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Computers for Teachers

An evaluation of Phase 2: survey of recipients

A report to the DfES by The Institute of Employment Studies

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

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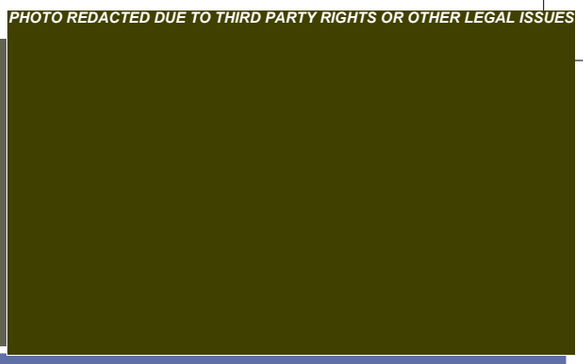
The evaluation of Phase 1 of the Computers for Teachers initiative is also published on the Becta Research web site, together with other reports in the ICT in Schools Research and Evaluation series.



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Preamble

Computers for Teachers (CfT) aimed to help teachers in England raise standards by enabling them to have personal access to a computer. There were two phases to this government initiative. The first phase offered subsidies of 50 per cent of the cost of purchasing a home computer, up to a maximum of £500, to 28,000 teachers. This initial phase was evaluated, and the findings indicated that the scheme made an impact both on teachers' confidence and competence with ICT, and on their pupils. This report is available from the DfES and via the web site (http://www.becta.org.uk/research/reports/cft/).

This first phase was substantially over-subscribed and was succeeded by a targeted scheme aimed at Key Stage 3 mathematics teachers. This second phase of the CfT scheme was evaluated by comparing a baseline survey that was conducted in July 2001, with a follow-up survey completed a year later. The survey was designed and administered by the DfES, and the data have been analysed and reported by The Institute for Employment Studies (IES)[1].

This evaluation focuses mainly on changes in teachers' use of computers and their views of the potential and application of ICT one year after receiving their computers. The follow-up survey covered many of the same questions as the baseline survey in order to measure changes in teacher behaviour and views.

The baseline survey measured teachers' responses at the start of the second phase of the CfT initiative. It should be noted that, owing to the staging of the scheme, some teachers had already owned their computers for a short period of time at the point when they completed the questionnaire, while others may have completed the questionnaire prior to purchase. Given that the study is designed in a 'before and after' format, ideally all teachers should have completed the questionnaire before using their computers. These findings therefore are likely to underestimate the degree of change in teachers' views and use of ICT. This underestimate cannot be quantified.

There are some important contextual and practical issues that need to be raised. In between the end of the first phase and the evaluation of the second phase, a consultation exercise took place, which gathered views on the best way to continue the scheme. In response to this consultation, the DfES launched a new policy initiative, Laptops for Teachers, to succeed the CfT scheme. The new initiative no longer provides subsidies for teachers. Rather, the initiative retains the emphasis on personal access for teachers, but leaves ownership of the laptops with the schools. As such, the issue of how subsidies are distributed to individual teachers, is of less importance to future policy than the *impact on teachers of improved access to ICT*. The latter issue is reflected and focused upon in this report.

Due to these policy changes, the follow-up survey was amended to focus less on the process and the subsidies of the scheme, and more on the impact on teachers' workload, abilities and confidence.

[1] IES is an independent, apolitical, international centre of research and consultancy that works closely with employers in manufacturing, service and public sectors, government departments, agencies, professional and employee bodies, and foundations. IES is a not-for-profit organisation which has a multidisciplinary staff of over 50.

Summary of key points

This report details the findings from the evaluation of the Computers for Teachers, Phase 2 scheme. This was designed to give Key Stage 3 mathematics teachers personal access to ICT, by providing a subsidy of 50 per cent of the cost, up to a maximum of £500, towards purchasing a home computer and/or peripheral equipment.

Key Stage 3 mathematics teachers were asked to provide feedback on their experiences of the scheme at two points in time. In July 2001, 2,662 teachers (a 69 per cent response rate) completed a baseline questionnaire, and in August 2002 the follow-up was sent to the 1,494 teachers who agreed to take part in further research. 970 completed questionnaires were returned (66 per cent response rate).

In both surveys, the respondents represented a range of gender, ethnicity and level of seniority and management responsibility. The aim of this evaluation is to report on changes in teachers' views and use of ICT 12 months after receiving their computers. The data from both the baseline and follow-up surveys are used, although in most sections, only respondents who completed both questionnaires are included in the analysis.

Computer and Internet access

- 74 per cent of teachers bought desktops and 26 per cent bought laptops.
- 91 per cent had access to a computer at home in the baseline survey. 99 per cent had access to a computer at home in the follow-up.
- 40 per cent had sole access in the baseline survey. 57 per cent reported they have sole access in the follow-up.
- Teachers who bought laptops are more likely to report having sole access to their computers at home than those who bought desktops.
- Those with laptops were much more likely to have sole access to their computers at work.
- More men than women had sole access to a computer at home in the baseline survey, while in the follow-up, the reverse was true.
- Access to the Internet at home increased markedly from the baseline survey to the follow-up.

Computer usage and potential

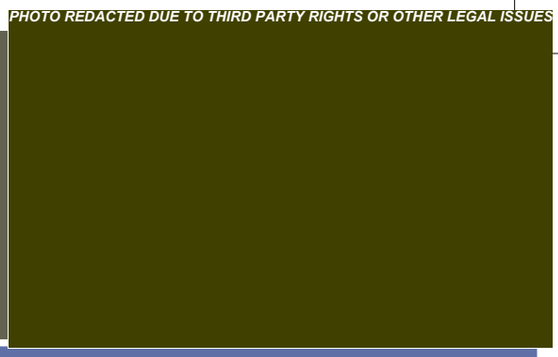
- At the follow-up survey, more teachers were using their computers daily for administration, up from 57 per cent to 65 per cent, with men using it more for this purpose than women.
- Those teachers with sole access to a computer at work were more likely to see the potential of ICT as high, 74 per cent compared to 60 per cent of those with shared access, suggesting that sole access is important.

ICT competence and training

- In many areas of ICT use and application, such as email, Internet, spreadsheets and word processing, teachers reported greatly improved levels of competence (ability) and confidence in the 12 months since the baseline survey.
- Teachers who bought laptops exhibited higher levels of confidence/experience in most packages when compared with those who bought desktops.
- Men were more likely than women to report that they were experienced users of packages and applications, and this gap seemed to have widened in the follow-up survey.
- Nearly all teachers had undergone some ICT training.
- Eight out of ten teachers had completed NOF training, and over half of the follow-up respondents had also undertaken in-house school-based training.
- Open responses suggested some dissatisfaction with the quality of the ICT training provided.

Impact of ownership

- There was a strong belief reported by teachers that personal access to a computer has both increased their confidence to use ICT in teaching and learning, and aided their productivity as a teacher, with no differences by gender or age.



- The impact of teachers' access to ICT on their pupils was reported as 'very positive' (56 per cent), although fewer than 46 per cent were convinced of the specific impact on pupil attainment. This may not be surprising given the variety of variables likely to impact on pupil attainment.
- Most teachers felt that ownership has reduced workload in staff management and in supporting learning. However, they do not think that it has reduced workload in relation to pupil contact. In terms of planning there is a mixed picture, 43 per cent think it has reduced workload, while 31 per cent think it has not.
- Some concern was reported over the expectations and new demands that now might be made on teachers with increased computer access. That is, the expectations of what can be done with computers both quantitatively and qualitatively in terms of administration, planning and preparation have risen, so increasing workload, rather than simply making other tasks quicker. The concern was that management may seek to add on new activities, if they perceive the use of ICT as freeing up time. Concern was also raised that teachers will be expected to work from home, so increasing their workload.

Teachers' attitudes to the scheme

- The results provide strong evidence of the potential benefits in providing teachers with access to ICT, especially in the case of laptops.
- In both the baseline and follow-up surveys, most teachers commented positively on the scheme and provided evidence of its impact on both themselves as individuals and on their work as teachers.
- Many teachers who bought desktops felt that in hindsight a laptop would have been more beneficial to them, for example to keep work in one place, so reducing compatibility and file transfer problems.
- The research suggests that teachers buying laptops report higher levels of confidence and more experience with ICT than those who buy desktops.
- The findings regarding laptops support the policy change by the DfES and the launch of the Laptops for Teachers initiative. However, there are some issues with those who now feel that they are 'stuck' with their desktop and have been penalised for taking part in an earlier scheme.
- Laptops should help to address the reported problems of access to computers within schools.
- Teachers reported concern with future scheme management. For example, if ICT is really to be used, the scheme needs to be disseminated to all teachers. Secondly, many can see problems with upgrading, particularly if it is to be at a personal cost. Suggestions include offering incentives to teachers to upgrade through tax and insurance concessions.

1 Introduction

The Computers for Teachers scheme was designed to give teachers personal access to ICT. Phase 2 of the scheme was aimed specifically at Key Stage 3 mathematics teachers. The evaluation of Phase 2 aims to assess the impact that teachers' personal access to ICT has had on teaching and learning.

The evaluation of Phase 2 was constructed as a 'before and after' longitudinal study. In early summer 2001, all teachers who had received the £500 subsidy to support the purchase of a computer, were surveyed as a baseline. This questionnaire sought background information on the teachers, and asked them about their experiences in purchasing their computers, their access to computers and the Internet, and their use and perceptions of ICT in school.

The first stage of this evaluation was based on 2,662 completed questionnaires, representing a response rate of 69 per cent. This was a good response rate to a survey of this nature, and the data provide a reliable baseline of teachers' opinions and use of ICT.

However, the survey was conducted between June and September 2001 and teachers accessed the funding between May and July. It is possible that some respondents could have bought their computers prior to completing the questionnaire. The implications of this are indicated throughout the report, as it is possible that the 'before' survey in some cases was not conducted before the individual received their computer.

The main purpose of the second follow-up survey was to determine how teachers' views and use of ICT changed as a result of the scheme.

The follow-up questionnaire was sent in August 2002 to the 1,494 teachers who agreed to take part in further research. 23 teachers had moved since the baseline survey, leaving a sample of 1,471. A reminder was sent at the beginning of September 2002, and by the time the survey closed in late September, 970 completed questionnaires had been returned. The follow-up survey achieved a response rate of 66 per cent.

The aim of this evaluation is to report on changes in teachers' views and use of ICT 12 months after receiving their subsidies and computers. The data from both surveys are used, although in most sections, only respondents who completed both questionnaires are included in the analysis.

This section provides a profile of the respondents who participated in both stages of the evaluation. This helps to both introduce the respondents and provide some contextual data, so that differences between teachers can be explored.

1.1 Gender and age

Just over half, 51 per cent, of respondents to both stages of the evaluation were women, 49 per cent were men.

Table 1.1: Age profile, percentages by gender

	% men	% women	% all respondents	% whole teaching pop (Mar 99)*
Under 25	1	1	1	2
25-34	13	13	13	20
35-44	22	26	24	25
45-54	52	52	52	47
55 plus	11	9	10	6
Base N=	473	485	958[2]	

**Source: DfES survey of teachers 2002*

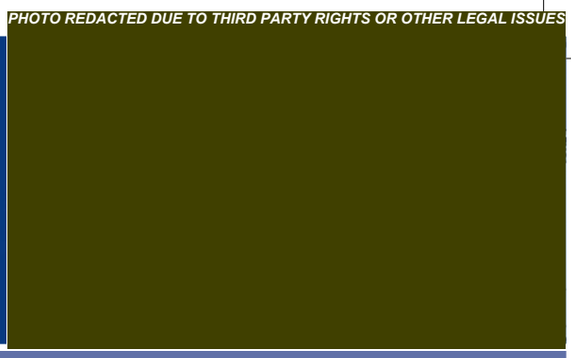
Table 1.1 shows the age profile by gender. Nearly two thirds of all respondents to both surveys were aged 45 plus. It is noticeable that a slightly higher proportion of older teachers, aged 45 plus, completed the second survey than was the case among the younger recipients of the subsidy.

1.2 Ethnicity and disability

Five per cent of respondents were from minority ethnic origins, 3 per cent from Asian origins, 1 per cent African-Caribbean, and 1 per cent from mixed or other backgrounds.

Seven per cent of respondents completing both surveys indicated that they have a disability. This figure is slightly higher among those aged 55 and over (12 per cent).

[2] Nine hundred and seventy completed questionnaires were returned but not all respondents completed every question.



1.3 Teaching responsibilities

A high 85 per cent of respondents reported that they teach mathematics/statistics. A further 4 per cent said they teach several subjects, 5 per cent said they teach ICT, some as a second subject, and the same percentage again said they teach science. A small number teach a variety of other subjects. In most cases these other subjects are taught in addition to mathematics.

Respondents were asked to report the nature of any additional responsibilities they may have. Approximately four per cent said they had several responsibilities. More than one in ten were headteachers, deputy or assistant heads (12 per cent); more than a third (36 per cent) were heads of department or subject; and 11 per cent were heads of year groups.

Level of responsibility is strongly correlated with gender and age. Table 1.2 shows the percentage of teachers at each level of responsibility who are women and aged 45 and over.

Table 1.2: Teaching responsibilities, percentages by gender and age group

	% respondents	% aged over 44	% women
Head/deputy head	12	77	31
Head of subject/ department/year	44	57	44
Co-ordinators	30	60	59
Other/various	14	80	46
All respondents Base=	717	64	49

Female respondents were less likely to be headteachers or depuy heads, 31 per cent compared to 49 per cent of all respondents. There is no discernible difference in level of responsibility by ethnicity.

Reflecting that the scheme was targeted at Key Stage 3 mathematics teachers, nearly all respondents teach at this level (99 per cent)[3]. However, 82 per cent also teach at Key Stage 4; 11 per cent at Key Stage 2; and two per cent at Key Stage 1. There are no differences by age in the proportion of teachers teaching at each key stage, but more men than women respondents teach Key Stage 4, 86 per cent compared to 78 per cent of women.

Eight out of ten teachers who completed the follow-up questionnaire were still teaching in the same school. Most of the rest were teaching in a different school (17 per cent), with one per cent retired, and one per cent taking a career break.

[3] The scheme was only open to KS3 mathematics teachers but a few did not report that they teach KS3 mathematics. It is likely that these teachers are in management positions and do not have current teaching responsibilities.

2 Buying the computer

In the first stage of the evaluation, respondents were asked to give information about the type of computer they bought, where they bought it from, and their views as to the quality of service provided. It should be noted that some respondents had already received their computers at the time they completed the questionnaire.

2.1 Type of computer

Three quarters (74 per cent) of all respondents bought a desktop, and almost all the rest bought a laptop or portable computer. Three individuals indicated that they bought both a laptop and a desktop. Men were no more or less likely to buy a laptop or desktop than women, and there were also no differences by age group. In the baseline survey, more than nine out of ten (92 per cent) respondents had an Internet connection at home.

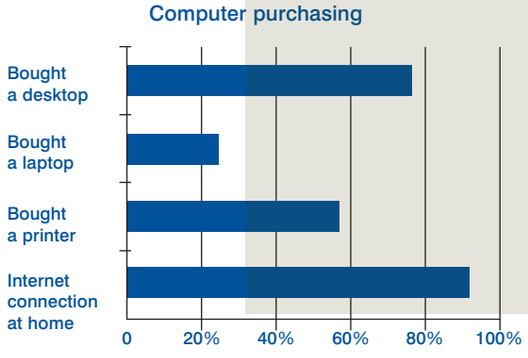


Figure 2.1

2.2 Printer

More than half the teachers (55 per cent) completing the survey bought a printer with their computer. Teachers aged under 25 were more likely to have bought a printer with their subsidy (70 per cent).

2.3 Suppliers and service

Under the scheme, teachers could purchase equipment from any one of fourteen suppliers. Five of these suppliers accounted for 84 per cent of purchases. A wider range of suppliers was used to buy desktops than was the case among teachers buying laptops, where one supplier accounted for 44 per cent of the market.

'I felt this year's scheme was better than the last phase as there seemed to be more choice of supplier and ability to shop around. However, I feel we should be able to buy from any supplier. The supplier I ended up using was not very responsive.'

Views of service levels were generally very positive in cases where teachers had made use of the support service. It should be noted that responses to this question were given at an early stage in the scheme and respondents would not have all used the full range of services. Figure 2.2 shows the responses in terms of service satisfaction. More than four fifths of respondents (81 per cent) felt that the advice they were given when buying their computer and peripherals was 'good' or 'very good' with just three per cent reporting it as 'poor' or 'very poor'.

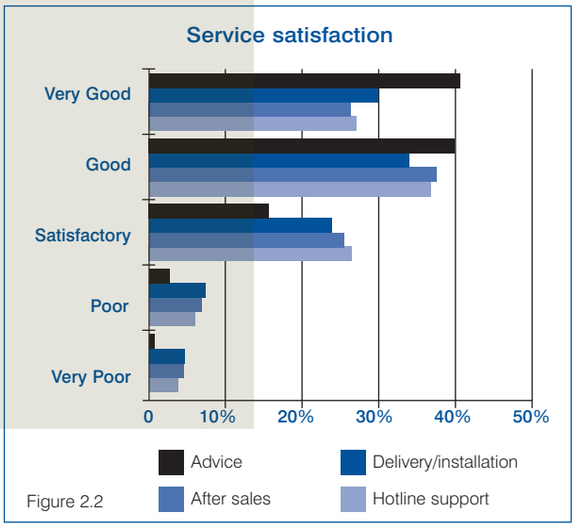


Figure 2.2

Nearly two thirds of teachers (64 per cent) who had received their computers reported the delivery and installation as 'good' or 'very good'. However, 12 per cent said they thought it was 'poor' or 'very poor'. Satisfaction levels are similarly positive among those who had used after sales services, 64 per cent saying it was 'good' or 'very good'. However, less than half the respondents had made use of after sales support at the time of the survey.

At the time of the follow-up survey there were some criticisms of certain suppliers in terms of the after sales support, and in a few cases, respondents had never been able to resolve the difficulties. The following comment highlights how supplier problems have reduced the impact of ICT for this teacher:

'Benefits of ICT still lie in the future for me. I cannot afford wasted time on things which go wrong. I don't have much time to develop a real expertise let alone lots of time spent on time-consuming problems with [company x].'

It is worth noting that there are major differences between suppliers in the quality of service provided.

2.4 Reasons for buying a computer

Teachers participating in the scheme see a variety of potential benefits in their having a computer. 'To help in preparing teaching materials' (92 per cent); 'to undertake administrative tasks' (86 per cent); 'to access the Internet at work' (85 per cent), were the three most frequently cited reasons for obtaining a computer. More than three quarters of all respondents highlighted all the reasons offered apart from buying it for family use, which 44 per cent indicated as a reason.

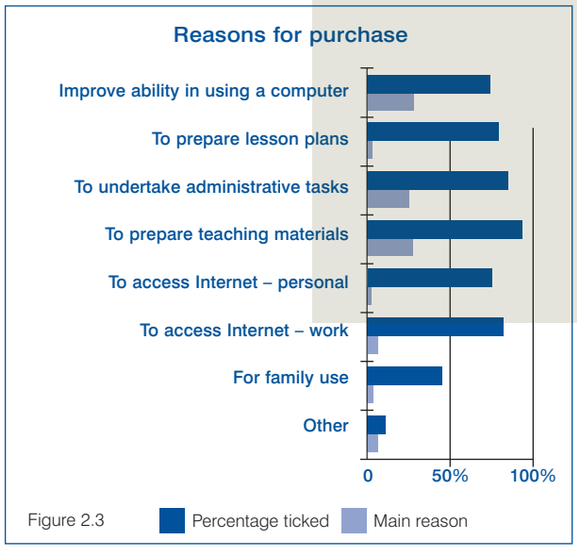


Figure 2.3

Figure 2.3 presents the summary data, showing the proportion of teachers who ticked each reason and the proportion who gave it as a main reason. As one teacher commented:

'Excellent – it encourages planning in teaching to incorporate ICT.'

One in ten teachers gave other reasons for buying their computers, of whom 43 per cent cited the need to improve or upgrade an existing machine. Just over one in six respondents (16 per cent) also mentioned wanting to improve their creativity and the range of tools they could use in the classroom; 14 per cent mentioned the need for portable access to a computer; 11 per cent mentioned other personal development reasons.

'This scheme encouraged me to replace my old Mac with a PC so that I was compatible with the machines at school and could do more work at home because the systems will be compatible. This will allow me to implement various assessment and appraisal schemes for the students, which we have been wanting to do for some time.'

There are some differences in teacher responses. Men were more likely to say they bought a computer to undertake administrative tasks as their main reason for purchase (25 per cent compared to 21 per cent of women). More women mentioned preparation of teaching materials as their main motivator (30 per cent compared to 24 per cent of men). Much of this difference can be explained by the fact that more men in the survey were working in management positions, such as head or deputy, than women who were more likely to be working in more mainstream teaching positions.

Age, however, is the key variable influencing the reasons teachers give for buying a computer. Improving their ability in using a computer is a much more important factor for older teachers, 39 per cent of those aged over 54 giving this as their main reason, compared to 9 per cent of teachers aged under 25. Conversely, younger teachers were more likely to say that the main reason they bought their computer was to assist in preparing teaching materials, 56 per cent of those aged under 25, compared to 19 per cent of those aged over 54. This is probably partly connected with levels of teaching commitment against management responsibility, and partly to do with the wealth of other teaching materials older respondents may have accrued during their careers.

2.5 Computer and Internet access

Teachers were asked in both surveys about the access they have to a computer and the Internet at home and at work. It needs reiterating here that many teachers may have received their computers before the first survey, so findings here do not necessarily reflect the full impact of the scheme.

The scheme has resulted in many more teachers having sole access to a computer at home and at work.

Computers for Teachers

Just over nine out of ten teachers completing the first questionnaire (91 per cent), reported that they had access to a computer at home, 40 per cent had sole access and 51 per cent shared access at the time of the survey. However, the second survey found 99 per cent had access to a computer at home, with 57 per cent reporting sole access. This represents a large increase in the proportion of teachers having sole access to a computer at home.

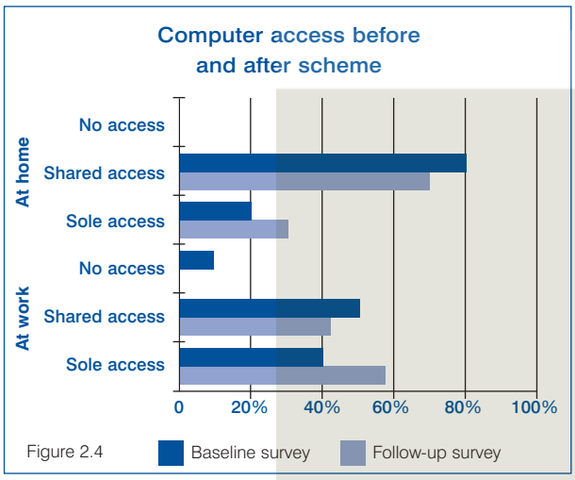


Figure 2.4

In addition, teachers who bought laptops are much more likely to report having sole access to their computer at home than those who bought desktops, 74 per cent compared to 51 per cent.

At work, all, except 0.2 per cent, reported in the first survey that they had access to a computer, of whom 20 per cent had sole access. In the second survey, 30 per cent reported that they have sole access to a computer at work (Figure 2.4). It is worth noting that those teachers who were teaching in a different school at the time of the follow-up survey were less likely to say they have sole access to a computer than those who were still teaching at the same school. Again, those with laptops were much more likely to have sole access to their computer at work, 37 per cent compared to 27 per cent of those who bought desktops.

Also, at the time of the baseline survey, more men than women had sole access to a computer at home, 45 per cent compared to 34 per cent of women. At the time of the follow-up survey, the reverse was true, 59 per cent of women compared to 54 per cent of men. This suggests that in terms of access to ICT at home, the scheme has had more impact on women than men.

Younger teachers seem to benefit greatly from the scheme. One in four of those aged under 25, and 16 per cent of those aged 25 to 34, reported that they had no access at the time of the first survey. After the scheme, all had access to a computer and most, two thirds, had sole access.

Four out of five teachers (84 per cent) said they had access to the Internet at home in the first survey, and this figure rose to 97 per cent in the second survey. Only three per cent of respondents said they had no access to the Internet at work; this figure remained unchanged in the second survey.

Teachers who had no access to a computer prior to the scheme were much more likely to say that they wanted to improve their ability in using a computer as a reason for buying the machine. Of those who had no access at home, 43 per cent gave this as a main reason, compared to 24 per cent with sole access to a computer at home, and 29 per cent with shared access.

3 Computer usage and potential

At the time of the first survey, 69 per cent of respondents said they used ICT weekly or daily in teaching, and 89 per cent said they used it as frequently for administration. After 12 months with their computers, a slightly higher proportion of teachers used their computers for teaching purposes daily or weekly (72 per cent). However, many more were using their computers daily for administration purposes, up from 57 per cent to 65 per cent (Figure 3.1).

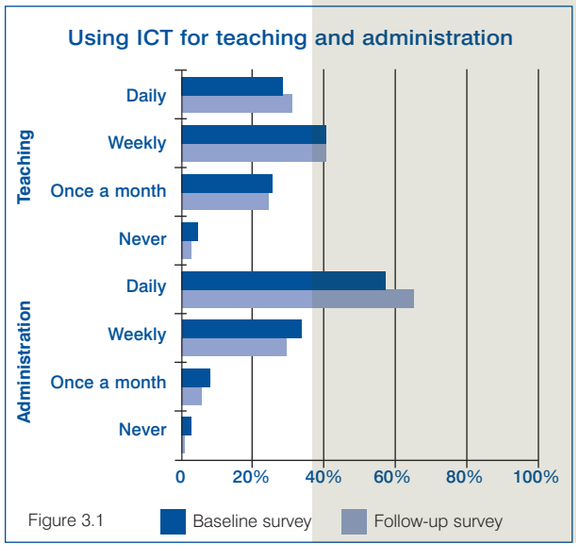


Figure 3.1

Men use ICT more frequently for administration purposes than women, 71 per cent using it daily, compared to 59 per cent of women at the time of the follow-up survey. However, both these figures had increased from the time of the baseline survey.

Also, the more frequently teachers reported using ICT for administration, the more likely they were to cite 'undertaking administrative tasks' as a main reason for buying the computer.

Two thirds of respondents (66 per cent) thought that the potential of ICT in the teaching and learning process was 'high' at the time of the baseline survey. This figure actually decreased marginally to 64 per cent in the follow-up. However, just one per cent think that ICT has only 'low' potential (Figure 3.2). Again, the more frequently teachers use ICT, either in teaching or administration, the higher they believe the potential to be. For example, 88 per cent of teachers who use ICT daily in teaching see the potential as 'high', compared to 35 per cent of those that never use ICT in teaching. These views were more or less unchanged between surveys.

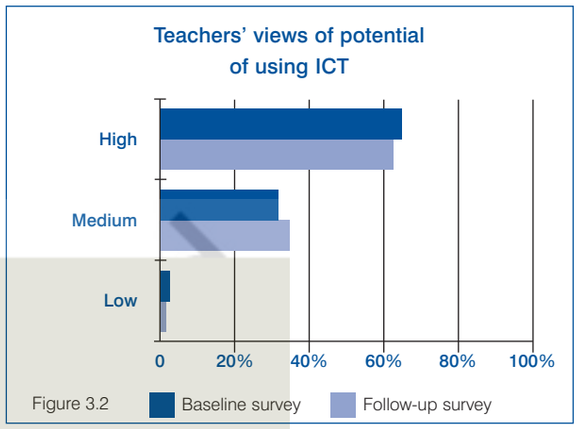


Figure 3.2

Many of the comments from teachers were positive regarding the potential and impact of access to ICT on quality of teaching materials and the students' experience of the subject:

> *'The potential for teaching and learning is high. All teachers need daily access at work and home to a computer. The computer will become the teacher's main teaching aid/tool – do doctors buy their own medical instruments?'*

> *'It will greatly enhance my teaching of mathematics and enable me to provide very high quality materials/worksheets/homework for my students.'*

However, one respondent commented:

> *'We still have a long way to go to ensure the majority of teachers utilise the potential of ICT, effectively and regularly in the classroom.'*

Teachers who have sole access to a computer at work are more likely to see the potential of ICT as 'high', 74 per cent compared to 60 per cent with shared access. This suggests that it is important for teachers to have sole access to a computer if they are to make the most of the resource.

From the baseline survey, teachers who wanted to improve their own ability in using computers, or to access the Internet for personal use as their main reason for purchase, were less likely to identify the potential of ICT in the teaching and learning process as 'high'. However, more than two thirds of teachers who identified work-related

reasons for their computer purchase see 'high' potential in ICT. This said, a comment from one respondent emphasises a concern in realising full potential:

'To realise the potential of ICT, specialist software should be provided free of charge if needed for preparation of work at home when intended for school use. Particularly relevant for subjects such as maths.'

4 ICT competence

Teachers' confidence and self-reported ability had improved greatly in some areas of ICT use and application in the 12 months since the baseline survey. In the baseline survey, word processing was the only one of 15 ICT applications in which more than half the teachers surveyed considered themselves 'experienced users'. In the follow-up survey, more than half the respondents considered themselves 'experienced users' in eight ICT applications.

The largest increases in confidence and ability seemed to be in using the Internet and email. For example, the baseline survey found that 45 per cent of teachers said they were experienced in connecting to the Internet and finding relevant web sites. In the follow-up, 74 per cent and 71 per cent respectively said they were experienced in these aspects of ICT (Figure 4.1).

It seems that key developments for teachers in gaining access to computers are in allowing improved communication through email, although professional use of email does not seem to have grown as much as personal use, and better access to resources on the Internet. For example:

> *'[Using the Internet] has enabled me to prepare more exciting lessons and to check web sites before using them or recommending them.'*

However, increased confidence levels were reported from a wide range of teachers.

> *'For teachers who were less confident with their own skills with computers I feel the scheme has had a dramatic effect on increasing confidence. Providing teachers with laptops had tripled the use of ICT within lessons….'*

It also worth highlighting that teachers who bought laptops exhibited higher levels of confidence and experience in most packages than was the case among teachers who bought desktops. This was especially the case in the use of presentation packages, where 33 per cent of those with laptops considered themselves experienced users, compared to 21 per cent of teachers with desktops.

The baseline survey revealed that men were much more likely to report that they are 'experienced users' of all the ICT packages and applications listed. Over the course of the 12 months between surveys, this gap between male and female respondents widened. For example, in the baseline survey, 57 per cent of male teachers said they were experienced users in spreadsheets, compared to 37 per cent of women. But in the follow-up survey, the percentages rose to 70 per cent for men but only 45 per cent for female teachers. The differences between men and women are greatest in the use of spreadsheets.

Similar differences, although not as marked, are also apparent between teachers in relation to their age, with those aged under 35 more likely to report they are experienced users of most of the packages and ICT resources, than those aged 45 plus.

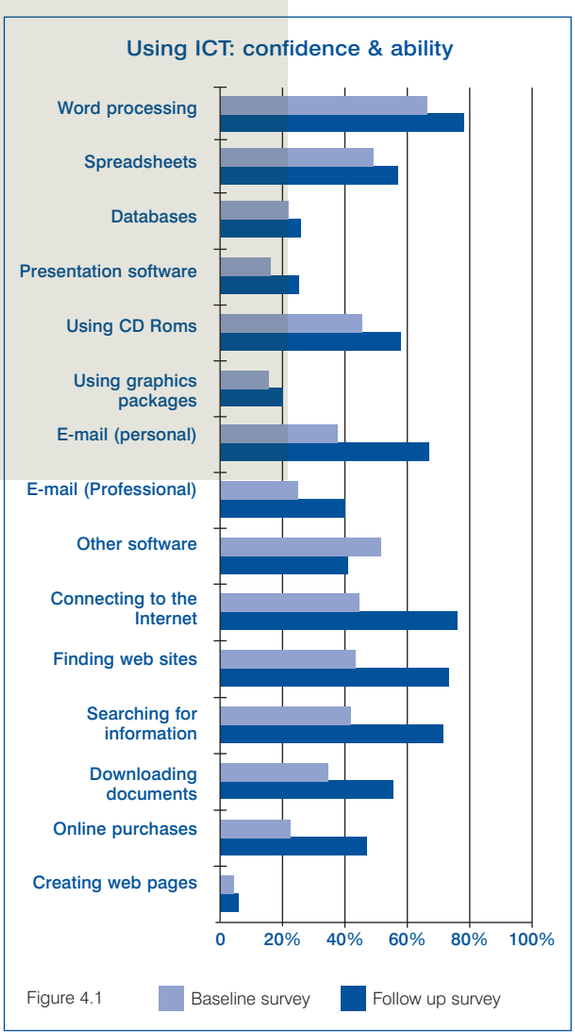


Figure 4.1

5 ICT training

In each of the two surveys, teachers were asked to indicate both the training they had undertaken and the training they were planning to undertake.

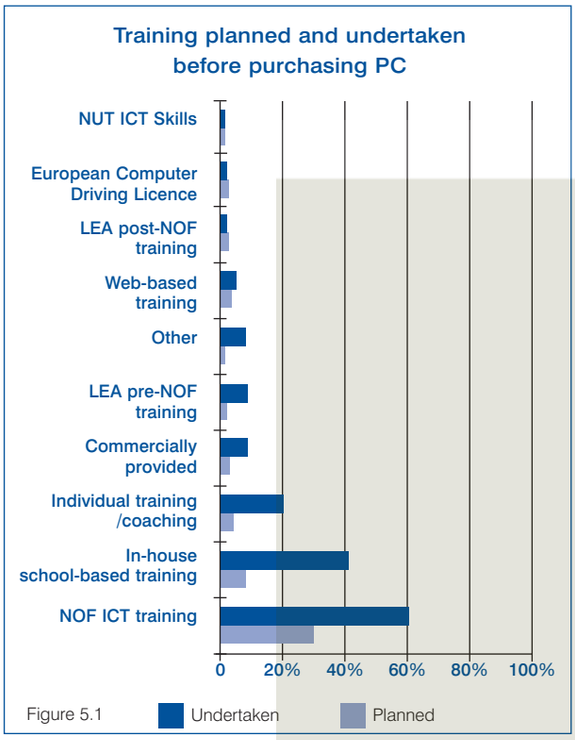


Figure 5.1

At the time of the baseline survey, nearly all teachers had undertaken, or were planning to undertake, at least some ICT-related training. New Opportunities Fund (NOF) ICT training was the most often cited, 61 per cent having already undertaken it and 31 per cent planning to undertake it. Just over four out of ten (42 per cent) respondents had undergone in-house school-based training, and a further nine per cent planned to in the near future (Figure 5.1).

The baseline survey showed there to be little difference between men and women in their access to, or involvement in, training. However, the youngest age group, under 25, were less likely to have either undertaken or planned NOF or school-based ICT training in the baseline survey. This was largely because newly qualified teachers have completed ICT training as part of their initial teacher training.

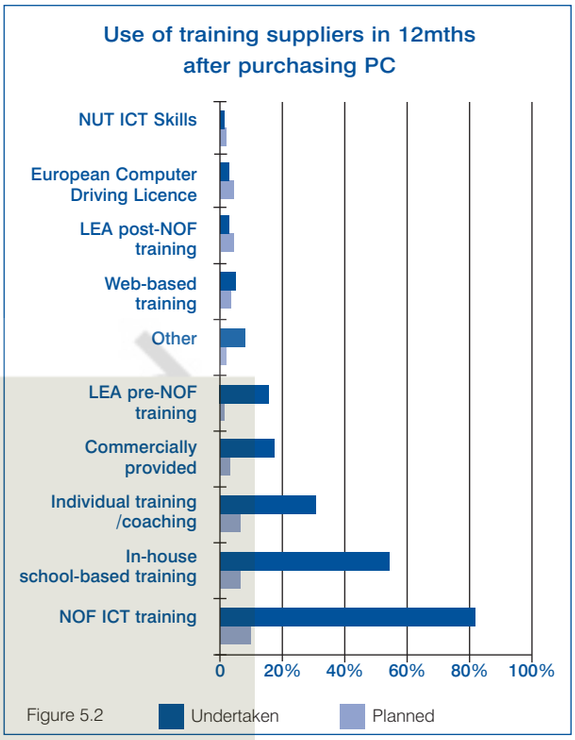


Figure 5.2

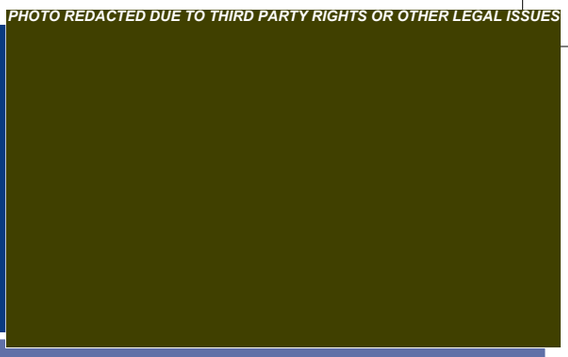
By the time of the follow-up survey, a few other training suppliers had been used by some respondents. More than eight out of ten teachers had completed NOF training, and a further eight per cent were still planning to complete NOF training. But, by the time of the follow-up survey, just over half, 53 per cent, had also undertaken in-house school-based training. Approximately one third, 31 per cent, had completed individual training/coaching, and 16 per cent had used commercially provided training (Figure 5.2).

A number of teachers, at least five per cent of all open responses, commented on the NOF training, often in a negative light:

> *'I thought the NOF training was poor – CLAIT was much more useful.'*

> *'Support from NOF training has been poor – I'm still learning.'*

These are descriptive accounts, and it was not possible to tell from the questionnaire or open data whether or not these comments relate to levels of experience. It may be the case that the NOF training was not seen as appropriate for more experienced computer users, but was better for novices.



There were some positive comments:

'The NOF training helped to improve my basic knowledge of the computer in my work.'

However, this teacher did go on to say:

'I tried to attend weekly sessions of NOF training but the tutor was not always available to assist.'

Another common problem seemed to be in accessing training, and several teachers commented on the need to have more in-house/on-the-job training. For example:

'Although my own personal training and use has improved tremendously there is still very limited access for teaching and learning in school.'

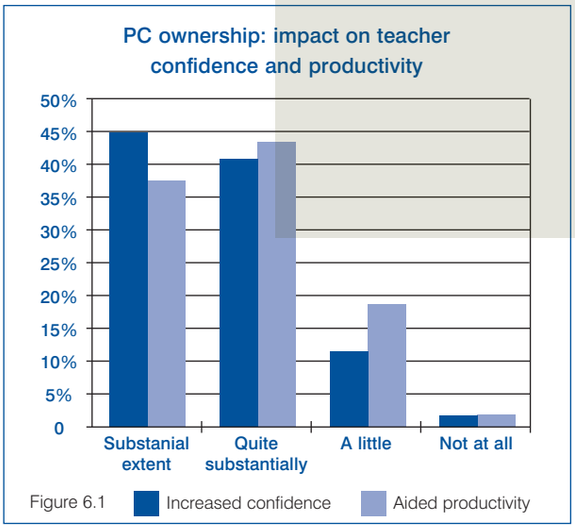
'Good in house-training and I learnt a lot from colleagues but found the NOF training very, very disappointing.'

6 Impact of ownership

In the follow-up survey, teachers were asked for their perceptions of the degree to which they feel personal access to a computer has both increased their confidence to use ICT in teaching and learning, and aided their productivity as a teacher. Respondents were also asked to indicate the extent to which they perceive an impact on pupils, and to consider the implications for their workload.

6.1 Impact on teaching and learning

The findings demonstrate a strong belief among teachers that personal access to a computer has impacted on both teaching and learning. Almost half, 45 per cent, indicated that access to a PC had increased their confidence with ICT to a 'substantial extent', and a further 41 per cent said that it had increased their confidence 'quite substantially'. There is no difference by gender or age in respondents' views of the impact of owning a PC on their teaching.



In terms of the impact of PC ownership on teacher productivity, 37 per cent of teachers felt that their productivity had been aided to a 'substantial extent', and 43 per cent thought it had been aided 'quite substantially' (Figure 6.1). As with impact on confidence, there is no difference by gender and age.

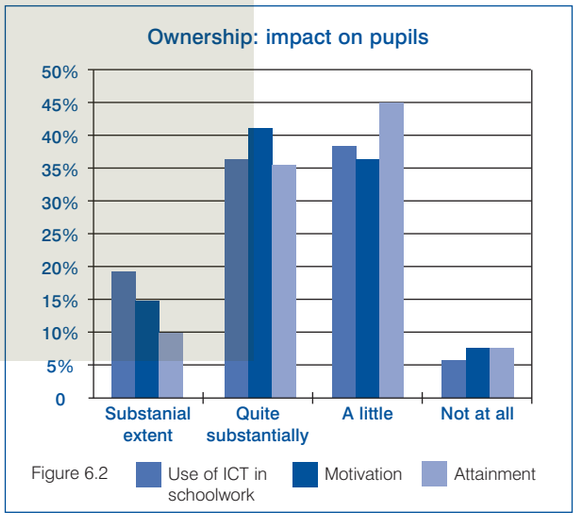
Teachers commented about how access to a computer had aided their teaching and personal development.

'I feel the CfT scheme was good and got ICT into the way teachers plan and prepare lessons… it has helped me to increase my confidence and skill level in ICT both in administration and teaching.'

'It is the only way forward – when teachers are confident users of ICT they will feel confident using it with their students.'

'Excellent scheme – steep uphill increase in my personal skills and desire to use these skills in the classroom – very impressed.'

'Very good – this scheme has helped me to develop my skills and develop the following: school web site, extra funding from the central bureau for education and international linking also in mathematics in KS3 and implementing numeracy strategy.'



Teachers were also asked for their views on how their personal ownership of a computer had impacted on their pupils. Again respondents were very positive. More than half of all respondents, 56 per cent, felt there was either a 'substantial' or 'quite substantial' impact on pupil motivation and use of ICT in their schoolwork. Only 46 per cent were convinced, though, that it had impacted substantially upon pupil attainment (Figure 6.2).

Teachers' comments reflected the positive nature of these quantitative results:

'I have benefited hugely and therefore so have my pupils.'

'Great scheme – not only helped me but also the rest of my family. I work with SEN pupils and we have all been greatly motivated – it is very important in SEN as any pupil can perform and present work at the same level as more able pupils.'

Some teachers commented that they were not sure, as yet, the degree to which their ownership of a computer had impacted on pupils. For example;

'I think the use of computers for admin/lesson preparation is very useful… [but] I have concerns that the use of ICT in the classroom does not necessarily raise pupil motivation and can in some cases lower it.'

6.2 Impact on workload

Most teachers feel that their ownership of a computer has reduced their workload in staff management (58 per cent agree), and in supporting learning (76 per cent agree). However, most do not think it has reduced workload in relation to pupil contact, and in terms of planning there is a mixed picture; 43 per cent think it has reduced workload while 31 per cent think it has not (Figure 6.3).

PC ownership: impact on teachers' workload

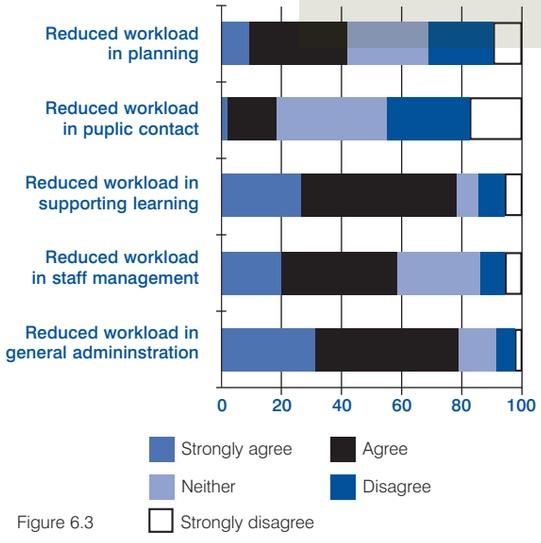


Figure 6.3

In commenting on issues of workload there appeared to be less unanimity, with many teachers indicating that, although their computer had helped improve their work and had made certain tasks more straightforward, it had also raised expectations as to what is possible with ICT. In some cases it seemed new demands were being placed on teachers, especially in relation to administration.

'Computers do not reduce workload they provide different opportunities and possibilities – teaching in some areas is made easier and record keeping is perhaps made easier though the tendency is to keep more records than in the past.'

'Pressure from senior management to increasingly use ICT in administration has increased my workload.'

'Computers do not reduce workloads; more is expected because computers open up new avenues and if anything the workload increases as you do more/better work.'

7 Teachers' attitudes to the scheme

The results provide strong evidence of the benefits and the potential of giving teachers access to ICT.

In their open comments on the scheme teachers were generally positive about it and its impact on their work. Approximately 50% gave a positive comment in both surveys. In the baseline survey the following comments were made:

'The scheme gave me the opportunity to buy a computer 6-12 months earlier than without the subsidy.'

'Great idea. I hate computers because I am ignorant of them and would not have bought one without this incentive. Now I hope to overcome my trepidation by familiarising myself at leisure at home and become an effective user of ICT at school.'

'It gave me the push to actually find the time and money to upgrade my computer.'

'It enables teachers to purchase a necessary piece of equipment at an affordable price and should help improve the quality of teaching and materials.'

In examining the comments made by teachers more broadly, there were also a number of positive comments relating to the impact of increased access to ICT generally, and the positive effect on their jobs:

'Having personal access makes it easier to do my job, makes time management better and should help with my admin.'

'All teachers need access and any scheme that increases access is to be welcomed – computers are "tools of the trade".'

'Only if teachers have access to their own computers will they make significant advances in the use of ICT in the classroom.'

In both the baseline and follow-up surveys, teachers commented positively about the scheme, and many mentioned its impact both on them as individuals and on their work. However, a number of other important messages were raised by a minority of respondents. These had not been covered by the questionnaires.

7.1 Laptops versus desktops

It was clear from a number of comments, approximately 10 per cent of all responses, that there are teachers who feel in hindsight, that a laptop would have been more beneficial to them in their work, and in a number of cases, they regretted the decision to buy a desktop.

The data reveals that teachers who bought laptops are more likely to consider themselves experienced users of most packages, than is the case among those who bought desktops.

Also, a number of comments from teachers highlighted the benefits of being able to keep work in one place, and not have compatibility and file transfer and storage problems between school and home.

'On reflection I wish now that I had purchased a laptop and I feel strongly that all teachers should be provided with a laptop.'

'The laptop means I can work where I want when I want more easily rather than just at home.'

'My own laptop has allowed me to keep pupil records; lesson plans and administration in a central place that can be easily updated and is always available. A big improvement on a workstation.'

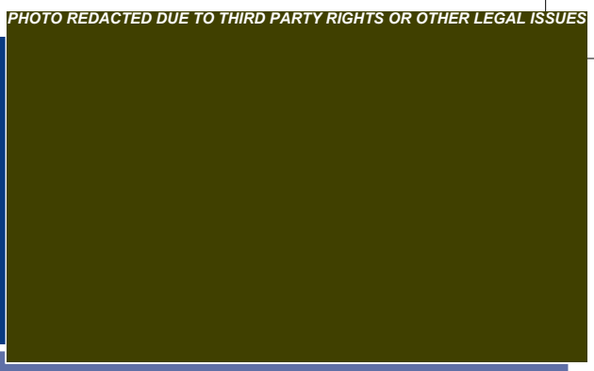
Since Computers for Teachers, the DfES aims to address some of these issues through the introduction of the Laptops for Teachers initiative. However, this added to the disappointment for some teachers, who feel that had they waited, they would have benefited more from the scheme.

'I think it is unfair that teachers who have taken advantage of an early scheme are excluded from future schemes. I would now consider buying a laptop if there was some financial support. Laptops are more useful for teaching and admin.'

7.2 School issues

Approximately five per cent of responses focused on difficulties in accessing computers in schools. The main issues were time, space and facilities, with some respondents reporting cramped conditions in which to use computers. Those with laptops were more able to access their computers at school and did not suffer the same difficulties in terms of space.

Others said that they found it difficult to find time in school to develop their expertise. Some suggested that in-house



training would be very beneficial, and would help ensure that all staff are working to similar levels of expertise.

Additionally, in relation to workload, some were concerned about the growing expectation that teachers will now be working at home 'as a matter of course'. Although this has created much needed flexibility for many, it may also be the case that workloads can increase as expectations of teachers change, with nearly one in ten responses concerning the impact of the computer on their workload.

7.3 Access and scheme management

One of the more frequent comments from teachers (one in five) is that the scheme needs to be disseminated to all teachers. A key argument here is that use of ICT in schools will only develop fully when all teachers have access to ICT, and it is the norm rather than the exception.

> *'An excellent idea and if it can be linked with every teacher having a laptop so that we can all take compatible work home and back into the classroom it will be even better.'*

A further argument put forward is that:

> *'If a computer is considered necessary for the job, computers should be free to all teachers as part of the job with necessary extras like printer and software.'*

Some respondents wanted to see incentives for teachers to purchase and upgrade ICT through tax concessions and more purchasing flexibility to get better deals.

> *'Upgrading [the] present system will be a personal problem as I have purchased the equipment. As I regard it as essential to my job then I think if I purchase upgrades/peripherals then perhaps tax allowances can be made.'*

Following on from this, there were a number of concerns about associated costs to teachers, such as peripherals, upgrading and insurance:

> *'Computers are only fully useful while we are able to use current software and access the Internet easily – how am I expected to buy my next computer which I will need in a few years time – not to mention all the software that I'm sure to need?'*

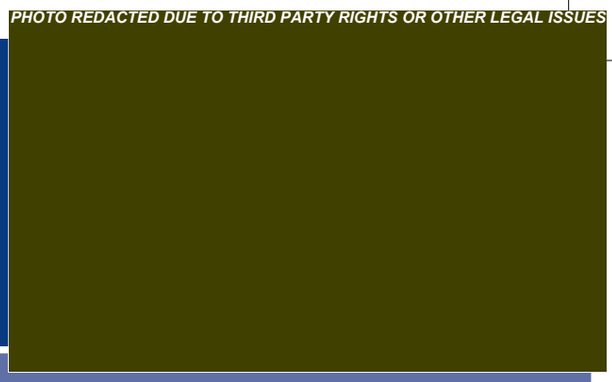
> *'I appreciated the help towards the cost of my laptop. However in other professions this is basic equipment provided for employees. A problem is security and insurance. I've insured the laptop myself as the school is not responsible.'*

Finally, there were a number of supplier criticisms. Some teachers would like to see more checking of the suppliers to ensure they are delivering agreed outcomes. Others wanted more flexibility in the range of suppliers from whom they could buy computers.

8 Conclusions

This report focuses on changes in teachers' use of computers and their views of the potential and application of ICT one year after receiving their computers. The results show that computer and Internet access has increased greatly, and that teachers who have sole access to a computer at work are more likely to see the potential of ICT as high. Reported levels of competence and confidence have improved in the 12 months between the two surveys, with those who bought laptops reporting higher levels of confidence and experience in most packages, compared to those who bought desktops.

In general, the results provide strong evidence of the benefits and the potential of providing teachers with access to ICT. In particular, the findings regarding the benefits of laptops support the policy change by the DfES in launching the Laptops for Teachers initiative. Positive responses to the scheme predominated the qualitative responses, although concerns were raised about the management of future schemes, how computers will be upgraded, and the need for the scheme to be available for all teachers.



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