

Evaluation of Curriculum Online Report of the third survey of schools

Sarah Kitchen, Helen Mackenzie, Sarah Butt and Steven Finch,
National Centre for Social Research



Contents



Contents	Page
Executive summary	7
1 Introduction	11
1.1 Background	11
1.2 Survey objectives and methodology	11
1.3 Analysis	11
1.4 Respondent characteristics	12
1.5 Report structure	12
2 Curriculum Online website	13
2.1 Awareness and knowledge of Curriculum Online	13
2.2 Exposure to the website	14
2.2.1 Frequency of visiting the website	14
2.2.2 Recent exposure to the website	15
2.2.3 Preferred times for visiting the website	16
2.2.4 Using the website to access software	16
2.3 Impact of the website on the process of finding software	17
2.3.1 Sources of information for finding software	17
2.3.2 Ease of finding relevant software	20
2.3.3 Quality of software	22
2.4 Views on the Curriculum Online website	25
2.4.1 Ratings of website	25
2.4.2 Suggested improvements to Curriculum Online relating to the website	26
2.4.3 Expectations of Curriculum Online related to the website	27
Summary – Curriculum Online website	29
3 Curriculum Online funding	31
3.1 Who uses eLearning Credits (eLCs) and makes purchasing decisions?	31
3.2 Spending on curriculum-related software	32
3.3 Views of Curriculum Online funding	33
3.3.1 Views on level of funding	33
3.3.2 Expectations of Curriculum Online related to funding	33
Summary – Curriculum Online funding	34
4 ICT usage and attitudes	35
4.1 Extent of use of ICT	35
4.1.1 Frequency of use in lessons	35
4.1.2 Use of ICT for homework and lesson planning	36
4.1.3 Attitudes towards using ICT in lesson planning	37
4.2 Pupil access to ICT outside lesson time	39
4.3 Importance of ICT	40
4.3.1 Key Stages 1 and 2	40

4.3.2	Key Stages 3 and 4	41
4.4	Views on how ICT facilitates personalisation	42
4.4.1	Attitudes towards the role of ICT in personalisation	42
4.4.2	Conditions to support personalisation	42
4.5	Teacher confidence and enthusiasm	43
	Summary – ICT usage and attitudes	44
5	ICT resources	45
5.1	Resources available	45
5.1.1	Pupil-to-computer ratios	46
5.1.2	Resources available to teachers	46
5.2	Views on resources available	48
5.2.1	Primary schools	48
5.2.2	Secondary schools	48
5.3	Internet and networking	50
5.3.1	Internet connections	50
5.3.2	Speed of internet connection	50
5.3.3	Number of internet connections	51
5.3.4	Location of computers and internet connections in schools	52
5.3.5	Networking	54
5.4	Online learning environments (OLEs)	55
	Summary – ICT resources	57
6	Conclusions	59
7	Appendix A Methodology	61

Executive summary



This report presents the findings of the third survey of schools carried out as part of the evaluation of Curriculum Online. The survey was conducted in maintained primary and secondary schools in England during the 2005 autumn term. One questionnaire collected school-level information for each school and additional questionnaires collected data for selected subject areas. This report includes findings related to: awareness of Curriculum Online; use of the website; the impact of eLearning Credits (eLCs) on spending and purchasing processes; changes in the use of ICT in teaching and attitudes towards the role of ICT; and changes in the levels of ICT resources in schools.

Curriculum Online website

- The majority of subject respondents (77% in primary schools and 80% in secondary schools) were aware of Curriculum Online, but awareness had not increased between the second survey in 2003 and the third survey in 2005. Levels of perceived knowledge of Curriculum Online also remained unchanged between 2003 and 2005.
- There was an increase in the proportion of primary subject respondents who had visited the Curriculum Online website between 2003 and 2005 but exposure to the website remained unchanged among other groups. Most school respondents (80% in primary schools and 88% in secondary schools) had visited the Curriculum Online website. Secondary school respondents remained more likely than primary school respondents to be frequent visitors to the Curriculum Online website. At the third survey, however, secondary school respondents were less likely than they had been at the second survey to have visited the website in the current school term.
- The majority of school respondents who had visited the Curriculum Online website had used it to search for products to purchase. Primary subject respondents who had visited the website were more likely to have downloaded free material than to search for products to purchase. The Curriculum Online website was mentioned as a source of information for selecting software by the majority of school respondents (57% in primary schools and 71% in secondary schools). This was a lower proportion of secondary school respondents than in 2003 while the proportion of primary school respondents was similar. Suppliers' catalogues were the most commonly used source of information for selecting software.

- The majority of subject respondents reported that it was 'very' or 'quite' easy to find relevant software for their subject and the proportions giving these ratings had increased significantly since the first survey at each key stage. Most subject respondents rated the software available for their subject as 'very good' or 'good' and there were increases in the proportions giving these ratings since the first survey. There were lower ratings for ease of finding software and content and quality of software for Key Stage 1 science, indicating possible difficulties in teachers finding appropriate products for science at this level.
- The Curriculum Online website was highly rated by the majority of respondents for being easy to use, for the information provided about products and for finding relevant products. Improvements were seen in the proportions of school respondents rating the website as 'very' or 'quite' good for these aspects compared with the second survey, particularly among secondary school respondents.

Curriculum Online funding

- Awareness of eLearning Credits (eLCs) was very high with most subject respondents having heard of them. The majority of schools have chosen to hold their eLCs centrally rather than distributing them among subjects. In secondary schools there has been a move towards more centralised systems for purchasing software since the introduction of eLCs. Only a quarter (26%) of secondary schools in 2005 said that departments selected software independently.

- Spending on software for the curriculum has increased considerably since the introduction of eLCs, particularly in primary schools. By 2005, primary schools spent an average of £21.26 per pupil while secondary schools spent an average of £13.60.
- There has been a corresponding increase in satisfaction with the amount of funding available for curriculum-related software. The majority of school respondents (59% in primary schools and 55% in secondary schools) thought that the amount of funding was 'about right'. Satisfaction with funding for software was considerably higher than satisfaction with the amount of funding for improving ICT facilities or for technical support.
- Views of Curriculum Online in relation to purchasing were generally positive. The majority of school respondents thought Curriculum Online helped schools purchase software that gave value for money and helped make purchasing software more efficient.

ICT usage and attitudes

- The frequency with which teachers used ICT resources in lessons increased between 2002 and 2005, particularly in primary schools. There was a particularly large increase in the use of interactive whiteboards, with more than two thirds (69%) of primary subject respondents saying that they were used in at least half of lessons.
- In secondary schools it had become more common to set homework requiring the use of a computer, with 30% of subject respondents saying that homework requiring computer usage was often set for their subject.
- Paper sources still accounted for the greater proportion of teachers' lesson planning, but the average proportion of planning using digital sources had increased to 32% for teachers in primary schools and 25% for teachers in secondary schools.
- Access to computers outside lessons was offered to pupils through formal clubs in more than three fifths (62%) of primary schools and nine in 10 (89%) secondary schools. The majority of secondary schools (85%) also offered informal access to computers outside lessons but this kind of access was only available in 35% of primary schools. The proportion of primary schools providing access to computers through formal clubs had increased slightly since the first survey and the proportion

that did not provide any access to pupils outside lessons fell slightly from 30% to 24%.

- ICT was increasingly seen as having an important role in teaching and learning with at least three quarters of subject respondents stating that ICT was 'very' or 'quite' important to their subject at Key Stages 1 to 4. Most subject respondents felt that ICT could help in responding to different pupil abilities and in improving the attainment of pupils.

ICT resources

- The availability of ICT resources had increased in both primary and secondary schools between the baseline survey in 2002 and the third survey in 2005. The largest increases were seen in the availability of interactive whiteboards, with the increases occurring between 2003 and 2005. In primary schools the average number of interactive whiteboards available rose from two in 2003 to six in 2005. In secondary schools the average number of interactive whiteboards rose from five in 2003 to 18 in 2005.
- The pupil-to-computer ratio had improved in both primary and secondary schools since the baseline survey. The average number of pupils per computer was 6.0 in primary schools and 3.7 in secondary schools.
- The proportion of subject respondents with access to ICT resources dedicated to their subject increased in both primary and secondary schools. The biggest increases were seen in the availability of dedicated laptops and, in particular, interactive whiteboards. Almost half (49%) of primary subject respondents had access to dedicated interactive whiteboards compared with just 6% in the baseline survey. In secondary schools, more than half (52%) of subject respondents had access to dedicated interactive whiteboards compared with 12% in the baseline survey.
- Satisfaction with the quantity of resources available increased in primary and secondary schools. However, the majority of subject respondents in secondary schools still felt that they had fewer desktop computers than they needed to deliver the curriculum.
- The majority of schools had at least one broadband internet connection. Broadband was available in 86% of primary schools and 87% of secondary schools. The number of primary schools with broadband has increased fourfold, up from 21% in the baseline survey, while the proportion of secondary schools

with broadband has remained similar since 2002. Accordingly, satisfaction with the speed of the internet rose significantly in primary schools with 64% of subject respondents agreeing that the internet is fast enough for most or all requirements compared with 35% in the baseline survey, while there was little change in satisfaction levels in secondary schools.

- Networking had increased in both primary and secondary schools. Half (51%) of primary schools had all computers networked, up from a third (32%) in the baseline survey. 86% of secondary schools had all computers networked, up from 64% in the baseline survey. Online learning environments (OLEs) are an increasingly common feature in secondary schools with half (50%) already in possession of one and a further 32% planning to establish one in the next two years.



Introduction



This report presents findings from the third survey of schools conducted by the National Centre for Social Research (NatCen) as part of the evaluation of the Curriculum Online programme.

1.1 Background

Curriculum Online has been developed as part of the Government's drive to encourage the use of ICT to help improve standards in schools. Curriculum Online is intended to provide access to a wide range of digital materials to support teaching and learning across the curriculum. A dedicated website was launched in January 2003 where teachers can search for digital materials from accredited suppliers to meet their specific requirements. Additional funding has been released to schools in the form of eLearning Credits (eLCs) which can only be used to purchase digital materials from accredited Curriculum Online suppliers. The first tranche of funding was released in the autumn of 2002 and £100 million has been set aside for each of the academic years between 2003 and 2006.

1.2 Survey objectives and methodology

The Department for Education and Skills (DfES) contracted NatCen and the University of Bristol in 2002 to conduct a four-year evaluation of Curriculum Online in order to assess:

- the educational impact of Curriculum Online in schools
- the operational effectiveness of the programme
- the impact that it has on the industry (suppliers of educational materials).

The educational impact of Curriculum Online has been measured through a series of surveys in schools, supported by qualitative work. This research aimed to examine the impact that Curriculum Online had over time on teaching and learning styles and pupil motivation and attainment.

The first school survey was conducted in the autumn of 2002, prior to the full launch of the Curriculum Online website, to provide baseline measures of the ICT resources available to teachers and the ways in which these resources were being used. The second survey was conducted in the autumn of 2003 to examine the impacts that Curriculum Online had in its first year. The third survey took place in the autumn of 2005 and was designed to provide evidence of the impacts of Curriculum Online after a longer period of time.

The school surveys were conducted in maintained primary and secondary schools in England. The sample for

the third survey consisted of schools that had participated in the first and second surveys. Interviewers from NatCen's field force visited the schools to distribute self-completion questionnaires. In each school one questionnaire collected school-level information on the resources available while additional questionnaires (three in primary schools, six in secondary schools) collected data for selected subject areas. School-level questionnaires were completed by 236 primary schools and 195 secondary schools, giving response rates of 90% among primary schools and 80% among secondary schools.

A more detailed account of the methodology used for the study can be found in Appendix A of this report.

1.3 Analysis

In order to measure impacts over time, the sample of schools analysed for this report includes only those schools that participated in each of the three surveys. Therefore, schools that took part in the first and second surveys but not the third survey are not included in analysis of the earlier surveys. The analysis sample of subject respondents includes all subject respondents from schools that participated at the third survey. At the third survey there were 650 productive subject respondents from responding primary schools and 954 productive subject respondents from responding secondary schools.

The sample of schools has been weighted to correct for selection probabilities. Weighting for non-response was found, after examination, to be unnecessary as the achieved sample did not under-represent or over-represent particular types of school. Tables and figures in this report show weighted percentages and means and unweighted sample sizes.

It is important to note the unweighted bases at the foot of tables and figures 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 levels within which we can be 95% confident that the true answer will lie (in other words, there is only a one 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 $\pm 4\%$, that is, between 46% and 54%. (These confidence limits assume a simple random sample and no adjustment has been made for the effects of clustering. Such an adjustment would increase the confidence limits slightly.)

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

- [] to indicate a percentage or mean based on fewer than 50 respondents
- * to indicate a percentage value of less than 0.5%
- to indicate a percentage value of zero.

Sample size	Approximate 95% confidence limits for a percentage result of:		
	10% or 90% +/-	30% or 70% +/-	50% +/-
50	8	13	14
100	6	9	10
250	4	6	6
500	3	4	4
1,000	2	3	3

1.4 Respondent characteristics

The roles of respondents completing the primary and secondary school questionnaires in the 2005 survey are shown in Table 1.1. In three quarters (75%) of primary schools, the school questionnaire was completed by the ICT co-ordinator, while in 11% it was completed by the headteacher. In secondary schools, the questionnaire was most often completed by a head of ICT (44%) or ICT co-ordinator (31%), while in 9% of secondary schools a deputy or assistant head completed the questionnaire.

Table 1.1 Role of school respondents

Role	Primary school (%)	Secondary school (%)
ICT co-ordinator	75	31
Head of ICT	4	44
Headteacher	11	1
Deputy/assistant headteacher	1	9
Systems/network manager	–	5
ICT technician/manager	–	2
ICT teacher	1	1
Other	8	2
Not answered	1	6

Base: all schools (primary: 236; secondary: 195)

Table 1.2 shows the roles of respondents completing the subject questionnaires in 2005. Most (80%) subject respondents in primary schools were subject co-ordinators, although 8% of subject questionnaires were completed by a headteacher or deputy/assistant headteacher. Subject respondents in secondary schools were most likely to be heads of department (82%), while 9% described themselves as subject co-ordinators. Findings in this report relating to 'teachers' thus refer to mostly senior staff and should not be taken to be representative of all teachers.

Table 1.2 Role of subject respondents

Role	Primary (%)	Secondary (%)
Subject co-ordinator	80	9
Head of department	4	82
Headteacher	4	1
Deputy/assistant headteacher	4	–
Subject/class teacher	2	7
Key stage co-ordinator	1	–
Other	4	1
Not answered	2	1

Base: all subject respondents (primary: 650; secondary: 954)

1.5 Report structure

Chapter 2 presents findings relating to the Curriculum Online website and access to software, including teachers' views on the quality of software available. Findings related to Curriculum Online funding and processes for purchasing software are presented in Chapter 3. Chapter 4 examines teachers' use of ICT resources for teaching and learning and attitudes towards the role of ICT in the curriculum. Chapter 5 looks at the availability of ICT resources and the ICT infrastructure in schools.

Curriculum Online website



This chapter assesses the impact of the Curriculum Online website on schools. The chapter begins by examining awareness of the website among teachers and the extent to which schools and teachers are making use of it. It assesses the impact that Curriculum Online has had on helping teachers to find appropriate software easily and concludes by discussing teachers' views of the website. Throughout the chapter, findings from the third survey will be compared with findings from the baseline and the second survey.

2.1 Awareness and knowledge of Curriculum Online

Awareness of Curriculum Online among subject respondents was fairly high. Four in five (80%) secondary subject respondents and just under this proportion (77%) of primary subject respondents had heard of Curriculum Online (Figure 1). Awareness of Curriculum Online rose substantially between the baseline and second survey but did not increase significantly in the following two years.

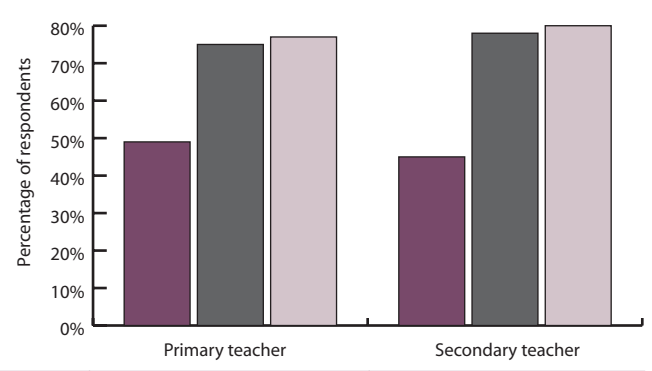
In primary schools, subject respondents' awareness of Curriculum Online tended to be higher if the school respondent had visited the Curriculum Online website. Four in five (80%) primary subject respondents with a school respondent who had visited the site at least once had heard of Curriculum Online, compared with 67% of teachers whose school respondent had never used the website. This suggests that in primary schools, school respondents' experience of the website could be generating an increase in subject respondents' awareness of Curriculum Online. There was not a corresponding relationship in secondary schools. This may be a reflection of the smaller size of primary schools facilitating closer contact between the school and subject respondents.

The proportion of school respondents who felt they knew 'a lot' or 'a fair amount' about Curriculum Online was considerably higher at the third survey than at the first survey, but had not increased since the second survey (Figure 2). 55% of primary school respondents and 66% of secondary school respondents felt they knew 'a lot' or a 'fair amount' at the third survey compared with 17% and 35% respectively at the first survey. Secondary school respondents were more confident in their knowledge of Curriculum Online, with 20% saying they knew 'a lot', compared with just 7% of primary school respondents. Perceived levels of knowledge remained similar between

the second and third surveys, which suggests a levelling out of school respondents' knowledge of Curriculum Online.

Subject respondents' knowledge of Curriculum Online also increased between the baseline and third survey, although only a minority felt they knew 'a lot' or 'a fair amount'. Overall, 22% of primary subject respondents and 18% of secondary subject respondents felt that they knew 'a lot' or 'a fair amount' about Curriculum Online, compared with 5% of both groups in the baseline survey (Figure 2). This increase is perhaps not as substantial as might have been expected, since the website had been operating for almost three years when the third survey was conducted. Furthermore, the proportion of primary and secondary subject respondents claiming to know 'a lot' or 'a fair amount' about Curriculum Online did not improve between the second and third surveys.

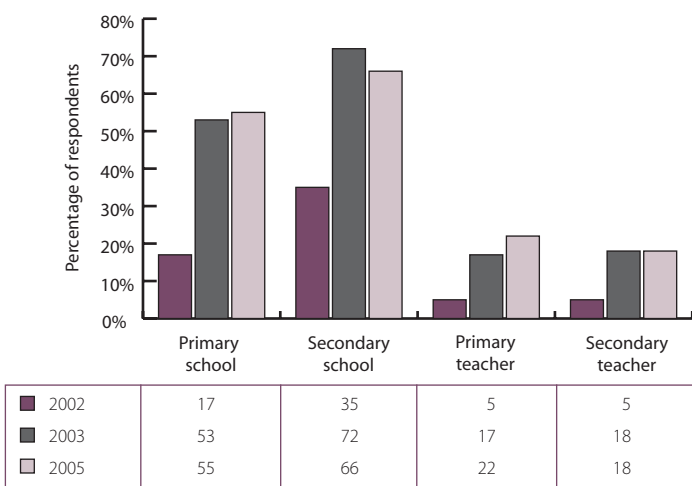
Figure 1 Subject respondents' awareness of Curriculum Online



■ 2002	49	45
■ 2003	75	78
■ 2005	77	80

Base: all subject respondents, excluding those who did not give an answer, at baseline/second/third survey (primary teacher: 664/636/648; secondary teacher: 1002/928/952)

Figure 2 Knowledge of Curriculum Online (percentage of respondents who knew 'a lot' or 'a fair amount' about Curriculum Online)



Base: all aware of Curriculum Online at baseline/second/third survey (primary school: 236/236/236; secondary school: 195/195/195; primary teacher: 308/461/492; secondary teacher: 467/718/762)

Table 2.1 How teachers first heard about Curriculum Online

	Primary teachers		Secondary teachers	
	2003 (%)	2005 (%)	2003 (%)	2005 (%)
From the headteacher	9	13	4	4
From the ICT coordinator	44	36	27	29
From someone else in the school	12	13	23	28
From newspaper or other media	24	23	39	26
From LEA	3	2	–	–
From numeracy/literacy consultants	2	*	–	–
Some other way	6	13	7	13
Base: All subject respondents aware of Curriculum Online and who gave a response to the question	444	467	694	736

Secondary subject respondents for English who had heard of Curriculum Online were more likely to state that they knew 'a lot' (7%) about it than respondents for science (1%), modern languages (0%) and geography (0%).

As was observed in the second survey, the majority of subject respondents first heard about Curriculum Online from a source within the school, with the ICT co-ordinator the most common source (36% for primary teachers and 29% for secondary teachers – Table 2.1). Just over a quarter

(26%) of secondary teachers first heard about Curriculum Online from newspapers or other media, but this was a smaller proportion than in the second survey (39%).

2.2 Exposure to the website

Most school respondents (80% in primary schools and 88% in secondary schools) had visited the Curriculum Online website on at least one occasion. 54% of primary subject respondents and just under half (49%) of secondary subject respondents had visited the website. The proportions of school and subject respondents who had visited the Curriculum Online website has not changed significantly since the second survey, with the exception of primary subject respondents where the proportion had increased from 46% (Figure 3).

Primary subject respondents' exposure to the Curriculum Online website was related to whether their school respondent had visited the site. Nearly three fifths (57%) of primary teachers whose school respondent had visited the website had also visited the site themselves, compared to just over two fifths (44%) whose school respondent had not visited the site. This provides a further indication that school respondents' use of the Curriculum Online website was leading to greater exposure among subject respondents in primary schools.

2.2.1 Frequency of visiting the website

Among school respondents who had visited the Curriculum Online website, under a third (29%) in primary schools and more than two fifths (44%) in secondary schools visited the website at least once a month (Figure 4, Table 2.2). The proportion of primary school respondents visiting the website at least once a month had fallen from 38% in the second survey. A significantly higher proportion of primary school respondents stated in the third survey that they visited the website less often than once a month than in the second survey (55% compared with 43%), while the proportion who had only visited the website once remained similar (16% compared with 18%). This pattern suggests a trend towards less frequent usage of the Curriculum Online website among primary school respondents. The proportion of secondary school respondents who had visited the website and who accessed it at least once a month had not changed significantly since the second survey.

More than a third (35%) of primary subject respondents and just over a quarter (26%) of secondary subject respondents who had visited the Curriculum Online website did so at least once a month. Almost a quarter

(23%) of secondary subject respondents who had used the site had only used it once. The frequency with which primary and secondary subject respondents used the Curriculum Online website did not alter significantly between the second and third surveys. However, the proportion of primary subject respondents who had visited the site only once fell from 24% at the second survey to 15% at the third survey. This, along with a corresponding slight increase in the other frequency categories, suggests primary subject respondents were becoming more likely to make return visits to the website.

Among subject respondents, there were few differences in frequency of visits to the Curriculum Online website by subject. However, in secondary schools, English teachers were slightly more likely (17%) than teachers of modern languages (9%) to visit the website at least once a month.

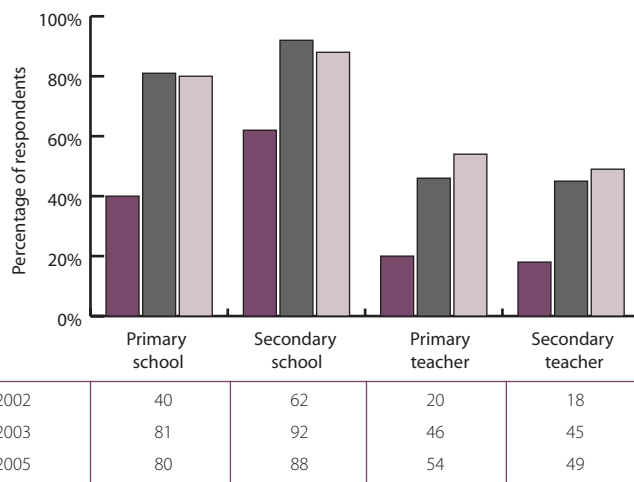
In secondary schools, subject respondents' usage of the Curriculum Online website was linked to how often they made use of ICT in lessons. Subject respondents who used interactive whiteboards in half or more of their lessons were more likely to have visited the Curriculum Online website than those who used interactive whiteboards in less than half their lessons (54% compared to 46%). Furthermore, subject respondents who used interactive whiteboards in at least half their lessons were twice as likely to visit the Curriculum Online website at least once a month than those who used them in less than half of lessons (15% compared with 7%). This might suggest that the Curriculum Online website has attracted teachers who integrate ICT into their teaching.

2.2.2 Recent exposure to the website

More than two fifths of both primary and secondary school respondents (43% and 42% respectively) who had visited the Curriculum Online website stated that they had most recently done so in the current term (autumn 2005). Almost a quarter (23%) of primary school respondents who had visited the Curriculum Online website stated that they had last done so in the autumn of 2004 or earlier, that is, not in the past year. The proportion of secondary school respondents who had visited the site and who had most recently done so in the current term fell from 61% in the second survey to 42% in the third survey. These findings may indicate that usage of the website has begun to decline.

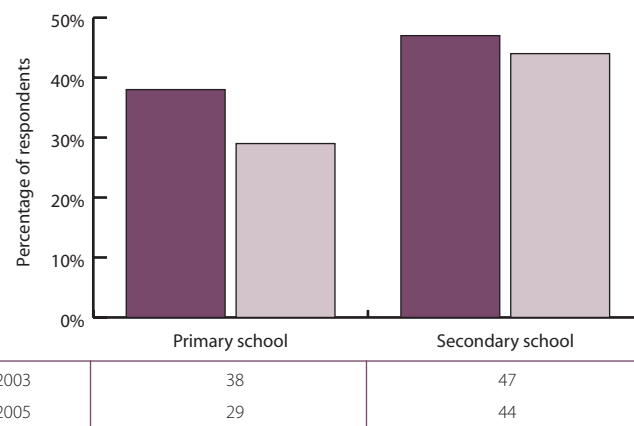
Primary subject respondents who had visited the Curriculum Online website were more likely than secondary subject respondents (51% compared with

Figure 3 Percentage of respondents who had visited the Curriculum Online website



Base: (primary school: 232-236; secondary school: 193-195; primary teacher: 638-669; secondary teacher: 929-1011)

Figure 4 Percentage of school respondents who had visited the Curriculum Online website who did so once a month or more often



Base: all school respondents who had visited website (primary school – 2005: 182, 2003: 186; secondary school – 2005: 173, 2003: 177)

40%) to have most recently done so in the current term (autumn 2005). The proportion of subject respondents stating that they had last visited the website at least a year ago was very similar for both groups, with 16% of primary teachers and 15% of secondary teachers who had visited the website saying their most recent visit had been in the autumn of 2004 or earlier.

Table 2.2 How teachers first heard about Curriculum Online

	Primary school		Secondary school		Primary teachers		Secondary teachers	
	2003 (%)	2005 (%)	2003 (%)	2005 (%)	2003 (%)	2005 (%)	2003 (%)	2005 (%)
More often than once a month	12	7	18	13	10	12	6	6
About once a month	26	22	29	31	19	22	22	20
Less often than once a month	43	55	44	48	46	51	46	51
Only visited once	18	16	8	9	24	15	26	23
Base: all who had visited website and gave a response to the question	186	182	177	173	271	347	429	478

Table 2.3 Usual time of visits to the Curriculum Online website

	Primary school (%)	Secondary school (%)	Primary teacher (%)	Secondary teacher (%)
Earlier than 9:30am	85	69	86	80
Between 9:30am and midday	13	20	12	11
Between midday and 4:00pm	2	4	1	3
Later than 4:00pm	*	6	1	5
Base: all who had visited website and gave a response to the question	171	164	336	442

Table 2.4 Using the Curriculum Online website to access software – Primary respondents

	Primary school		Primary teacher	
	2003 (%)	2005 (%)	2003 (%)	2005 (%)
Used website to search for products to purchase	56	61	25	26
Used website to download free material	32	30	37	35
Base: all who visited website	187	183	273	348

Table 2.5 Using the Curriculum Online website to access software – Secondary respondents

	Secondary school		Secondary teacher	
	2003 (%)	2005 (%)	2003 (%)	2005 (%)
Used website to search for products to purchase	71	68	43	46
Used website to download free material	35	29	29	30
Base: all who visited website	178	173	429	478

2.2.3 Preferred times for visiting the website

In the third survey, all respondents who stated that they had visited the Curriculum Online website at least once were asked at what time(s) of day they usually visited it. The most common time for all teachers was before 9:30am (Table 2.3). This might be expected since teachers might be more likely to have spare time at the start of the day before teaching begins. Primary school and subject respondents who had used the website most commonly did so earlier than 9:30am (85% and 86% respectively) as did four in five (80%) secondary subject respondents. Of all the groups, secondary school respondents were least likely to use the website at this time (69%), but slightly more likely to use it between 9:30am and midday (20%).

2.2.4 Using the website to access software

The majority of school respondents who had visited the Curriculum Online website had searched the catalogue of resources to purchase products. Three fifths (61%) of primary school respondents and just over two thirds (68%) of secondary school respondents who had visited the site had used it to search for products to purchase (Tables 2.4, 2.5). Additionally, nearly a third of school respondents (30% of primary school respondents and 29% of secondary school respondents) who had used the Curriculum Online website had done so to download material that was available free of charge. The proportions of school respondents using the Curriculum Online website to search for software or to download free material remained similar between the second and third surveys.

Usage of the Curriculum Online website for product searches and downloads among subject respondents did not change substantially between the second and third surveys. Secondary subject respondents were more likely than primary subject respondents to use the website to search for software to purchase – just under half (46%) of

secondary teachers stated that they had accessed the website to search for software to purchase, compared with just over a quarter (26%) of primary teachers. Around a third of primary subject respondents (35%) and secondary subject respondents (30%) reported using the website to access software that could be downloaded free of charge.

There was some variation between subjects in subject respondents' use of the Curriculum Online website. In primary schools, maths respondents were more likely than English respondents to use the website to search for products to purchase – almost a third (31%) of maths respondents used the site for this purpose, compared to just under a fifth (19%) of English respondents. In secondary schools, accessing the Curriculum Online website to search for products to purchase did not vary considerably depending on the subject taught, but English teachers were slightly more likely (57%) than geography teachers (41%) to use it for this purpose. In addition, using the website to download material available free of charge was more common among English teachers (42%) than modern languages teachers (16%) and maths teachers (26%).

Secondary school respondents used the Curriculum Online website to search for products most frequently, having done so on an average of 13 occasions (Figure 6). Primary school respondents were the most frequent users of the website for downloading materials free of charge, making an average of 13 visits for this purpose (Figure 5). The number of times respondents had used the Curriculum Online website for product searches and software did not increase significantly between the second and third surveys, as might have been expected given the time period that elapsed between the surveys.

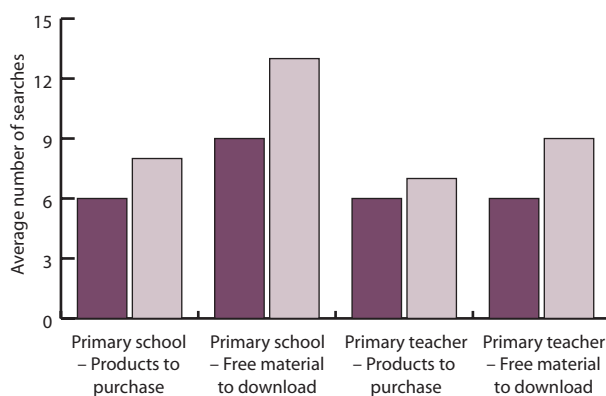
Findings on exposure to the Curriculum Online website, frequency of visits and usage of the website indicate that exposure has not increased (apart from among primary teachers) and that those who have visited the website are using it less frequently than they were in 2003.

2.3 Impact of the website on the process of finding software

2.3.1 Sources of information for finding software

At the second survey, the Curriculum Online website was found to be an established source of information used by schools to find software, but it had yet to establish itself as the preferred source of information. Findings from the third survey indicate that it has continued to be an

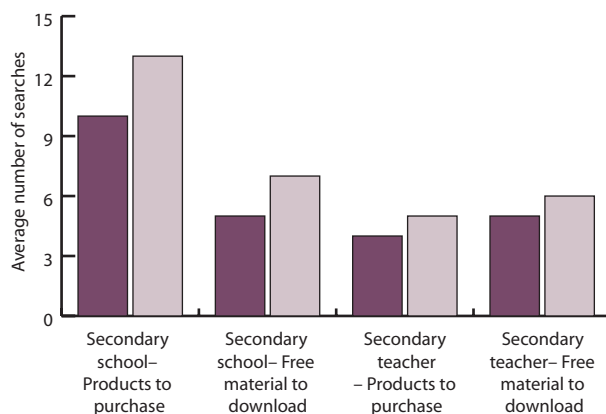
Figure 5 Average number of times searched for products to purchase and accessed free material to download through the Curriculum Online website – Primary respondents



■ 2003	6	9	6	6
■ 2005	8	13	7	9

Base: all answering, who had visited the website, at second survey/third survey (primary school – products to purchase: 96/101, free material to download: 60/55; primary teacher – products to purchase: 61/85, free material to download: 101/126)

Figure 6 Average number of times searched for products to purchase and accessed free material to download through the Curriculum Online website – Secondary respondents



■ 2003	10	5	4	5
■ 2005	13	7	5	6

Base: all answering, who had visited the website, at second survey/third survey (secondary school – products to purchase: 112/116, free material to download: 51/47; secondary teacher – products to purchase: 177/204, free material to download: 115/144)

important source of information, but it has still not become the preferred source. Almost three fifths (57%) of primary school respondents stated that they used the Curriculum Online website as a source of information when finding out about software, which is a similar proportion to that observed in the second survey (59%) (Table 2.6). Most primary school respondents (93%) used suppliers' catalogues, while a high proportion also used recommendations from contacts outside the school (86%) and recommendations from colleagues (83%).

71% of secondary school respondents said that they used the Curriculum Online website as a source of information when selecting software, a fall from 80% at the second survey. As in the second survey, the most common source of information for secondary school respondents was suppliers' catalogues, although slightly fewer stated that they used this source in the third survey (89% compared with 95%). Other common sources for secondary school respondents were recommendations from colleagues (85%, an increase from 76% at the second survey) and recommendations from contacts outside the school (79%).

Consistent with findings from the second survey, subject respondents were less likely than school respondents to use the Curriculum Online website as a source of information for selecting software (Table 2.6). Around a third (32%) of primary subject respondents stated that they used the Curriculum Online website as a source of information, a similar proportion to that observed in the second survey. The most commonly used sources of

information for primary subject respondents were suppliers' catalogues (77%), recommendations from contacts outside the school (68%) and recommendations from colleagues (64%), showing little change since the second survey. The proportion of secondary subject respondents who said they used the Curriculum Online website as a source of information when selecting software (37%) was the same as in the second survey. The sources of information most commonly mentioned by secondary teachers were the same as the second survey, namely, suppliers' catalogues (84%), recommendations from contacts outside the school (70%) and recommendations from colleagues (50%).

Subject respondents in both primary and secondary schools were slightly more likely at the third survey to state that they used suppliers' own websites than in the second survey, suggesting a possible move towards web-based sources of information. Nearly a quarter (23%) of primary subject respondents at the third survey used suppliers' websites, an increase from 15% in 2003.

Sources of information used by subject respondents when selecting software varied depending on the subject taught. In primary schools, maths respondents were more likely than science respondents to use recommendations from colleagues within their school as a source of information when finding out about software. More than four fifths (82%) of maths teachers stated that they used this source, compared to 70% of science teachers. More than four in five English and maths teachers

Table 2.6 Sources of information used when selecting software

	Primary school		Secondary school		Primary teachers		Secondary teachers	
	2003 (%)	2005 (%)	2003 (%)	2005 (%)	2003 (%)	2005 (%)	2003 (%)	2005 (%)
Curriculum Online website	59	57	80	71	30	32	37	37
Suppliers' catalogues	91	93	95	89	78	77	87	84
Suppliers' websites	56	50	73	68	15	23	28	33
TEEM website	8	6	11	7	2	1	1	1
Recommendations from colleagues	78	83	76	85	67	64	46	50
Recommendations from contacts outside the school	89	86	83	79	69	68	70	70
BETT exhibition	3	3	3	*	–	–	–	–
Other source	5	8	6	7	2	6	1	6
Not answered	1	*	1	*	1	2	*	2
Not applicable (don't select software)	–	–	–	–	12	12	3	2
Base: all	236	236	195	195	638	650	929	954

(84% and 83% respectively) stated that they used recommendations from contacts outside their school when selecting software. Science teachers were less likely to use outside recommendations, with just under three quarters (73%) stating that they used this as a source of information.

In secondary schools, geography respondents were more likely than science, modern languages and English respondents to use suppliers' catalogues, with over nine in 10 (94%) stating that they used this source. Using suppliers' websites when finding out about software was more likely among science and maths respondents with almost half (49%) of science teachers and just under this proportion (45%) of maths teachers stating that they made use of this source. Around two thirds of science, maths and English respondents (68%, 65% and 62% respectively) stated that they used recommendations from colleagues as a source of information when selecting software, which is a substantially larger proportion than teachers of modern languages (48%), geography (37%) and music (29%). In addition, maths respondents were also more likely (83%) than respondents for English (71%), modern languages (68%) and geography (57%) to use recommendations from outside the school as a source of information. Geography teachers were the least likely of all subject teachers to use outside recommendations as a source of information.

Since the second survey, the proportion of primary school respondents stating that the Curriculum Online website was the source of information they used most frequently

has remained low at just 3% (Table 2.7). However, the proportion of secondary school respondents using Curriculum Online as their main source of information has fallen, from 14% in the second survey to just 7% in the third survey. The most frequently used source of information for both primary and secondary school respondents was suppliers' catalogues (50% for primary schools and 44% for secondary schools). Despite the popularity of suppliers' catalogues, the majority of school respondents (73% in primary schools and 70% in secondary schools) stated that they would usually compare products across a range of suppliers when looking for new software to purchase, rather than only looking at products from a smaller number of trusted suppliers.

A minority of subject respondents stated that the Curriculum Online website was the source of information they used most frequently when selecting software, with just 2% of primary subject respondents and 7% of secondary subject respondents giving this response (Table 2.7). The most common main source was suppliers' catalogues, cited by around half of both primary subject respondents (51%) and secondary subject respondents (49%). Subject respondents also tended not to limit their choice of software to just a few suppliers, with around two thirds of both primary (67%) and secondary (66%) subject respondents stating that they would usually compare products across a range of suppliers when looking for new software for curriculum use.

Table 2.7 Most used source of information for selecting software (for those who used more than one source)

	Primary school		Secondary school		Primary teachers		Secondary teachers	
	2003 (%)	2005 (%)	2003 (%)	2005 (%)	2003 (%)	2005 (%)	2003 (%)	2005 (%)
Curriculum Online website	2	3	14	7	3	2	4	7
Suppliers' catalogues	49	50	40	44	56	51	54	49
Suppliers' websites	4	5	11	8	1	4	5	5
TEEM website	2	*	–	–	1	*	–	–
Recommendations from colleagues	8	9	10	16	12	13	11	10
Recommendations from contacts outside the school	32	32	24	24	27	27	26	29
BETT exhibition	1	*	2	–	–	–	–	–
Other source	3	1	–	1	1	3	1	2
Base: all who used more than one source	191	196	158	162	380	421	627	668

2.3.2 Ease of finding relevant software

Locating relevant software for curriculum use appears to have become easier for teachers between the first and the third survey. The proportions of school and subject respondents stating that it was 'very easy' to find relevant software for curriculum use were substantially higher than in the first survey (Table 2.8). This was also the case for school and subject respondents stating that it was 'very easy' or 'quite easy'. Furthermore, there was also a substantial improvement between the second and third surveys.

Among subject respondents in primary schools, ease of finding relevant software for Key Stage 1 was strongly related to use of the Curriculum Online website. Around four in five (81%) subject respondents who used the site on a regular or occasional basis rated finding software for Key Stage 1 'easy' (either 'very easy' or 'quite easy'), compared to 69% who had either never used the website or had not heard of Curriculum Online. More than a quarter (27%) of subject respondents who had never used the website rated finding software for Key Stage 1 as 'not very easy', compared to just 11% of frequent users.

In secondary schools, there was an association between ease of finding relevant software and use of the Curriculum Online website for subject respondents at both Key Stage 3 and Key Stage 4. 91% of subject respondents who had visited the website rated finding software for Key Stage 3 as 'very' or 'quite' easy, compared to four fifths (80%) of those who were non-users or had not heard of Curriculum Online. 87% of subject respondents who used the website stated that software was 'easy' to find for Key Stage 4 compared to three quarters (75%) of non-users. These findings do not

necessarily imply that using the Curriculum Online website made it easier for teachers to find relevant software, as teachers who were more confident at locating software may have been more likely to access the Curriculum Online website.

In both primary and secondary schools, ease of finding relevant software was also related to the subject taught. In primary schools, maths teachers were most likely to rate finding software as 'easy' with more than four fifths (85%) at Key Stage 1 and 90% at Key Stage 2 stating that it was 'very easy' or 'quite easy' (Table 2.9). Science teachers were least likely to rate finding software as 'easy', with around three fifths (62%) at Key Stage 1 and just over three quarters (78%) at Key Stage 2 giving this rating.

Among subject respondents in primary schools, ease of finding relevant software for Key Stage 1 was strongly related to use of the Curriculum Online website. Around four in five (81%) subject respondents who used the site on a regular or occasional basis rated finding software for Key Stage 1 'easy' (either 'very easy' or 'quite easy'), compared to 69% who had either never used the website or had not heard of Curriculum Online. More than a quarter (27%) of subject respondents who had never used the website rated finding software for Key Stage 1 as 'not very easy', compared to just 11% of frequent users.

In secondary schools, there was an association between ease of finding relevant software and use of the Curriculum Online website for subject respondents at both Key Stage 3 and Key Stage 4. 91% of subject respondents who had visited the website rated finding software for Key Stage 3 as 'very' or 'quite' easy, compared to four fifths (80%) of those who were non-users or

Table 2.8 Ease of finding relevant software

	Primary school (%)	Teacher KS1 (%)	Teacher KS2 (%)	Secondary school (%)	Teacher KS3 (%)	Teacher KS4 (%)
Very easy	12	18	20	15	26	24
Change from baseline	+8*	+8*	+9*	+11*	+5*	+5*
Change from second survey	+5	+6*	+9*	+8*	+8*	+6*
Very/quite easy	84	76	83	72	85	81
Change from baseline	+19*	+9*	+13*	+10*	+9*	+10*
Change from second survey	+12*	+6*	+9*	+1	+8*	+9*
Base: all answering	235	513	564	194	938	914

* = statistically significant change

Table 2.9 Ease of finding relevant software – Key Stages 1 and 2 subject respondents

	Key Stage 1			Key Stage 2		
	Maths (%)	English (%)	Science (%)	Maths (%)	English (%)	Science (%)
Easy	85	80	62	90	81	78
Very easy	23	21	10	28	20	14
Quite easy	62	59	53	63	62	64
Not easy	15	20	38	10	18	22
Base	181	161	171	197	175	192

Table 2.10 Ease of finding relevant software – Key Stage 3 subject respondents

	Key Stage 3					
	Maths (%)	English (%)	Science (%)	Modern languages (%)	Geography (%)	Music (%)
Easy	93	82	88	83	85	81
Very easy	35	20	27	24	16	33
Quite easy	58	62	60	59	70	48
Not easy	7	18	12	17	15	19
Base	164	154	146	167	158	149

had not heard of Curriculum Online. 87% of subject respondents who used the website stated that software was ‘easy’ to find for Key Stage 4 compared to three quarters (75%) of non-users. These findings do not necessarily imply that using the Curriculum Online website made it easier for teachers to find relevant software, as teachers who were more confident at locating software may have been more likely to access the Curriculum Online website.

In both primary and secondary schools, ease of finding relevant software was also related to the subject taught. In primary schools, maths teachers were most likely to rate finding software as ‘easy’ with more than four fifths (85%) at Key Stage 1 and 90% at Key Stage 2 stating that it was ‘very easy’ or ‘quite easy’ (Table 2.9). Science teachers were least likely to rate finding software as ‘easy’, with around three fifths (62%) at Key Stage 1 and just over three quarters (78%) at Key Stage 2 giving this rating.

In secondary schools, over four fifths of respondents for each subject at Key Stage 3 rated finding relevant software as ‘very’ or ‘quite’ easy (Table 2.10). There were still some variations between subjects, as more than nine in 10 (93%) maths teachers at Key Stage 3 stated that they thought finding software was ‘very easy’ or ‘quite easy’, a significantly larger proportion than teachers of

geography (85%), modern languages (83%), English (82%) and music (81%). It is interesting to note that although a lower proportion of music teachers rated finding relevant software as ‘very’ or ‘quite’ easy combined, around a third (33%) gave a rating of ‘very easy’ which is a considerably higher proportion than teachers of English (20%) or geography (16%).

At Key Stage 4, teachers of maths and science were more likely than teachers of English, geography and modern languages to rate finding software as either ‘very easy’ or ‘quite easy’ (Table 2.11) – almost nine in 10 maths and science teachers (90% and 87% respectively) gave this rating, compared to just over three quarters (76%) of English and geography teachers, and less than three quarters (70%) of teachers of modern languages. Comparable with findings for Key Stage 3, a high proportion (39%) of music teachers rated finding software as ‘very easy’. This is a substantially larger proportion than teachers of science (27%), English (21%), geography (13%) and modern languages (12%), suggesting that in secondary schools, locating relevant software could be a more straightforward process for the music curriculum.

Table 2.11 Ease of finding relevant software – Key Stage 4 subject respondents

	Key Stage 4					
	Maths (%)	English (%)	Science (%)	Modern languages (%)	Geography (%)	Music (%)
Easy	90	76	87	70	76	85
Very easy	33	21	27	12	13	39
Quite easy	56	55	60	58	63	46
Not easy	11	23	12	30	23	15
Base	159	148	143	163	156	145

Table 2.12 Teacher ratings of software for relevant content and technical quality

	Teacher KS1 (%)	Teacher KS2 (%)	Teacher KS3 (%)	Teacher KS4 (%)
Relevant content: very good	17	17	20	19
Change since baseline	+9*	+10*	+6*	+3
Change since second survey	+5*	+8*	+5*	+4*
Relevant content: very good/ good	86	87	86	82
Change since baseline	+12*	+12*	+9*	+8*
Change since second survey	+9*	+5*	+5*	+7*
Technical quality: very good	16	19	18	18
Change since baseline	+7*	+12*	+6*	+5*
Change since second survey	+6*	+12*	+6*	+6*
Technical quality: very good/good	90	91	88	88
Change since baseline	+11*	+11*	+6*	+9*
Change since second survey	+7*	+6*	+3	+6*
Base: all answering (relevant content/technical)	509/500	564/554	933/920	905/897

* = statistically significant change

2.3.3 Quality of software

Most subject respondents rated the software available for their subject highly for relevant content and technical quality. More than four fifths rated software for their subject as ‘very good’ or ‘quite good’ for relevant content at each key stage and around nine in 10 gave these ratings for technical quality (Table 2.12, Figure 7, Figure 8). Subject respondents’ ratings of curriculum-related software for relevant content and technical quality had improved considerably since the baseline for all four key stages. Improvements had mainly occurred between the second and third surveys.

Among primary subject respondents, there was a relationship between usage of the Curriculum Online website and ratings of software for relevant content. Although the majority of primary subject respondents who did not use the website (Key Stage 1: 82%; Key Stage 2: 83%) rated software as ‘very good’ or ‘quite good’ for relevant content, website users were still significantly more likely (90% for both key stages) to give this rating. Similarly for Key Stage 2, subject respondents who were users of the website were slightly more likely to give a positive rating for the technical quality of software than non-users (94% compared with 87%).

In secondary schools there was no association between whether subject respondents used the Curriculum Online website and ratings of the technical quality of software. However, teachers who were frequent users of the Curriculum Online website were slightly more likely than those who had never used the website to rate relevant content of software as either ‘very good’ or ‘quite good’ at Key Stage 3 (93% of frequent users, compared with 84% of non-users).

In primary schools, the use of interactive whiteboards was related to ratings for relevant content and technical quality of software. Around nine in 10 subject respondents (89% for Key Stage 1 and 90% for Key Stage 2) who used interactive

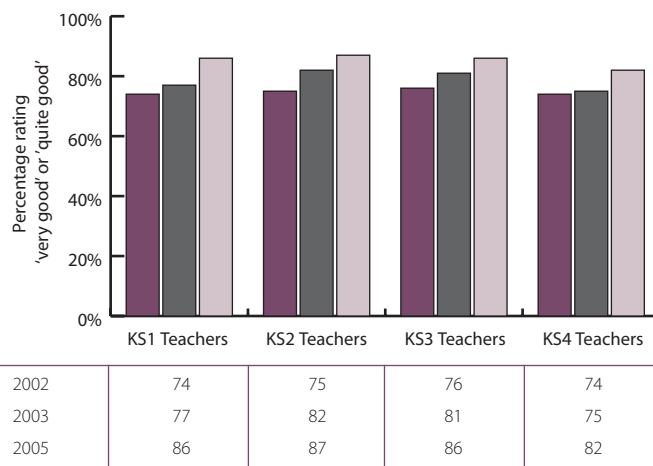
whiteboards in at least half their lessons gave a rating of 'very good' or 'quite good' for relevant content of software. Subject respondents who used interactive whiteboards in less than half their lessons were less likely to give a positive rating of software's relevant content – around four fifths (78%) of subject respondents who used interactive whiteboards less frequently rated the relevant content of software as 'very good' or 'quite good' for both Key Stage 1 (80%) and Key Stage 2 (78%).

Ratings of relevant content and technical quality varied by subject, in both primary and secondary schools. At Key Stage 1, science respondents were least likely to give positive ratings for relevant content and technical quality of software. 91% of maths respondents and 90% of English respondents rated software as 'very good' or 'quite good' for relevant content, compared to just over three quarters (77%) of science respondents. Similarly, more than nine in 10 maths and English respondents (94% and 93% respectively) rated software as 'very good' or 'quite good' for technical quality, compared to just over four in five (83%) science respondents. Maths respondents at Key Stage 2 were more likely than English and science respondents to rate software as 'very good' or 'quite good' for relevant content, with more than nine in 10 (94%) giving this response.

At Key Stage 3, English and music respondents were less likely than respondents for other subjects to rate relevant content of software positively, although the proportions were still high. 79% of English respondents and less than three quarters (74%) of music respondents rated relevant software as 'very good' or 'quite good' compared with around nine in 10 respondents for other subjects. Maths respondents at Key Stage 3 were more likely (96%) to rate the technical quality of software as 'very good' or 'quite good' than English and music teachers (84% and 76% respectively).

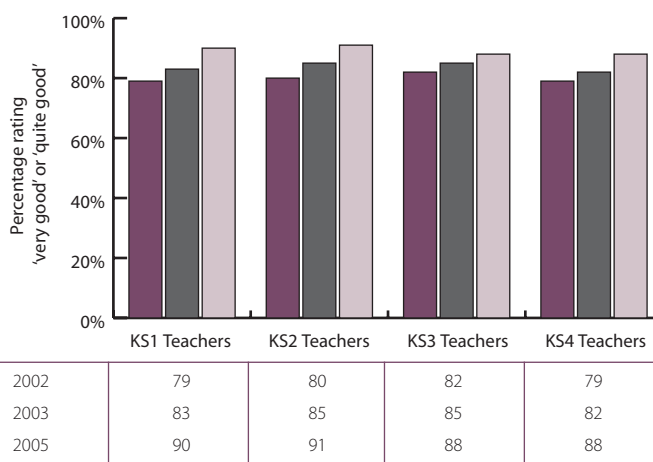
At Key Stage 4, modern languages and English respondents were less likely than respondents for other subjects to rate relevant content of software as 'very good' or 'quite good'. Nine in 10 (90%) science and music respondents and just under this proportion of maths and geography respondents (88% and 86% respectively) gave this rating, compared to just under three quarters (73%) of teachers of modern languages and just over two thirds (68%) of English teachers. Maths teachers at Key Stage 4 were slightly more likely than teachers of music, English and modern languages to positively rate the technical quality of software.

Figure 7 Percentage of subject respondents rating software as 'very good/quite good' for relevant content



Base: all primary and secondary teachers answering at baseline/second survey/ third survey (KS1 teachers: 521/492/509, KS2 teachers: 565/549/564, KS3 teachers: 972/900/933, KS4 teachers: 933/867/905)

Figure 8 Percentage of subject respondents rating software as 'very good/quite good' for technical quality

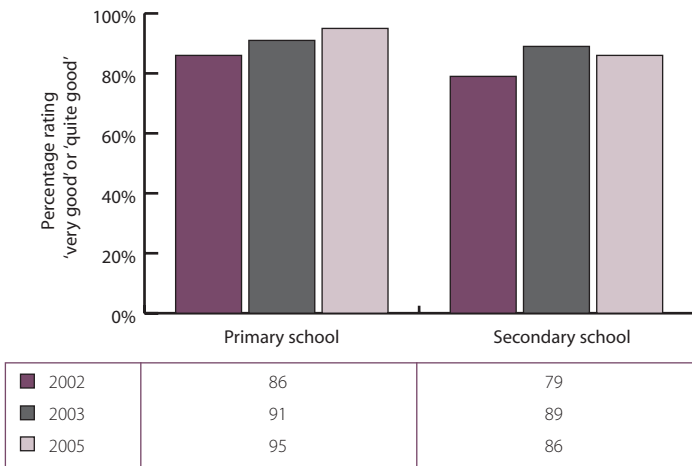


Base: all primary and secondary teachers answering at baseline/second survey/ third survey (KS1 teachers: 508/481/500, KS2 teachers: 548/538/554, KS3 teachers: 954/887/920, KS4 teachers: 914/853/897)

Table 2.13 School respondent ratings of software fitness for purpose

	Primary school			Secondary school		
	2002 (%)	2003 (%)	2005 (%)	2002 (%)	2003 (%)	2005 (%)
Good	86	91	95	79	89	86
Very good	8	14	16	9	13	15
Quite good	78	77	7	70	77	72
Not very good	14	9	5	20	11	14
Not at all good	*	–	*	–	–	0
Base: all answering	234	234	233	192	191	193

Figure 9 Percentage of school respondents rating software as 'very good/quite good' for fitness for purpose



Base: all school respondents answering at baseline/second survey/third survey (primary school: 234/234/233; secondary school: 192/191/193)

Most school respondents (95% in primary schools and 86% in secondary schools) rated the fitness for purpose of software as 'very good' or 'quite good' (Table 2.13, Figure 9). There has been a steady increase since the baseline survey in the proportion of primary school respondents giving positive ratings of software fitness for purpose. Among secondary school respondents, positive ratings of software fitness for purpose also increased between the first and third surveys. However, the most substantial increase (from 79% to 89%) occurred between the first and second surveys and there was no significant change between the second and third surveys.

2.4 Views on the Curriculum Online website

2.4.1 Ratings of website

Ratings of the Curriculum Online website were positive for being easy to use and for the information provided about products (Tables 2.14 and 2.15). The website was also rated well for finding relevant products, but slightly less so (Table 2.16). Ratings tended to be most positive among school respondents, although the majority of subject respondents who had visited the website also rated each aspect well, giving either 'very good' or 'quite good' responses. Consistent with findings from the second survey, only a small proportion of respondents chose the 'very good' options for each aspect of the website, indicating that views continued to be only moderately favourable.

Since the second survey, positive ratings of the Curriculum Online website increased among school respondents. Almost four in five (78%) secondary school respondents rated the website as 'very good' or 'quite good' for ease of use, compared to just over three in five (62%) in the second survey (Figure 10). Positive ratings of the website for information provided about products increased substantially since the second survey for both primary and secondary school respondents. Around three quarters of primary and secondary school respondents (72% and 75% respectively) rated the website as 'very good' or 'quite good' for information provided about products, compared to just over three fifths (62% and 64% respectively) in the second survey (Figure 11). Additionally, around two thirds (68%) of secondary school respondents rated the website as 'very good' or 'quite good' for finding relevant products, compared to just over half (53%) in the second survey (Figure 12).

Subject respondents' ratings of each aspect of the Curriculum Online website remained broadly similar between the second and third surveys. However, the proportion of primary subject respondents rating the website as 'very good' or 'quite good' for ease of use had decreased since the second survey from four fifths (80%) to just under three quarters (73%).

Table 2.14 Rating of Curriculum Online website for being easy to use

	Primary school (%)	Secondary school (%)	Primary teacher (%)	Secondary teacher (%)
Very good	4	9	7	4
Quite good	71	69	66	65
Not very good	13	17	7	8
Not at all good	3	2	2	3
Can't say	9	3	18	20
Base: all answering, who had visited website	177	171	336	468

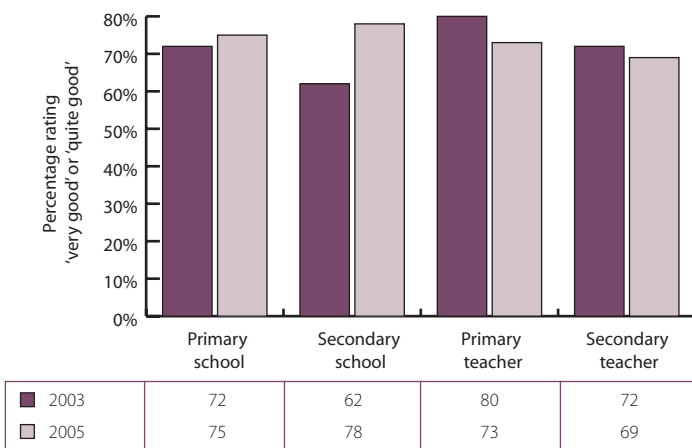
Table 2.15 Rating of Curriculum Online website for information provided about products

	Primary school (%)	Secondary school (%)	Primary teacher (%)	Secondary teacher (%)
Very good	6	8	4	6
Quite good	67	67	58	54
Not very good	10	18	8	12
Not at all good	3	1	2	1
Can't say	14	7	28	27
Base: all answering, who had visited website	176	170	337	465

Table 2.16 Rating of Curriculum Online website for finding relevant products

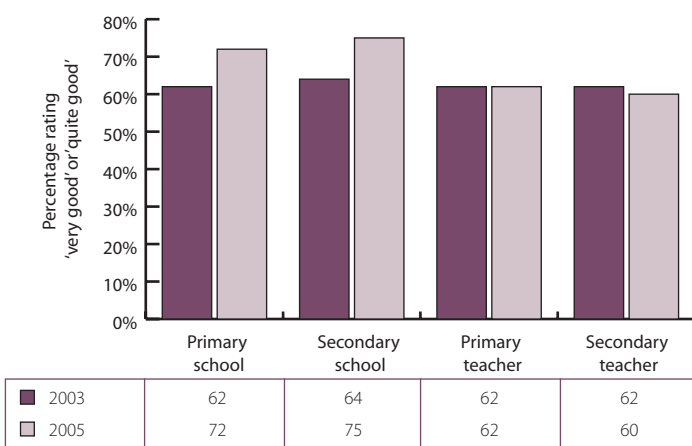
	Primary school (%)	Secondary school (%)	Primary teacher (%)	Secondary teacher (%)
Very good	4	5	4	4
Quite good	65	63	58	54
Not very good	16	25	11	15
Not at all good	2	2	1	2
Can't say	13	5	26	24
Base: all answering, who had visited website	177	171	337	466

Figure 10 Percentage rating Curriculum Online website as 'very good/quite good' for ease of use



Base: All answering who visited website at second survey/third survey (primary school: 182/177; secondary school: 177/171; primary teacher: 267/336; secondary teacher: 423/468)

Figure 11 Percentage rating Curriculum Online website as 'very good/quite good' for information provided about products



Base: All answering who visited website at second survey/third survey (primary school: 178/176; secondary school: 176/170; primary teacher: 263/337; secondary teacher: 420/465)

2.4.2 Suggested improvements to Curriculum Online relating to the website

School respondents were less likely to suggest improvements for Curriculum Online than in the second survey – just over a quarter (27%) of secondary school respondents suggested improvements compared to two fifths (40%) in the second survey. Similarly, less than a fifth (14%) of primary school respondents suggested improvements compared to a quarter (25%) in the second survey.

Primary school respondents tended to suggest improvements relating to the process of finding software. A fifth (20%) of those suggesting improvements said that searches should be quicker, while a similar proportion (18%) said that searches should produce fewer or more relevant results. Secondary school respondents' most common suggestions for improvements were concerned with improving knowledge and awareness of Curriculum Online among teachers, as well as improvements to the website. 16% of secondary school respondents suggesting improvements said that there should be more publicity and promotion of Curriculum Online, while 11% said that more training and support should be provided to help teachers use the website. These suggestions indicate a change since the second survey, when most suggestions for improvement related to the process of finding software.

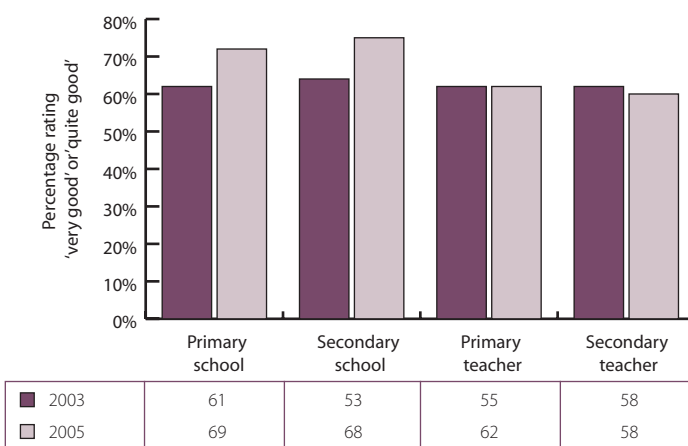
There was little change in the proportion of subject respondents suggesting improvements for Curriculum Online. In primary schools, 7% of subject respondents suggested improvements, compared to 6% in the second survey. Similarly, 12% of secondary subject respondents suggested improvements, compared to 10% in the second survey. The most common suggestions made by primary subject respondents were to make the searching process quicker and for there to be more publicity of Curriculum Online. Secondary subject respondents' most common suggestions were that it should be easier to find particular types of product and that the search function should be improved.

2.4.3 Expectations of Curriculum Online related to the website

More than three fifths (62%) of primary school respondents expected Curriculum Online to help 'a lot' or 'a little' to encourage teachers' use of ICT, while slightly fewer expected it to help with pupil attainment (55%) and to help teachers plan lessons more quickly (51%) (Figure 13). Expectations were similar among secondary school respondents with around three fifths expecting Curriculum Online to help with pupil attainment (60%) and encouraging teachers' use of ICT (62%), while half (50%) thought it would help teachers plan lessons more quickly. The proportion of primary and secondary school respondents stating that they expected Curriculum Online to impact 'a lot' or 'a little' in these ways has remained very similar since the first survey but the proportions expecting it to impact 'a lot' have decreased substantially (Figures 14 and 15). Just 8% of secondary school respondents at the third survey expected Curriculum Online to help 'a lot' with encouraging teachers' use of ICT compared to 21% at the second survey. Among primary and secondary school respondents, the proportion expecting Curriculum Online to help 'a lot' with improving pupil attainment fell from 15% at the second survey to 7% at the third survey.

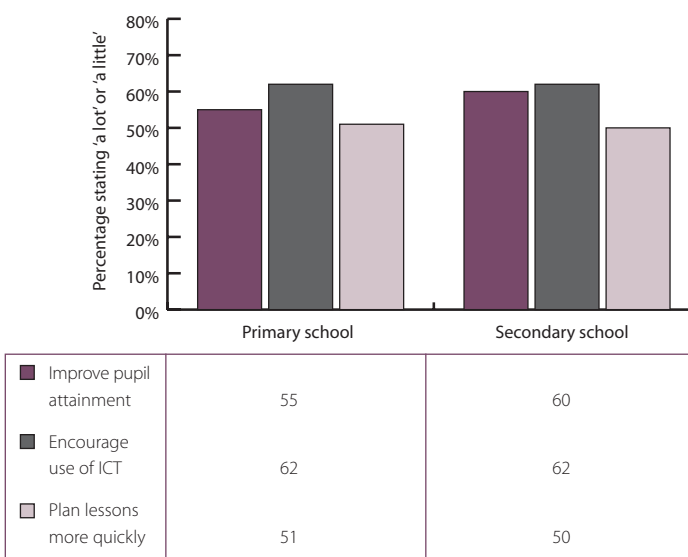
More than three fifths (62%) of primary subject respondents expected Curriculum Online to help encourage teachers' use of ICT while more than half (54%) expected it to help improve pupil attainment (Figure 16). Primary subject respondents' expectations of Curriculum Online in the third survey had improved slightly since the first survey. Expectations among secondary subject respondents were similar to those in primary schools with 58 per cent expecting Curriculum Online to help encourage use of ICT and 52 per cent expecting it to help improve pupil attainment, slightly higher proportions than in the first survey (Figure 17).

Figure 12 Percentage rating Curriculum Online website as 'very good/quite good' for finding relevant products



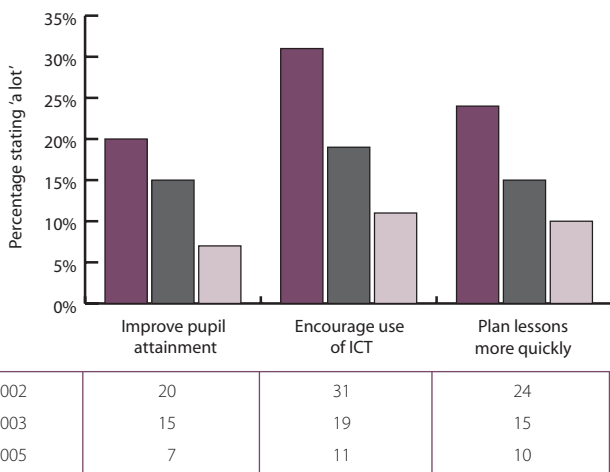
Base: all answering who visited website at second survey/third survey (primary school: 179/177; secondary school: 176/171; primary teacher: 263/337; secondary teacher: 419/466)

Figure 13 Percentage of primary and secondary school respondents expecting Curriculum Online to help 'a lot' or 'a little'



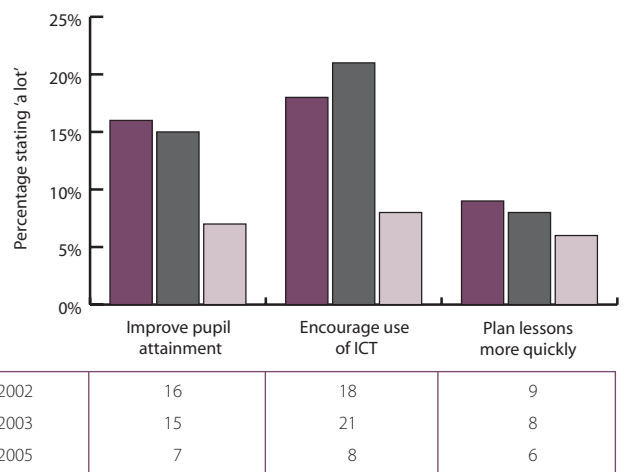
Base: all primary and secondary teachers answering at baseline/second survey/ third survey (KS1 teachers: 508/481/500, KS2 teachers: 548/538/554, KS3 teachers: 954/887/920, KS4 teachers: 914/853/897)

Figure 14 Percentage of school respondents rating software as 'very good/quite good' for fitness for purpose



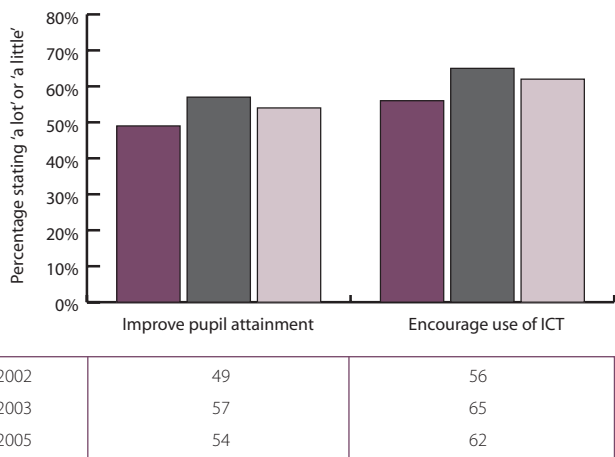
Base: All primary school respondents answering, at baseline/ second survey/ third survey (Improve pupil attainment: 197/ 227/ 220, Encourage use of ICT: 197/ 228/ 221, Plan lessons more quickly: 199/ 228/ 220)

Figure 15 Percentage of Secondary school respondents expecting Curriculum Online to help 'a lot' 2002-2005



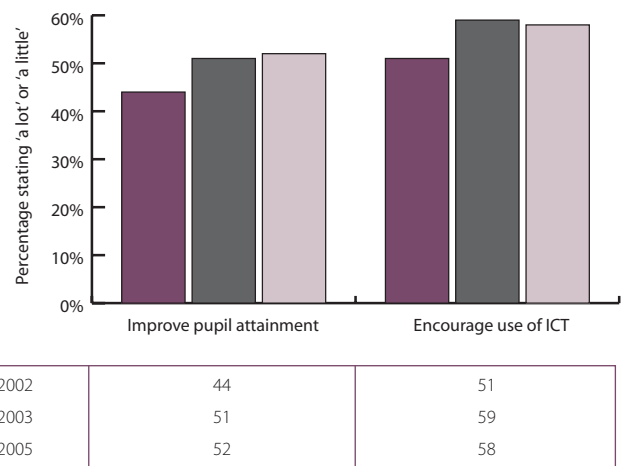
Base: all secondary school respondents answering, at baseline/ second survey/ third survey (Improve pupil attainment: 175/ 187/ 189, Encourage use of ICT: 175/ 188/ 188, Plan lessons more quickly: 176/ 188/ 188)

Figure 16 Primary subject respondents expecting Curriculum Online to have 'a lot' or 'a little' impact



Base: All primary subject respondents answering, at baseline/ second survey/ third survey (Improve pupil attainment: 294/ 443/ 470, Encourage use of ICT: 295/ 443/ 474)

Figure 17 Secondary subject respondents expecting Curriculum Online to have 'a lot' or 'a little' impact



Base: All secondary subject respondents answering, at baseline/ second survey/ third survey (Improve pupil attainment: 433/ 704/ 728, Encourage use of ICT: 436/ 705/ 732)

Summary – Curriculum Online website

The majority of subject respondents (77% in primary schools and 80% in secondary schools) were aware of Curriculum Online, but awareness had not increased between the second survey in 2003 and the third survey in 2005. Levels of perceived knowledge of Curriculum Online also remained unchanged between 2003 and 2005.

There was an increase in the proportion of primary subject respondents who had visited the Curriculum Online website between 2003 and 2005, but exposure to the website remained unchanged among other groups. Most school respondents (80% in primary schools and 88% in secondary schools) had visited the Curriculum Online website. Secondary school respondents remained more likely than primary school respondents to be frequent visitors to the Curriculum Online website. However, at the third survey secondary school respondents were less likely than they had been at the second survey to have visited the website in the current school term.

The majority of school respondents who had visited the Curriculum Online website had used it to search for products to purchase. Primary subject respondents who had visited the website were more likely to have downloaded free material than to search for products to purchase. The Curriculum Online website was mentioned as a source of information for selecting software by the majority of school respondents (57% in primary schools and 71% in secondary schools). This was a lower proportion of secondary school respondents than in 2003 while the proportion of primary school respondents was similar. Suppliers' catalogues were the most commonly used source of information for selecting software.

The majority of subject respondents reported that it was 'very' or 'quite' easy to find relevant software for their subject and the proportions giving these ratings had increased significantly since the first survey at each key stage. Most subject respondents rated the software available for their subject as 'very good' or 'quite good' and there were increases in the proportions giving these ratings since the first survey. There were lower ratings for ease of finding software and content and quality of software for Key Stage 1 Science, indicating possible difficulties in teachers finding appropriate products for Science at this level.

The Curriculum Online website was highly rated by the majority of respondents for being easy to use, for the information provided about products and for finding relevant products. Improvements were seen in the proportions of school respondents rating the website as 'very' or 'quite' good for these aspects compared with the second survey, particularly among secondary school respondents.



Curriculum Online funding



This chapter examines findings related to Curriculum Online funding. It examines how eLearning Credits (eLCs) are held in schools and changes in processes for purchasing software. It also looks at trends in spending on software for the curriculum and satisfaction with the funding available.

Between 2002 and 2005, a total of £330 million was released to schools in the form of eLC funding: £30 million was allocated in 2002 and £100 million was allocated in each of the years 2003-04, 2004-05 and 2005-06. Schools received a fixed amount per institution plus additional funding per pupil.

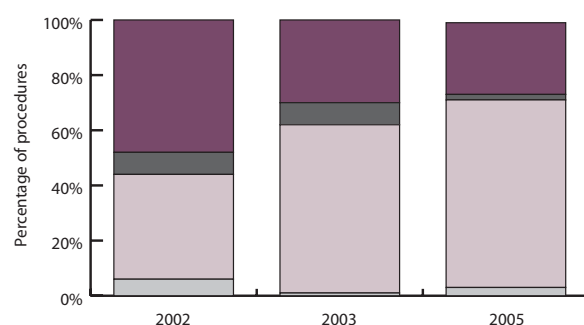
3.1 Who uses eLearning Credits (eLCs) and makes purchasing decisions?

Awareness of eLearning Credits (eLCs) among subject respondents, already high at the second survey, had risen further at the third survey. Most subject respondents (95% in primary schools and 97% in secondary schools) had heard of eLCs at the third survey.

It was found that eLCs tended to be held centrally rather than distributed among subjects. Only a small proportion of subject respondents at the third survey said that their subject had an allocated amount of eLCs (3% of primary subject respondents and 10% of secondary subject respondents). The proportion of secondary subject respondents who said their subject had been allocated eLCs had fallen slightly from 16% at the second survey. The majority of school respondents said that eLCs were held centrally, although secondary schools were more likely to distribute credits between subjects. 6% of primary school respondents and 18% of secondary school respondents said that eLCs were distributed between subjects, similar proportions to those at the second survey.

Since the advent of eLCs, systems for purchasing software in secondary schools appear to have become more centralised. The proportion of secondary school respondents who said that departments selected software independently fell from almost half (48%) at the first survey to just over a quarter (26%) at the third survey (Figure 18). There was a move towards teachers submitting their requests to a central staff member, with more than two thirds of school respondents (68%) saying that this was how software purchasing decisions were made at the third survey, compared with two fifths (38%) at the first survey.

Figure 18 Procedures for purchasing software in secondary schools



Procedure	2002	2003	2005
Departments select independently	48	30	26
Head/ICT head selects all software	8	8	2
Teachers submit requests	38	61	68
Other	6	1	3

Base: all subject respondents, excluding those who did not give an answer, at baseline/second/third survey (primary teacher: 664/636/648; secondary teacher: 1002/928/952)

This shift was not seen in primary schools as the majority (62%) said at the first survey that teachers submitted requests for software and this increased only slightly by the third survey, with 71% saying that teachers submitted requests and 9% that departments selected software independently. It was more common in primary schools than in secondary schools for all software purchasing decisions to be made by a single member of staff such as the headteacher or ICT co-ordinator. 16% of primary school respondents said at the third survey that software was selected in this way, compared with just 2% of secondary school respondents.

There was a tendency in secondary schools for subject respondents to be more likely than school respondents to say that their department purchased software independently. Just over two fifths (41%) of secondary subject respondents said that the department or individual teachers made purchases on an ad hoc basis. However, the pattern across the three surveys among subject respondents was similar to that among school respondents as the proportion who said that their department made ad hoc purchases fell from 58% at the first survey to 41% at the third survey. The proportion who said that requests were submitted centrally rose from 19% at the first survey to 41% at the third survey. The difference between school and subject respondents' perceptions of purchasing processes in secondary schools may suggest that departments make some purchases independently from their own budgets. Subject respondents in primary schools had similar perceptions to school respondents with 71% saying at the third survey that requests were submitted centrally, a figure that had not changed significantly over the three surveys.

3.2 Spending on curriculum-related software

The introduction of eLCs appears to have driven a substantial increase in spending on software for the curriculum in both primary and secondary schools.

It should be noted that only around half of schools at each survey provided complete data on spending, so the data should be treated with caution.

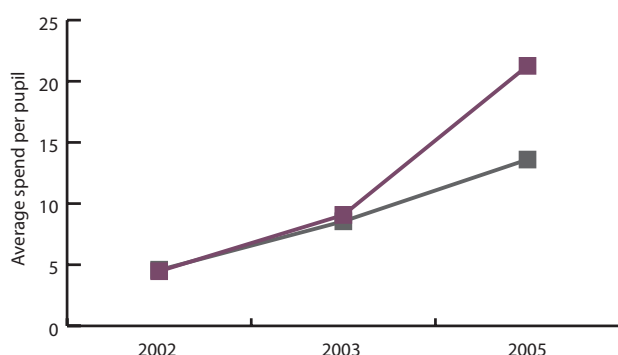
The increase in spending on software for the curriculum across the three surveys was most dramatic in primary schools. The average spend on software packages in primary schools tripled between the first survey in 2002 and the second survey in 2003, rising from £823 to £1,287. It then doubled again to £2,435 in the third survey in 2005. Spending on subscription services also rose substantially, from an average of £157 at the first survey to £1,552 at the third survey. The average amount spent per pupil on software (packages and subscription services) in primary schools rose from £4.47 in 2002 to £9.07 in 2003 and £21.26 in 2005 (Figure 19).

In secondary schools there had been a relatively modest increase in average spending on software packages between 2002 and 2003 from £4,951 to £5,827. There was a larger increase between 2003 and 2005, with an average of £10,192 spent on software packages at the third survey. Average spending on subscription services in secondary schools saw a smaller increase across the three surveys, from £2,100 in 2002 to £3,442 in 2005. The average amount spent per pupil on software in secondary schools rose from £4.57 in 2002 to £8.55 in 2003 and £13.60 in 2005.

Comparing spend per pupil on software in primary and secondary schools, while the average amounts were similar in the first and second surveys, average spending per pupil at the third survey was higher in primary schools than in secondary schools (£21.26 compared with £13.60).

Since the introduction of eLCs, primary schools have become less likely to set funds aside for curriculum-related software. At the third survey, just over two fifths of primary schools (42%) said that they set funding aside in addition to their eLCs, a decrease from 52% at the second survey and 59% at the first survey. The proportion of secondary schools that had dedicated funding for curriculum-related software did not change significantly across the three surveys, with 47% at the third survey saying that they set funding aside, compared with 41% at the first survey. Larger secondary schools were more likely to have additional dedicated funding for curriculum-related software, with 63% of secondary schools with 1,200 or more pupils saying at the third survey that they set funding aside, compared with 32% of schools with fewer than 800 pupils.

Figure 19 Average spend per pupil on software for curriculum use in schools



Primary school	4.47	9.07	21.26
Secondary school	4.57	8.55	13.6

Base: All answering who visited website at second survey/third survey (primary school: 182/177; secondary school: 177/171; primary teacher: 267/336; secondary teacher: 423/468)

3.3 Views of Curriculum Online funding

3.3.1 Views on level of funding

Satisfaction with the level of funding available for curriculum software has risen substantially in both primary and secondary schools since the introduction of eLCs, with more than half (59% of primary schools and 55% of secondary schools) at the third survey in 2005 saying that the amount of funding was 'about right' (Figure 20). Among primary school respondents, there was a considerable increase between 2002 and 2003, when eLCs were first introduced, in the proportion who said that the amount of funding for curriculum software was 'about right', from 29% to 53%. The proportion who thought funding was about right in 2005 (59%) was not significantly different from 2003. Among secondary school respondents, the proportion who thought the amount of funding for software was 'about right' increased between 2002 and 2003, from 20% to 36%, and increased again between 2003 and 2005, to 55%. At the second survey, satisfaction was significantly higher among primary school respondents than secondary school respondents but by the third survey levels of satisfaction were similar.

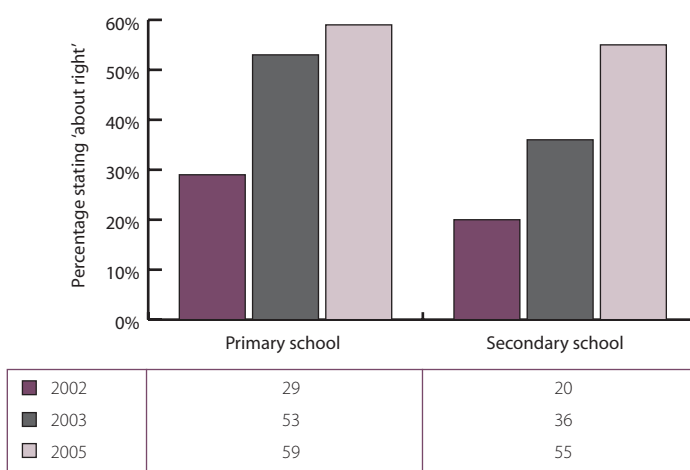
Satisfaction with funding for software was, by the third survey, significantly higher than satisfaction with funding for improving ICT facilities or for technical support in both primary and secondary schools. 28% of primary school respondents thought that the amount of funding for improving ICT facilities was 'about the right amount' and 30% had this view of funding for technical support. Just over a fifth (21%) of secondary school respondents thought that the amount of funding for improving ICT facilities was 'about right', while nearly two fifths (38%) thought that they had 'about the right amount' of funding for technical support.

In primary schools there was a correlation between higher spending per pupil on software and thinking that the amount of funding available was 'about right'. There were no relationships in primary or secondary schools between satisfaction with funding and whether schools set aside additional funding for software.

3.3.2 Expectations of Curriculum Online related to funding

The majority of school respondents thought that Curriculum Online would help schools to purchase software for the curriculum that gave value for money and would make purchasing more efficient. Two thirds (66%) of primary school respondents and four fifths (80%) of secondary

Figure 20 Satisfaction with funding for new software



Base: all schools answering (primary – 2002: 230, 2003: 228, 2005: 232; secondary – 2002: 193, 2003: 192, 2005: 191)

school respondents thought that Curriculum Online would help schools 'a lot' or 'a little' with purchasing value-for-money software. Three fifths (59%) of primary school respondents and nearly two thirds (65%) of secondary school respondents thought that Curriculum Online would help 'a lot' or 'a little' to make purchasing more efficient. The proportion of primary school respondents who thought that Curriculum Online would help 'a lot' in these ways had decreased at each survey, while the proportion who thought it would help 'a little' rose. 31% of primary school respondents at the first survey thought that Curriculum Online would help 'a lot' with making purchasing more efficient, while at the third survey only 11% had this view.

Secondary school respondents who used the Curriculum Online website regularly were more likely than those who occasionally used the site to think that Curriculum Online would help to make purchasing software more efficient and enable schools to purchase value-for-money software. At the third survey, 24% of regular users who were able to state a definite view thought that Curriculum Online would help 'a lot' to make the process of purchasing software more efficient, compared with 4% of occasional users.

Some suggestions for improvements to Curriculum Online related to the ways that eLCs are used. The most common were that schools should be able to purchase a wider range of software with eLCs, and that there should be more flexibility in the way that eLCs can be used.

Summary – Curriculum Online funding

Awareness of eLCs was very high with most subject respondents having heard of them. The majority of schools have chosen to hold their eLCs centrally rather than distributing them among subjects. In secondary schools there has been a move towards more centralised systems for purchasing software since the introduction of eLCs. Only a quarter (26%) of secondary schools in 2005 said that departments selected software independently.

Spending on software for the curriculum has increased considerably since the introduction of eLCs, particularly in primary schools. By 2005, primary schools spent an average of £21.26 per pupil while secondary schools spent an average of £13.60.

There has been a corresponding increase in satisfaction with the amount of funding available for curriculum-related software. The majority of school respondents (59% in primary schools and 55% in secondary schools) thought that the amount of funding was 'about right'. Satisfaction with funding for software was considerably higher than satisfaction with the amount of funding for improving ICT facilities or for technical support.

Views of Curriculum Online in relation to purchasing were generally positive. The majority of school respondents thought Curriculum Online helped schools purchase software that gave value for money and helped make purchasing software more efficient.

ICT usage and attitudes



This chapter examines how teachers used ICT resources to deliver the curriculum. It looks at changes in the frequency of using different kinds of resources in lessons and the extent to which ICT is used for lesson planning. It also examines teachers' attitudes to the role of ICT in the curriculum and the perceived importance of ICT at each key stage.

4.1 Extent of use of ICT

4.1.1 Frequency of use in lessons

Primary teachers

Primary teachers' use of ICT in lessons increased substantially between the first and third surveys. In particular, there was a considerable rise in the proportion of teachers using interactive whiteboards frequently in lessons (Table 4.1). More than two thirds (69%) of primary subject respondents at the third survey said that interactive whiteboards were used in half or more lessons for their subject, compared to just 6% at the first survey and 13% at the second survey (Figure 21). More than a third (36%) of primary subject respondents at the third survey said that interactive whiteboards were used in 'all or most' lessons.

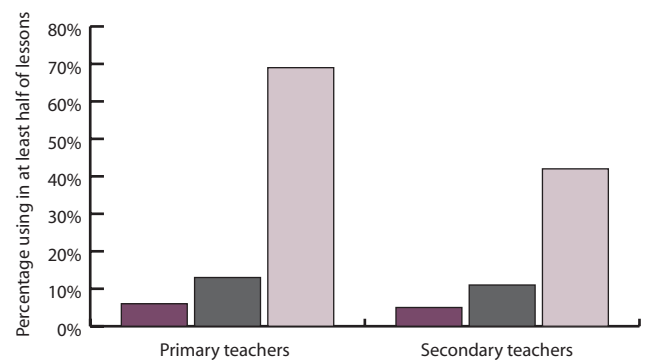
Fewer than two fifths (38%) of primary subject teachers said that internet-based resources were used in at least half of lessons (Figure 24) and the same proportion said that subject-specific software applications were used this frequently (Figure 23). A similar proportion (36%) said that computer packages such as word-processing or spreadsheet applications were used in at least half of lessons (Figure 22). After interactive whiteboards, internet-based resources saw the biggest increase in frequent use by the third survey, rising to 38% of primary subject respondents from 10% at the first survey and 14% at the second survey. There were no significant differences between subjects in primary schools in the frequency of using ICT resources in lessons.

Secondary teachers

The use of ICT in lessons also increased in secondary schools, although secondary teachers were, at the third survey, less likely than primary teachers to be using resources frequently in lessons.

- As in primary schools, there was a considerable increase in the proportion of teachers using interactive whiteboards frequently. At the third survey, 42% of secondary subject respondents said that interactive whiteboards were used in at least half of lessons for their subject, compared to just 5% at the first survey and 11% at the second survey.

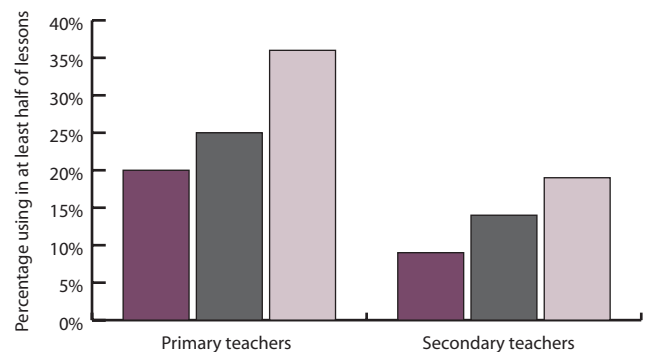
Figure 21 Use of interactive whiteboards in lessons



2002	6	5
2003	13	11
2005	69	42

Base: all subject respondents answering (primary – 2002: 621, 2003: 564, 2005: 619; secondary – 2002: 979, 2003: 875, 2005: 922)

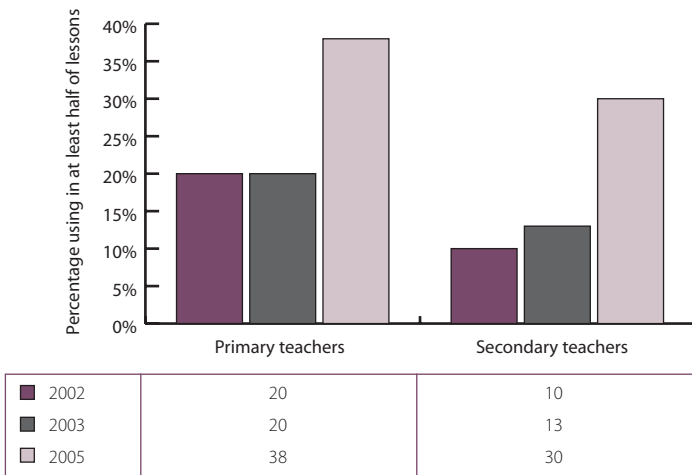
Figure 22 Use of computer packages (eg word-processing or spreadsheet applications) in lessons



2002	20	9
2003	25	14
2005	36	19

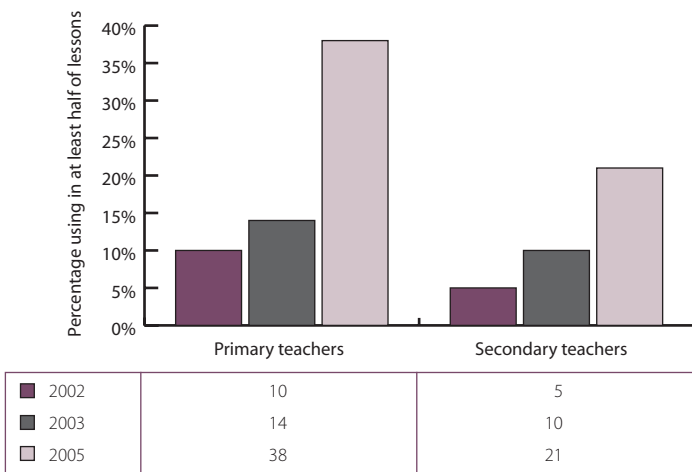
Base: all subject respondents answering (primary – 2002: 621, 2003: 564, 2005: 619; secondary – 2002: 979, 2003: 875, 2005: 922)

Figure 23 Use of subject-specific software applications in lessons



Base: all subject respondents answering (primary – 2002: 626, 2003: 565, 2005: 601; secondary – 2002: 990, 2003: 896, 2005: 924)

Figure 24 Use of internet-based resources in lessons



Base: all subject respondents answering (primary – 2002: 643, 2003: 602, 2005: 625; secondary – 2002: 994, 2003: 894, 2005: 925)

- 30% of secondary subject respondents said at the third survey that subject-specific software was used in at least half of lessons for their subject, a figure which had risen from 10% at the first survey.
- Internet-based resources were used in at least half of lessons by 21% of secondary subject respondents, a rise from 5% at the first survey.

- Computer packages such as word-processing and spreadsheet applications were used in at least half of lessons by 19% of secondary teachers at the third survey, compared with 9% at the first survey.

Interactive whiteboards were used most frequently in lessons in secondary schools by maths teachers, three fifths (60%) of whom said that interactive whiteboards were used in at least half of their lessons. Interactive whiteboards were less likely to be used frequently by music teachers, with 27% saying they were used in at least half of lessons.

Subject-specific software applications were most likely to be used in at least half of lessons for music (45%) and maths (39%).

Secondary subject respondents who had used the Curriculum Online website were more likely to say that internet-based resources and subject-specific software were used frequently in lessons for their subject. Almost a third (32%) of those who used the website regularly said that internet-based resources were used in at least half of lessons compared with 14% who had never used the website.

ICT resources were perceived by almost all subject respondents to be useful for teaching. 90% of primary subject respondents at the first survey agreed with the statement 'ICT is a valuable aid for teaching' and this rose to 97% at the third survey. Most secondary subject respondents (87%) at the first survey also agreed with this statement and there was a small rise by the third survey to 92%. Perceptions were similar among respondents for all subjects. Almost all secondary school respondents (99%) at the third survey agreed that ICT was a valuable aid for teaching.

4.1.2 Use of ICT for homework and lesson planning

Homework

Setting homework that required use of a computer or internet access became more common in secondary schools between the first and third surveys. 30% of subject respondents at the third survey said that homework was set for their subject requiring use of a computer 'very often' or 'quite often' compared with 18% at the first survey (Figure 25). A similar proportion (28%) at the third survey often set homework requiring internet access, a rise from 15% at the first survey. The incorporation of ICT into homework varied considerably between subjects. Respondents for English and geography were more likely than those

for other subjects to say that homework requiring use of a computer was often set (54% and 51% respectively). Maths respondents were least likely to set homework requiring use of a computer with just 6% saying they often did so and more than a third (36%) saying that they never did. The variations between subjects were very similar for setting homework requiring internet access.

Setting homework requiring use of a computer or access to the internet was associated with use of ICT resources in lessons. Subject respondents who reported that internet-based resources or computer packages were used in at least half of lessons were more likely to say that homework requiring a computer or internet access was set regularly. Nearly half (46%) of subject respondents who reported that computer packages were used in at least half of lessons for their subject said that homework requiring use of a computer was 'very often' or 'quite often' set, compared with a quarter (25%) of those who said that computer packages were used in less than half of lessons. Similarly, more than two fifths (42%) of subject respondents who reported that internet-based resources were used in at least half of lessons said that homework requiring access to the internet was set 'very' or 'quite' often, compared with over one fifth (23%) who said that internet-based resources were used in less than half of lessons. There were no associations, however, between use of interactive whiteboards in lessons and setting homework requiring a computer or internet access.

Lesson planning

The proportion of primary teachers' lesson planning done using digital sources has increased across the three surveys although paper sources were still used more often. Digital sources accounted on average for 32% of primary subject respondents' lesson planning at the third survey compared with 15% at the first survey (Figure 26). There were no differences between subjects in the proportion of lesson planning using digital sources. Primary subject respondents who said that interactive whiteboards were used in at least half of lessons for their subject made on average proportionately greater use of digital sources in lesson planning than those who said that interactive whiteboards were used in less than half of lessons (36% compared with 22%). Similar patterns were seen for frequency of usage of computer packages, internet-based resources and subject-specific software in lessons.

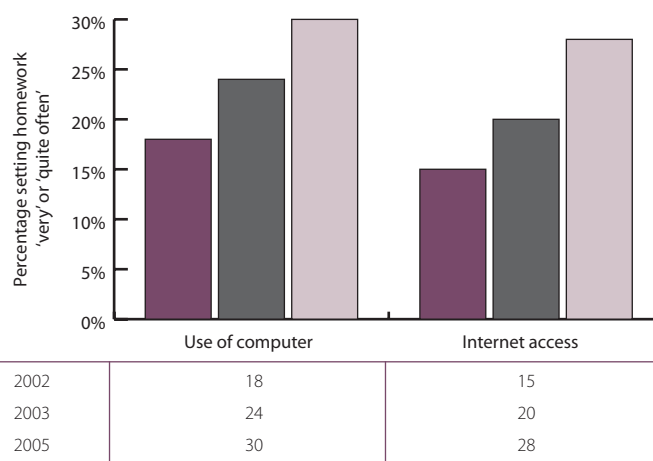
There was also an increase in the proportion of secondary teachers' lesson planning using digital sources. At the third survey on average a quarter (25%) of secondary

Table 4.1 Use of ICT in lessons (percentage point change from baseline)

	Primary teacher (%)	Secondary teacher (%)
Interactive whiteboard	69	42
Change from baseline	+63*	+31*
Computer packages	36	19
Change from baseline	+16*	+10*
Subject-specific applications	38	30
Change from baseline	+18*	+20*
Internet-based resources	38	21
Change from baseline	+28*	+16*
Base: all teachers answering	601-625	922-925

* = statistically significant change from baseline

Figure 25 Homework requiring use of a computer or internet access (percentage of secondary teachers setting 'very' or 'quite' often)

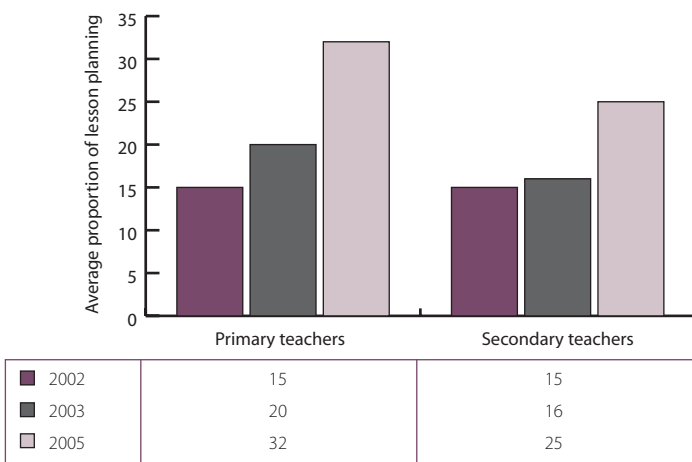


Base: all secondary subject respondents answering (918-1007)

teachers' lesson planning used digital sources, compared with 15% at the first survey. Digital sources accounted on average for 35% of music teachers' planning but only 20% of maths teachers' and 21% of modern languages teachers' planning.

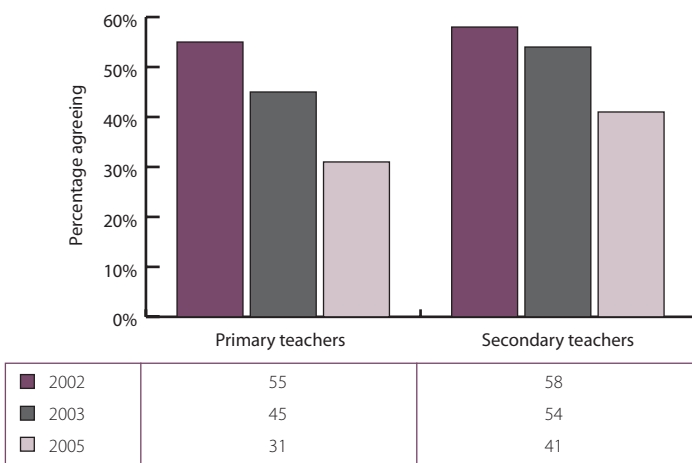
The average proportion of secondary teachers' lesson planning using digital sources rose according to the frequency with which use of interactive whiteboards in lessons was reported. Among secondary teachers who said interactive whiteboards were used in 'all or most lessons' for their subject, the average proportion of lesson

Figure 26 Average proportion of teachers' lesson planning using digital sources



Base: all subject respondents answering (primary – 2002:626, 2003:612, 2005:627; secondary – 2002:948, 2003:910, 2005:920)

Figure 27 Agreement with the statement 'it is easier to find relevant teaching material in textbooks than on the internet'



Base: all subject respondents answering (primary – 2002:661, 2003:631, 2005:641; secondary – 2002:1000, 2003:924, 2005:948)

planning using digital sources was 37%, while for those who 'rarely or never' used interactive whiteboards, the average proportion was 18%. Similar patterns were seen for frequency of usage of computer packages, internet-based resources and subject-specific software in lessons.

Secondary subject respondents who had accessed the Curriculum Online website reported on average a higher proportion of lesson planning using digital sources than those who had not accessed the website or had not heard of Curriculum Online. Among those who had visited the website, an average of 28% used digital sources for lesson planning, compared with 20% among those who had not heard of Curriculum Online.

4.1.3 Attitudes towards using ICT in lesson planning

Teachers' attitudes towards using ICT in lesson planning became more positive across the three surveys. Agreement with the statement 'It is easier to find relevant material for teaching in textbooks than on the internet' among primary subject respondents fell from 55% at the first survey to 31% at the third survey (Figure 27). At the third survey, two fifths (41%) of secondary subject respondents agreed with the statement 'It is easier to find relevant material for teaching in textbooks than on the internet' while at the first survey nearly three fifths (58%) had agreed with this. Agreement with this statement among secondary subject respondents was lowest among respondents for English (29%) and music (30%), implying that teachers of these subjects had more favourable views of using ICT in lesson planning.

By the third survey only a small minority (11%) of secondary school respondents agreed that it was easier to find teaching material in textbooks than on the internet, a fall from 30% at the first survey. There was a larger fall in agreement with this statement among primary school respondents, from 37% at the first survey to 9% at the third survey. Thus, those responsible for ICT in schools continued to have more positive views about the availability of teaching materials on the internet than teachers.

There were relationships between frequent use of ICT in lessons and positive attitudes towards using ICT in lesson planning. Primary subject respondents who reported that interactive whiteboards were used in at least half of lessons were less likely than those who did not use interactive whiteboards this frequently to agree that it was easier to find teaching material in textbooks than on the internet (28% compared with 37%). There was not a corresponding relationship with interactive whiteboard use for secondary subject respondents. However, secondary subject respondents who used internet resources in at least half of lessons were less

likely to agree with this statement than those who did not use internet resources frequently (27% compared with 45%).

Exposure to Curriculum Online was also related to more positive attitudes towards using ICT in lesson planning. A quarter (25%) of primary subject respondents who had visited the Curriculum Online website agreed that it was easier to find relevant teaching material in textbooks than on the internet, while 43% of those who were not aware of Curriculum Online agreed with this statement. Secondary subject respondents who had visited the Curriculum Online website were not less likely to agree with this statement than those who were aware of Curriculum Online but had not accessed the website. However, agreement was lower among subject respondents who were aware of Curriculum Online than among those who had not heard of it (39% compared with 52%).

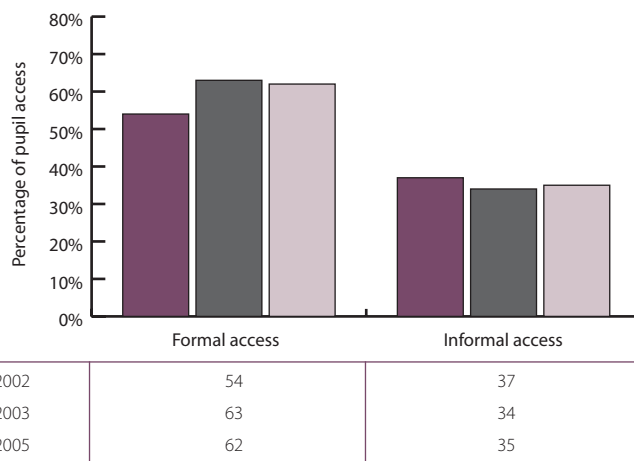
A further indication of more positive views of using digital sources for lesson planning was the rise in agreement with the statement 'There is a lot of useful material for the curriculum on the internet' among primary subject respondents, from 77% at the first survey to 87% at the third survey. The proportion of secondary subject respondents who agreed with this statement was already high at the first survey (79%) and remained at a similar level at the third survey (83%). Subject respondents for geography and English were the most likely to agree with this statement (30% and 28% respectively 'strongly agreeing').

4.2 Pupil access to ICT outside lesson time

There was a small rise in the proportion of primary schools that provided pupils with access to computers through formal clubs, from 54% at the first survey to 62% at the third survey (Figure 28). The most common type of formal access to computers in primary schools was through after-school clubs, offered by two fifths (40%) of schools at the third survey. Lunchtime clubs providing access to computers were offered by just over a third (34%) while just 11% offered access through breakfast clubs.

Informal access to computers outside lessons (that is, access that was not provided through organised clubs) was less common than formal clubs in primary schools, with just over a third (35%) of primary schools offering informal access at the third survey. The proportion of primary schools offering pupils informal access to computers did not change significantly between the first

Figure 28 Pupil access to ICT resources outside lessons in primary schools



Base: all primary schools answering (2002: 233, 2003: 234, 2005: 230)

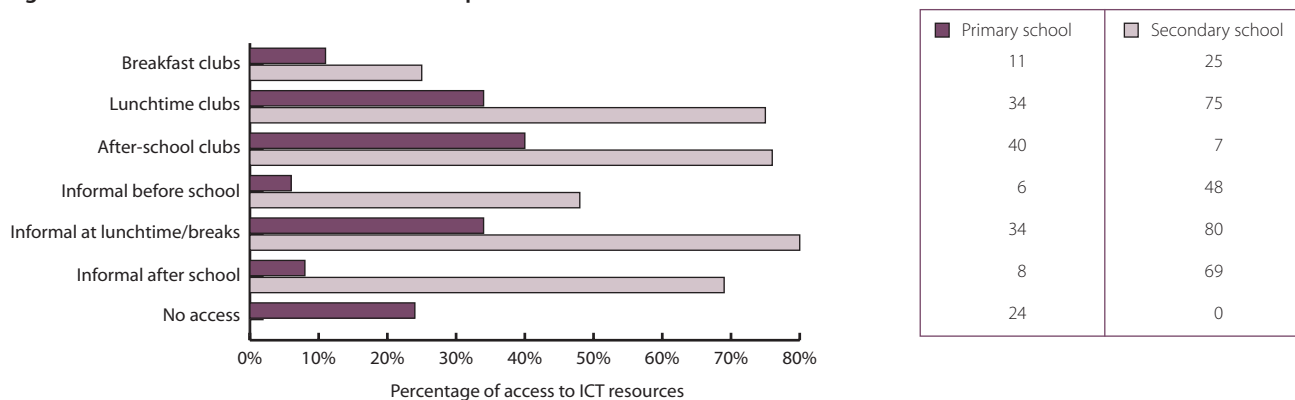
and third surveys. Informal access to computers was most commonly provided at lunchtime or breaks with a third (34%) of primary schools offering access at these times at the third survey. Just 6% provided informal access before school while 8% provided it after school.

The proportion of primary schools that did not provide pupils with any access to computers outside lessons fell slightly from 30% at the first survey to 24% at the third survey.

There was a relationship between the level of ICT resources available at primary schools and pupil access to resources outside lessons, with schools in the highest tertile for the number of pupils to each computer being less likely to provide access through formal clubs. 54% of schools that had more than 6.75 pupils per computer provided formal access to computers outside lessons compared with 64% in schools that had up to 5.1 pupils per computer. Nearly half (47%) of primary schools with up to 5.1 pupils per computer offered informal access to computers outside lessons compared with almost a fifth (18%) of those with more than 6.75 pupils per computer.

Most secondary schools (89% at the third survey) offered access to computers outside lessons through formal clubs and this figure did not change significantly between the first and third surveys. Three quarters of

Figure 29 Forms of access to ICT resources provided outside lessons



Base: all schools answering (primary: 230; secondary: 191)

Table 4.2 Subject respondents' perceived importance of ICT at Key Stages 1 and 2 (percentage saying 'very' or 'quite' important)

	Key Stage 1			Key Stage 2		
	Maths (%)	English (%)	Science (%)	Maths (%)	English (%)	Science (%)
2002	56	60	40	61	64	52
2005	83	78	69	89	89	78

Base: all primary subject respondents answering (Key Stage 1 – 2002: 528, 2005: 516; Key Stage 2 – 2002: 569, 2005: 577)

secondary schools offered access to computers through lunchtime clubs and a similar proportion (76%) offered access via after-school clubs (Figure 29). Access through breakfast clubs was less common and offered by a quarter (25%) of secondary schools at the third survey. 85% of secondary schools at the third survey provided informal access to computers outside lessons and again this had not changed significantly since the first survey. 80% of secondary schools allowed pupils to have access to computers at lunchtime or breaks while more than two thirds (69%) offered informal access after school. Just under half (48%) offered informal access before school. All secondary schools at the third survey offered some form of access to computers outside lessons.

Larger secondary schools were more likely than smaller ones to offer access to computers through formal clubs. 95% of secondary schools with more than 1,200 pupils offered formal clubs compared with 82% of schools with fewer than 800 pupils. Unlike in primary schools, there was no relationship between the ratio of pupils to computers in secondary schools and the likelihood of offering formal or informal access to computers outside lessons.

4.3 Importance of ICT

4.3.1 Key Stages 1 and 2

There were considerable increases at both key stages in the proportions of primary subject respondents who thought that ICT was 'very important' or 'quite important' to their subject between the first and the third survey. Just over three quarters (76%) at the third survey thought that ICT was important at Key Stage 1 compared with just over half (52%) at the first survey. ICT remained slightly more likely to be seen as important at Key Stage 2 than Key Stage 1, with 85% of primary subject respondents at the third survey saying it was important at Key Stage 2, again a considerable rise from 59% at the first survey.

There were similar levels of increase in the proportion of subject respondents rating ICT as important for maths, English and science. At both key stages, science respondents remained less likely to say that ICT was important. At Key Stage 1, 69% of science respondents said that ICT was important compared with 78% of English respondents and 83% of maths respondents. Similarly, at Key Stage 2, 78% of science respondents said ICT was important compared with 89% of both maths and English respondents (Table 4.2).

Perceptions of the importance of ICT were related to use of ICT resources in lessons. 38% of primary subject respondents who used interactive whiteboards in at least half of lessons thought that ICT was very important at Key Stage 2, compared with 10% of those who did not use interactive whiteboards so frequently.

The increased perception of the importance of ICT was reflected in the decline in agreement with the statement 'ICT is not relevant to every subject'. At the first survey, 35% of primary subject respondents agreed with this statement but this fell to 22% at the third survey. While science respondents were less likely to say that ICT was important to their subject, they were, in contrast, less likely to agree that ICT was not relevant to every subject (16% agreeing compared with 29% of English respondents).

4.3.2 Key Stages 3 and 4

Overall, the proportion of secondary teachers who thought that ICT was important to their subject increased between the first and third surveys. Just over three quarters (76%) of secondary subject respondents thought that ICT was important for their subject at Key Stage 3 at the third survey, compared to 55% at the first survey. Similarly, 78% thought ICT was important at Key Stage 4 compared with 60% at the first survey. Substantial increases in the proportion of teachers who thought ICT was important were seen for all subjects, with the exception of Key Stage 4 music where it was already high at the first survey (84% compared with 88% at the third survey).

At Key Stage 3, ICT was more likely to be seen as important to maths (79%), science (80%) and geography (83%). The largest increase was for maths, with just over half (52%) of maths respondents at the first survey saying that ICT was important at Key Stage 3 (Table 4.3).

At Key Stage 4, modern languages respondents were less likely than other subject respondents to say that ICT was important, although the proportion saying that it was important increased to 64% from 48% at the first survey. The largest increase was again for maths, with 78% at the third survey saying that ICT was important compared with 48% at the first survey (Table 4.4).

The use of ICT resources in lessons was also related to perceptions of the importance of ICT at Key Stages 3 and 4. More than a third (34%) of subject respondents who said that interactive whiteboards were used in half or more lessons for their subject thought that ICT was 'very important' at Key Stage 3, compared with 16% of those who did not report such frequent use of interactive whiteboards, and there was a similar difference at Key Stage 4 (36% compared with 23%).

Subject respondents who had visited the Curriculum Online website were more likely to think that ICT was important at Key Stages 3 and 4. 29% of secondary subject respondents who had visited the website thought that ICT was 'very important' to their subject at Key Stage 3, compared with 18% of those who had heard of Curriculum Online but not visited the website.

The relevance of ICT to all subjects was recognised by most subject respondents in secondary schools across the three surveys. Just 16% at the first survey and 12% at the third survey agreed with the statement 'ICT is not relevant to every subject'. Levels of agreement were similar across all subjects. The proportion of secondary school respondents who agreed that ICT was not relevant for all subjects did not change significantly between the first and third surveys (14% agreed at the third survey compared with 18% at the first survey).

Table 4.3 Subject respondents' perceived importance of ICT at Key Stage 3 (percentage saying 'very' or 'quite' important)

	Maths (%)	English (%)	Science (%)	Modern languages (%)	Geography (%)	Music (%)
2002	52	51	60	47	61	61
2005	79	72	80	68	83	72

Base: all secondary subject respondents answering (2002: 980, 2005: 937)

Table 4.4 Subject respondents' perceived importance of ICT at Key Stage 4 (percentage saying 'very' or 'quite' important)

	Maths (%)	English (%)	Science (%)	Modern languages (%)	Geography (%)	Music (%)
2002	48	51	68	48	63	84
2005	78	72	81	64	88	88

Base: all secondary subject respondents answering (2002: 958, 2005: 911)

4.4 Views on how ICT facilitates personalisation

4.4.1 Attitudes towards the role of ICT in personalisation

The majority of subject respondents in primary and secondary schools believed that ICT resources could help respond to differing pupil abilities. At the third survey, 84% of primary subject respondents agreed with the statement 'Using ICT resources can help in responding to different pupil abilities', a small rise from 79% at the first survey (Figure 30). There were similar levels of agreement with this statement among secondary subject respondents (83% at the third survey compared with 75% at the first survey). Among primary subject respondents, agreement was higher among respondents for maths (88%) than for science (78%). Among secondary subject respondents, the proportion 'agreeing strongly' with this statement was higher for music (24%) and modern languages (23%) than for science (10%) or maths (12%).

There were less positive views among subject respondents towards another aspect of personalisation, providing individual feedback, although some improvement was seen between the first and third surveys. At the third survey, 45% of primary subject respondents and 55% of secondary subject respondents agreed with the statement 'ICT resources can help in

giving individualised feedback to pupils', compared with 39% and 44% respectively at the first survey. Among secondary subject respondents, agreement was considerably higher among respondents for maths (75%) than among respondents for other subjects.

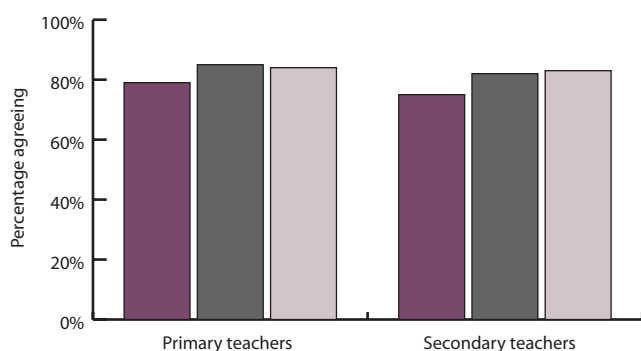
ICT was perceived by most subject respondents to have a positive role in pupil attainment. At the third survey, 87% of primary subject respondents agreed with the statement 'Using ICT resources can improve the attainment of pupils', an increase from 78% at the first survey (Figure 31). Among secondary subject respondents, there was a small rise in the proportion agreeing with this statement, from 76% at the first survey to 82% at the third survey. There were no significant differences in levels of agreement between subjects among either primary or secondary subject respondents.

4.4.2 Conditions to support personalisation

There are a number of elements which may support the delivery of personalised learning in schools, for example, in terms of infrastructure and pupil access to resources. The most relevant of these for which data was collected in this study are pupil access to facilities outside lesson time, networking of computers and the presence of online learning environments (OLEs). Among primary subject respondents, there were no significant differences in views of whether ICT could help in responding to different pupil abilities or giving personalised feedback on any of these measures. There was, however, a relationship with use of resources in the classroom. Subject respondents who said that subject-specific software applications were used in at least half of lessons were more likely to agree that ICT could help in responding to different pupil abilities. A quarter (25%) of those who used subject applications in at least half of lessons agreed 'strongly' with this statement, compared with 15% of those who did not use subject applications so frequently.

Subject respondents in secondary schools that had an online learning environment were slightly more likely to agree that ICT could help in giving individualised feedback to pupils (58% compared with 51%). There were no other relationships with school infrastructure or pupil access to resources. However, there were some associations with teachers' use of resources in lessons. Subject respondents who reported that internet-based resources and subject-specific software applications were used in at least half of lessons were more likely than those who reported less frequent use to agree 'strongly'

Figure 30 Agreement with the statement 'Using ICT resources can help in responding to different pupil abilities'



Base: all subject respondents answering (primary – 2002: 662, 2003: 632, 2005: 642; secondary – 2002: 999, 2003: 923, 2005: 949)

that ICT could help in responding to different pupil abilities (25% compared with 14% for both measures).

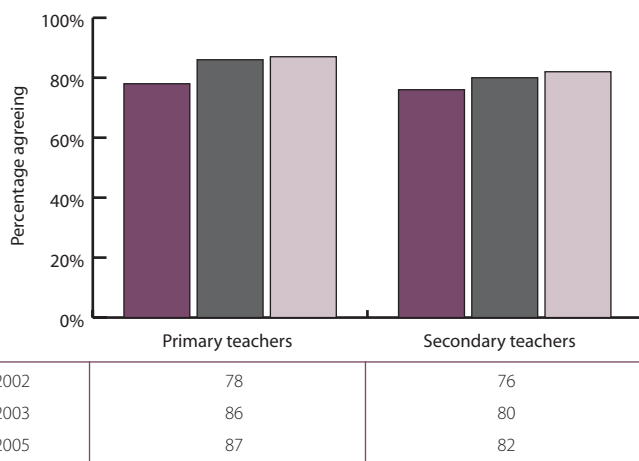
There were also higher levels of overall agreement with the statement 'ICT can help in giving individualised feedback to pupils' among subject respondents who reported that internet-based resources and subject-specific applications were used in at least half of lessons. Two thirds (66%) of those who used subject-specific applications in at least half of lessons agreed that ICT could help in providing individualised feedback compared with half (50%) of those who reported less frequent use. There was a similar difference for use of internet-based resources (66% for more frequent users compared with 51% for less frequent users).

4.5 Teacher confidence and enthusiasm

There was a steady rise across the three surveys in the proportion of primary school respondents who had positive perceptions of teachers' enthusiasm towards using ICT for teaching and learning. More than three quarters (77%) at the third survey thought that 'all' or 'most' teachers in their school were enthusiastic compared with 57% at the first survey (Table 4.5). There was a smaller increase in perceptions of primary teachers' confidence in using ICT. At the third survey more than three quarters (77%) of primary school respondents thought that teachers were 'quite confident' compared with two thirds (66%) at the first survey. The proportion who thought teachers were 'very confident' rose from 5% to 9% (Table 4.6).

Secondary school respondents' perceptions of teacher enthusiasm became more positive between the second and third surveys, having remained similar between the first and second surveys. 70% of secondary school respondents at the third survey thought that 'all' or 'most' teachers were enthusiastic about using ICT, compared with 57% at the first survey and 61% at the second survey. Perceptions of teachers' confidence in using ICT also became more positive between the second and third surveys. At the third survey, almost three quarters (74%) of secondary school respondents thought that teachers were 'quite confident', an increase from 58% at the first survey. However, the proportion who thought that teachers were 'very confident' remained small (5% at the third survey compared with 6% at the first survey).

Figure 31 Agreement with the statement 'Using ICT can improve pupils' attainment'



Base: all subject respondents answering (primary – 2002: 661, 2003: 634, 2005: 643; secondary – 2002: 1002, 2003: 925, 2005: 949)

Table 4.5 School respondents' perceptions of how many teachers in the school are enthusiastic about ICT

How many teachers enthusiastic	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
All/nearly all	20	31	10	12
Most	37	46	47	58
Some	37	21	37	28
Few	6	2	5	1

Base: all school respondents answering (primary – 2002: 235, 2005: 235; secondary – 2002: 194, 2005: 193)

Table 4.6 School respondents' perceptions of how confident teachers are about using ICT

How confident are teachers	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Very confident	5	9	6	5
Quite confident	66	77	58	74
Not very confident	28	14	35	21
Not at all confident	*	*	–	–

Base: all school respondents answering (primary – 2002: 233, 2005: 233; secondary – 2002: 192, 2005: 194)

Summary – ICT usage and attitudes

The frequency with which teachers used ICT resources in lessons increased between 2002 and 2005, particularly in primary schools. There was a particularly large increase in the use of interactive whiteboards, with more than two thirds (69%) of primary subject respondents saying that they were used in at least half of lessons.

In secondary schools it had become more common to set homework requiring the use of a computer, with 30% of subject respondents saying that homework requiring computer usage was often set for their subject.

Paper sources still accounted for the greater proportion of teachers' lesson planning, but the average proportion of planning using digital sources had increased to 32% for primary teachers and 25% for secondary teachers.

Access to computers outside lessons was offered to pupils through formal clubs in more than three fifths (62%) of primary schools and nine in 10 (89%) secondary schools. The majority of secondary schools (85%) also offered informal access to computers outside lessons but this kind of access was only available in 35% of primary schools. The proportion of primary schools providing access to computers through formal clubs had increased slightly since the first survey and the proportion that did not provide any access to pupils outside lessons fell slightly from 30% to 24%.

ICT was increasingly seen as having an important role in teaching and learning with at least three quarters of subject respondents stating that ICT was 'very' or 'quite' important to their subject at Key Stages 1 to 4. Most subject respondents felt that ICT could help in responding to different pupil abilities and in improving the attainment of pupils.



This chapter examines the ICT infrastructure in schools. It looks firstly at changes in the levels of ICT resources available in schools between the first and third surveys and teachers' views on the resources available to them. The chapter goes on to examine internet connections and the extent of networking of computers. The chapter also reports the findings from new questions on online learning environments (OLEs) which were asked in the 2005 survey.

5.1 Resources available

By the third survey in 2005, levels of ICT resources available had risen significantly in both primary and secondary schools, with particular increases in resources being seen since the second survey in 2003.

- There was a small increase in the average number of desktop computers available in primary schools, from 24 in the baseline survey to 28 in 2005 (Table 5.1).
- There was a larger increase in the availability of laptops, with the average number rising from four in the baseline survey to 12 in 2005.
- The biggest rise in resources in primary schools was seen with regard to interactive whiteboards, particularly since 2003. By 2005, 91% of schools reported having at least one whiteboard compared with only 39% in the baseline survey and 58% in 2003. The average number available increased from two in 2003 to six in 2005.
- Other resources remained less common – in 2005 it was still the case that very few primary schools (4%) reported having any hand-held devices while just under half (48%) stated that they had any data loggers, the average number remaining at one.
- In secondary schools, the average number of desktop computers increased to 242 in 2005, up from 174 in the baseline survey and 199 in 2003.
- The average number of laptops in secondary schools increased from 23 in the baseline survey to 34 in 2003 and 75 in 2005.
- The average number of interactive whiteboards in secondary schools increased from five in 2003 to 18 in 2005.
- The average number of data loggers in secondary schools was eight and had not changed significantly between the first and third surveys.
- The average number of hand-held computers rose from two to four but, as in the previous surveys, only a minority of secondary schools (32%) reported having any.

Table 5.1: Mean level of resources available in schools

	Primary schools			Secondary schools		
	2002 (%)	2003 (%)	2005 (%)	2002 (%)	2003 (%)	2005 (%)
Desktop computers	24.1	25.3	28.4	174.4	198.6	242.4
Laptops	3.9	6.7	11.6	22.8	34.4	75.0
Interactive whiteboards	0.7	1.5	6.1	3.5	5.4	18.0
Hand-held computers	0.6	0.9	0.8	1.5	2.2	4.3
Data loggers	0.8	0.8	1.4	7.2	7.1	7.5
Base: all schools	236			195		

5.1.1 Pupil-to-computer ratios

Ratios for the number of pupils per computer (desktops plus laptops) improved in both primary and secondary schools since the baseline survey, reflecting the upward trend in the number of computers available in schools. In 2005, primary schools had an average pupil-to-computer ratio of 6.0:1, an improvement from 8.8:1 since the baseline (Figure 32). The average number of pupils per computer varied with school size and was larger in large schools. Schools in the smallest size tertile (fewer than 200 pupils) had an average of 4.7 pupils per computer while schools in the largest tertile (more than 300 pupils) had an average of 7.9 pupils per computer.

The improvement in pupil-to-computer ratios was slightly smaller in secondary schools, albeit from a stronger base. The pupil-to-computer ratio fell from 5.9:1 in the baseline survey to 3.7:1 in 2005. In the baseline survey, schools in

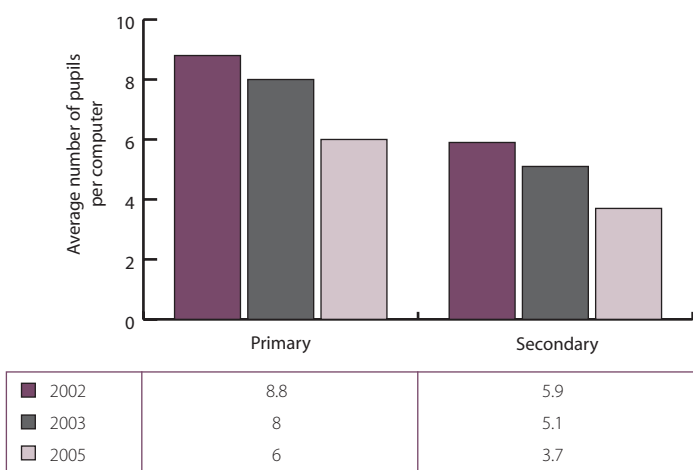
the highest tertile had 6.5 pupils or more per computer while those in the lowest tertile had 4.8 pupils or fewer. By 2005 the gap between the highest and lowest tertiles had narrowed; schools in the highest tertile had 3.8 pupils or more while those in the lowest tertile had 3.0 pupils or fewer. The pupil-to-computer ratio did not vary significantly with school size.

5.1.2 Resources available to teachers

The proportion of primary and secondary teachers with access to ICT resources in lessons had risen significantly both since the baseline survey and since the second survey in 2003. In particular, higher numbers of teachers reported having access to dedicated subject resources as opposed to having to share. These trends reflect the patterns of increased resources in schools.

- Just under two fifths (39%) of primary subject respondents had access to dedicated desktop computers for their subject. This was a small rise from the baseline when 31% of subject respondents had dedicated desktop computers (Table 5.2, Figure 33).
- Dedicated subject laptops were available to just over a quarter (26%) of primary subject respondents. This was an increase from 14% in 2003 and 6% in the baseline survey.
- The biggest increase was seen in access to interactive whiteboards with most of this increase occurring since 2003. In 2005, nearly half of primary subject respondents (49%) had use of dedicated interactive whiteboards compared with 13% in 2003 and 6% in the baseline survey.
- The number of primary subject respondents reporting access to data loggers (9%) and hand-held computers (1%) remained small and had not risen significantly since the baseline survey.
- In primary schools the availability of dedicated resources did not vary significantly by subject.

Figure 32 Average number of pupils per computer in schools



Base: all schools (primary: 236; secondary: 195)

Table 5.2: Mean level of resources available in schools

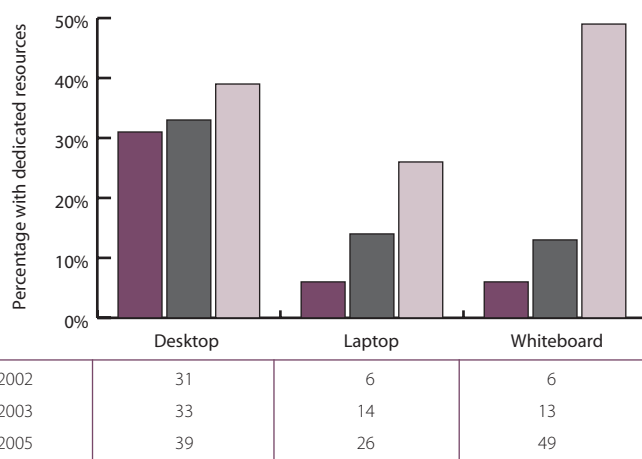
	Desktops		Laptops		Interactive whiteboards		Data loggers		Hand-held computers	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Dedicated to subject	31	39*	6	26*	6	49*	7	9	1	1
Shared	63	50*	34	39	30	39*	18	20	2	2
Not available/not answered	6	10	60	35*	64	12*	75	71	97	96

Base: all primary teachers (2002: 669, 2005: 650) * = statistically significant change 2002-05

The proportion of secondary teachers with access to dedicated subject resources also rose.

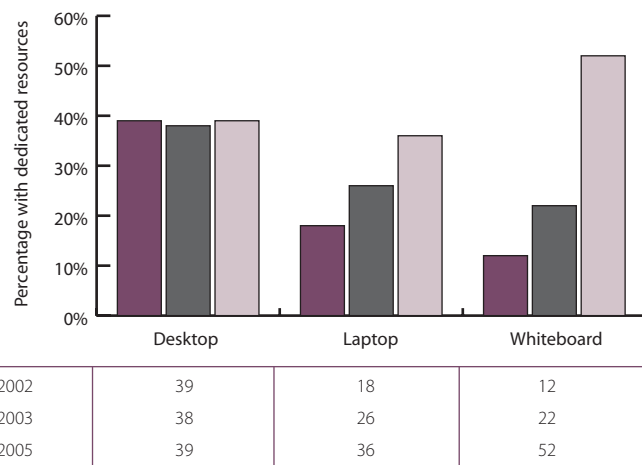
- In 2005, 36% of secondary subject respondents reported having access to dedicated subject laptops compared with 18% in the baseline survey (Table 5.3, Figure 34).
- 52% of secondary subject respondents reported having access to dedicated interactive whiteboards compared with 12% in the baseline survey. As in primary schools, there had been a particular increase in the availability of dedicated interactive whiteboards since the second survey in 2003 when 22% of secondary subject respondents said they were available.
- Just under two fifths (39%) of secondary subject respondents had access to dedicated subject desktop computers, the same proportion as in the baseline survey.
- Science respondents in secondary schools were more likely than other subject respondents to have access to dedicated laptops. Nearly two thirds (63%) of science teachers reported having dedicated subject laptops compared with just over a quarter (26%) of geography teachers and a third (33%) of music teachers.
- Maths and science teachers were more likely than other secondary subject respondents to report having dedicated interactive whiteboards available to them. 77% of maths teachers and 67% of science teachers had dedicated interactive whiteboards for their subject while only 40% of music teachers did. As noted earlier, maths respondents were more likely than other subject respondents to report frequent use of interactive whiteboards in lessons.

Figure 33 Changes in resources available to primary subject respondents



Base: all primary teachers (2002: 669, 2003: 630, 2005: 650)

Figure 34 Changes in resources available to secondary subject respondents



Base: all secondary teachers (2002: 1011, 2003: 929, 2005: 954)

Table 5.3: Resources available to secondary subject respondents

	Desktops		Laptops		Interactive whiteboards		Data loggers		Hand-held computers	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Dedicated to subject	39	39	18	36*	12	52*	14	12	1	1
Shared	52	47*	18	19	21	18	3	5	1	1
Not available/not answered	9	14*	64	44*	66	30*	84	83	99	97

Base: All secondary teachers (2002: 1011, 2005: 954) * = statistically significant change 2002-05

5.2 Views on resources available

5.2.1 Primary schools

Among primary school respondents, views on the fitness for purpose of ICT resources were largely unchanged from the baseline survey. There was a small but significant drop in the proportion of school respondents with positive views on the fitness for purpose of desktops, from 96% in the baseline to 88% in 2005 (Table 5.4). In general, satisfaction remained high with most school respondents rating the fitness for purpose of resources as either good or very good. Most subject respondents were also positive about the fitness for purpose of ICT resources, as they had been in the baseline survey.

than a third (28%) (Table 5.5). This figure had not changed significantly since 2003 but represented a significant fall from the baseline figure of 42%. The proportion of school respondents thinking they had fewer laptops than needed (38%) had fallen considerably since both the first survey (75%) and the second survey in 2003 (63%). In line with the substantial increases in the availability of interactive whiteboards in primary schools since 2003, the number of school respondents thinking they had fewer whiteboards than needed had fallen to 33%, down from a high of 72% in the second survey.

Among primary subject respondents, views on the quantity of resources available closely mirrored changes in the availability of resources to teachers. Increases in the availability of dedicated resources for subjects were reflected in the significant reductions in the proportion of subject respondents reporting that they had fewer resources than needed.

- There was a small but significant reduction in the number of respondents thinking they had fewer desktops than needed, from 42% in the first survey to 35% in 2005.
- The number of subject respondents reporting they had fewer laptops than needed fell to 45% from 67% in the first survey and 55% in 2003.
- Less than a third of subject respondents in 2005 (29%) thought they had fewer whiteboards than needed, a considerable fall from 60% in 2003.

Table 5.4 Rating of fitness for purpose of resources in primary schools (percentage very good/good)

	School		Teacher	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Desktop computers	96	88*	89	87
Laptops	95	91	86	87
Interactive whiteboards	93	97	91	97*
Data loggers	85	84	78	77
Base: all with each type of resource answering	92-230	111-223	150-628	186-589

* = statistically significant change 2002-05

Ratings of the quantity of resources available in primary schools had improved since the baseline survey, with significant reductions in the proportion of respondents reporting that they had fewer resources than needed. Among primary school respondents, the proportion reporting they had fewer desktops than needed was less

5.2.2 Secondary schools

Ratings of the fitness for purpose of resources remained high among secondary school respondents and were largely unchanged from the baseline survey (Table 5.6). There was also little change in the views of subject

Table 5.5: Rating of quantity of resources in primary schools (percentage saying 'less than we need')

	School			Teacher		
	2002 (%)	2003 (%)	2005 (%)	2002 (%)	2003 (%)	2005 (%)
Desktop computers	42	34	28*	42	40	35*
Laptops	75	63	38*	67	55	45*
Interactive whiteboards	67	72	33*	52	60	29*
Data loggers	63	64	63	69	68	62
Base: all with each type of resource answering	92-230	92-231	111-232	143-624	139-588	185-593

* = statistically significant change 2002-05

respondents. Satisfaction remained high although the proportion of 'good' or 'very good' responses was lower among subject respondents than among school respondents. 80% of subject respondents were satisfied with the fitness for purpose of desktops, a slight fall from 86% at the baseline survey.

Satisfaction with the quantity of resources available in secondary schools had increased, although a large proportion of school respondents still thought they had less than they needed to deliver the curriculum. 46% of school respondents thought they had fewer desktops than needed, down from 63% in the first survey (Table 5.7). The number of school respondents thinking the number of laptops was insufficient had fallen compared to both the baseline survey (77%) and 2003 (64%). 65% of school respondents thought they had fewer interactive whiteboards than needed. However, this represented a significant drop from the second survey in 2003 when 84% of respondents reported they had fewer than needed.

Subject respondents were less satisfied than school respondents with the quantity of desktops available. 68% of secondary school subject respondents thought they had insufficient desktops to deliver the curriculum, a similar proportion to the baseline survey. The proportion of subject respondents believing they had fewer laptops than needed had fallen both since the baseline (74%) and the 2003 survey (67%) to 56% in 2005. Since the 2003 survey there had been a fall in the proportion of subject respondents reporting they had fewer interactive whiteboards than needed. 53% of respondents in 2005 said this was the case compared with 72% in 2003 and 74% in the baseline survey.

There were few significant differences in satisfaction levels across subjects despite subject-level differences in

Table 5.6 Rating of fitness for purpose of resources in secondary schools (percentage very good/good)

	School		Teacher	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Desktop computers	96	95	86	80*
Laptops	92	92	84	84
Interactive whiteboards	94	98	91	91
Data loggers	81	81	76	73
Base: all with each type of resource answering	138-193	124-190	171-868	159-813

* = statistically significant change 2002-05

the availability of dedicated resources. The one significant finding was that, of teachers with access to resources, maths teachers (36%) were less likely to report that they had fewer laptops than needed compared to science teachers (64%) and English teachers (71%).

In general, satisfaction with the level of resources was correlated with the availability of resources in secondary schools. Only 24% of school respondents in schools with the lowest numbers of pupils per computer felt they had fewer desktops than needed compared with 57% of respondents in schools with the highest numbers of pupils per computer. Among subject respondents, satisfaction with the resources available was higher among those reporting access to dedicated subject resources compared with those who had to share resources. Fewer than four out of 10 respondents (38%) with access to dedicated interactive whiteboards for their subject felt they had insufficient numbers to deliver the curriculum compared with nearly nine out of 10 respondents (86%) who had to share.

Table 5.7 Rating of quantity of resources in secondary schools (percentage saying 'less than we need')

	School			Teacher		
	2002 (%)	2003 (%)	2005 (%)	2002 (%)	2003 (%)	2005 (%)
Desktop computers	63	54	46*	70	68	68
Laptops	77	64	54*	74	67	56*
Interactive whiteboards	87	84	65*	74	72	53*
Data loggers	71	73	65	72	56	58*
Base: all with each type of resource answering	146-192	139-195	139-192	175-885	164-835	163-830

* = statistically significant change 2002-05

5.3 Internet and networking

5.3.1 Internet connections

There has been a significant move towards the use of broadband internet connections in primary schools while the widespread use of broadband in secondary schools has been maintained (Table 5.8, Figure 35).

86% of primary schools had a broadband connection in 2005, a substantial increase compared with both the

baseline survey (21%) and the second survey in 2003 (50%). There was a correspondingly large fall in the proportion of primary schools with an ISDN connection from 71% in the baseline survey to 15% in 2005. The use of broadband in secondary schools has not increased since the baseline survey but remains high with 87% of schools reporting a broadband connection. Since 2003 there has been an increase in the use of leased line connections in secondary schools. In 2005, 12% of secondary schools had a leased line connection, up from 2% in the baseline survey and 5% in 2003.

5.3.2 Speed of internet connection

Levels of satisfaction with the speed of internet connections has increased significantly in primary schools (Table 5.9, Figure 36). Satisfaction was significantly higher compared to the baseline survey and also to 2003. More than two thirds (69%) of primary school respondents stated that the connection was 'fast enough for most or all requirements' compared with 46% in 2003 and 25% in the baseline survey. Satisfaction levels among subject respondents followed a similar trend with 64% of respondents thinking that the connection was 'fast enough for most or all requirements', up from 35% in the baseline survey and 48% in 2003. These increases in satisfaction reflect the rise in broadband penetration in primary schools reported in the previous section.

There was less change in overall levels of satisfaction with the speed of internet connections in secondary schools (Figure 37). The proportion of school respondents thinking that the internet connection was fast enough for all or most of their purposes (64%) was similar to the proportion in the first survey (61%). This figure rose between the baseline and 2003 (to 71%) but had fallen back again by 2005. There was a rise in the level of satisfaction among secondary subject respondents between 2003 and 2005. 62% of subject respondents in 2005 thought the internet connection was 'fast enough for most or all requirements', compared with 54% of respondents in 2003 and 49% in the baseline survey.

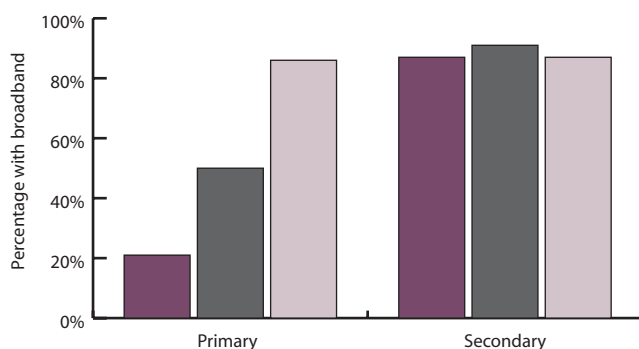
Table 5.8 Form of internet connection

	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Broadband	21	86*	87	87
ISDN	71	15*	19	8*
Dial-up	10	3*	5	2
Leased line	3	1	2	12*

Base: all answering (primary school: 228/232; secondary school: 192/194)

* = statistically significant change 2002-05

Figure 35 Change in proportion of schools with broadband internet connections



	2002	2003	2005
Primary	21	50	86
Secondary	87	91	87

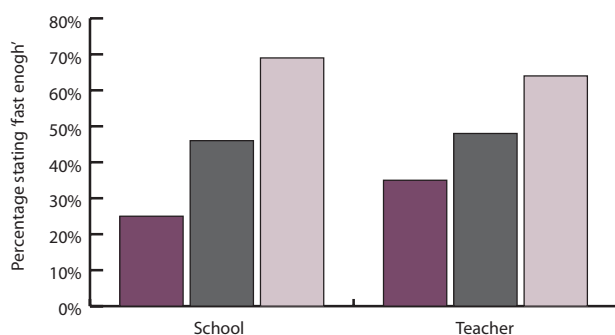
Base: all answering (primary school: 228/230/232; secondary school: 192/193/194)

Table 5.9 Speed of internet connection

	Primary school				Primary teachers			
	School		Teacher		School		Teacher	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Fast enough for all/most requirements	25	69*	35	64*	61	64	49	62*
Fast enough for some requirements	45	20*	46	28*	26	31	36	28*
Not fast enough for our requirements	30	11*	19	8*	13	6	14	10*
Base: all answering	234	236	649	634	194	194	962	932

* = statistically significant difference 2002-05

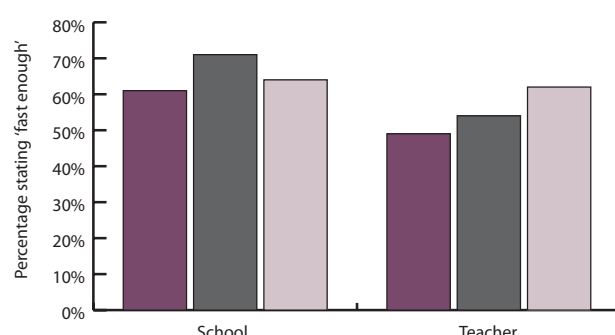
Figure 36 Change in proportion of primary school respondents who believe their internet connection is fast enough for most/all requirements



■ 2002	25	35
■ 2003	46	48
■ 2005	69	64

Base: school – 234/233/236; teacher – 649/617/634

Figure 37 Change in proportion of secondary school respondents who believe their internet connection is fast enough for most/all requirements



■ 2002	61	49
■ 2003	71	54
■ 2005	64	62

Base: all answering (school: 194; teacher: 962/904/932)

5.3.3 Number of internet connections

There were generally high levels of satisfaction with the number of internet connections available in primary schools (Table 5.10, Figure 38). As in the baseline survey, the majority of primary school respondents (64%) and subject respondents (69%) felt that they had about the right amount of internet connections. The proportion of primary school respondents expressing dissatisfaction and thinking that they had fewer than needed had halved since the baseline, falling from 34% to 15%. Among subject respondents, the proportion of respondents thinking they had fewer connections than needed had fallen since 2003. 17% of subject respondents stated they had fewer connections than needed, compared to 29% in 2003 and 32% in the baseline survey.

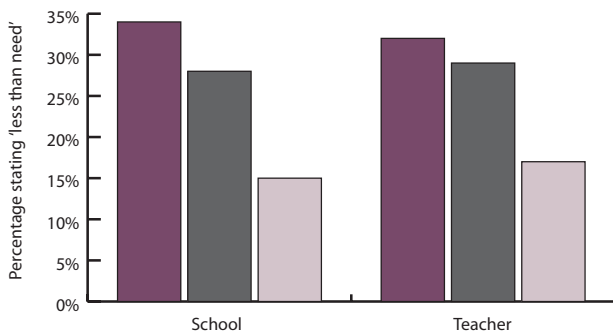
In secondary schools there had been a reduction in the number of school respondents stating they had fewer internet connections than needed since the 2003 survey (Figure 39). In 2005 only 12% of school respondents thought this was the case compared with 20% in the baseline survey and 21% in 2003. Dissatisfaction with the number of internet connections was higher among subject respondents than among secondary school respondents. In 2005, 37% of subject respondents stated they had fewer connections than needed, down from 44% in the baseline survey. Nearly three quarters of school respondents (73%) thought they had about the right amount of internet connections compared with half of subject respondents (53%).

Table 5.10 Number of internet connections

	Primary school				Secondary school			
	School		Teacher		School		Teacher	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)	2002 (%)	2005 (%)
More than we need	4	21*	7	14*	12	15	7	10
About the right amount	62	64	61	69*	68	73	49	53
Less than we need	34	15*	32	17*	20	12	44	37*
Base: all answering	231	235	640	622	189	189	948	920

* = statistically significant difference 2002-05

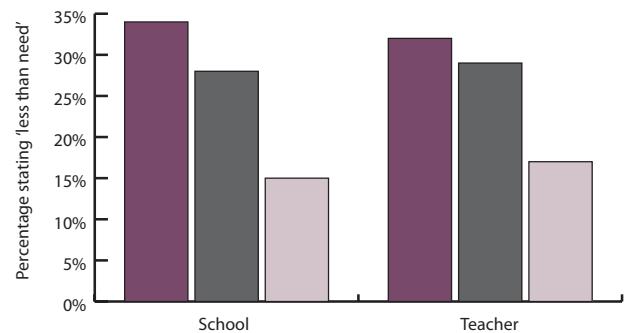
Figure 38 Change in proportion of primary school respondents reporting they have fewer internet connections than needed



2002	34	32
2003	28	29
2005	15	17

Base: all answering (school: 231/232/235; teacher: 640/609/622)

Figure 39 Change in proportion of secondary school respondents reporting they have fewer internet connections than needed



2002	20	44
2003	21	39
2005	12	37

Base: all answering (school: 189/192/189; teacher: 948/888/920)

5.3.4 Location of computers and internet connections in schools

The location of computers in both primary and secondary schools had not changed significantly since the baseline survey (Table 5.11). Nearly a fifth of primary schools (17%) had no dedicated ICT suite, with all computers located in the classroom. In over two thirds of primary schools (69%), computers were mainly located in a dedicated ICT suite. As in the baseline survey, most secondary schools (94%) said that computers were mainly located in a dedicated ICT suite.

There were changes to the location of internet connections in primary schools, reflecting the fact that an increasing number of schools now have the internet in more than one location. (Table 5.12, Figure 40). 83% of primary schools had connections in more than one location in 2005 compared with 68% in 2003 and 60% in the baseline survey. There was not a significant increase in the presence of internet connections in dedicated ICT suites. However, there were significant increases in internet access in other locations. 92% of primary schools had access in classrooms, up from 69% in the baseline survey and 77% in 2003. In addition, 36% of schools reported access in libraries and 31% via laptops. As in the baseline survey, the main internet location for schools with more than one connection was an ICT suite (Table 5.13). There was a significant increase, from 13% to 21%, in the number of schools reporting that the classroom was the main location for the internet.

As in the baseline survey, nearly all secondary schools (95% in 2005) had access to the internet in more than one location. As before, the main location for the internet in most schools (92%) was the ICT suite. The number of schools with internet connections in an ICT suite (95%) had not changed significantly since the baseline survey. There were significant increases in the number of schools with internet connections on portable laptops (60%) and in classrooms (88%) since the baseline survey, though not since the 2003 survey (Figure 41).

Table 5.11 Location of computers in schools

	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Only in dedicated ICT suite	–	2	3	1
Mainly in dedicated ICT suite but some classroom	67	69	89	94
Mainly in classroom but some in ICT suite	12	12	8	5
No ICT suite (facilities located in classroom)	21	17	–	–
Base: all answering	231	234	194	193

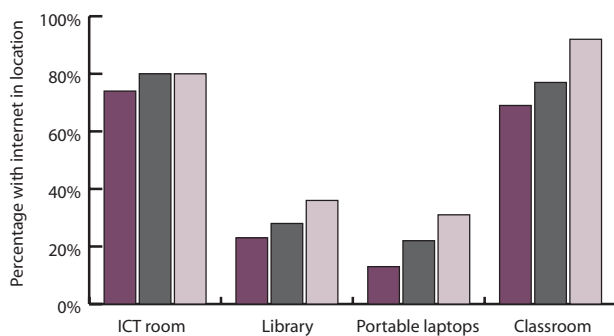
* = statistically significant change 2002-05

Table 5.12 Location of internet in schools

	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Dedicated ICT room	74	80	97	95
Library/learning resource centre	23	36*	88	88
Set of portable laptops	13	31*	38	60*
Classrooms	69	99*	74	88*

Base: all schools (primary: 236; secondary: 195) * = statistically significant change 2002-05

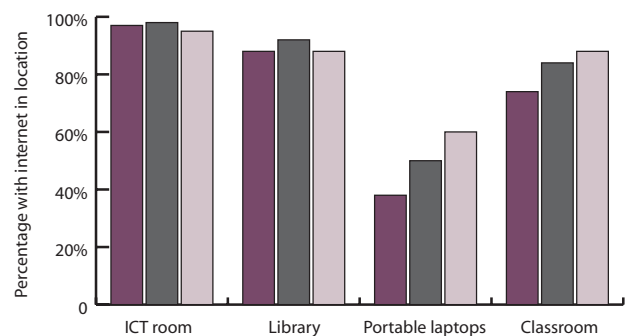
Figure 40 Changes in location of internet in primary schools



2002	70	23	13	69
2003	80	28	22	77
2005	80	36	31	92

Base: all primary schools (236)

Figure 41 Changes in location of internet in secondary schools



2002	97	88	38	74
2003	98	92	50	84
2005	95	88	60	88

Base: all secondary schools (195)

Table 5.13 Main location of internet in schools

	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
Dedicated ICT room	78	73	91	92
Library/learning resource centre	6	–	5	3
Set of portable laptops	3	5	–	1
Classrooms	13	21*	4	4
Base: all answering	140	183	157	162

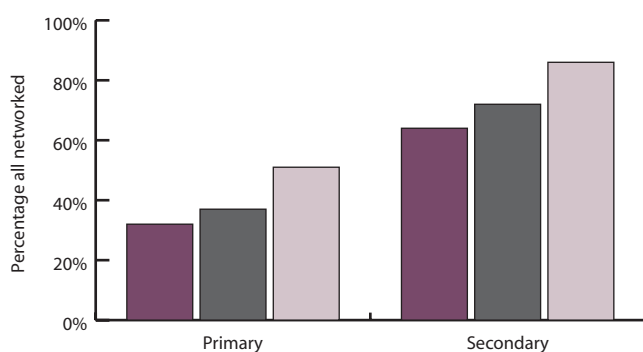
* = statistically significant change 2002-05

Table 5.14 Extent of networking in schools

Computers linked	Primary school		Secondary school	
	2002 (%)	2005 (%)	2002 (%)	2005 (%)
All	32	51*	64	86*
More than half	33	33	35	14*
Around half	6	6	–	–
Less than half	6	4	–	–
None	22	6	–	–

Base: all schools (primary: 236; secondary: 195) * = statistically significant change 2002-05

Figure 42 Change in proportion of schools with all computers networked



■ 2002	32	64
■ 2003	37	72
■ 2005	51	86

Base: all schools (primary: 236; secondary: 195)

5.3.5 Networking

Networking of computers has become more extensive in primary and secondary schools since both the baseline survey and the second survey in 2003. In 2005, 84% of primary schools had more than half of their computers connected to a network, up from 65% in the baseline survey (Table 5.14). The number of primary schools with all computers networked had increased significantly from 37% in 2003 to 51% in 2005 (Figure 42). All secondary schools reported having more than half of their computers networked by the time of the baseline survey. In 2005, most secondary schools (86%) reported having all computers networked, compared with 64% in the baseline survey and 72% in 2003. In primary schools, though not in secondary schools, there was a significant relationship between the extent of networking and size of school. More than two thirds (68%) of primary schools with 300 or more pupils had all their computers networked compared with only 39% of smaller schools (200 or fewer pupils).

In the 2005 survey, schools were asked about various features of their networks. The most common feature of the networks in both primary and secondary schools was for them to integrate curriculum and management functions. 60% of primary and 82% of secondary schools reported that their network did this (Table 5.15). In addition, 68% of secondary schools and 37% of primary schools used their network to host an intranet. Networks made at least some use of wireless technology in two thirds (68%) of secondary and a third (32%) of primary schools. Remote access to the network off school premises was available in very few primary schools (7%) but was available in more than a third (34%) of secondary schools.

5.4 Online learning environments (OLEs)

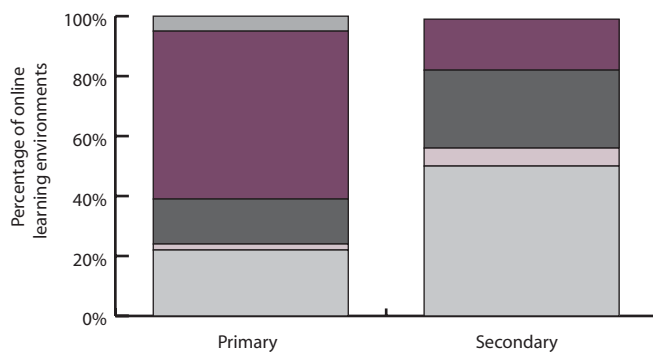
Questions on online learning environments (OLEs) were asked for the first time in the 2005 survey. OLEs were more common in secondary schools than in primary schools. 22% of primary schools and 50% of secondary schools already had an OLE (Figure 43). OLEs looked set to become increasingly common in secondary schools. In addition to those schools which already had them, a further 32% of secondary schools had plans to establish an OLE within the next two years. However, a majority of primary schools (56%) still had no plans to set one up. OLEs had been well established in a number of schools. 19% of secondary and 14% of primary schools had had their OLEs for over two years (Table 5.16). A majority of both primary (59%) and secondary schools (52%) with OLEs had had them for at least 12 months.

Table 5.15 Type of network in schools (2005)

Applies to network	Primary school (%)	Secondary school (%)
Integrates curriculum and management functions	60	82
Makes use of wireless technology	32	68
Hosts an intranet	37	68
Accessible from beyond school premises	7	34
None	12	3

Base: all answering (primary school: 218; secondary school: 191)

Figure 43 Prevalence of online learning environments (OLEs) in schools



	Primary	Secondary
Not answered	5	–
No plans	56	17
Planned	15	26
In procurement	2	6
Currently have	22	50

Table 5.16 Rating of fitness for purpose of resources in secondary schools (percentage very good/good)

	Primary school (%)	Secondary school (%)
Less than six months	25	27
Between six and 12 months	17	20
Between 12 months and two years	44	34
More than two years	14	19
Base: all schools answering	60	98

Table 5.17: Type of OLE

	Primary school (%)	Secondary school (%)
Learning platform	29	24
Virtual learning environment (VLE)	14	38
Learning portal	49	25
Combination of the above	4	12
Other	5	2
Base: all schools with OLE answering	60	100

Table 5.18: Provider of OLE

	Primary school (%)	Secondary school (%)
Regional broadband consortium	17	18
Local authority	59	37
Self-created	4	23
Commercial supplier	20	23
Base: all schools answering	60	97

In secondary schools, the presence of OLEs was related to school size with OLEs less common in small schools. Only 34% of schools in the smallest size tertile (fewer than 800 pupils) had an OLE compared with 56% in the middle tertile and 54% in the largest tertile (more than 1,200 pupils). In primary schools, OLEs also tended to be more common in larger schools although the differences between tertiles were not significant.

The most common type of OLE in secondary schools, used by 38% of schools with OLEs, was a virtual learning environment or VLE (defined as enabling online interactions between learners and teachers) (Table 5.17). In contrast, VLEs were used by only 14% of primary schools with OLEs. The most common type of OLE in primary schools was the learning portal (defined as having features such as an intranet, storage and launching of electronic content), used by 49% of schools with OLEs.

The majority of OLEs in primary schools (59%) were provided by the local authority (Table 5.18). However, provision in secondary schools was more diverse. While 37% of OLEs were provided by the local authority, 23% were provided by a commercial supplier and a further 23% were self-created.

Summary – ICT resources

The availability of ICT resources had increased in both primary and secondary schools between the baseline survey in 2002 and the third survey in 2005. The largest increases were seen in the availability of interactive whiteboards, with the increases occurring between 2003 and 2005. In primary schools, the average number of interactive whiteboards available rose from two in 2003 to six in 2005. In secondary schools, the average number of interactive whiteboards rose from five in 2003 to 18 in 2005.

The pupil-to-computer ratio had improved in both primary and secondary schools since the baseline survey. The average number of pupils per computer was 6.0 in primary schools and 3.7 in secondary schools.

The proportion of subject respondents with access to ICT resources dedicated to their subject increased in both primary and secondary schools. The biggest increases were seen in the availability of dedicated laptops and, in particular, interactive whiteboards. Almost half (49%) of primary subject respondents had access to dedicated interactive whiteboards compared with just 6% in the baseline survey. In secondary schools, more than half (52%) of subject respondents had access to dedicated interactive whiteboards compared with 12% in the baseline survey.

Satisfaction with the quantity of resources available increased in primary and secondary schools. However, the majority of subject respondents in secondary schools still felt that they had fewer desktop computers than needed to deliver the curriculum.

The majority of schools had at least one broadband internet connection. Broadband was available in 86% of primary schools and 87% of secondary schools. The number of primary schools with broadband has increased fourfold, up from 21% in the baseline survey, while the proportion of secondary schools with broadband has remained similar since 2002. Accordingly, satisfaction with the speed of the internet rose significantly in primary schools with 64% of subject respondents agreeing that the internet is fast enough for most or all requirements compared with 35% in the baseline survey, while there was little change in satisfaction levels in secondary schools.

Networking had increased in both primary and secondary schools. Half (51%) of primary schools had all computers networked, up from a third (32%) in the baseline survey. 86% of secondary schools had all computers networked, up from 64% in the baseline survey. OLEs are an increasingly common feature in secondary schools with half (50%) already in possession of one and a further 32% planning to establish one in the next two years.



Conclusions



Between 2002 and 2005, ICT has become increasingly important to teaching and learning in both primary and secondary schools. Increased availability of resources has facilitated wider use of ICT in lessons. In particular, the substantial rise in the availability of interactive whiteboards in schools has seen them become commonly used in lessons, especially in primary schools. Digital sources, by 2005, were beginning to account for a significant portion of teachers' lesson planning and teachers were more positive in their views towards using digital resources.

At the first survey, ICT was already perceived by the majority of teachers to have a role in improving attainment and responding to different pupil abilities. By the third survey, these attitudes were reflected in practice through the integration of ICT resources into lessons. Schools were extending the potential of their ICT resources through increased networking of computers and, in secondary schools, the acquisition of OLEs.

At the third survey, teachers were more likely to report finding it easy to locate relevant software for the curriculum than they had been at the first survey. Software was highly rated by teachers for relevant content and technical quality, and ratings had improved since the first survey for all key stages. These findings indicate that teachers have become more likely to be able to access software that meets their needs for delivering the curriculum.

Awareness of Curriculum Online, although high, had not improved significantly between 2003 and 2005. The Curriculum Online website had been used by the majority of those responsible for ICT in schools. In secondary schools, the website retained a strong core of regular visitors. In primary schools, although a greater number of subject leaders had visited the website in 2005 compared with 2003, there was a decline in regular use among those responsible for ICT. The number of times respondents had used the website did not increase significantly between 2003 and 2005 and the website was not the preferred source of information about software for most ICT leaders. These findings indicate that the Curriculum Online website has not, overall, continued to attract new users or become an integral part of the software selection process for schools.

Teachers who used the Curriculum Online website were more likely to report that finding relevant software was easy than teachers who had not visited the website. This

may indicate that the website is facilitating the location of relevant software or, conversely, that teachers who were more adept at finding software were more likely to access the website.

Clearly, eLCs have had a significant impact in schools, contributing to large rises in spending on software for the curriculum. Satisfaction with funding for software was, at the third survey, considerably higher than satisfaction with funding for facilities or training, while levels of satisfaction had been similar in the baseline survey. It is also notable that fewer primary schools were setting funding aside for software in addition to their eLCs. Given the increased spending on software and satisfaction with funding, this implies that the level of funding was meeting demand in primary schools. The introduction of eLCs does appear to have brought about greater centralisation of the software purchasing process within schools, with most schools electing to hold their eLCs centrally rather than allocating them among departments.





Appendix A Methodology

Selection of schools

Baseline survey

The population for this study was maintained primary and secondary schools in England. The first stage of drawing the sample was to select 110 local authorities, based on total pupil size and region. The ICT Test Bed local authorities¹ were excluded from this survey. A sample frame of schools within the selected local authorities was provided by the DfES EduBase (excluding schools recently sampled for other DfES studies), with additional information supplied from the Annual Schools Census. Each selected local authority was divided into two geographical strata, based on grid references of schools, and one stratum per local authority was selected.

Schools were then divided into two groups, based on the proportion of pupils eligible for free school meals and these groups were then subdivided into two sub-groups based on the proportion of pupils from non-white ethnic groups. Finally, schools were sorted in size order within each sub-group. Four primary schools and four secondary schools in each local authority were then systematically selected, to give a total issued sample of 880 schools.

Second survey

The sample for the second survey consisted of schools that had participated in the baseline survey. A small number of schools were removed from the sample as the high response to the baseline survey meant that there were more schools in the sample than had been budgeted for recontacting. Some 49 primary schools and 21 secondary schools were systematically selected for removal from the sample, leaving a total sample to be recontacted of 310 primary and 310 secondary schools.

Third survey

All schools that participated in the second survey (261 primary schools and 247 secondary schools) were recontacted for the third survey.

Selection of teachers

It was agreed with the DfES that the most appropriate method of collecting data on teachers' usage and attitudes to ICT would be to provide questionnaires to be completed on behalf of key subject areas. Teachers would be asked to respond on behalf of their subject or department as a whole. It was important that questionnaires should be issued for the same subjects in each school to enable useful comparison and subjects

were selected in consultation with the DfES. Maths, English and science were selected as they are the key National Curriculum areas. In secondary schools, modern languages was included as a fourth key subject while geography and music were selected to represent a humanity and an arts subject.

Contacting schools

NatCen's telephone unit contacted the schools in September 2005 to check the details of the named ICT contact from the second survey and to collect details of a new contact if this person was no longer at the school. An initial letter was sent to headteachers informing them that the final survey in the series would be taking place later that term.

A further letter was sent to the ICT contacts at the start of fieldwork, informing them that a NatCen interviewer would be contacting them. The interviewers then telephoned the ICT contacts to arrange an appointment to visit the school.

The first school visit

The first visit to the school was used to collect details of subject teachers who would be given questionnaires and to arrange the distribution of questionnaires to teachers. The ICT contact provided the names of the most appropriate staff members to complete the subject questionnaires. In primary schools, these had to be subject co-ordinators or equivalent as the questionnaire was not suitable for a class teacher to complete. In secondary schools, the head of department was preferred but other staff in the department could complete the questionnaire if the head of department was unavailable.

¹ICT Test Bed is a four-year project developed by the DfES to examine how effective ICT use can support the wider government aim of school reform and is taking place in three local authorities in England.

Table A1 Primary schools by Government Office region

Government Office region	Schools (%)
East Midlands	10
East of England	14
London	10
North East	4
North West	13
South East	11
South West	15
West Midlands	10
Yorkshire and Humber	13

Base: all primary schools (236)

Table A2 Secondary schools by Government Office region

Government Office region	Schools (%)
East Midlands	10
East of England	14
London	10
North East	4
North West	13
South East	11
South West	15
West Midlands	10
Yorkshire and Humber	13

Base: all secondary schools (195)

Where possible, the interviewer distributed the questionnaires to the selected teachers in person, but otherwise gave them to the ICT contact to distribute. The ICT contact was given a copy of the school questionnaire to complete themselves. All questionnaires were accompanied by a letter describing the study and explaining how to complete the questionnaire.

Teachers completing questionnaires for this survey did not have to be the same individuals who took part in the baseline survey.

The second school visit

The interviewer returned to the school at a time arranged with the ICT contact to collect the completed questionnaires. If any questionnaires were not returned at this time, the interviewer left a pack containing a replacement questionnaire, an accompanying letter and a reply-paid envelope for the teacher concerned so that they could return the questionnaire by post to NatCen.

Response rate

A good response was received from the schools. Two secondary schools were found to be closed when initial telephone contact was made so these were removed from the sample. First and second visits were completed with 92% of primary schools and 88% of secondary schools contacted for the survey. The base for analysis (schools where a school questionnaire was completed) was 90% of issued primary schools and 80% of secondary schools. The rate of returns from subject teachers was also good, with 90% of subject teachers from participating primary schools and 76% of teachers in secondary schools completing a questionnaire, similar to the response rates in the second survey. Overall, the yield of interviews was in line with expectations.

Data analysis

The data from the questionnaires was processed by an external agency and edited by NatCen's Operations Department. Weighting of the data was carried out to account for probability of selection. Weights were calculated to correct for the probability of the local authority being selected and the probability of the school being selected, based on the total number of primary or secondary schools in the local authority. The weights were adjusted to account for the probability of being retained in the sample at the second survey.

Sample characteristics

This section discusses the characteristics of the sample of schools when weighted.

Primary Schools

The average number of pupils in the primary schools that took part was 236. Nearly three fifths (58%) of these schools were community funded (that is funded through the local authority), while nearly a quarter (23%) were voluntary aided and a further 17% voluntary controlled. Half of primary schools had 6% or fewer pupils from non-white ethnic groups while a quarter had 14% or more pupils from these groups. The average proportion of pupils eligible for free school meals was 14% but this ranged from 3% or fewer in the lowest quartile to 17% or more in the highest quartile. On average, 17% of pupils in primary schools had special educational needs (including those with and without a statement).

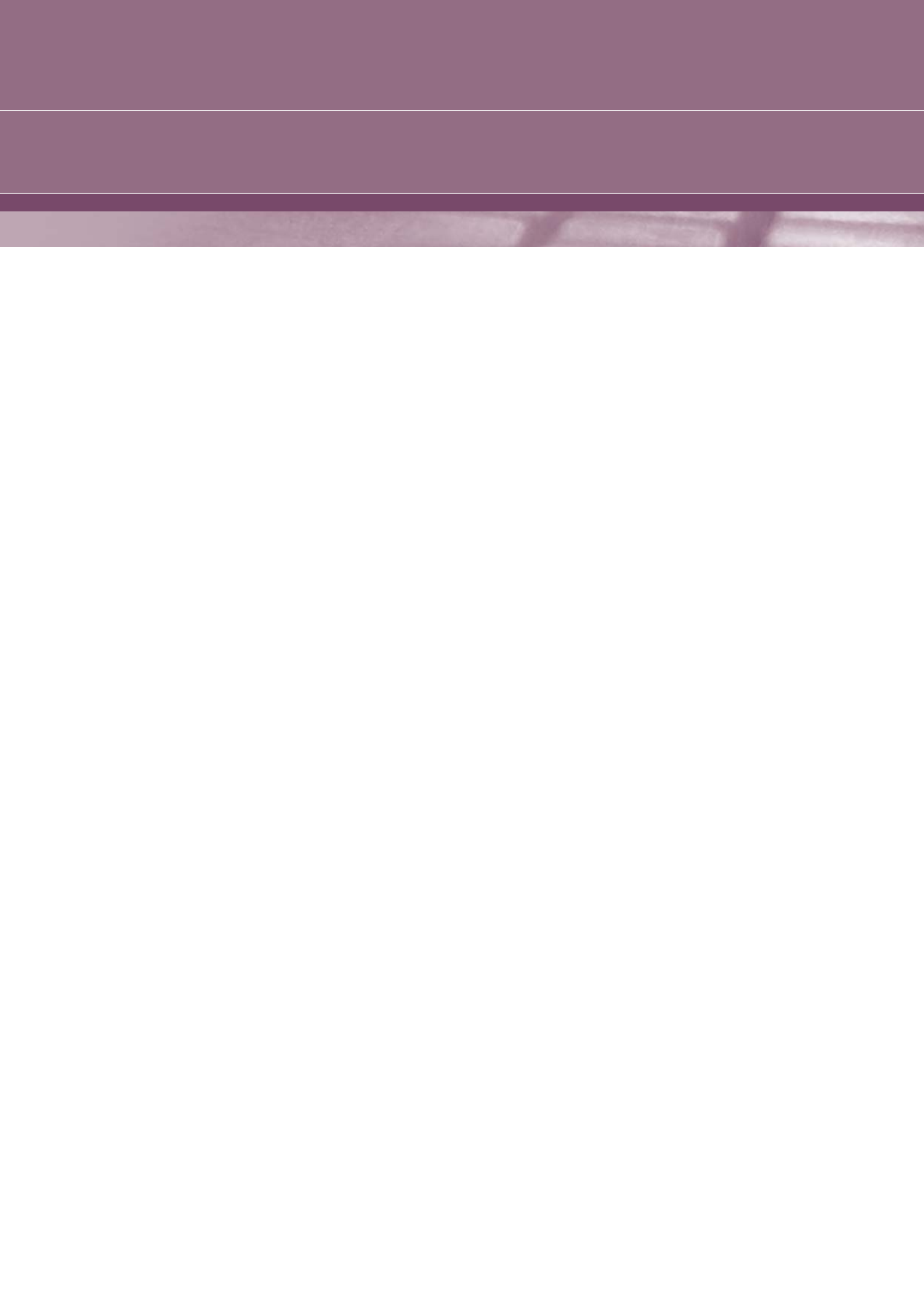
Table A1 shows the breakdown of participating primary schools by region.

Secondary schools

The average number of pupils in the secondary schools in the survey was 1,023. Most of the schools (85%) were mixed gender while 8% were all-boys schools and 7% all-girls schools. Three fifths (61%) were community schools, while 21% were foundation schools, 14% voluntary aided and 4% voluntary controlled. The intake of most schools (86%) was comprehensive, while 4% were selective and 5% were secondary moderns (information on intake was not available for the remaining 5% of schools).

The proportion of pupils from non-white ethnic groups ranged from 3% or fewer in the lowest quartile to 16% or more in the highest quartile. On average, 15% of secondary pupils were eligible for free school meals but this ranged from 6% or fewer in the lowest quartile of schools to 19% or more in the highest quartile. The average proportion of pupils with special educational needs, including those with and without a statement, was 17%.

Table A2 shows the breakdown of secondary schools in the survey by region.



www.becta.org.uk/research

To order further copies of this publication or to download an electronic copy visit <http://www.becta.org.uk/publications>

© Copyright Becta 2006

You may reproduce this material, free of charge in any format or medium without specific permission, provided you are not reproducing it for profit, or for material or financial gain.

You must reproduce the material accurately and not use it in a misleading context. If you are republishing the material or issuing it to others, you must acknowledge its source, copyright status and date of publication.

While great care has been taken to ensure that the information in this publication is accurate at the time of publication, we accept no responsibility for any errors or omissions. Where a specific product is referred to in this publication, no recommendation or endorsement of that product by Becta is intended, nor should it be inferred.



British Educational Communications
and Technology Agency

Millburn Hill Road
Science Park
Coventry CV4 7JJ

Tel: 024 7641 6994
Fax: 024 7641 1418

Research email: research@becta.org.uk
Main email: becta@becta.org.uk
URL: <http://www.becta.org.uk>

04/DD06-07/3003/005/MD/500