education and Skills.

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The views expressed in this report are the authors' own and do not necessarily reflect those of the Department for Education and Skills.

ICT in Schools Survey 2004

The ICT in Schools programme is central to the Government's ongoing programme of school reforms. *Fulfilling the Potential,* launched by the Secretary of State for Education and Skills in May 2003, outlines future directions for ICT as an enabler in whole school development and teaching and learning. Copies of *Fulfilling the Potential* are available on www.dfes.gov.uk/ictinschools. Research and evaluation is being undertaken using a variety of techniques, both qualitative and quantitative, and at both national and local levels.

Below you can find a list of the reports published so far in the ICT in Schools Research and Evaluation series, produced by Becta for the Department for Education and Skills (DfES).

All of the reports in the series can be found on the Becta Research website at www.becta.org.uk/research and can be ordered from the DfES publication order line (0845 60 222 60).

1. ImpaCT2 – Emerging Findings (DfES/0812/2001, Becta 2001)

2. NGfL Pathfinders – Preliminary Report on the Roll-out of the NGfL Programme in 10 Pathfinder LEAs (DfES/0813/2001, Becta 2001)

3. Computers for Teachers – Evaluation of Phase 1: Survey of Recipients (ISBN 1 84185 656 8, Becta 2001)

4. Using ICT to Enhance Home School Links (ISBN 1 84185 655 X, Becta 2002)

5. Young People and ICT (DfES/0250/2002, Becta 2002)

6. Total Cost of Ownership (TCO): A Review of the Literature (website only)

7. ImpaCT2 – The Impact of Information and Communication Technology on Pupil Learning and Attainment (DfES/0696/2002, Becta 2002)

8. ImpaCT2 – Learning at Home and School: Case Studies (DfES/0741/2002, Becta 2002)

9. ImpaCT2 – Pupils' and Teachers' Perceptions of ICT in the Home, School and Community (DfES/0742/2002, Becta 2002)

10. NGfL Pathfinders – Second Report on the Roll-out of the NGfL Programme in 10 Pathfinder LEAs (DfES/0743/2002, Becta 2002)

11. NGfL Pathfinders – Final Report on the Roll-out of the NGfL Programme in 10 Pathfinder LEAs (DfES/0781/2002, Becta 2003)

12. Young People and ICT – Findings from a Survey Conducted Autumn 2002 (DfES/0789/2002, Becta 2003)

13. Computers for Teachers – An Evaluation of Phase 2: Survey of Recipients (DfES/0782/2002, Becta 2003)

14. Computers for Teachers – A Qualitative Evaluation of Phase 1 (DfES/0327/2003, Becta 2003)

15. Evaluation of Curriculum Online: Report of the Baseline Survey of Schools (website only)

16. ICT Research Bursaries: A Compendium of Research Reports (DfES/0791/2003, Becta 2003)

17. ICT and Attainment: A Review of the Research Literature (DfES/0792/2003, Becta 2003)

18. ICT and Pedagogy: A Review of the Research Literature (DfES/0793/2003, Becta 2003)

19. Laptops for Teachers: An Evaluation of the First Year (DfES/00132/2004, Becta 2004)

20. Evaluation of Curriculum Online: Report of the Follow-up Survey of Schools (website only)

21. Evaluation of Curriculum Online: Report of the Qualitative Study of Schools Year 1 (website only)

ICT in Schools Survey 2004

The views expressed in this report are the authors' and do not
necessarily reflect those of the Department for Education and Skills.

Full text of this document is available at http://www.becta.org.uk/research