

**Evaluation of the Home Access programme:  
Pilot progress report**

**SQW Consulting**

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## Executive summary

In December 2008, Becta commissioned SQW Consulting, with Ipsos MORI and London Knowledge Lab, to conduct a longitudinal evaluation of the Home Access programme over the period 2009–11.

This document reports on progress from the formative evaluation of the pilot of the Home Access programme in Oldham and Suffolk, with a view to identifying key lessons from the pilot phase and making recommendations for the design of the national roll-out. Our findings are based on the following: analysis of secondary data and pilot monitoring data; execution and analysis of a survey of 400 households in Oldham and Suffolk; case study discussions with teachers, ICT co-ordinators and pupils in seven schools; and consultations with Becta, suppliers and other external stakeholders.

## Outputs, outcomes and impacts

The pilot **clearly did very well in terms of achieving its targeted gross outputs**: a total of 12,344 grants were issued to 8,991 households, reaching an estimated 93 per cent of the learners eligible for a grant in the two local authorities, and exceeding by 65 per cent the pilot's target of 7,500 supported learners.

The **'leakage'<sup>1</sup> was high**, however: we estimate that approximately 45 per cent of the beneficiary households (38 per cent in Oldham and 51 per cent in Suffolk) already had both a computer and internet connectivity at home. While there are certainly benefits for learners in these households (through having easier and/or better access), they are not within the target group identified by the Home Access taskforce (ie households without any home access).

Among those households that didn't previously have home access, we estimate that, on average, **households obtained home access about 2.4 years sooner** than they would have otherwise. At a formative stage in a learner's development, we consider this a worthwhile acceleration effect.

Combining the acceleration effect with assumptions on leakage and the extent of multipliers suggests that the **pilot succeeded in pulling home access forward by 13,055 household-years** in Oldham and Suffolk.

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<sup>1</sup> 'Leakage' is a technical term used in public policy evaluations, referring to the extent to which an intervention's gross outputs have related to beneficiaries outside the intended group - which we take to be those households with children (aged 5-19 in state maintained education in England) which did not previously have any working computer with internet access at home. It should be noted that 'leakage' to beneficiaries outside the intended group does *not* mean that packages were provided to *ineligible* households (the grant was targeted at households eligible for Free School Meals). Neither does it imply that there were no educational benefits associated with those packages provided to households which already had a computer and the internet; there clearly *were* benefits valued by these households.

The Home Access pilot has made a **material impact on closing the digital divide** in Oldham and Suffolk: taking leakage into account, we estimate that the proportion of families (with learners aged five to 18) with home access was increased by approximately 9 percentage points in Oldham and by approximately 5 percentage points in Suffolk.

There are **positive indications of the educational benefits** of home access for learners and their families. According to their parents, beneficiary learners spend about an hour more per week on learning-related uses of ICT in the home than do their non-beneficiary peers who also have computers (despite the latter group spending more time overall on computers). When asked whether having home access will help their children do better at school, 97 per cent of beneficiary parents agreed that it will help a great deal or a fair amount.

There are also signs of **benefits for the wider family** – especially in those households that did not previously have home access.

The expectations of teachers, pupils and parents were **broadly positive regarding a future impact on educational attainment**, although some teachers expressed concern regarding the amount of time that learners would spend using instant messaging, social networking websites, and so on.

## Inputs and activities

A total of **£14.84 million** was spent in the pilot, including £7.21 million in grants.

As would be expected in a pilot, unit costs were relatively high (£1,650 per supported household). **We anticipate that the unit costs will be substantially lower in the national roll-out**, with greater economies of scale in the administrative costs, a shift to one grant per household, and other measures to reduce leakage.

Overall, this was a **highly effective pilot process**. It generated high levels of awareness in the target group, and rapid take-up. Applicants found the process easy, and satisfaction levels with the package were high (59 per cent of beneficiary parents were very satisfied, and 27 per cent fairly satisfied).

The **pilot also succeeded in uncovering and taking on board important lessons** which will help improve the effectiveness and value for money of the national roll-out. Points to consider include the following:

- There were concerns over the **eligibility** criteria. Several teachers thought that the grant should not be available to children who already have a computer and internet access at home. There was also strong concern regarding ‘working poor’ households, who may just miss out on eligibility, but who still cannot afford to buy a computer.

- Although the programme's **logo** says 'Next Generation Learning @ Home', the scheme was more widely referred to and recognised as 'Home Access'.
- We have concerns over the pilot's **de facto reliance on mobile broadband**. All connectivity provided in the pilot was mobile, but it is likely that some households would have been better off with a fixed broadband service, had this been available, with faster download and upload speeds and less restrictive download volume limits.
- In our pilot case studies in both local authorities, **teachers felt 'out of the loop'**. Critically, teachers couldn't be certain whether their pupils now had home access
- Our discussions with groups of pupil beneficiaries of the pilot suggested that the parental control software was frequently blocking appropriate content, which caused frustration. As a result, several pupils had disabled the controls (typically without their parents' knowledge).
- The process of serving **learners who have special educational needs (SEN)** encountered various difficulties in the pilot – not least in terms of local capacity to undertake assessments. The programme has established a revised approach to SEN applications and assistive technologies for the national roll-out.
- It was difficult for Becta to extract **individual-level beneficiary data** for the pilot evaluation, and we found substantial differences in the data fields within the customer relationship management (CRM) systems of the two local authorities, with ambiguities in certain fields. To some extent, this reflects the difficulty of ensuring consistency across two local authorities using different service providers (which will not be the case for national roll-out). However, it does serve to emphasise the need to ensure that beneficiary data requirements are tightly specified.

## Contextual conditions, rationale and objectives

The **Home Access programme is operating in a significantly changed context** (market and economic) from that of July 2008, when the Home Access taskforce report was completed:

- Whereas home internet access penetration had been relatively flat in 2006 and 2007, there was a **substantial increase in home internet access during 2008**. The increase in home internet access was driven by the availability of new low-cost netbooks and by the introduction of affordable mobile broadband packages.
- We have also entered a **recession**, which has significantly affected the incomes of many households. A 'cooling off' of internet access penetration in the first half of 2009 among the lowest income households (having previously increased substantially) may well reflect the impact of these tougher economic conditions.

In our view, the pilot confirms that **there remains a strong case for intervention**: the Home Access pilot had a material impact on closing the digital divide and teachers, parents and pupils had positive expectations of the educational benefits of home access.

However, we suggest that **a clearer link is needed from the objectives set for the programme (and related activities) back to the rationale for intervention** set out in the Home Access taskforce report – which advocated ubiquitous home access for the benefit of *all* learners (not just the direct beneficiaries).

## Recommendations

In the light of our evaluation to date, we offer the following recommendations – some of which are already being implemented:

- Recommendation 1. Review the current combination of aims, objectives and benefit recognition events to see whether these can now be rationalised to a simpler set of programme objectives, ensuring that there are strong links back to the rationale for intervention – in conjunction with objectives set for related activities.
- Recommendation 2. Restrict the grant to one per household.
- Recommendation 3. Focus the grant on households which didn't previously have broadband internet access.
- Recommendation 4. Clarify the branding of the scheme.
- Recommendation 5. Develop and disseminate material to ensure that teachers are well-informed re the scheme.
- Recommendation 6. Consider mechanisms for providing a stronger feedback loop to teachers in the classroom.
- Recommendation 7. Seek to ensure that fixed broadband becomes a workable connectivity option.
- Recommendation 8. Ensure that 'fair usage' download limits are clearly explained to beneficiaries in advance of purchase.
- Recommendation 9. Seek to minimise the extent to which useful appropriate content is blocked by parental control software.
- Recommendation 10. Ensure that the beneficiary dataset is well-defined, and accessible for statistical and evaluation purposes.

## Introduction

### Background

The vision for Home Access is to ensure that all pupils aged 5–19 in state-maintained education in England have the opportunity to access computers and internet connectivity for education at home.

In July 2008, the Home Access taskforce report identified evidence of market failure and made the case for government intervention in providing home access to technology, particularly for lower income families with children. The taskforce proposed that a programme of intervention should address three key strands of activity:

- Maximising the benefits of home access to all
- Increasing the perceived value by parents
- Removing the barriers of cost for families with low incomes.

Following these recommendations, in September 2008 the Prime Minister announced the £300 million Home Access programme, with Becta as the delivery agency. This programme would allow eligible families to apply for a grant to purchase a Home Access package from an accredited supplier. The programme was piloted in Oldham and Suffolk, and national roll-out commenced in late 2009..

In December 2008, Becta commissioned SQW Consulting, with Ipsos MORI and London Knowledge Lab, to conduct a longitudinal evaluation of the programme over the period 2009–11. The evaluation will be formative and identify lessons from the pilot phase in order to help shape the design of the national roll-out, and summative, in that it would seek to establish the net impacts of the intervention.

The overall evaluation research questions for the evaluation are:

- Has the programme succeeded in providing home access to technology for the target group? What has been the net effect of the programme (over and above what would have happened anyway)?
- Is there a measurable increase in the proportion of families within the target group who use ICT to support their learning? How does this proportion compare with that in more wealthy socio-economic groups?
- Is there a measurable increase in the proportion of families within the target group whose perception of the value of having ICT at home to support learning has increased?
- Does home access to technology lead to the intended benefits, including greater use of home ICT for educational purposes, a more personalised education, enhanced motivation and skills, and increased educational attainment?



- Is the programme effective and efficient in delivering home access to the target group?

## **This report**

This document reports on progress from the formative evaluation of the pilot of the Home Access programme in Oldham and Suffolk, with a view to identifying key lessons from the pilot phase and making recommendations for the design of the national roll-out.

The findings are based on a number of key research methods undertaken to gather evidence for the evaluation (see our scoping report for further methodological detail). The research methods were:

- the analysis of secondary data, to establish the contextual conditions that underpin the rationale for intervention
- the analysis of pilot monitoring data (as at the end of July 2009), to profile the beneficiaries of the pilot scheme and assess inputs, activities and outputs
- the execution and analysis of a survey of 400 households in Oldham and Suffolk, conducted by Ipsos MORI between 26 May and 13 June 2009 – half with a named sample of known applicants, and half with a random sample in deprived areas
- consultations with Becta, suppliers and other external stakeholders
- case studies at seven schools (four in Oldham and three in Suffolk), involving interviews by SQW Consulting and London Knowledge Lab with a total of seven ICT co-ordinators, 28 teachers and 109 learner beneficiaries (in focus groups).

The following sections of this report are:

- Assessment of rationale and objectives
- Assessment of inputs and activities
- Assessment of gross and net outputs
- Assessment of outcomes and impacts
- Assessment of value for money
- Conclusions and recommendations.

There are five annexes:

- Annex A: Consultees
- Annex B: Contextual conditions – information at a national level
- Annex C: Contextual conditions in Oldham and Suffolk
- Annex D: Oldham case studies – summary reports for each of the Oldham case studies

- Annex E: Suffolk case studies – summary reports for each of the Suffolk case studies.

Separate to this report, Ipsos MORI's survey tabulations are available for:

- Oldham
- Suffolk
- Oldham and Suffolk combined.

## Assessment of rationale and objectives

In the light of the latest information on the changing contextual conditions for home access, as summarised in Annex B, this section considers whether the programme's rationale for intervention remains valid, and whether the programme's objectives remain appropriate.

### Stated rationale and objectives

The rationale for intervention is set out in the Home Access taskforce report:

'Strong evidence exists for the potential educational, economic and wider benefits of home access to technology. Despite this growing body of evidence, approximately 35 per cent of families still do not have access to the internet and the digital divide is not being narrowed. It is clear that cost is a major barrier to access and, while costs of home access are falling, they will not do so quickly enough to prevent a large number of low-income families from being excluded from the educational and wider benefits of home access. This exclusion of low-income families results in an inequitable exploitation of home access and means that it is impossible for all learners and their families to experience these educational benefits without some intervention.

The Taskforce has identified evidence of market failure and is convinced there is a compelling business case for Government investment in support of widening opportunities to home access. The educational benefits alone justify such investment, but there will also be significant personal, social and financial benefits from any programme.'

We summarise the rationale as follows:

By promoting the value of home access and subsidising solutions for low income families, we can reduce the digital divide, thereby helping to address a social inequity, and providing opportunities for schools, colleges and local authorities to raise the quality of education for all.

The Home Access programme's intended contribution to the Government's vision of universal home access for learners is currently set out as a combination of three aims, four objectives and six 'benefit-recognition events':

- Aims:
  - To reduce the barriers of cost to families with low incomes, through government financial support
  - To maximise the benefits of home access to all eligible families with learners that receive the grant
  - To increase the perceived value of ICT for learning at home to all eligible families with learners that receive the grant.

- Objectives:
  - To increase the attainment of pupils
  - To provide wider opportunities for pupils to engage in formal and informal learning
  - To increase parental engagement with schools and colleges
  - To increase awareness and enable improvements in economic and social benefits of having access to ICT at home.
  
- Benefit-recognition events (against which quantified programme targets are being proposed):
  - Decrease in the technology gap between the varying income groups
  - Special needs learners gain access to software or assistive technology, appropriate to their needs
  - Improved learning of eligible pupils
  - Increased parental involvement in child's learning
  - Increased number of parents using technology for learning for themselves
  - Improved economic status of eligible families, caused by use of technology.

At the time of the formative evaluation of the pilot, the headline programme target was for 330,000 learners to receive financial support for an approved Home Access package by March 2011<sup>2</sup>.

It is important to note that although the programme aims, objectives and benefit-recognition events are targeted at families eligible for the Home Access programme grant, stakeholders thought that the evaluation should also gather evidence in the spirit of the wider policy objectives addressed by the Home Access taskforce. As such, the Home Access programme ought to be evaluated against its brief but within the context of contributing towards the vision of universal home access and its associated intended benefits for all learners and their families.

### **Assessment of the rationale and objectives**

In retrospect, it is clear from recent data that the Home Access taskforce report was published in the middle of the biggest up-turn in household internet penetration for several years. The assumption that a plateau in internet penetration would persist,

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<sup>2</sup> Following the recommendation of this evaluation to re-articulate the headline target in terms of households, rather than learners, the target was changed to 270,000 households to receive financial support for an approved Home Access package by March 2011

and that the digital divide (in terms of physical access) was not being narrowed, may not have been the case after all.<sup>3</sup>

Is there still a sound rationale for intervention, then, in the light of recent market developments? Our analysis of the literature, secondary data and survey responses suggests that there *is* a sound case, given the acceleration of educational benefits, and the cost barriers that still exist for the lowest income groups, provided that:

- the national roll-out is designed to minimise the amount of ‘leakage’ (into households that already have a computer and internet access) and ‘deadweight’ (where public funding is used to buy a computer and internet access that the beneficiaries would have purchased with their own money) – issues of leakage and deadweight demand much more attention for an intervention in a relatively fast-moving market than in the steady-state market that the Home Access taskforce operated within; the findings of the pilot reinforce this
- the programme is tightly coupled to initiatives to realise the pedagogical and parental engagement benefits of universal home access for learners – for the majority who already have home access, as much as for the minority obtaining home access for the first time via this scheme.

The programme aims, objectives and benefit-recognition events noted above are couched in terms of the benefits to the learners and families that receive the Home Access grant – the reasoning being that wider benefits (cited in the taskforce report) are not within the control of the programme. However, we suggest that an additional explicit objective should be considered around stimulating an acceleration in the rate of pedagogical exploitation of home access – either for the programme or for related Becta activities. This need not involve large revenue-funding resources, but would necessitate smart links from the programme into Becta’s business-as-usual activities and into the classroom.

Furthermore, we recommend that the headline programme target of 330,000 learners to receive support by March 2011 should be re-articulated in terms of the number of households (with learners) without functional home access that are to be connected to the internet (via a computer). As discussed in the section ‘Assessment of gross and net outputs’, the leakage associated with the pilot was high; the national roll-out must be very firmly focused on the households that are the hardest to reach and that do not (and will not) otherwise have home access.

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<sup>3</sup> Also, the statement within the rationale for intervention, set out in the Home Access taskforce report, that 35 per cent of families still do not have access to the internet at home, requires clarification: ‘households’ would have been more accurate than ‘families’ (many of the 35 per cent are elderly people with no children at home); in early 2008, approximately 17 per cent of England’s households with children (approximately 1 million households) lacked a computer and internet access, according to the Office for National Statistics (ONS).

Finally, we note that the three aims, four objectives and six benefit-recognition events described above were developed as the programme matured. Taken together, the aims, objectives and benefit-recognition events are now a somewhat complicated articulation of what the programme intends to achieve, and the mapping from aims to objectives to benefit-recognition events is not straightforward. We suggest that if the aims, objectives and benefit-recognition events are rationalised and simplified into a single set of programme objectives with explicit links back to the rationale for intervention articulated in the Home Access taskforce report, it will help to ensure internal and external clarity on what the programme is formally intended to achieve.

## Assessment of inputs and activities

This section presents the emerging findings on the ways in which the Home Access pilots in Oldham and Suffolk were implemented by way of resources and activities, and what worked well and what worked less well in their delivery.

This assessment uses evidence drawn from a mix of quantitative and qualitative evaluation methods: the pilot areas survey of 400 households in Oldham and Suffolk, Home Access programme monitoring data, consultations with a range of stakeholders, and case study visits in seven schools in the pilot areas.

### Inputs

In order to achieve the specific programme objectives and wider policy objectives, the Government has committed £241 million in this Comprehensive Spending Review period (ie to March 2011) for the Home Access programme, including the administration and distribution of grants for eligible households, and support to local authorities and schools. The amounts are:

- £34 million in 2008–09
- £74 million in 2009–10
- £134 million in 2010–11.

All direct resources, including additional salary costs, marketing expenditure, training costs, and the costs of the helpline, assessment and payment body will be met from the central programme budget.

### Breakdown of programme expenditure on the pilot

A total of £14.84 million was spent on the pilot, as shown in Table 1.

**Table 1: Breakdown of programme expenditure on the Home Access pilot in Oldham and Suffolk**

	£ million
<b>Revenue expenditure</b>	6.06
<b>LA technical uplift expenditure</b>	1.57
<b>Grants</b>	7.21
<b>Total</b>	<b>14.84</b>

Source: Becta.

### Observations on inputs from consultations

Evidence from consultations with stakeholders, both within Becta and externally, suggests that they expected significant resources to be spent during the pilot phase,

not just by Becta but also by partners, schools and local authorities, in achieving the overall policy objectives; these were not necessarily within the scope of the programme. This includes resources from and effort by organisations such as UK online centres that regularly work with schools and learners to support ICT use. Stakeholders thought that the pilot posed significant opportunities for local authorities and schools in terms of building capacity, forming effective partnerships, and engaging with families effectively as a result of the programme. For example, Oldham local authority used its youth workers for outreach, and its existing learning partnerships to work, with UK online, to engage with families for the pilot.

There was some indication that suppliers may have used significant investment of their own to deliver the packages at their outlets, in some cases beyond what they had anticipated. Besides having full-time staff managing the process and liaising with Becta, suppliers had technical support teams that worked extended hours to provide the required support. The sales teams underwent relevant training to enable them to target the customer group in question.

In allocating resources, stakeholders were of the view that the programme spent a majority of its resources and effort in sorting out grant-related issues and getting the package out to grant recipients, leaving little room for investment in support of learners and families. This focus reflects the fact that Home Access is predominantly a capital programme, leaving little scope for resources to be allocated to activities that require revenue funding.

Furthermore, even within capital funding constraints, issues around special educational needs (SEN) consumed disproportionate amounts of time and resources by Becta, the two local authorities and suppliers. This has been flagged as a key lesson learnt from delivering the pilot programme.

## **Activities**

### **Capacity building**

#### *Observations from consultations*

According to the stakeholders who were consulted, the pilot generally appeared to have been effective in engaging with schools and families and other channels such as libraries and UK online centres in Oldham and Suffolk to communicate the key messages of the programme. Becta deemed it necessary to engage schools, because parents and children tend to trust teachers and headteachers; by getting schools on board, the pilot would be able to overcome a key challenge in its communications regarding the programme.

Staff representing the Home Access programme gave presentations to some schools<sup>4</sup> and provided marketing literature including a toolkit with details of how to

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<sup>4</sup> Note that schools in Suffolk also ran their own events to generate awareness about the programme.



apply, get online and use the internet. The strategy of engaging a former headteacher to communicate the process and benefits of the programme to schools, learners and families appears to have been particularly effective.

The pilot tested, on a small scale, a model of aggregation. This model enables schools to aggregate ICT resources in order to increase the benefits for disadvantaged families. For the Home Access programme, the approach included forming partnerships with other schools applying the model, helping parents source and apply for the grant, and forwarding the forms to relevant parties to enable families to acquire the package. Three schools in Suffolk applied this model, and one school expanded it to enable all parents to be part of the programme.

Suppliers offered mixed views about aggregation. While suppliers acknowledged the attractiveness of bulk orders, they tended to prefer the consumer model: customers had wider choice and were not constrained by what the school or local authority decided,<sup>5</sup> and suppliers did not have to deal with intermediaries in the process.

#### *Observations from case studies*

Evidence from the seven case study visits indicates that most of the teachers understood and supported what the programme is trying to achieve. The positive view of one teacher, that it is “a fabulous idea – it levels the playing field”, echoes the views of others, that home access will “narrow the gap between the poor and the not so poor and extend the school day”, “pull the bottom up and extend ICT use in home and school”, and even enable a “democratic right” to access technology.

Several teachers, however, expressed frustration about being ‘out of the loop’ – in other words, not being given more information about the programme, not being involved in identifying pupils who would benefit most from it, and not being told which of their pupils had home access under the pilot.<sup>6</sup> Most teachers expressed a strong desire for greater involvement in promoting the Home Access programme to families, and supporting pupils to use computers and the internet at home for learning.

## **Marketing**

#### *Observations from consultations*

Stakeholders were of the view that the Home Access brand worked well in general in terms of communicating the key messages of the programme. The brand had a strong logo, bold colours and was easily recognisable among other collateral in retail

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<sup>5</sup> For the national roll-out, aggregating local authorities are required to offer a range of devices. It is, however, likely that the local authorities will shortlist both suppliers and devices, and this may limit the choice available when directly compared with the standard ‘consumer model’. It should also be noted that the aggregating local authorities will compete against the consumer model and will have to sell the benefits of aggregation to the potential recipients of the grant, who are free to choose the consumer model.

<sup>6</sup> In some cases, it may be that information was provided to schools but not disseminated to teachers.

outfits. However, there was some lack of consistency regarding the two terms used in the marketing literature: the term 'Home Access' was far more recognisable and easily understood than 'Next Generation Learning @ Home', but both appeared in the application form and other literature for the Home Access programme.

Suppliers highlighted the importance of sharing marketing campaigns between their organisations, and for Becta to ensure consistency in key messages and creating a branding that has value and which suppliers can also use for their own commercial interests.

Word of mouth appeared to have been driving the success of the marketing activities and resulted in sustained momentum, even after the bulk of marketing activity had stopped in the pilot areas. Schools' parents' evenings were particularly successful, as they allowed parents to engage with the programme directly and understand it fully, although parents' evenings are not expected to be rolled out for the national programme. Some consultees noted that it would be unrealistic to expect all schools to engage actively with the programme, and that there is likely to be a spectrum of engagement when it comes to national roll-out.

Substantial efforts went into making the application form as clear and easy to use as possible for the target groups. The result was deemed very successful in minimising the number of ineligible applicants while making the application process easy.

Some consultees observed that sales staff at supplier stores may not have been sufficiently trained in selling to the target groups in question; this may have resulted in some dilution of the effectiveness of communication of the key benefits of the Home Access programme package for customers. Suffolk local authority pointed out that some complaints to the call centre related to sales staff dealing unsatisfactorily with Home Access programme customers.

#### *Observations from case studies*

Teachers commended Becta for actively marketing Home Access in schools, for example by launching the programme in a school playground, talking to parents in a school library, and helping them complete their application forms. However, staff at one school felt that Becta's approach placed too great an emphasis on the eligibility criteria and application process, and did not explain the benefits of technology in the home for children and families. As a result, teachers found that some eligible parents and carers did not apply, and that ineligible parents and carers who could afford to purchase the technology remained unconvinced of the benefits. Teachers at one school commented that some parents did not understand why they were getting a laptop or what they should do with it.

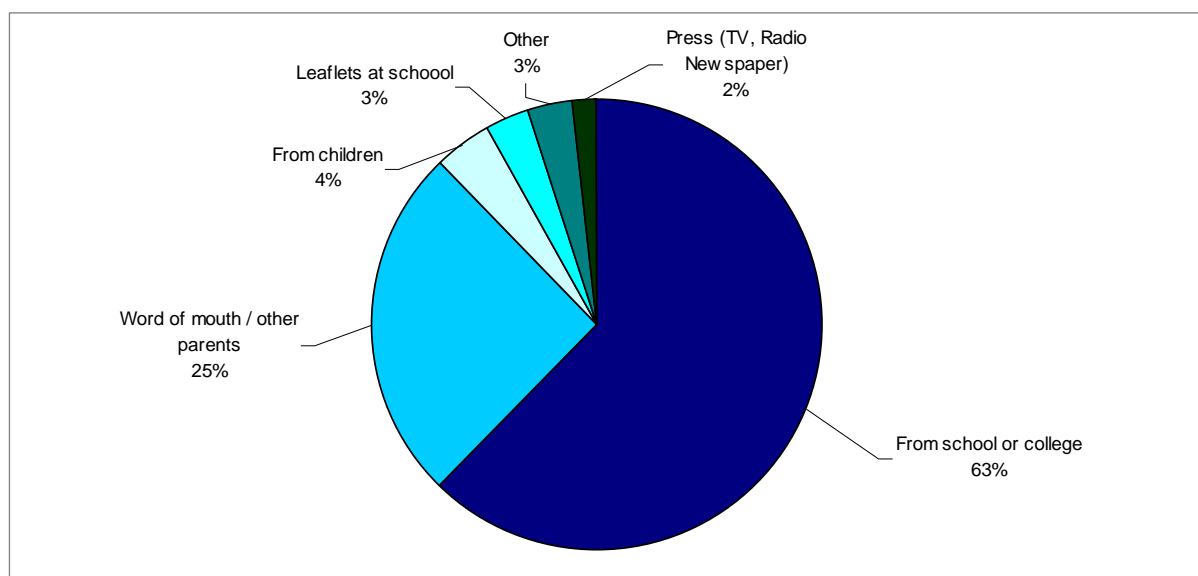
Teachers' perceptions were that awareness of the Home Access programme among parents and carers was patchy in some areas. The following barriers that need to be addressed in the national roll-out were identified in some schools and communities:

literacy and language difficulties in some communities; and limited dissemination to teachers of information on benefits, eligibility, packages and beneficiaries.

### *Findings from monitoring data*

The Oldham and Suffolk monitoring data suggests that the majority of applicants to the Home Access programme heard about the scheme through their schools or colleges, or by word of mouth from other parents.

Almost two-thirds of applicants<sup>7</sup> in Suffolk (63 per cent) noted that they heard about the programme directly through their school or college, while 25 per cent cited word of mouth or other parents (Figure 1).



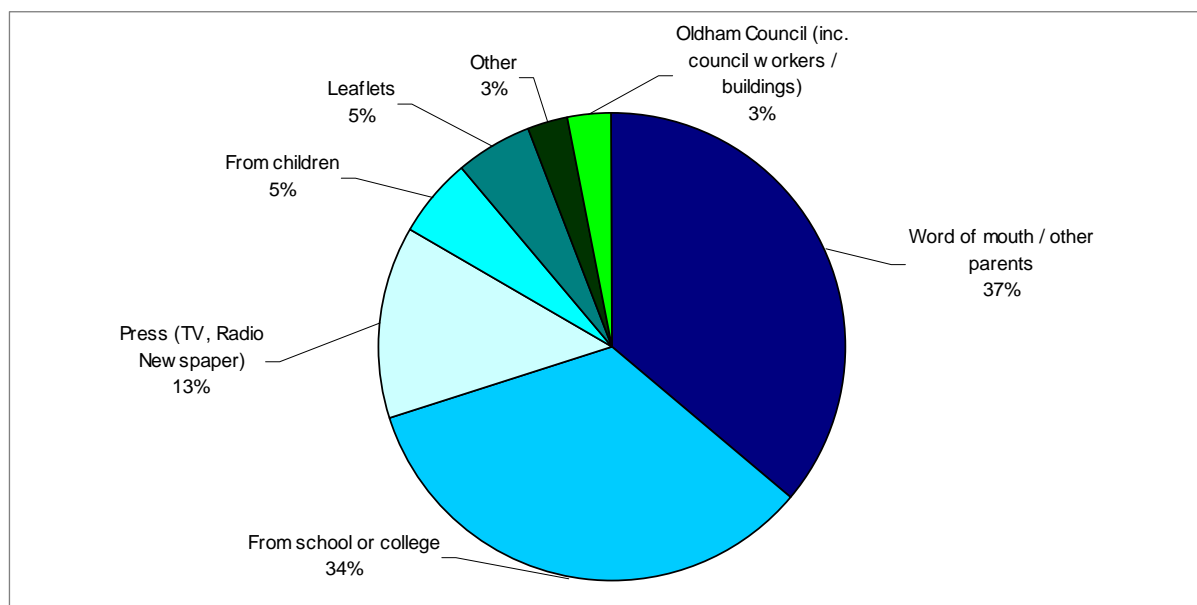
Source: SQW analysis of Suffolk programme monitoring data. Note that this is based on 5,454 applications (81 per cent) who stated this information.

### **Figure 1: Methods by which Suffolk applicants heard of the Home Access programme**

The Oldham monitoring data<sup>8</sup> suggests some significant differences in comparison with the Suffolk data. Here, the most frequently cited method of hearing about the programme was word of mouth or other parents (37 per cent); communication from school or college (34 per cent) was marginally below this (Figure 2). A relatively high proportion of applicants in Oldham noted that they heard of the programme through the press (13 per cent). This figure is much higher than the Suffolk equivalent (2 per cent).

<sup>7</sup> The Suffolk monitoring data provides this information for 81 per cent of applicants.

<sup>8</sup> The Oldham monitoring data provides this information for 39 per cent of applicants. The percentages quoted here are of those applications for which this information is recorded.



Source: SQW analysis of Oldham programme monitoring data. Note that the figures are based on 2,597 applicants (39 per cent) who provided this information.

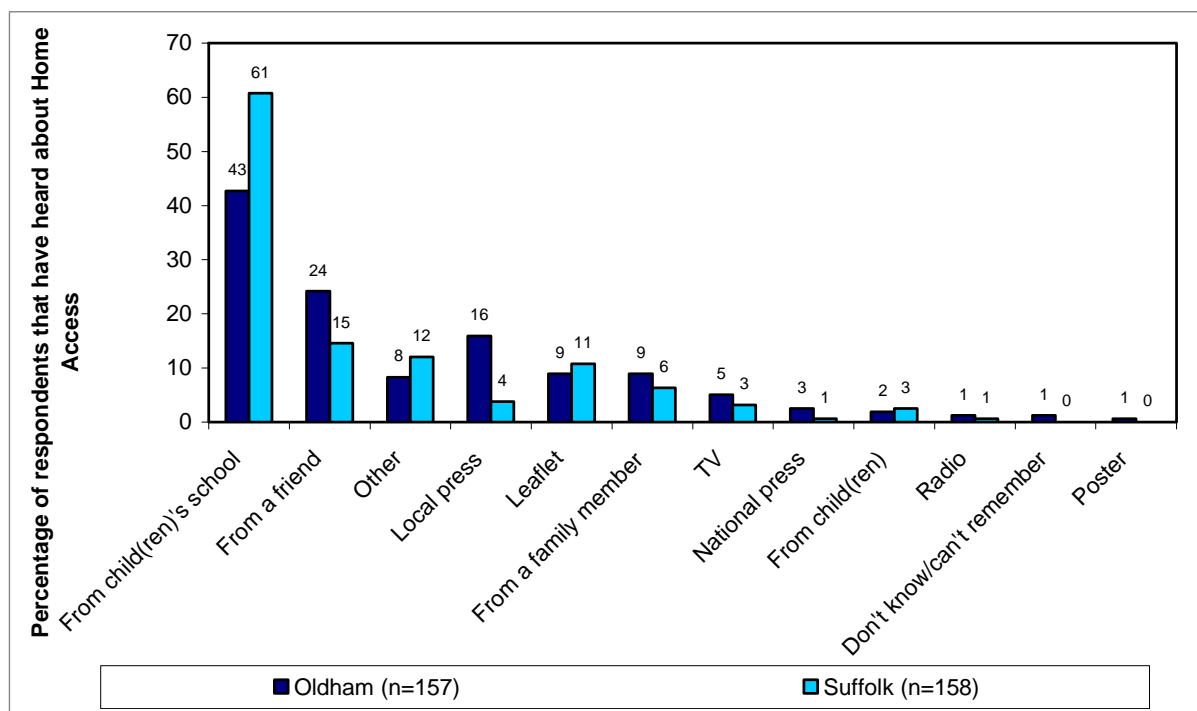
## Figure 2: Methods by which Oldham applicants heard of the Home Access Programme

### *Findings from the survey*

Becta appears to have created high levels of general awareness about the programme: of the random sample, 61 per cent of Suffolk respondents had heard of the Home Access scheme, once it had been described to them, and 64 per cent of the random Oldham sample had heard of it. A substantially greater proportion of the survey respondents were aware of the programme when referred to as the 'Home Access scheme' as opposed to 'Next Generation Learning @ Home': of all the 400 respondents, 69 per cent had heard of the Home Access scheme (before it was explained to them), whereas only 52 per cent had heard of Next Generation Learning @ Home.

The survey found that the most frequently cited means of hearing of the scheme was from the school (52 per cent of those who had heard of the scheme), followed by word of mouth from a friend (19 per cent). As shown in Figure 3, word of mouth from a friend was particularly important in Oldham – possibly reflecting the tighter geographic concentration of the target group in Oldham than in Suffolk.

TV, national press and posters appeared to have played very little part in awareness in the target group: almost all of the respondents citing these were in the fourth income decile or higher.



Source: Ipsos MORI pilot areas survey.

Base: all who have heard of Home Access.

### Figure 3: How survey respondents heard about the Home Access scheme

Although suppliers were meant to offer the package to everyone, awareness that those ineligible for a Home Access grant could pay for an approved package was rather low. Of the 92 respondents who were aware of the scheme but had not made a (successful) application, only 23 per cent (21) said they were aware that they could pay for an approved package. Of these, only 14 per cent (3) had considered using their own money to buy an approved package, and only one person had actually done so. Although the packages were on open sale to other members of the public, the pilot suppliers concentrated on the grant holders and therefore did not necessarily explore ways to promote the packages to other families. The focus in the pilot was to test the implementation of Home Access programme processes in terms of targeting and serving the specific eligible population.

### Supplier accreditation

#### *Observations from consultations*

In general, stakeholders were of the view that the overall model and process of accrediting suppliers during the pilot phase was a sound one and was delivered smoothly. Suppliers were positive about the notion of getting approved supplier status, as it quality-assured their specification and communicated that customers are receiving a quality product. It was noted that those suppliers that promoted the programme aggressively did very well in the pilot.

Becta has adopted a disciplined and a well defined gated process for the national programme, which includes a pre-qualification questionnaire (PQQ), followed by a full invitation to tender (ITT) issued to those that qualify, and finally the shortlist stage. A quality assurance process is anticipated to take place after suppliers have been approved. The pilot provided a similar approach, albeit within a condensed timescale to ensure that the tight deadlines could be met.

A specific issue emerged during the pilot related to contractual arrangements between equipment and connectivity suppliers, and between the customer and the supplier with regard to download limits. A technical error led to at least one case of a customer being allowed to substantially exceed the download limit without the customer's bandwidth being throttled back, which led to some debate as to who was liable for the excess download charges.<sup>9</sup> It will clearly be important that consumers in these low income groups are not exposed to any liability for excess download charges (which can be very substantial) – whether due to technical errors or otherwise – and this is reflected in Becta's requirements issued to suppliers.

Suppliers who were consulted for this evaluation were of the view that the pilot had not been a particularly profitable business for them; the challenge to meet price points and provide a tight specification within the grant value had put pressure on margins. Nevertheless, suppliers welcomed the opportunity to be involved with the pilot: the programme had opened up a market that they would not traditionally have targeted. The pilot also allowed suppliers to test the feasibility of what they could offer in the national programme, should they choose to bid.

In practice, all broadband supplied as part of the pilot was *mobile* broadband, as it was more transactional (as pre-paid options are available), and easier to administer and sell. However, mobile broadband does not typically provide as good connectivity as fixed broadband (in terms of speed and download limits). Some consultees suggested that a fixed broadband service may be a better solution for many of the households (69 per cent of applicants in the survey had a fixed phone line).

With regard to fulfilment, consultees noted that some customers thought that the payment card would buy them the same kit across all six suppliers, and therefore did not shop around.

One of the key aims of the pilot was to test out approaches to supplying to the special educational needs (SEN) population. It soon emerged that technologies for those with SEN, and related assistive technologies, were a particular challenge for suppliers, Becta and the local authorities. According to local authority consultees, the different grant values for applicants with and without SEN created confusion among some customers. Time constraints during the implementation of the pilot scheme meant that some of the complexities associated with SEN applications had not been fully thought through; this resulted in processes that were time-consuming, difficult

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<sup>9</sup> The consumer was not charged for this.

and delivered less value for money. Many customers did not previously have statements, and as suppliers relied on local authorities to carry out individual assessments, there were often delays in delivering the packages to SEN grant recipients.

For the national Home Access programme, Becta plans to embed most of the technologies associated with basic SEN needs within the core package for the programme, and channel more complicated SEN requirements through a specialist service provider.

### **Helpline, assessment and payment body processes (eligibility, application, approval, payment, fulfilment)**

#### *Observations from consultations*

For the pilot, the helpline, assessment and payment body (HAPB) process was outsourced to the local authorities of Oldham and Suffolk. The local authorities varied their existing contracts with service providers to deliver HAPB services.

Feedback from stakeholders suggests that the local-authority-based model for the pilot worked well in terms of most aspects of HAPB, as local authorities had the necessary data and networks to deliver the HAPB process effectively. A local-authority-based model would not be a realistic option for the national roll-out, however, as it would be too resource-intensive and expensive to run. Regional models were considered for the national roll-out but are less attractive in terms of economies of scale and efficiency than a single managed services provider.

The approaches adopted by the two local authorities were slightly different: Oldham had a drop-in centre, which, along with the call centre and helpline, was helpful in supporting applicants, many of whom were from ethnic minorities; Suffolk had a call centre and a helpline only.

A prepaid Barclaycard was used to distribute the grant; this was deemed very effective by stakeholders, because it avoided issues around stigma and controlled the fraud risk. According to Becta, the contract with Barclaycard worked well because the organisation had sufficiently qualified and trained personnel who knew how to deliver the payment aspect of the pilot.

In terms of determining eligibility, the local authorities used their own data and sources to approve applications, which served as a checking mechanism against official data sources.<sup>10</sup> This worked relatively well, according to the two local authorities, and did not pose any significant issues around fairness. However, some stakeholders were of the view that targeting those on benefits disadvantaged the

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<sup>10</sup> For the national programme, Becta will rely on the National Pupil Database (NPD) to confirm the take-up of free school meals. Other methods, such as paper evidence to support applications, will also be used where necessary.



‘working poor’ or, more specifically, those on working tax credits. Furthermore, the binary nature of the grant meant that those just above the threshold missed out on a valuable package.

Applications from those with SEN appeared to have been a significant issue in the HAPB process. Although local authorities are legally required to carry out individual needs assessments, a lack of local capacity for assessing SEN and approving applications resulted in delays in processing and approving SEN applications and delivering the Home Access programme package to families. The special educational needs co-ordinators required training themselves but were often time-constrained.

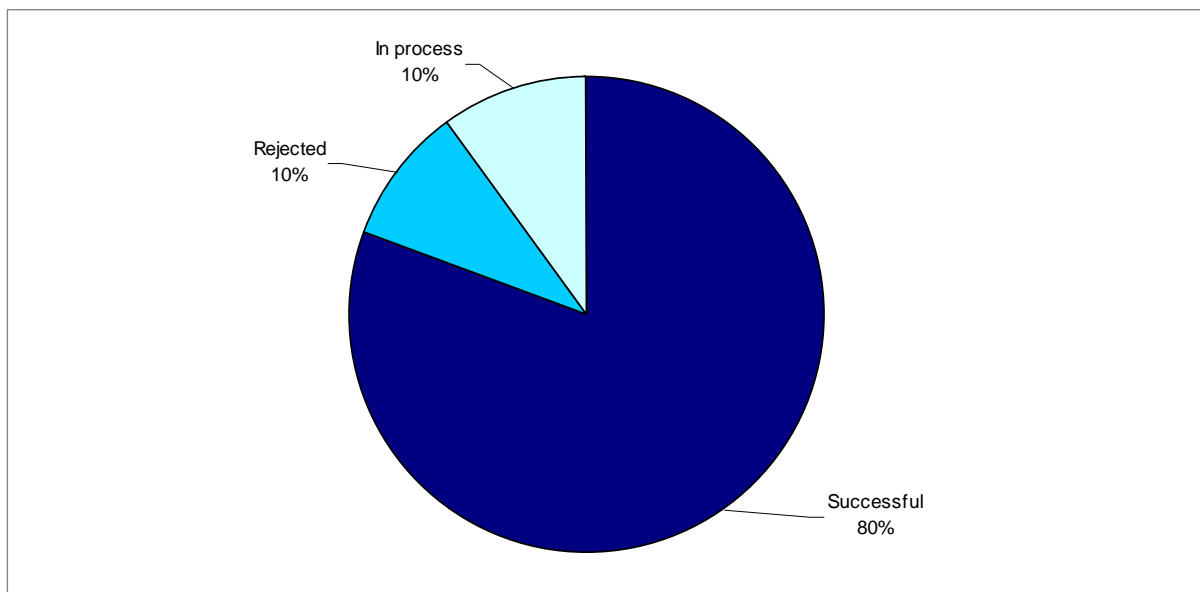
#### *Observations from case studies*

Case study evidence revealed some disquiet among teachers and parents and carers (as reported by teachers) about a perceived unfairness of the eligibility criteria: working parents or carers on low incomes excluded by the eligibility criteria did not think this is fair, particularly when some eligible families already have one or more computer at home and are given another one for free. Some teachers felt strongly on this issue, stating that the eligibility criteria are “easy to work with but crude and not fair”, that “a lot of money was wasted”, and “it should only go to those who don’t have a computer at home”.

#### *Findings from monitoring data*

The Suffolk monitoring data provided details of applications for 9,823 grants. Of these, 80 per cent were successful, 10 per cent were rejected and 10 per cent were marked as still in progress (Figure 4). Therefore, of the grant applications that had fully completed the application process, 89 per cent were successful and just 11 per cent were rejected.



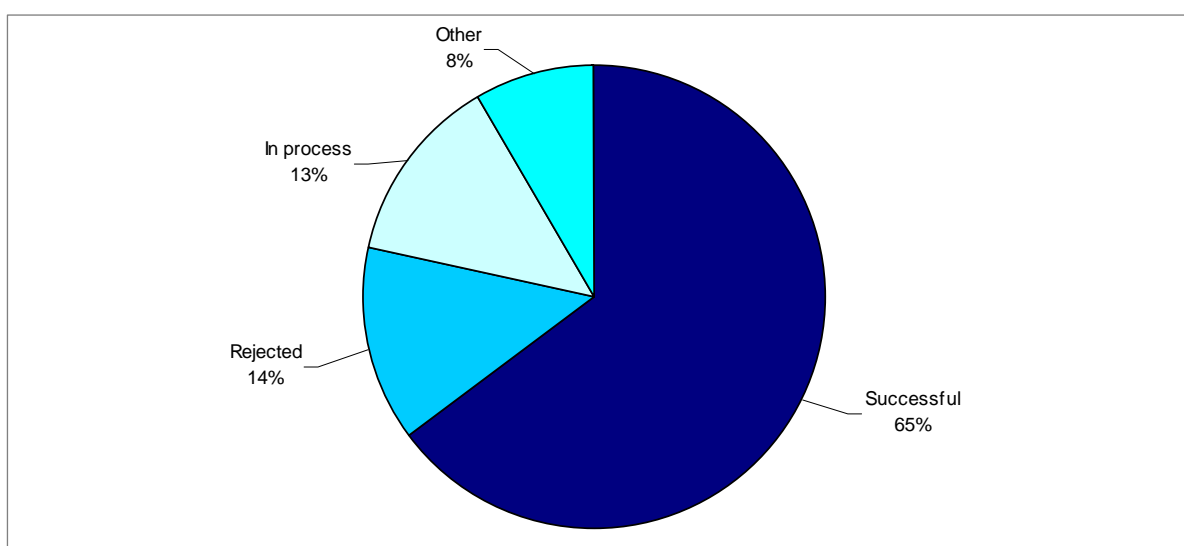


Source: SQW analysis of Suffolk programme monitoring data.

**Figure 4: Suffolk Home Access programme applications progress**

Around 940 applications proved unsuccessful. Sixty-eight per cent of these were rejected as being ineligible, while 32 per cent were rejected for being duplicate applications.

The Oldham monitoring data shows that of 6,594 grant applications, 65 per cent proved successful, 14 per cent were rejected and 13 per cent were marked as still in process (Figure 5). For a further 8 per cent of grant applications, the status was not clear ('open', 'closed' or 'cancelled').

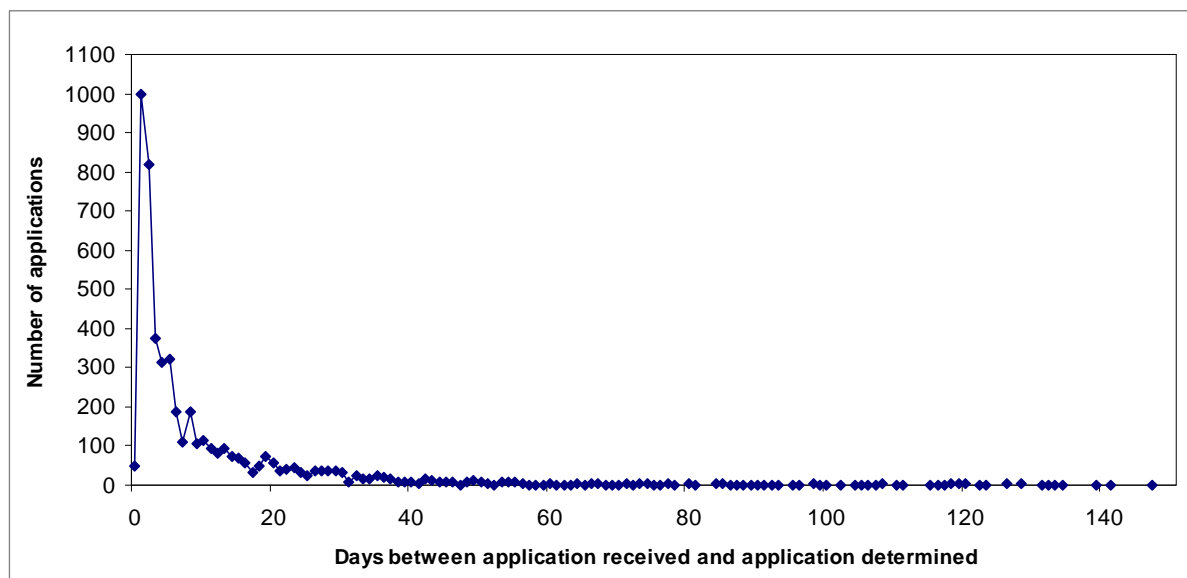


Source: SQW analysis of Oldham programme monitoring data.

**Figure 5: Oldham Home Access programme applications progress**

Regarding the speed of the application process, we have analysed the difference in days between the date an application was received and the data on which the

application was determined in Oldham. (The fields provided in the Suffolk monitoring data did not allow this analysis.) The mean duration to process the application was 10.6 calendar days, while the median was four calendar days (*cf.* the service level agreement target of fully processing applications within 10 working days<sup>11</sup>). The distribution is illustrated in Figure 6 below.



Source: SQW analysis of Oldham monitoring data.

**Figure 6: Number of days between an application being received and it being determined, in Oldham**

### *Findings from the survey*

The application process appears to have been straightforward: 76 per cent of applicants found it very easy, 19 per cent fairly easy, 2 per cent neither easy nor difficult, and just 3 per cent fairly difficult. The process was somewhat less easy than average for black and minority ethnic applicants (64 per cent of black and minority ethnic respondents said it was very easy, versus 79 per cent of white respondents), and for applicants with an SEN child (63 per cent of SEN applicants said it was very easy, versus 78 per cent of non-SEN applicants). However, the ease of applying was reported as similar across all household income groups in the sample, which suggests that the careful design of the application form succeeded in providing equitable access to the scheme.<sup>12</sup>

<sup>11</sup> By way of comparison, we note that the time to process applications for the well established free school meals scheme appears to be quite variable, and in some cases substantially longer than the turnaround times achieved in the Home Access Programme pilot. We have not undertaken comprehensive research on this, but we note that some local authorities' websites state that applications will be dealt with 'usually within five working days' or 'usually within five to 10 working days', while others state 'within 15 working days' or 'within 28 working days'.

<sup>12</sup> Very few respondents said they found the application process difficult. As a result, there were only six responses to this question, and only one of the six was an SEN applicant. Of the six responses,

Of the 83 respondents who had heard of the Home Access scheme but not yet applied, 17 per cent said that they were planning to apply. Of the remainder, the dominant reasons for not planning to apply were 'not eligible' (63 per cent), 'already have a computer at home' (29 per cent), and 'already have the internet at home' (11 per cent). Only one person reported not wanting a computer at home.

Respondents were asked whether it was fair that the grant is available only to families in receipt of certain benefits, with children aged between seven and 18 who are in full-time education at a state school or college. Unsurprisingly, the perception of fairness was more positive among applicants than non-applicants: only 16 per cent of applicants considered the criteria unfair, while 38 per cent of non-applicants considered them unfair (with the majority of these – 22 per cent of non-applicants – considering them very unfair).

Of the 105 respondents who considered the eligibility criteria unfair:

- 36 per cent said that the grant should be available to all children, regardless of whether the parents or carers receive benefit and are working or not
- 28 per cent said it should be available to low income and single parent families who do not qualify for benefits and whose income is just above the threshold
- 10 per cent said that it should be available to people receiving any kind of benefit
- 10 per cent said that working families are being penalised, and unemployed people get a lot of help.

The vast majority of the 191 applicants who had used their grant redeemed their payment card at a store (76 per cent) as opposed to over the phone (12 per cent) or online (15 per cent). Three-quarters of those who used the online option had had the internet at home for more than six months.

Once users had received their cards, they generally found the process of purchasing the Home Access package easy: 68 per cent found it very easy, 18 per cent fairly easy, 4 per cent neither easy nor difficult, and 10 per cent found it fairly difficult or very difficult. As with the application process, black and minority ethnic and SEN applicants found the purchasing process significantly less easy than average (56 per cent of black and minority ethnic versus 70 per cent of white applicants found it very easy; 58 per cent of SEN versus 69 per cent of non-SEN applicants found it very easy). Of the 19 (10 per cent) applicants who found the process difficult, six were SEN applicants, 16 were white, and all were from the lowest three income deciles.

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two said the reason for difficulty was that the "information was unclear" and four said the reason for difficulty was "other".

One in five (20 per cent) of the beneficiaries used their own money to add to the value of the grant, with the mean top-up value being £67 (£52 in the lowest income decile, rising to £74 in the third income decile group). According to Becta, some suppliers required top-ups for customers to obtain laptops rather than netbooks.

## Approved packages

### *Observations from consultations*

Supplier views suggest that there was not much difference between the specific requirements of customers in Oldham and Suffolk, but compared with other customers, beneficiaries of the Home Access programme were less interested in additional equipment or packages as add-ons to their Home Access programme packages. However, Becta's own observations suggest that customers were not always aware that they could shop around for the most appropriate package, and some were under the impression that they could get the same package from any of the six suppliers.

From a supplier's perspective, the biggest question for the national roll-out, when suppliers were interviewed, was around the grant value. Suppliers felt the need to develop their specifications and packages according to customer requirements and offer an appropriate choice of packages, but were concerned that they would not be able to do this sufficiently well when bidding for the national programme if they were unaware of the grant value.<sup>13</sup> One supplier thought it may be important to offer a full-size laptop across all suppliers, but that a less generous warranty is appropriate for the national roll-out.

Although connectivity was offered only for a year in the pilot,<sup>14</sup> consultees were not unduly concerned about families ceasing to have internet access; one supplier said that customers are likely to get bundled packages from Sky, TalkTalk or BT rather than not getting connectivity at all. Several grant recipients already have connectivity through the bundled fixed-line routes, and hence the issue of losing the connectivity element of the package may not be a major one.

In terms of technical support, despite Becta stipulating specific times for support to be offered, there were relatively few support calls and no major problems with regard to setting up the equipment. Stakeholders' views varied with regard to offering technical support for three years: some felt that the three-year technical support was an important part of the package; others, especially industry stakeholders, were of the view that the technical support offer should be in line with other service-related offers such as warranties, and that one year's technical support would be sufficient.

### *Findings from monitoring data*

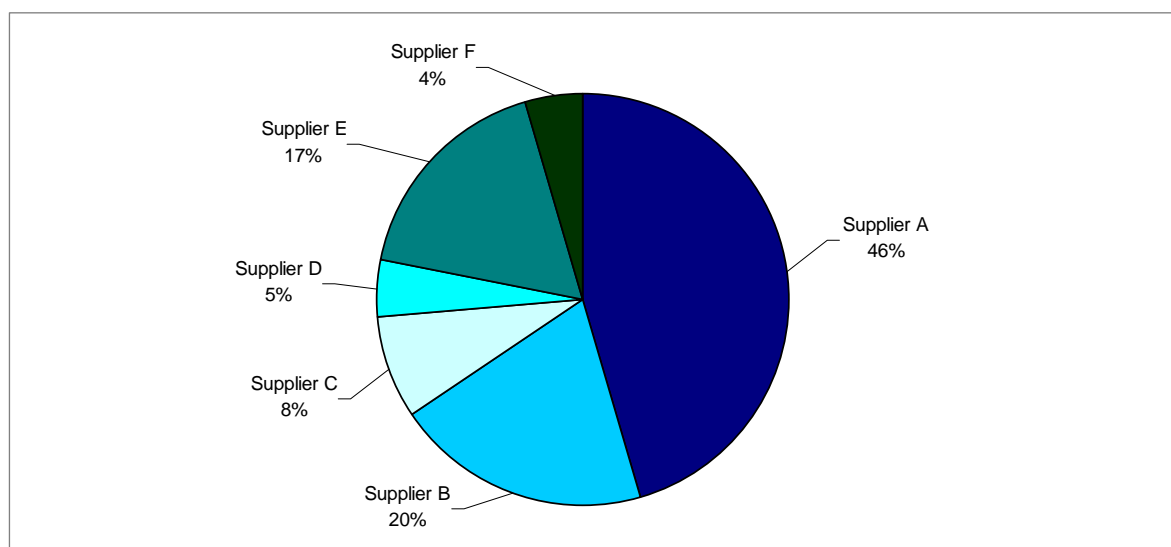
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<sup>13</sup> We understand that potential suppliers were subsequently advised of the grant value from the start of the accreditation process for the national roll-out.

<sup>14</sup> Note that one supplier later offered two years of connectivity in order to differentiate its package.

Of the approved packages, 75 per cent were full packages and 25 per cent were device and support packages. Fewer than 1 per cent were for connectivity only.

Figure 7 shows the distribution of packages sold by the six (anonymised) suppliers. One supplier in particular, supplier A, accounted for almost half of all packages. In total, three of the six suppliers (A, B and E) accounted for 83 per cent of all packages.

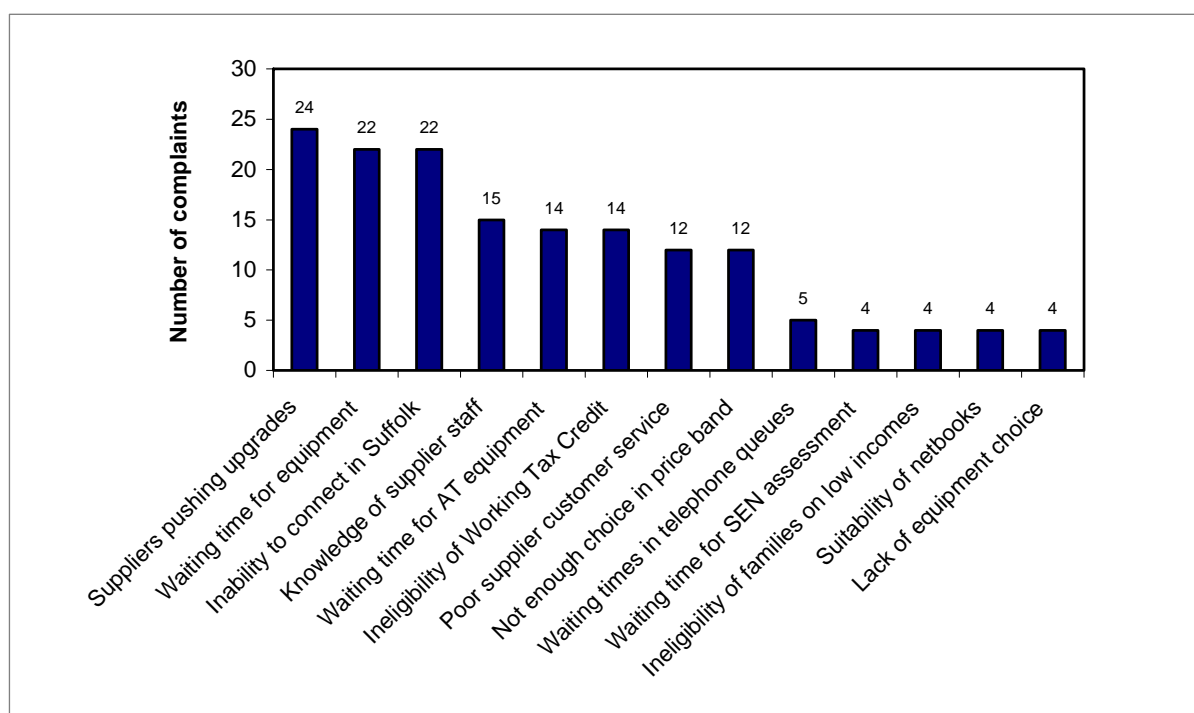


Source: SQW analysis of Becta management data.

### Figure 7: Home access package distribution by supplier

Looking at the monitoring data on complaints, we found that a total of 178 complaints were made (approximately 2 per cent of the households that benefited in the pilot<sup>15</sup>). The most frequent complaints were regarding suppliers pushing customers to upgrade (with a top-up from their own resources), the waiting time for equipment, and an inability to connect to the internet in Suffolk using mobile broadband (Figure 8). Between them, these three topics accounted for 38 per cent of complaints.

<sup>15</sup> We have not been able to source complaint statistics for directly comparable schemes in time for this report. However, we consider this complaint rate to be relatively low. From Hansard Written Answers we note that there were approximately 3,725 complainants per month regarding tax credits in October–November 2008; in the third quarter of 2007–08, 277,000 new tax credits claims were received that went on to successful awards; assuming a similar level of applications in the equivalent period in 2008–09, this would imply an average of approximately four complainants per 100 successful tax credit claims.



Source: SQW analysis of Becta management data

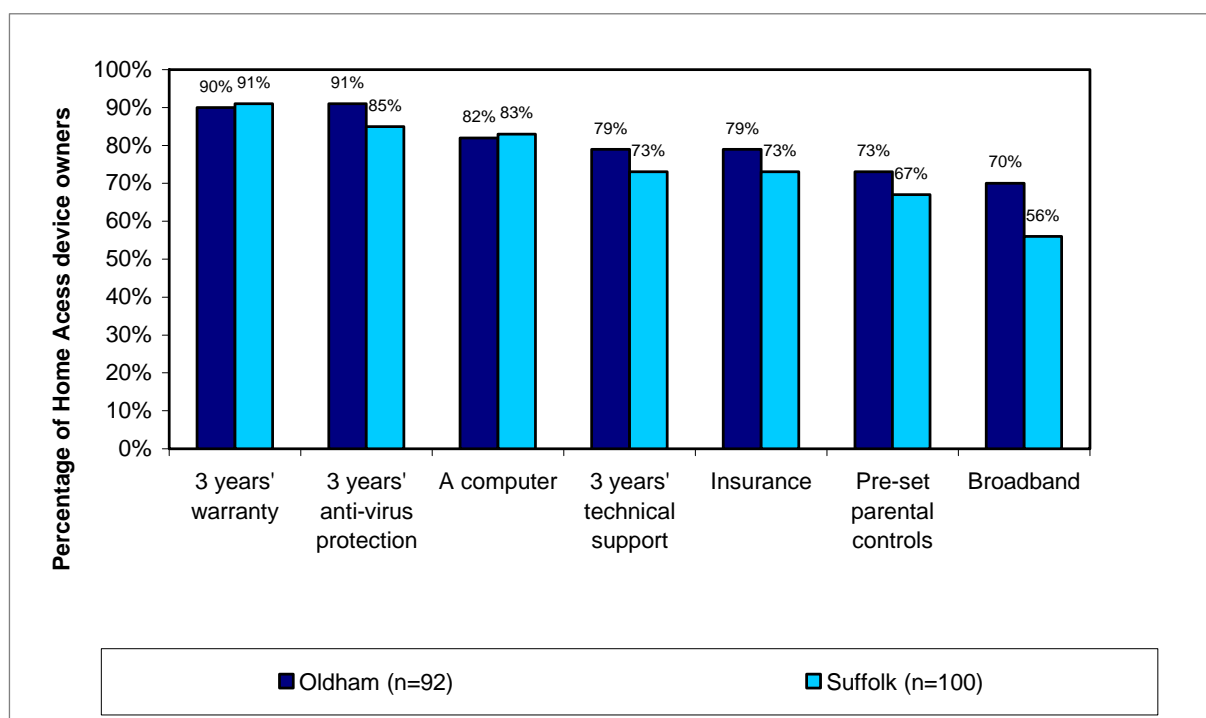
**Figure 8: Top complaints in the pilot**

### *Findings from the survey*

For the 192 beneficiaries who had used their grants, the warranty, virus protection and computer were the most important parts of the package (Figure 9). Broadband was considered least important – especially among the Suffolk respondents. However, it should be noted that of the 37 people (19 per cent of beneficiaries) who said that broadband was not important as part of the package, all but five had had broadband for more than six months anyway (ie before the Home Access pilot).

Preset parental controls were particularly important for parents of seven- to 11-year-old children (76 per cent of this group said parental controls are very important). Technical support was particularly important for the lowest income decile (91 per cent of this group said it is very important, versus the 76 per cent average). Interestingly, significantly more parents of girls than parents of boys considered insurance<sup>16</sup> to be a very important part of the package (83 per cent versus 70 per cent) – suggesting that parents of girls were more concerned about the risk of device theft.

<sup>16</sup> That is, a reinstatement service in the event of device theft. Some suppliers may take out a policy to cover each sale, while others may take out a generic policy that covers them for the delivery of the entire Home Access service. Some may even seek alternative methods of fulfilling the requirement, eg keeping spare items on a shelf and using them as replacements.



Source: Ipsos MORI pilot areas survey.

### Figure 9: Proportion of Home Access device owners that felt it was very important to have the following as part of their package

Satisfaction levels with the overall package were high: 59 per cent of beneficiaries were very satisfied, 27 per cent fairly satisfied, 5 per cent neither satisfied nor dissatisfied, 4 per cent fairly dissatisfied and 3 per cent very dissatisfied. Of the 14 respondents who were dissatisfied, 36 per cent cited problems with the internet connection, and 29 per cent cited poor customer service.

It was relatively easy for users of the Home Access package to set up the necessary equipment at home. Of the 183 beneficiaries who had a Home Access device and had set it up, 79 per cent said the package was very or fairly easy to set up. For the 30 households (16 per cent) who found it difficult, the most frequently cited reasons were difficulties in the setting-up process (37 per cent), problems in connecting to the internet (30 per cent), and problems understanding the instructions (17 per cent).

The use of the Home Access technical support service was highest in the lowest income decile households (50 per cent of beneficiaries in this group used the service – significantly higher than the 30 per cent average). When the service was used, there was a reasonably high level of satisfaction: of the 57 support service users, 51 per cent said they were very satisfied and 25 per cent fairly satisfied.

Of the very small number (12) saying they were dissatisfied, 67 per cent cited 'bad customer service/do not call back', 50 per cent 'not helpful/cannot solve problem' and 25 per cent 'cost of calls'.

## **Programme management**

The pilot of the Home Access programme was delivered under tight deadlines and within budget constraints. Its project management was viewed positively by stakeholders, who thought that it was a tightly run project with effective channels of communication.

One area where it appears there is room for improvement is the specification and management of beneficiary-level data. We found various difficulties in accessing beneficiary-level information for this evaluation of the pilot (in particular, it was a resource-intensive process for Becta to provide us with names of beneficiaries at case study schools). To some extent, the problems reflect the difficulty of ensuring complete consistency across two different local authorities using different service providers (which will not be the case for national roll-out). However, for the national programme, it is important to ensure that beneficiary data requirements are tightly specified. With much larger volumes involved in the national roll-out, it will be important to establish very clearly what information needs to be kept electronically within the CRM database for the purposes of monitoring and evaluation, and to ensure that the data-set is as 'clean' as possible (for example, with consistent and unambiguous versions of school names).



## Assessment of gross and net outputs

This section presents findings on the key outputs generated by the pilot in Oldham and Suffolk, namely the number and profile of beneficiaries. It also discusses additionality – that is, the extent to which the pilot was successful in generating outputs that would not have materialised in its absence.

Our analysis draws on the programme monitoring data for information on the grants issued and the profile of beneficiaries, and uses evidence from the pilot areas survey regarding additionality.

### Gross outputs

#### Headline volumes

Becta advises us that, as of the end of the pilot:

- 9,698 applications had been received:
  - 5,770 in Suffolk
  - 3,928 in Oldhamof which 8,991 (93 per cent) had been approved (ie 8,991 beneficiary households)
- 12,344 grants had been issued (ie 12,344 beneficiary learners), of which 11,910 grants had been redeemed as of 27 August 2009 (96.5 per cent of grants issued).

This indicates an average of 1.37 grants per approved application.

Of the estimated eligible population of 13,207<sup>17</sup> learners in Oldham and Suffolk, grants were issued to 12,344 learners, indicating that the pilot was successful in serving approximately 93 per cent of estimated eligible learners, which represents a very high level of penetration.<sup>18</sup>

### Beneficiary analysis

#### *Benefits received by applicant*

In Suffolk, 63 per cent of applicants received child tax credits, and 42 per cent received income support (see Table 2). The figures in Oldham are somewhat below

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<sup>17</sup> The estimated eligible population is based on the group registered for free school meals (FSM) in each local authority. A reduction has been applied to account for Computers for Pupils devices issued. This is an estimate of the entire FSM-registered group and may not represent the full eligible pool (in both local authority and nationally), because not everyone who is eligible for FSM has taken it up.

<sup>18</sup> By way of comparison, the latest HM Revenue and Customs estimates are that take-up of Child Tax Credit was 81 per cent of the eligible population in 2006–07, and the take-up of Working Tax Credit was 57 per cent.

those for Suffolk, with just 33 per cent of grant applicants receiving income support, and 32 per cent receiving child tax credits. In terms of the learner applicants, 52 per cent of those in Suffolk and 64 per cent of those in Oldham were in receipt of free school meals, according to the monitoring data.

**Table 2: State benefits received by applicants**

<b>Benefit</b>	<b>Suffolk</b>	<b>Oldham</b>
<b>Free school meals</b>	52%	64%
<b>Child tax credits</b>	63%	32%
<b>Income support</b>	42%	33%
<b>Jobseekers allowance</b>	7%	8%
<b>Pensions credit</b>	1%	1%
<b>Employment support allowance</b>	1%	1%

Source: SQW analysis of Suffolk and Oldham monitoring data.

### *Ethnicity and gender of applicants*

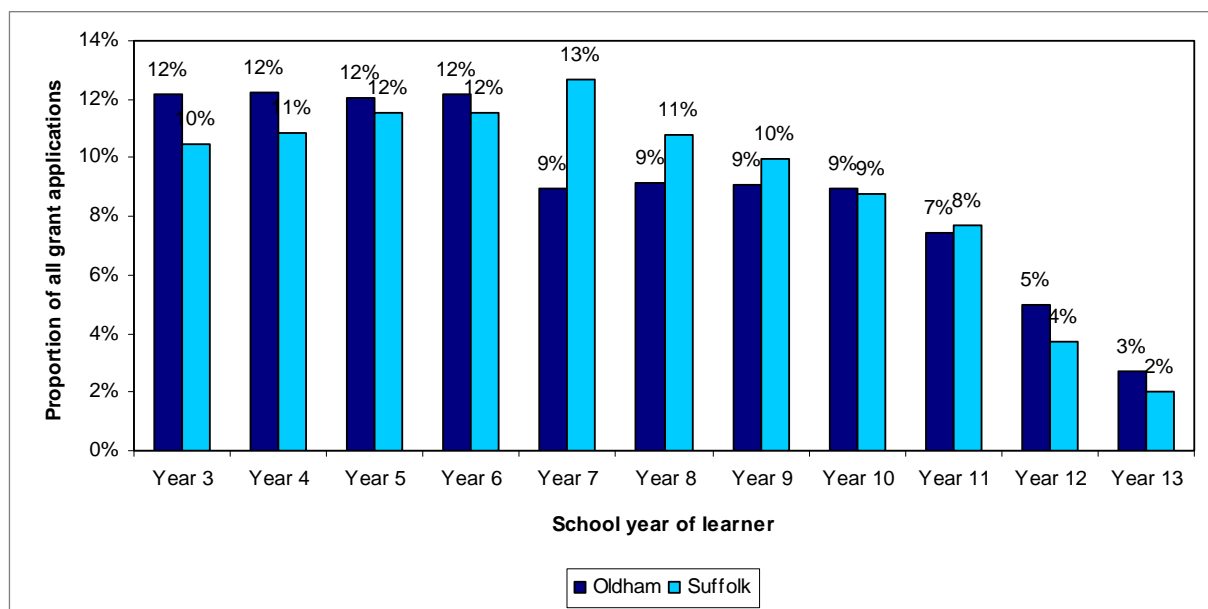
The monitoring data suggests that, typically, mothers applied on behalf of their children: in Oldham 71 per cent of applicants (who stated their gender) were female, and in Suffolk the figure was 82 per cent.

Ninety per cent of applicants in Suffolk stated their ethnicity as white British, and a further 2 per cent stated another white category; 3 per cent of applicants stated Asian and 1 per cent black. In contrast, Oldham applicants were relatively heterogeneous: 50 per cent of applicants stated white, and 47 per cent of applicants stated Asian. The difference was broadly reflected in our survey: 96 per cent of applicant respondents were white in Suffolk, versus 67 per cent in Oldham. This broadly reflects the ethnic mix in the populations of the two local authorities.

### *Age and gender of children*

There are some similar trends in the age distributions of both Oldham and Suffolk learner applicants. As Figure 10 illustrates, in both areas there is a large fall in the number of grants going to pupils who are above compulsory school age (ie Years 12 and 13). However, in Suffolk the fall is slowly graduated through the secondary school years, whereas in Oldham there seems to be a step-change after Year 6, and little difference between Years 7 and 11. This could be partly explained by the Computers for Pupils programme having only recently been implemented in Oldham (with those beneficiaries being ineligible to receive a Home Access device).

The main difference between the Oldham and Suffolk age distributions is the proportion of Year 7 learner applicants. In Oldham, just 9 per cent of learner applicants were in Year 7, much fewer than the 12 per cent of Year 6 learner applicants. In Suffolk, however, 13 per cent of all learner applicants were in Year 7.



Source: SQW analysis of Oldham and Suffolk programme monitoring data.

**Figure 10: School year of learner applicants in Oldham and Suffolk**

In both areas, the monitoring data shows a fairly even split between the gender of learners. In Oldham the split is 48 per cent female to 52 per cent male, and in Suffolk the split is 49 per cent female to 51 per cent male.

### *Children per household*

Among the beneficiaries, the number of people in the household under the age of 20 ranged from one to over six, with the mean being 2.4 children and/or young people per beneficiary household.

### *Lone parents*

Our survey did not ask explicitly whether the respondent was a lone parent. However, we asked for the total number of people in the household and for the total number aged under 20. Comparing these two responses, we find that 113 of the 206 beneficiary households had just one person aged 20 or over<sup>19</sup> – suggesting that lone parent households accounted for up to 55 per cent of beneficiaries.

<sup>19</sup> One beneficiary household had no one aged over 20.

### *SEN versus non-SEN children*

The monitoring data shows that SEN grants accounted for 6 per cent of grants in Oldham and 9 per cent in Suffolk. There is some discrepancy here with the survey data, which found that 15 per cent of Oldham beneficiaries had an SEN child, versus 11 per cent in Suffolk.<sup>20</sup> So, while the monitoring data on SEN grants and the survey findings are broadly comparable for Suffolk, the proportions of SEN grants in the monitoring data appear to be much lower than the SEN incidence found in the survey. It is unclear to us, at this stage, whether this reflects a difference in respondents' interpretations of the survey question or a difference in the local authorities' approaches to SEN.

### *Grant values*

Table 3 shows the grant values of the successful applicants in Oldham and Suffolk, according to the monitoring data. Note that there were three main grants: £600 – full package; £475 – device and support; and £250 – connectivity. Any further grants issued represented a grant award based on SEN; these were up to £500, or greater than £500 for complex needs.<sup>21</sup>

In both areas, the £600 grant was by far the most common value, followed by the £475 grant. Note that values above £600 were relevant only to SEN applications and offered as uplifts to include assistive technologies.

**Table 3: Grant values in Suffolk and Oldham**

Grant value	Suffolk		Oldham	
	Number of grants	Proportion of total grants	Number of grants	Proportion of total grants
<b>£250 (reduced package)</b>	11	0%	1	0%
<b>£475 (reduced package)</b>	1,829	23%	423	10%
<b>£500 (reduced package)</b>	2	0%	0	0%
<b>£600 (standard package)</b>	5,341	68%	3,603	84%
<b>£750 (SEN uplift)</b>	3	0%	0	0%
<b>£975 (SEN uplift)</b>	154	2%	30	1%

<sup>20</sup> In the random sample, 9 per cent of Oldham respondents and 15 per cent of Suffolk respondents had an SEN child.

<sup>21</sup> SEN grants were further capped to stop ineligible spend; eg if the applicant's SEN needs equated to £140 then the applicant would not receive the entire £500 SEN grant; the total grant issued for a full package in this case would be £740.

Grant value	Suffolk		Oldham	
	Number of grants	Proportion of total grants	Number of grants	Proportion of total grants
<b>£1,100 (SEN uplift)</b>	571	7%	207	5%
<b>Over £1,1000 (SEN uplift)</b>	0	0%	6	0%

Source: SQW analysis of Oldham and Suffolk programme monitoring data. Note that the values included in the table are only those where the applicant was successful.

This data suggests that the mean grant value was £616 in Oldham and £614 in Suffolk.

### *Beneficiaries by school*

In the monitoring data, there are applications for learners against 154 different school names in Oldham and 1,133 different school names in Suffolk. However, this substantially overstates the numbers of schools, as there are variations of the same school name.<sup>22</sup> Using school postcodes as an alternative school identifier suggests that the learners were at 121 schools in Oldham (of which 28 accounted for 50 per cent of applications) and 555 schools in Suffolk (of which 40 accounted for 50 per cent of applications).

### *Location of beneficiaries*

We were not provided with learners' home postcodes in the monitoring data for Suffolk.

An analysis of the location of Oldham learner applicants confirms that they are predominantly within England's 20 per cent most deprived Lower Super Output Areas, as shown in Figure 11.

<sup>22</sup> For example, Upland Middle School, Upands Middle School, Uplands Community Middle, Uplands Community Middle School, Uplands Community College, Uplands Middle, Uplands Middle School, and Upplands Middle School.

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### Figure 11: Location of Oldham learner applicants

#### Net outputs

#### Leakage

In public policy evaluations, 'leakage' is the extent to which an intervention's gross outputs relate to beneficiaries outside the intended group.

Our analysis of the rationale for the Home Access programme suggests that the intended group should be those households with children (aged five to 19, in state-maintained education in England) that do not have a working computer with internet access at home. These are the households that the policy was conceived to address in order to move more quickly towards universal home access for learners.

It should be noted that 'leakage' to beneficiaries outside the intended group does *not* mean that packages were provided to *ineligible* households (the grant was targeted at households eligible for Free School Meals). Neither does it imply that there were no educational benefits associated with those packages provided to households which already had a computer and the internet; there clearly *were* benefits valued by these households, as reported in the evidence gathered in the survey and case studies.

However, whilst it can be argued that if a household has a computer at home, that doesn't necessarily mean that a learner can access the computer when required (nor that the specification of the technology is necessarily sufficient for a good learning experience), this applies to many of the 5 million households with learners that already have home access (not just those in receipt of certain benefits). Providing an extra computer to a household that already has a computer and internet connection does nothing to reduce the number of households without any home access.

On this basis, we estimate that the overall leakage in the pilot was approximately 45 per cent,<sup>23</sup> derived from our analysis of the survey questions regarding how long the household has had both a computer and an internet connection. As shown in Table 4, the leakage was substantially higher in Suffolk (51 per cent) than in Oldham (38 per cent) – doubtless reflecting higher internet penetration in the county, given its relative prosperity compared with Oldham.

**Table 4: Analysis of leakage in the pilot areas**

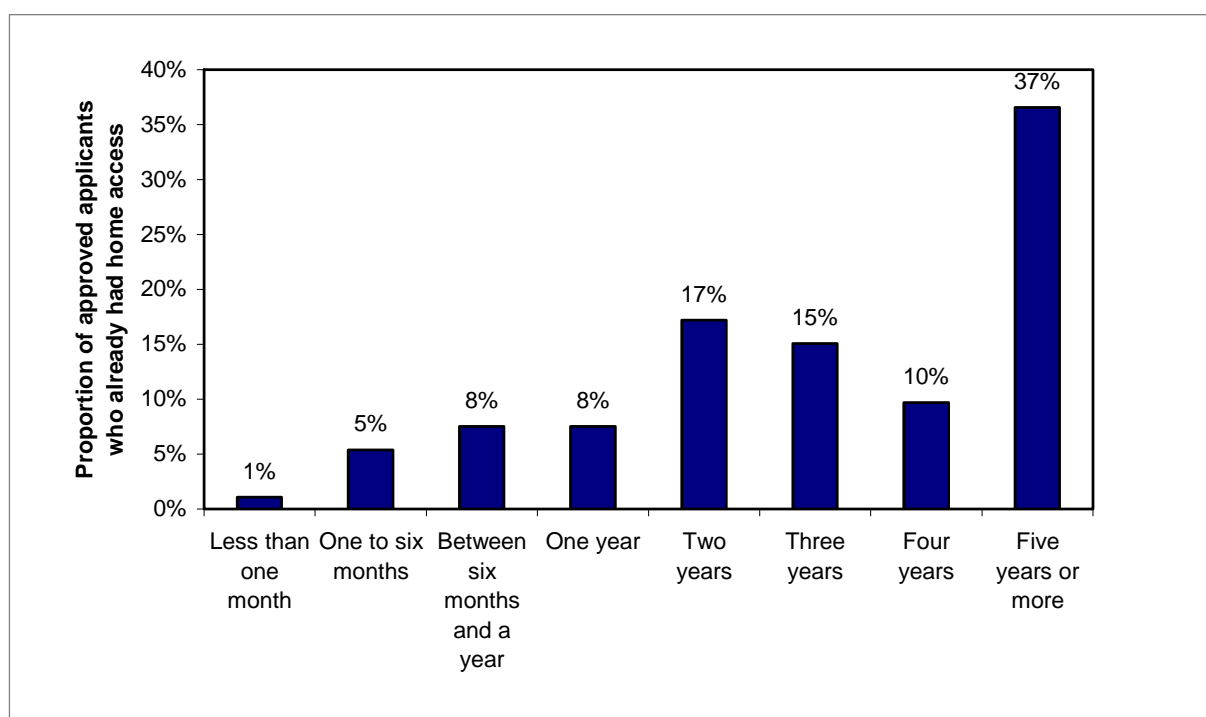
	<b>Oldham</b>	<b>Suffolk</b>	<b>Total</b>
Number of approved applicants in sample	97	109	206
Number of approved applicants in sample who have had both a computer and internet at home for more than six months	32	55	87
Number of approved applicants in sample who have had either a computer or internet at home for less than six months, but who said they had a computer and internet before getting the Home Access device	5	1	6
Total approved applicants who had a computer and internet before getting the Home Access device	37	56	93
Per cent of approved applicants in sample who had a computer and internet before getting the Home Access device	38%	51%	45%

Source: SQW analysis of Ipsos MORI pilot areas survey.

Of the approved applicants who already had a computer and internet access before getting the Home Access device(s):

<sup>23</sup> This level of leakage can be deemed as high. The English Partnerships Additionality Guidance provides ready reckoners: low, 10 per cent; medium, 25 per cent; high, 50 per cent; very high, 75 per cent.

- the average ratio of computers to under 20-year-olds in the household was 1:2.4 before obtaining the Home Access device(s) – suggesting there was likely to be significant contention between family members for use of the computer
- only two (2 per cent) said they had not previously had broadband access to the internet (presumably they were using dial-up connections)
- 61 per cent had had a computer in the home for three years or more, as shown in Figure 12 (although this cannot necessarily be taken to reflect the age of pre-existing computer(s), as the survey did not ask for the ages of all the computers in the household).



Source: SQW analysis of Ipsos MORI pilot areas survey.

### Figure 12: How long have you had a computer at home?\*

\*For approved applicants who had a computer and internet access before obtaining the Home Access devices.

### Deadweight

'Deadweight' is the extent to which the same gross outputs would have been achieved in the absence of intervention (in this case through beneficiaries buying their own computers – albeit possibly later than was the case with intervention).

The most meaningful analysis of deadweight in a market in which take-up is increasing anyway is to assess the extent to which beneficiaries' purchases of home access have been accelerated as a result of the grant. Table 5 presents an analysis of the acceleration effect of the Home Access pilot for beneficiaries who had received their payment cards and who had not previously had a computer and internet access in their homes.



**Table 5: Without the Home Access grant, how soon do you think your household would have got broadband access?\***

	Number of respondents	Assumed acceleration (months)
<b>Some time this year anyway</b>	14	4
<b>Next year</b>	21	12
<b>2–3 years' time</b>	18	30
<b>4–5 years' time</b>	4	54
<b>Longer</b>	3	60
<b>Never</b>	17	60
<b>Don't know</b>	8	30
<b>Total</b>	<b>85</b>	
<b>Average acceleration (months)</b>		<b>29</b>

\* For beneficiaries who had received their payment cards and who had not previously had a computer and internet access in their homes.

Source: SQW analysis of Ipsos MORI pilot areas survey.

As shown in Table 5, we estimate that the average acceleration (among those who are not accounted for in the leakage estimate above) was approximately 29 months: in other words, for those who didn't already have it, home access was on average obtained about 2.4 years earlier than it would have been in the absence of intervention.

## Multipliers

Interventions can have spill-over benefits beyond the direct gross outputs. In the case of Home Access, the most relevant measure is the extent to which non-applicants have bought home access for the first time as a result of hearing about the scheme – to ensure, for example, that their children don't get left behind.

The lower bound on the programme's multipliers is given by the number of people who have bought an approved Home Access package with their own money. There was one such respondent in our sample (for the 32 beneficiaries in the random sample, there was one indirect beneficiary – suggesting a multiplier of  $1 + 1/32 = 1.03$ ).

The upper bound on the multiplier effect can be seen by examining the number of non-applicants who had heard of the scheme and who had bought internet access

for the first time in the last six months. There were five such households in our sample (for the 32 beneficiaries in the random sample, there were five households who did not apply but who nevertheless had bought internet access at home for the first time in the last six months – suggesting an upper bound multiplier of  $1 + 5/32 = 1.16$ ).

In practice, it would be unreasonable to attribute all non-applicant purchases to the influence of the Home Access programme. We believe that it would be reasonable to take the mid-point of our lower bound and upper multipliers: 1.10 – implying that for every one direct net beneficiary household, a further 0.1 households are stimulated to obtain home access using their own resources.

### Summary of net outputs

In total, then, we estimate that the net outputs of the pilot in Oldham and Suffolk are that home access has been accelerated by a total of 13,055 household-years, as shown in Table 6 below:

**Table 6: Analysis of the net outputs of the pilot**

	<b>Value</b>
Gross direct number of households supported	8,991 households
Less leakage	45%
Equals	4,945 households
Adjusted for the multiplier effect	1.10
Equals	5,440 households
Multiplied by the average acceleration of home access per beneficiary household	2.4 years
Equals the <b>net outputs</b>	<b>13,055 household-years</b>

Source: SQW analysis.

## Assessment of outcomes and impacts

This section presents an analysis of the early outcomes of the Home Access pilot, including use of home access for educational purposes, effects on pupils' skills and motivation, and parental engagement. It also explores the potential impacts of the pilot with regard to the digital divide, educational attainment and parental engagement in skills development.

The section primarily uses evidence from the pilot areas survey combined with findings from the case study visits to seven schools in Oldham and Suffolk.

### Outcomes

#### Enhanced use of home access for education

##### *Findings from survey data*

Table 7 shows that in 94 per cent of all Home Access households, one of the users of the package is the selected child or young person.<sup>24</sup> It also reveals that other family members – other children and young people, and the main carer (ie the respondent) – are using the package in a substantial proportion of households. Oldham and Suffolk are similar in this respect.

**Table 7: The users of Home Access computers in beneficiary households (during the last four weeks)**

	Oldham (n=82)	Suffolk (n=92)
<b>Respondent</b>	39%	41%
<b>Respondent's partner</b>	7%	8%
<b>Selected child or young person</b>	94%	93%
<b>Other child(ren)/young person living in the household</b>	44%	41%
<b>Other adult(s) living in the household</b>	1%	1%

Source: Ipsos MORI pilot areas survey.

Of the 11 households where the selected child had not used the Home Access programme computer in the last four weeks:

<sup>24</sup> In the survey, respondents with more than one child were asked to think of one child in particular, when responding to certain questions. For applicants, the selected child was one of those named on their Home Access application.

- five had had a computer in the household for more than six months
- eight had had the Home Access programme computer for a month or less
- five said the Home Access programme computer was used by no one, while four said the Home Access programme computer was used by other children in the house
- five said that the selected child never used any computer at home – indicating that the selected child used another home computer in six of the 11 households.

In the beneficiary households, the selected child was typically using the computer every day (59 per cent) or most days (28 per cent) – although nine (5 per cent) said that the selected child never used a computer at home.

When respondents were asked what they (ie the carer respondent or their partner/spouse) had used their Home Access computer for, the most common responses were ‘for fun/ entertainment’ (44 per cent), ‘to look at school/college website’ (42 per cent), ‘to keep in touch with friends/family who live at a distance’ (36 per cent) and ‘to look at an official government website’ (34 per cent).

Among beneficiaries of the Home Access pilot, respondents estimated that each child spent 10.6 hours on the computer each week on average, of which 5.8 hours (55 per cent of computer time) was on school work, homework and/or learning activities. For non-applicants, the equivalent mean usage was 11.5 hours and 4.64 hours (40 per cent of computer time) respectively. So, on average, beneficiary children were spending about an hour more per week on learning-related computer activity compared with their non-beneficiary peers who also had computers in the home. The difference is statistically significant and does not appear to be a function of a different age distribution (given that the overall computer use was still higher in non-beneficiaries).

Overall, 65 per cent of beneficiary parents agreed that their children are spending more time on homework than before they got the Home Access computer (with substantially more agreement in Oldham at 78 per cent than in Suffolk at 54 per cent, probably reflecting the lower levels of additionality in Suffolk, as discussed in the previous section).

### *Observations from case studies*

The case studies completed in July provided some – although, as yet, limited – evidence of enhanced use of Home Access computers for education. Most of the interviewed children had already had a computer at home before receiving their Home Access packages, but some complained that their existing home computers were slow or that they had to share with other members of the household. Having their own computers, usually located in their bedrooms, therefore enhanced the potential to use home access to computers for education; indeed, most said they were using a computer for homework more now than they were six months ago. The

interviewed children certainly liked having more time on computers than before, although some still complained that they also had to share computers with their siblings.

Clear evidence of enhanced use of home access for education was provided by one Oldham primary school. Here pupils in Years 3–6 said they logged on to the school website from home, emailed teachers and their friends about homework, and spent at least 30 minutes a day on homework or educational games on their new computers. For these pupils, the best things about having the Home Access computers were being able to do homework, having the computer available all the time, and not having to rely on the library.

Pupils at other schools provided supporting evidence of enhanced use of home access for education; learning-related benefits cited by pupils include:

- researching topics using the internet
- helping with revision (including revision websites)
- using MyMaths, SAM Learning and other online resources
- finding images on the internet for homework assignments
- presenting work more neatly
- communicating with friends about homework
- making homework less boring (partly because you can talk to friends at the same time, using instant messaging)
- emailing work to their teachers
- being able to make things: films, games and animations.

However, many pupils reported technical difficulties with their new packages, which restrict the benefits: primarily, slow or inconsistent internet connectivity, but also some cases of broken or faulty hardware. Pupils and teachers also raised the lack of a printer as an issue.

As well as using the computers for learning, pupils spent time on the computer playing games, watching videos (DVDs or YouTube), listening to music, social networking and messaging their friends. The amount of time spent on instant messaging and on social networking websites was a cause for concern among some teachers – although others suggested that these activities were important in helping to establish and maintain social participation and confidence within peer groups.

### **Improved ICT skills and confidence**

In the survey, 81 per cent of the parents with a Home Access device said they considered that home access would help their own confidence about using technology a great deal (45 per cent) or a fair amount (36 per cent), and this proportion was significantly higher (94 per cent) among black and minority ethnic

respondents. Sixty-two per cent of parents agreed that they were more interested in using the internet than they were before they got the Home Access computer.

Learners interviewed during case study visits reported using computers more than they did six months previously, but gaining ICT skills and confidence was not ranked highly among benefits cited by learners, most of whom had already developed their ICT skills and confidence through previous use of computers at home and school.

At one Oldham primary school, a large number of pupils said they were able to do computer work in school more easily and quickly than fellow pupils without home access to a computer (even though a learning platform had yet to be introduced at this school). Some teachers also reported improvements in pupils' ICT skills and confidence, and examples of pupils teaching their parents how to use the computer.

### **Improved learner motivation and behaviour**

A fair proportion of respondents to the survey in both Oldham and Suffolk believe that their children were enjoying their school work more since getting a Home Access computer. In Oldham, 78 per cent of those with a Home Access device believed this to be case, while in Suffolk this figure was lower at 57 per cent – again, perhaps reflecting the lower levels of additionality in Suffolk.

Teachers interviewed during case study visits agreed that ICT does motivate reluctant learners and has a positive impact on learning behaviour, and that greater access to ICT through home access will contribute to further improvement. However, most of the comments were offered in general terms and without particular reference to the Home Access pilot – not least because teachers were frequently unsure which of their pupils had benefited from the scheme.

### **Enhanced opportunities for personalised learning**

Many pupils interviewed during the case studies enjoyed the greater freedom afforded by having their own computers. They felt freed from dependence on library opening hours, and also from having to share a computer with their siblings. Some also reported using instant messaging to discuss homework with their peers, and typing rather than hand-writing their work to improve its presentation.

In most cases, however, pupils' home access to learning platforms remained embryonic or non-existent, and this limits the scope for personalised formal learning opportunities for pupils. Teachers interviewed during the case studies said they were reluctant to set more online homework until they are certain that all of their pupils could access these materials at home. The Home Access eligibility criteria and also the limited information sent to schools about which families had benefited from the scheme means that teachers are not confident that all of their pupils now have a computer and internet access at home. Thus the case study evidence suggests that giving pupils individual access to a computer and the internet at home will enhance

opportunities for personalised learning, but that these pedagogical benefits will be fully realised only once teachers are confident that all pupils have home access.

### Enhanced use of learning platforms

In the survey, parental usage of learning platforms was broadly similar between beneficiaries and non-beneficiaries: 26 per cent of respondents (or their partners) in beneficiary households had used the Home Access computer to log on to the school's website with a username and password, compared with 27 per cent of non-beneficiaries with computers; 17 per cent of beneficiaries had looked at an online report on their child, compared with 15 per cent of non-beneficiaries with computers. Given that beneficiary households were consistently lower users of all other applications, this is an encouragingly high level of electronic engagement with schools by parent beneficiaries, which – as shown in Table 8 below – was consistently higher in Oldham than in Suffolk.

**Table 8: Have you or your partner or spouse used the Home Access computer to do any of these things?**

	Oldham (n=86)	Suffolk (n=97)
<b>To communicate by email with your child(ren)'s school or college</b>	26%	13%
<b>To look at a report on your child</b>	26%	9%
<b>To look at the school's or college's website</b>	50%	34%
<b>To log on to the school's or college's website with a username or password</b>	35%	19%

Source: Ipsos MORI pilot areas survey.

Teachers were confident that as home access to computers and the internet spreads, they will make greater use of school learning platforms. At the moment, however, it is not possible to set homework or encourage home learning through learning platforms, because pupils without home access will be disadvantaged. The case studies did suggest, however, that the pilot of the Home Access programme has helped to put increased momentum behind the development of schools' plans to exploit learning platforms.

### Enhanced parental engagement

The pilot areas survey found some positive indications of enhanced parental engagement with their children's education. Of 183 respondents who have a Home Access device set up, 81 per cent agreed that having Home Access had made them feel more involved with their child's learning (considerably higher in Oldham at 92 per



cent than in Suffolk at 72 per cent). This response was significantly higher than average for black and minority ethnic respondents (94 per cent) and for families in receipt of free school meals (85 per cent).

Few teachers or learners commented during the case studies on increased parental engagement. Most learners have their new computers in their bedrooms, and many use them unsupervised. Arguably, the location of Home Access computers in children's bedrooms rather than in shared living areas could act as a barrier to parental engagement.

### Enhanced attitudes to technology

As shown in Table 9, respondents and their partners use the Home Access devices for a variety of different activities, showing a willingness to use the technology for educational, leisure and financial activities.

**Table 9: Activities undertaken by respondents and/or their partners who have a Home Access device and have set it up**

	Oldham (n=86)	Suffolk (n=97)
<b>For fun, entertainment and/or leisure activities</b>	45%	43%
<b>To communicate by email with your child(ren)'s school or college</b>	36%	13%
<b>To keep in touch or communicate with friends and/or family who live at distance</b>	41%	32%
<b>To make a financial transaction</b>	26%	19%
<b>To look at a report on your child</b>	26%	9%
<b>To look at an official government website</b>	44%	26%
<b>To look at the school's or college's website</b>	50%	34%
<b>To look at your local council website</b>	28%	21%
<b>To look for employment</b>	37%	22%
<b>To log on to the school's or college's website with a username or password</b>	35%	19%
<b>None of these</b>	21%	29%
<b>Don't know</b>	2%	–

Source: Ipsos MORI pilot areas survey.



Encouragingly, of the 80 respondents who used the grant for broadband, 53 per cent said they were very likely to pay for broadband to continue after 12 months, and 20 per cent were fairly likely. Of the seven people (9 per cent) who said that they were not likely to do so, four had already had internet in the house for more than six months. Of those who said that they were unlikely to continue, or that it would depend on the cost, 14 per cent said they would be prepared to pay up to £5 per month, 36 per cent said £5–10, and 14 per cent £11–15.

### **Adverse outcomes**

The beneficiaries surveyed in Oldham and Suffolk were positive regarding the overall benefits of the package, and reported very few adverse outcomes. When asked whether the package had been a good thing, a bad thing, a mixture of both or had made no difference, no one said it had been a bad thing. Just 7 per cent of beneficiaries said that the package had been a mixture of both good and bad. Among these 14 respondents, when asked what the negative impacts have been, a range of answers were provided: aside from ‘other bad’, family arguments over computer use was the most frequently cited answer within this group (by three of the 14).

In the case studies, some concerns were expressed regarding potential adverse outcomes.

At one primary school, all pupils interviewed from all but one year group said they had found inappropriate internet content. Young pupils at several schools were concerned about the risk of meeting strangers in chat rooms. Most of the new computers are located in children’s bedrooms, and many pupils reported using their computers without parental controls or monitoring.

There was some discontent among pupils over the parental control software, which apparently blocks appropriate sites: some said that access to YouTube was blocked, while several stated that various general sites found through Google were blocked (and that these do not contain inappropriate content). Partly due to such frustrations, several secondary school pupils said they had disabled or adapted the Net-intelligence internet security software without their parents’ knowledge.

Pupils also often mentioned family arguments over access to the computer.

Teachers were concerned about the potential for pupils to be exposed to inappropriate material, and the likelihood of arguments with siblings over access to the computer; they also identified a number of other potential adverse outcomes:

- pupil time spent on instant messaging, social networking websites and so on displacing learning and/or other activities, including physical activity
- the potential for plagiarism (although this is limited by the use of controlled assessments for coursework)

- issues around the maintenance and security of laptops.

## Impacts

### Reduction of the digital divide

We do not have data on the exact levels of home access within the target group of five- to 19-year-old learners in Oldham and Suffolk before the pilot started. However, we can develop some estimates of the pilot's impact on the digital divide in the two local authority areas.

Using Census 2001 information on the number of households with dependent children aged five to 18, combined with information on the total number of households supported by the pilot and our previous estimates on the leakage into households that already had a computer and internet access, we estimate that the pilot accounted for an increase of approximately 9 percentage points in the proportion of Oldham families<sup>25</sup> with a computer and internet access, and an increase of approximately 5 percentage points in Suffolk, as shown in Table 10 below.

**Table 10: Estimated increases in home internet penetration**

	<b>Oldham</b>	<b>Suffolk</b>
<b>Estimated number of families<sup>26</sup> with dependent children aged five to 18</b>	21,517	58,689
<b>Gross beneficiary households</b>	3,020	5,971
<b>Assumed leakage</b>	38%	51%
<b>Net beneficiary households</b>	1,872	2,926
<b>Increase in home access (computer and internet), of families with dependent children</b>	<b>8.7%</b>	<b>5.0%</b>

Source: Census 2001; Becta; SQW analysis.

From our pilot areas survey, we note that the proportions of the random sub-sample that now have both a computer and internet are 78 per cent in Oldham and 97 per cent in Suffolk. As these respondents were in the most deprived parts of the local authority areas (in England's 20 per cent most deprived), we can assume that the overall levels of home access penetration (in families with children) are higher than

<sup>25</sup> Using 'families' as shorthand for those households with at least one dependent child aged five to 18.

<sup>26</sup> This estimate assumes that approximately half of those households that have two or more dependent children and where the youngest child is nought to four years old have no children aged five years or older.

this – perhaps approximately 85 per cent in Oldham and approximately 99 per cent in Suffolk.

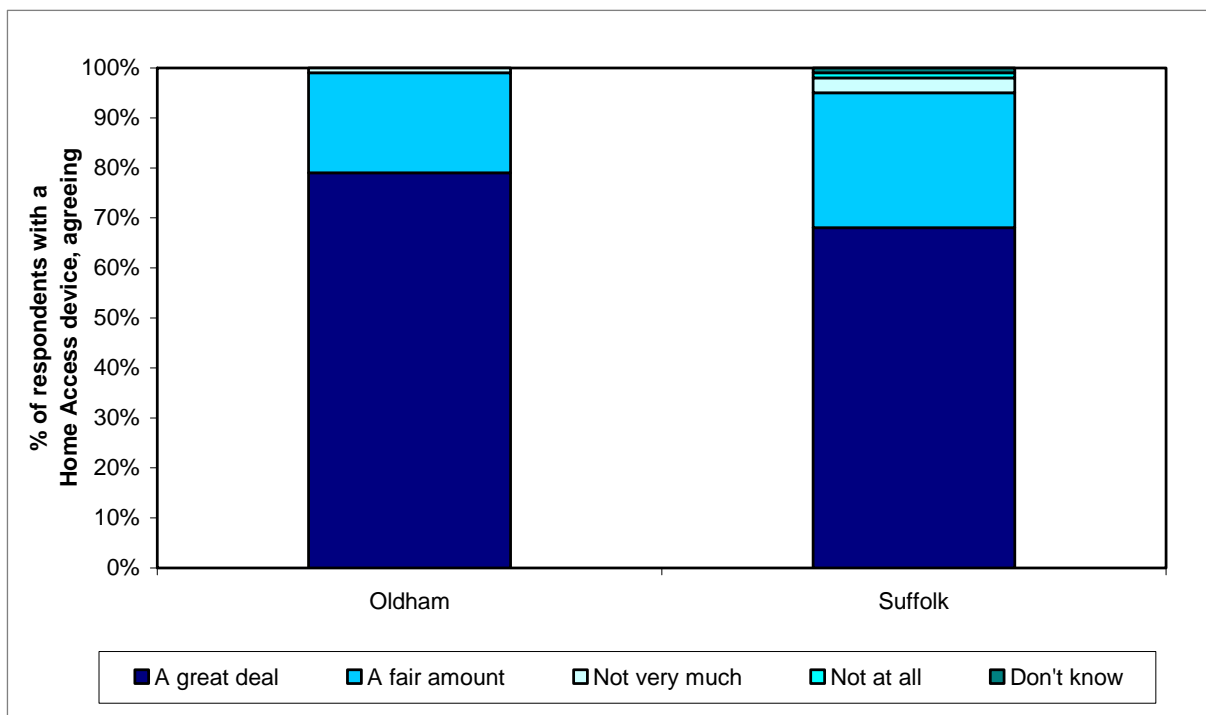
We conclude, therefore, that the pilot has had a material impact in closing the digital divide in both areas: we estimate that the pilot accounted for home access penetration in the target age group of learners rising from approximately 76 per cent to approximately 85 per cent in Oldham, and from approximately 94 per cent to approximately 99 per cent in Suffolk.

### Enhanced educational attainment

Our pilot areas survey and case studies were undertaken only a few weeks or months after the beneficiaries received their equipment. As would be expected, therefore, there is little firm evidence yet on actual improvements in educational attainment.

There are positive indications, however, in terms of the expected future impacts on educational attainment.

Parents in our survey were strongly of the view that having home access would help their children do better at school: 97 per cent of those with a Home Access device agreed with this a great deal or a fair amount, as illustrated in Figure 13. The response was particularly positive in Oldham (where the additionality was higher).



Base: 92 in Oldham, 100 in Suffolk.

**Figure 13: How much, if at all, do you think that Home Access will help your children do better at school?**

In our case studies, teachers were also broadly positive on the expected educational impacts (although a few concerns were expressed regarding the impact of children's time being spent on social networking websites, instant messaging, etc). Several teachers suggested that the educational impacts would only start to be properly realised when:

- the teachers could be sure that there is universal home access in their classes
- the school's learning platform is used in earnest for remote access and for setting homework, including personalised learning.

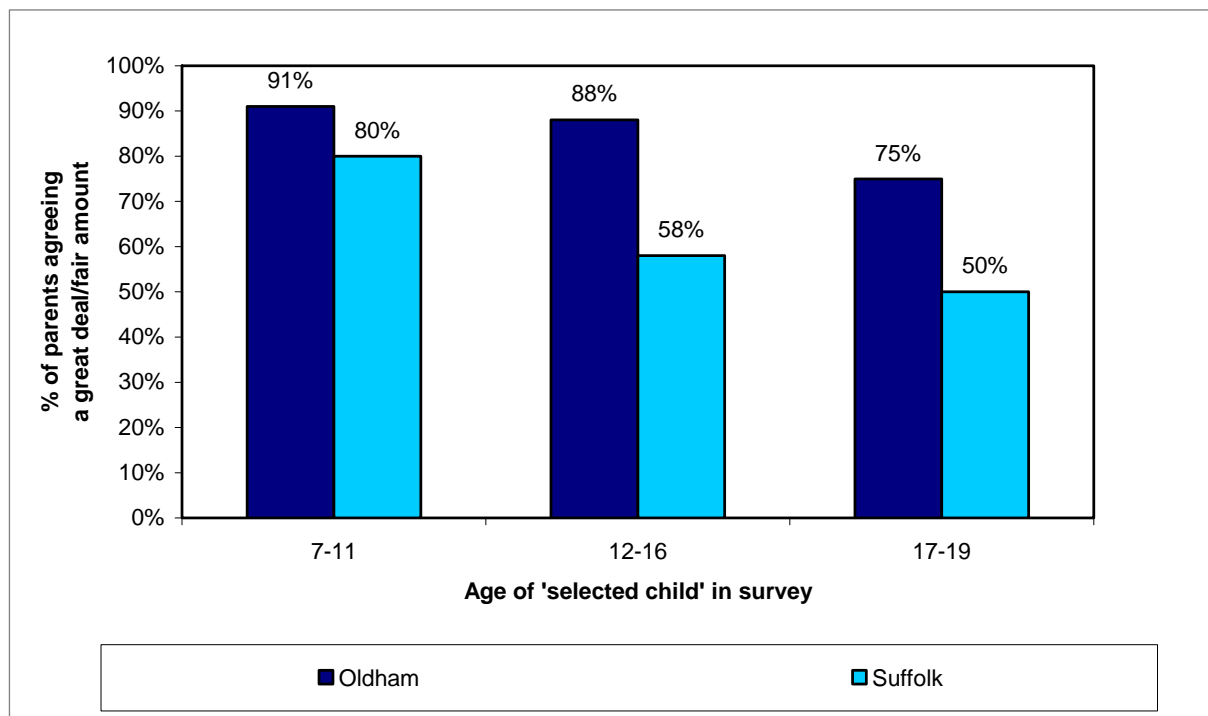
In one secondary school in Oldham, however, teachers did feel that there had already been some effect: some pupils who did not previously attempt homework are now actively doing it, and some pupils have achieved noticeable improvements in grades. Note that this school is a maths and science specialist school where there is already strong emphasis on using ICT in teaching and learning.

It will be interesting to explore these issues further in our autumn case studies, when the beneficiaries will have had the equipment for longer.

### **Increased parental engagement with skills development**

Similarly, parents have positive expectations regarding the extent to which having home access will help them develop new skills. Again, expectations were particularly positive in Oldham, where 89 per cent of beneficiary parents (versus 69 per cent in Suffolk) agreed a great deal or a fair amount that Home Access will help them develop new skills.

As shown in Figure 14, parents of younger children were the most positive in this respect (this was the group that had had least previous access to the internet).



Base: 92 in Oldham, 100 in Suffolk.

**Figure 14: How much, if at all, do you think that Home Access will help you develop new skills?**

Becta also advised us that both local authorities in the pilot have instigated adult education initiatives on the back of stakeholder engagement in the Home Access programme. Initiatives include adult education courses in schools (Suffolk), and the provision of additional information on further education courses (Oldham).

## Assessment of value for money

### Cost per gross output

As previously noted, a total of £14.84 million has been spent on the pilot in Oldham and Suffolk, of which grants accounted for £7.21 million.

A total of 8,991 households have been supported, which implies an average cost of:

- £801 per supported household, if only the grants are considered
- £1,650 per supported household, if the full pilot costs are included.

As this has been a pilot, the administrative unit costs would be expected to be relatively high because large fixed costs are shared across relatively low volumes: the non-grant costs were £7.6 million in revenue expenditure and technical uplifts<sup>27</sup> for the two local authorities (£849 per supported household). We expect these unit costs to be substantially lower for the national roll-out, with a single centralised managed services provider handling much larger volumes of applications.

### Cost per net output

In terms of net outputs, our analysis suggests that the pilot accelerated home access by a total of approximately 13,055 household-years, which implies an average cost of:

- £552 per household-year of home access, if only the grants are considered
- £1,136 per household-year of home access, if the full pilot costs are included.

With the national roll-out, we anticipate that these costs per net output will be much lower, because:

- the administrative costs will benefit from economies of scale, as discussed above
- the programme is now proposing to limit the scheme to one grant per household
- greater emphasis will be put on reducing leakage of grants into households that already have home access.

### Wider value from the pilot

The above calculation of cost per net output focuses on the costs associated with helping to close the digital divide (in terms of the impact on households that did not

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<sup>27</sup> Technical uplift costs concerned ICT infrastructure within the two pilot local authorities, and will not be incurred for the national roll-out.

previously have home access). However, it should be recognised that the programme also benefited learners within households that already had a computer and internet connectivity and where they competed with siblings and parents for use of the computer, by providing easier access to a computer when it suited them.

Furthermore, the aim of the pilot phase was, of course, to test out the proposed approach in order to learn lessons that will help inform the national roll-out – helping to maximise its effectiveness and value for money. In the context of a £300 million programme, we consider the pilot's £7.6 million non-grant costs are money well spent in learning some important lessons for the full programme implementation.

## Conclusions and recommendations

### Summary of conclusions

#### Outputs, outcomes and impacts

The pilot clearly **did very well in terms of achieving its targeted gross outputs**: a total of 12,344 grants were issued to 8,991 households, reaching an estimated 93 per cent of the learners eligible for a grant in the two local authorities, and exceeding the pilot's target of 7,500 supported learners by 65 per cent.

The **leakage was high**, however. We estimate that approximately 45 per cent of the beneficiary households (38 per cent in Oldham and 51 per cent in Suffolk) already had both a computer and internet connectivity at home. While there were certainly benefits for learners in these households (through having easier and/or better access), the beneficiaries are not within the target group identified by the Home Access taskforce (ie households without any home access).

Among those households that didn't previously have home access, we estimate that, on average, **households obtained home access about 2.4 years sooner** than they would have otherwise. At a formative stage in a learner's development, we consider this a worthwhile acceleration effect.

Combining the acceleration effect with our assumptions on leakage and the extent of multipliers suggests that the **pilot succeeded in pulling home access forward by 13,055 household-years** in Oldham and Suffolk.

The Home Access pilot has made a **material impact on closing the digital divide** in Oldham and Suffolk: taking leakage into account, we estimate that the proportion of families (with learners aged five to 18) with home access has been increased by approximately 9 percentage points in Oldham (to something in the order of 85 per cent) and by approximately 5 percentage points in Suffolk (to something in the order of 99 per cent).

There are **positive indications of the educational benefits** of home access for learners and their families. According to their parents, beneficiary learners spend about an hour more per week on learning-related uses of ICT in the home than do their non-beneficiary peers who also had computers (despite the latter group spending more time overall on computers). When asked whether having home access would help their children do better at school, 97 per cent of beneficiary parents agreed that it would help a great deal or a fair amount.

There are also signs of **benefits for the wider family** – especially in those households that did not previously have home access.

The expectations of teachers, pupils and parents were **broadly positive regarding a future impact on educational attainment**, although some teachers expressed



concern regarding the amount of time that learners would spend using instant messaging, social networking websites, and so on.

### Inputs and activities

A total of **£14.84 million** was spent in the pilot, including £7.21 million in grants.

As would be expected in a pilot, unit costs were relatively high (£1,650 per supported household). **We anticipate that the unit costs will be substantially lower in the national roll-out**, with greater economies of scale in the administrative costs, a shift to one grant per household, and other measures to reduce leakage.

Overall, this was a **highly effective pilot process**. It generated high levels of awareness in the target group, and rapid take-up. Applicants found the process easy, and satisfaction levels with the package were high (59 per cent of beneficiary parents were very satisfied and 27 per cent fairly satisfied).

The **pilot also succeeded in uncovering and taking on board important lessons** which will help improve the effectiveness and value for money of the national roll-out. Points to consider include the following:

- There were concerns over the **eligibility** criteria. Several teachers were of the view that the grant should not be available to children who already had a computer and internet access at home. There was also strong concern regarding 'working poor' households, who may just miss out on eligibility, but who still cannot afford to buy a computer.
- Although the programme's **logo** says 'Next Generation Learning @ Home', the scheme was more widely referred to and recognised as 'Home Access'. At a practical level, three syllables are less of a mouthful than nine.
- We have concerns over the pilot's **de facto reliance on mobile broadband**. All connectivity provided in the pilot was mobile, but it is likely that some households would have been better off with a fixed broadband service, had this been available, with faster download and upload speeds and less restrictive download volume limits. We note that 69 per cent of applicant families had a working fixed-line telephone at home (ie they would not have had to purchase a telephone line in order to obtain fixed broadband). Poor connectivity was commonly cited as a frustration for pupils in all of our case studies, and has the potential to limit the benefits of home access – as well as potentially being a cause for complaints. The issue was particularly prevalent in Suffolk, with its lower 3G coverage, but mobile broadband availability is worse in other areas of England (eg the South West).
- In our pilot case studies in both Oldham and Suffolk, **teachers felt 'out of the loop'**. Critically, teachers couldn't be certain which of their pupils now

had home access (headteachers may have been provided with lists of beneficiaries, but these had not filtered through to teachers). Pedagogical change will depend on teachers knowing that all (or nearly all) of their pupils have home access, so it will be important to put in place some sort of feedback mechanisms to the classroom.

- Our discussions with groups of pupil beneficiaries suggested that the **parental control software was frequently blocking appropriate content**, which caused frustration. As a result, several pupils had disabled the controls (typically without their parents' knowledge).
- The process of serving **SEN learners** encountered various difficulties in the pilot – not least in terms of local capacity to undertake assessments. The programme has established a revised approach to SEN applications and assistive technologies for the national roll-out.
- It was difficult for Becta to extract **individual-level beneficiary data** for the pilot evaluation, and we found substantial differences in the data fields within the customer relationship management (CRM) systems of the two local authorities, with ambiguities in certain fields (eg school name, which was a free text entry, was subject to numerous variations). To some extent, this reflects the difficulty of ensuring consistency across two different local authorities that are using different service providers (which will not be the case for national roll-out). However, it is necessary to ensure that beneficiary data requirements are tightly specified.

### Contextual conditions, rationale and objectives

The Home Access **programme is operating in a significantly changed context** (market and economic) from that of July 2008, when the Home Access taskforce report was completed:

- Whereas home internet access penetration had been relatively flat in 2006 and 2007, there was a **substantial increase in home internet access during 2008**. The increase in home internet access was driven by the availability of new low-cost netbooks and by the introduction of affordable mobile broadband packages.
- We have also entered a **recession**, which has significantly affected the incomes of many households. A 'cooling off' of internet access penetration in the first half of 2009 among the lowest income households (having previously increased substantially) may well reflect the impact of these tougher economic conditions.

In our view, the pilot confirms that **there remains a strong case for intervention**, given its material impact on closing the digital divide and the positive expectations of teachers, parents and pupils as to the educational benefits of having home access.

However, we suggest that **a clearer link is needed from the objectives set for the programme (and related activities) back to the rationale for intervention** set out

in the Home Access taskforce report – which advocated achieving ubiquitous home access for the benefit of *all* learners (not just the direct beneficiaries).

## Recommendations

In the light of our evaluation to date, we offer the following recommendations – some of which are already being implemented:

- **Recommendation 1: Review the current combination of aims, objectives and benefit-recognition events to see whether these can be rationalised** into a simpler set of programme objectives – ensuring that there are strong links back to the rationale for intervention – in conjunction with the objectives set for related activities. Specifically, we suggest that:
  - the current combination of three aims, four objectives and six benefit-recognition events is an unnecessarily complicated articulation of what the programme is intended to achieve, and that a simpler set of programme objectives would aid internal and external clarity
  - the 330,000 headline target should be couched in terms of ‘households with learners’ rather than ‘learners’
  - in setting quantified targets for the programme, some recognition of the need to focus on households that do not have home access should be incorporated (in order to maximise the impact on the digital divide)
  - a new explicit objective should be considered, either for the programme or for related Becta activities, regarding stimulating an acceleration in the pedagogical exploitation of the more ubiquitous home access enabled by the programme; this need not involve large resources but would necessitate smart links from the programme into Becta’s business-as-usual activities and into the classroom.
- **Recommendation 2: Restrict the grant to one per household.** Given that a second grant does nothing to reduce the number of households without any home access, we suggest that the programme’s value for money would be increased by limiting the scheme to one grant per household. This would also help to mitigate the sense of unfairness felt by some non-beneficiaries.
- **Recommendation 3: Focus the grant on households that do not have broadband internet access.** We suggest that the impact and value for money of the programme will be maximised if it focuses on those households that have no internet access. Again, this would help to mitigate the sense of unfairness felt by some non-beneficiaries. It will not be feasible to reduce the leakage to zero, but there are measures that should help to reduce it well below the 45 per cent level experienced in the pilot. Specifically, the marketing material and application form should make it clear that the grant is available only if the household does not currently have broadband internet access, and the application form should require a

declaration to that effect. It is also worth considering whether to remove the online option for ordering a package.

- **Recommendation 4: Clarify the branding of the scheme.** It is unhelpful that the logo is 'Next Generation Learning @ Home', whereas the scheme is more frequently (and more easily) referred to and known as 'Home Access'.
- **Recommendation 5: Develop and disseminate material to ensure that teachers are well informed about the scheme.** Schools were by far the most important channel to market in both Oldham and Suffolk; however, teachers didn't feel particularly well informed about the scheme. In some cases, this may have been partly due to information provided to the school not being disseminated to teachers. Without adding in any significant way to teachers' workloads, we suggest that there is scope for improving the dissemination of information, and that this will be especially important in those schools serving deprived communities, where the volumes of potential beneficiaries are highest.
- **Recommendation 6: Consider mechanisms for providing a stronger feedback loop to teachers in the classroom.** In order to change pedagogic practices, it is important for teachers to know whether their pupils have home access. This could be achieved through making information on each school's beneficiaries more accessible to teachers (with appropriate permission obtained via the application form). Alternatively, Becta could provide tools and guidance for schools to help them conduct their own regular surveys of the extent of home access in each year and/or class.
- **Recommendation 7: Seek to ensure that fixed broadband becomes a workable connectivity option.** Although appropriate for some households (eg those without a fixed telephone line), mobile broadband cannot yet provide the performance available through most fixed broadband packages, and connectivity issues were clearly a frustration for the pupils we talked to. While remaining strictly supplier-neutral, it will be important for competitive fixed broadband options to be made available in the national roll-out, alongside mobile options – both to help maximise the benefits of home access and minimise the volume of complaints.
- **Recommendation 8: Ensure that 'fair usage' download limits are clearly explained to beneficiaries before equipment is purchased.** In particular, the extent to which a connectivity package supports downloading and the streaming of video content needs to be clear in order to minimise learners' bandwidths being throttled back (which disadvantages educational as well as leisure use of the internet).
- **Recommendation 9: Seek to minimise the extent to which useful, appropriate content is blocked by parental control software.** Our case studies found that several pupils had disabled the parental controls, partly through frustration at them blocking access to content that was perfectly

appropriate (and indeed useful for educational purposes). We suggest that online safety will be increased if the incentives for learners to disable the parental controls are decreased; anything Becta can do, with suppliers, to minimise the extent to which appropriate content is blocked would be helpful.

- **Recommendation 10: Ensure that the beneficiary data-set is well defined and accessible for statistical and evaluation purposes.** There were various difficulties in accessing beneficiary-level information for this evaluation (in particular, it was a resource-intensive process for Becta to provide us with names of beneficiaries at case study schools). With much larger volumes involved in the national roll-out, it will be important to establish very clearly the format for the data that needs to be kept electronically within the CRM database for the purposes of statistical analysis and evaluation, and to ensure that the data-set is as 'clean' as possible (for example, with consistent and unambiguous versions of school names).

## Annex A: Consultees

Our evaluation methodology includes consultations with 70 stakeholders over the course of the evaluation – some in 2009 (phase 1) and some in 2011 (phase 2). We conducted consultations during phase 1 in two distinct tranches: the first tranche (February–March 2009) tested the intervention rationale and aims and objectives of the evaluation, and the second tranche (May–July 2009) focused on getting perspectives on pilot progress and key emerging lessons for the national roll-out. The consultations completed in tranche 2 are shown in Table 11 below.

**Table 11: Tranche 2 stakeholder consultations (May–July 2009)**

Organisation	Person
Becta	Craig Warmington
Becta	Jill Lewis-Ranwell
Becta	Alan York
Becta	Bill Williams
BT	John Thorneycroft
DC 10+	Stephen Dodson
DSGi	Sara Bowden and Jarrod Cairns
e-Learning Foundation	Valerie Thompson
MISCO (approved supplier)	Colin Riddle
Oldham local authority	Steve Goodman
RM (approved supplier)	Helen Bates
Samsung	Craig Booth
Suffolk local authority	Ian Brown and Liz Jackson
T-Mobile	Simon Baker
Toshiba	Len Daniels
UK online centres	Aniela Kaczmarczyk and Ian Clifford
Virgin Media	Matt Rogerson

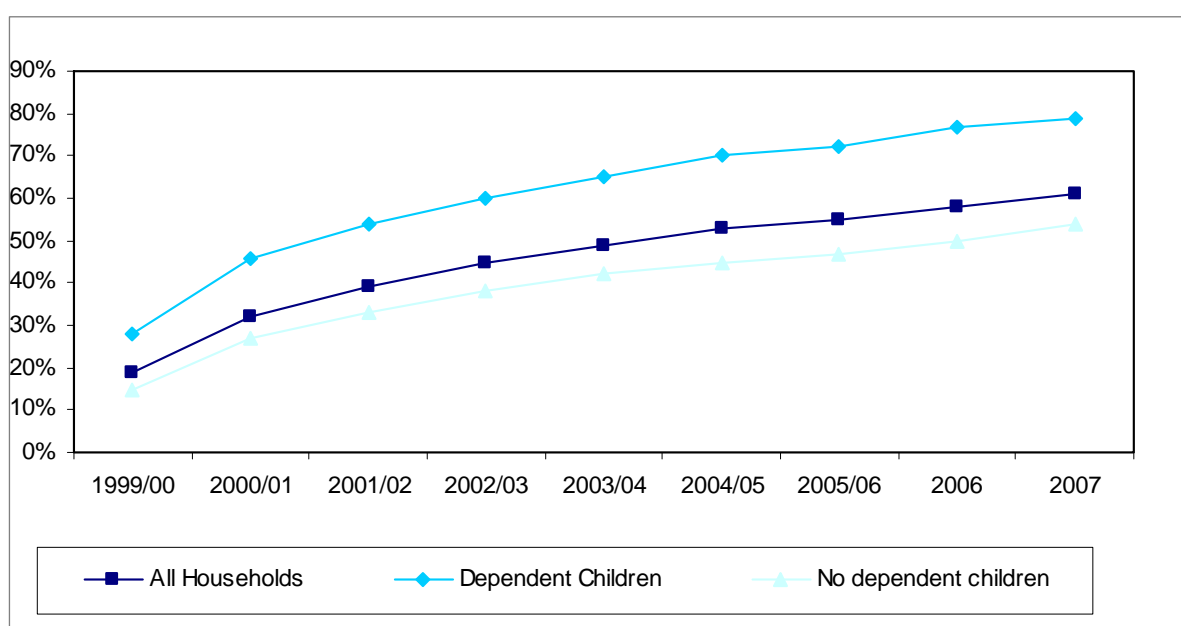
Source: SQW.

## Annex B: Contextual conditions

### Home access trends

The Home Access taskforce report (2008) noted Freshminds (2007) research for UK online centres suggesting that the number of internet users had reached a plateau, with little or no growth since late 2004 (citing ONS Omnibus Survey data).

In terms of household internet access (as opposed to the proportion of people who use the internet), the ONS Expenditure and Food Survey suggests that there was a rise of 8 percentage points between 2004–05 and 2007, with household internet access rising to 61 per cent in 2007 (79 per cent of households with children, and 54 per cent of households without children), as shown in Figure 15.



Source: ONS, Expenditure and Food Survey (2001–02 onwards) and Family Expenditure Survey (prior to 2001–02). Note that a dependent child is defined as a person aged nought to 15 in a household or aged 16–17 in full-time education and who is not married. The Expenditure and Food Survey methodology was recently updated: reporting switched to calendar rather than financial years.

**Figure 15: UK household internet access, from 1999–2000 to 2007**

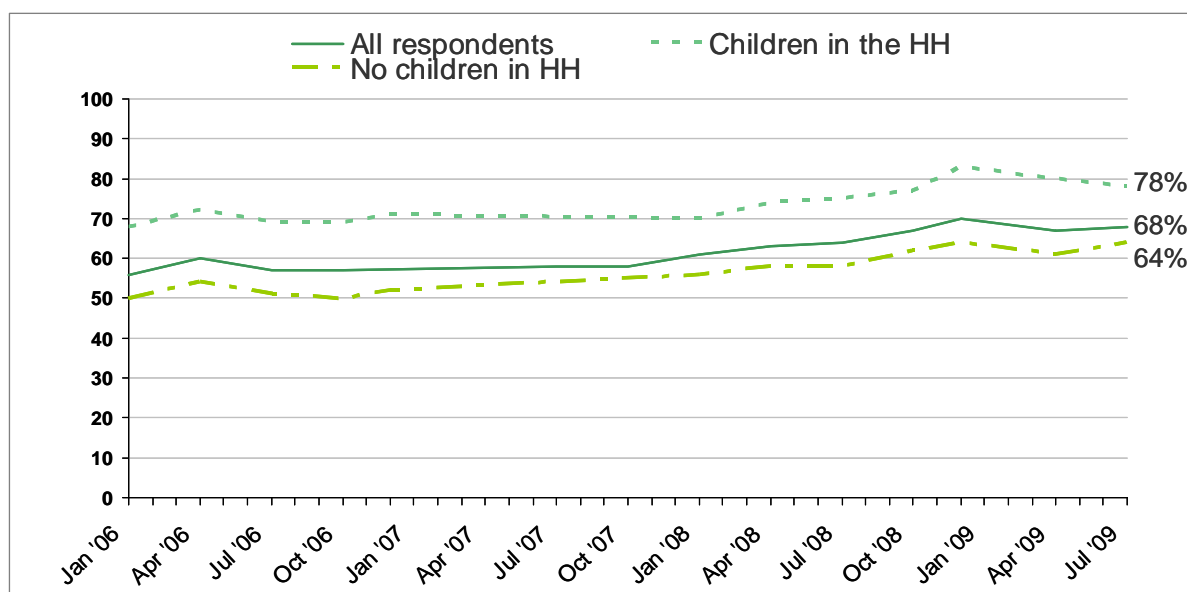
More recent primary research undertaken by Ipsos MORI confirms that the proportion of households with internet access remained broadly flat throughout most of 2006 and 2007, but suggests a significant upturn in household internet access over the 18 months to July 2009 (Figure 16). In particular, among households with children,<sup>28</sup> internet penetration increased from 70 per cent at the start of 2008 to 78

<sup>28</sup> Note that the internet penetration of 'households with children' is dependent on the definition of 'children', because households with older children tend to be more likely than households with younger children to have internet access. Ipsos MORI's Technology Tracker Survey uses the definition of a child being aged 15 or under, which results in lower internet access results than the ONS Family Expenditure Survey definition noted under Figure 15.



per cent in July 2009 – an 8 percentage point increase in just 18 months, despite some cooling in the first half of 2009.

We suggest that the increase was driven by the increased availability of relatively low-cost netbooks,<sup>29</sup> and by the advent of mobile broadband packages that do not require a fixed telephone line at home. (See the section ‘Broadband coverage and take-up’ later in Annex B for a discussion of mobile broadband take-up.)



Source: Ipsos MORI Technology Tracker January 2006 to July 2009.

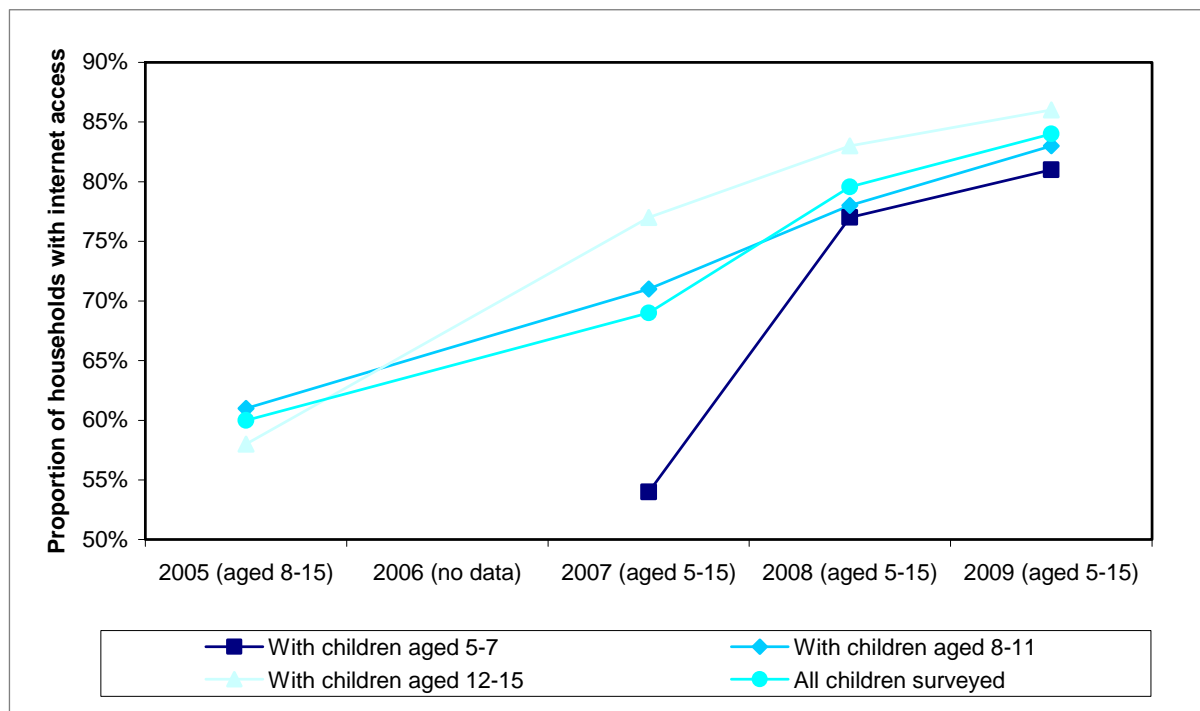
Base: approximately 2,000 interviews per month.

**Figure 16: UK household internet access, 2006–09**

Evidence provided from the Ofcom Children’s Tracking Survey also suggests a marked rise between 2007 and 2008 in internet access for households with children, with a particularly sharp increase for households with younger children (aged five to seven), as shown in Figure 17.

<sup>29</sup> DisplaySearch estimates that netbooks accounted for approximately 20 per cent of worldwide portable computer sales by the first quarter of 2009, having been introduced only in late 2007.

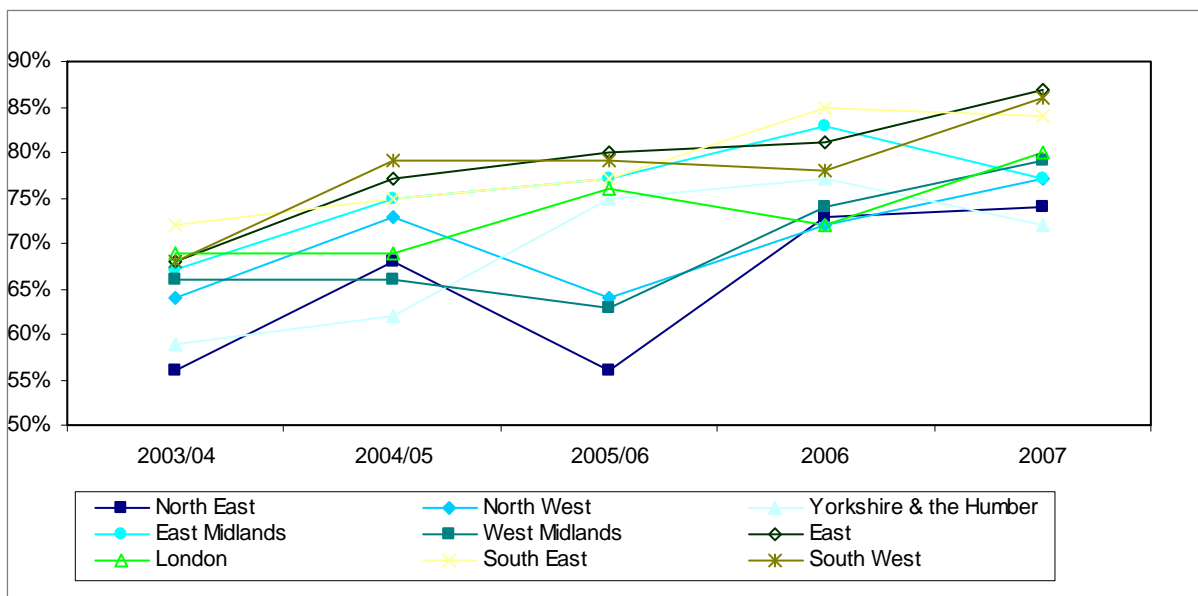




Source: Ofcom Children's Tracking Survey, April–September 2005, April–September 2007, April– October 2008 and April–May 2009 (2009 wave 1 results).

**Figure 17: Internet access of households with children**

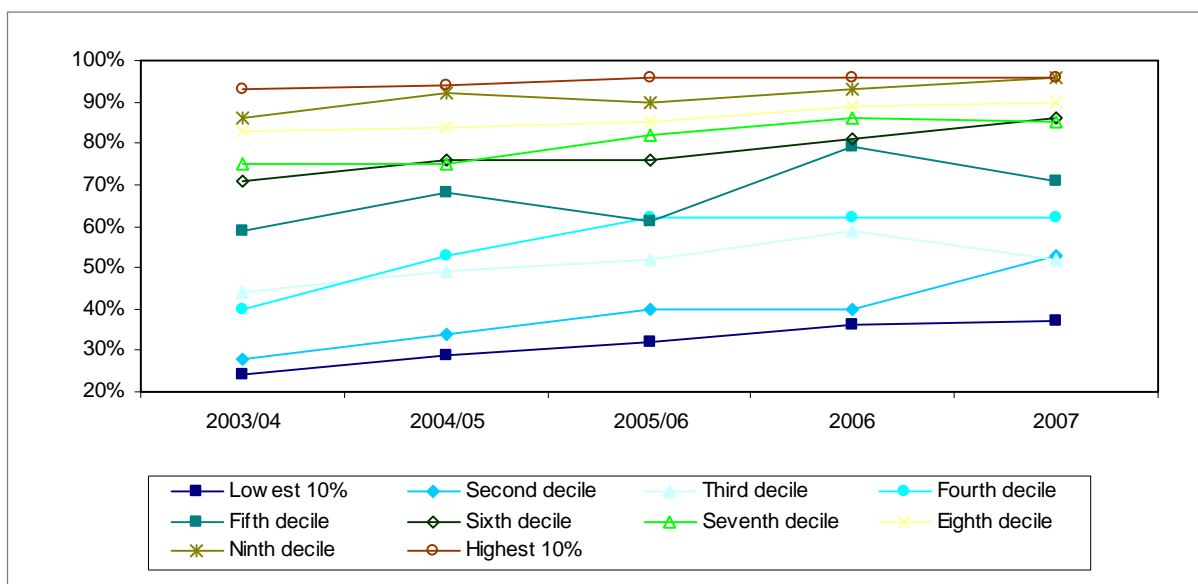
There are significant variations in household internet access across the English regions. In 2007, 87 per cent of households with children in the east of England had internet access, compared with just 72 per cent in Yorkshire and Humber (see Figure 18).



Source: ONS, Expenditure and Food Survey. The Expenditure and Food Survey methodology was recently updated: reporting switched to calendar rather than financial years.

**Figure 18: Internet access of households with children, by English region**

Despite general increases in internet penetration, take-up has historically been highly correlated with household income. While 96 per cent of households in the top income decile with children had internet access as of 2007, just 37 per cent of households in the bottom income decile with children had it (Figure 19).

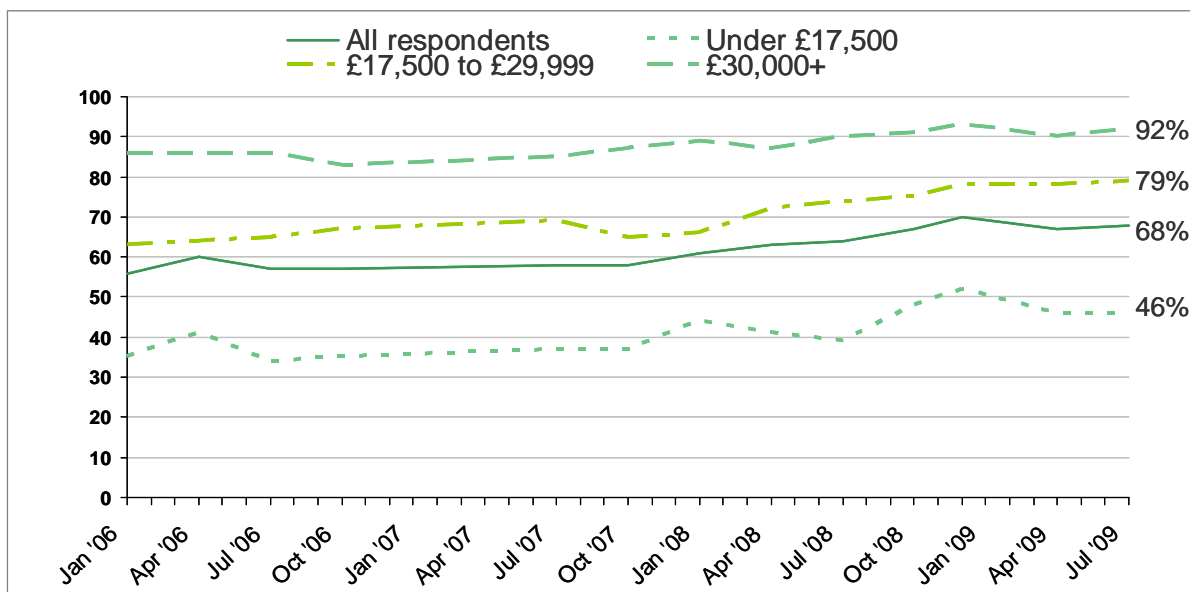


Source: ONS, Expenditure and Food Survey. The Expenditure and Food Survey methodology was recently updated: reporting switched to calendar rather than financial years.

**Figure 19: UK internet access of households with children, by income decile**

The increase in access for low income households has also been observed in the Ipsos MORI data. An increase in internet access was particularly evident in the latter

half of 2008 for households with an income under £17,500 per year (Figure 20): internet penetration increased from 40 per cent in July 2008 to 52 per cent in December 2008, before falling back down to 46 per cent in April 2009 – an overall increase of 6 percentage points in 12 months.



Source: Ipsos MORI Technology Tracker January 2006 to July 2009.

Base: approximately 2,000 interviews per month.

**Figure 20: Household internet access, by income**

## Broadband coverage and take-up

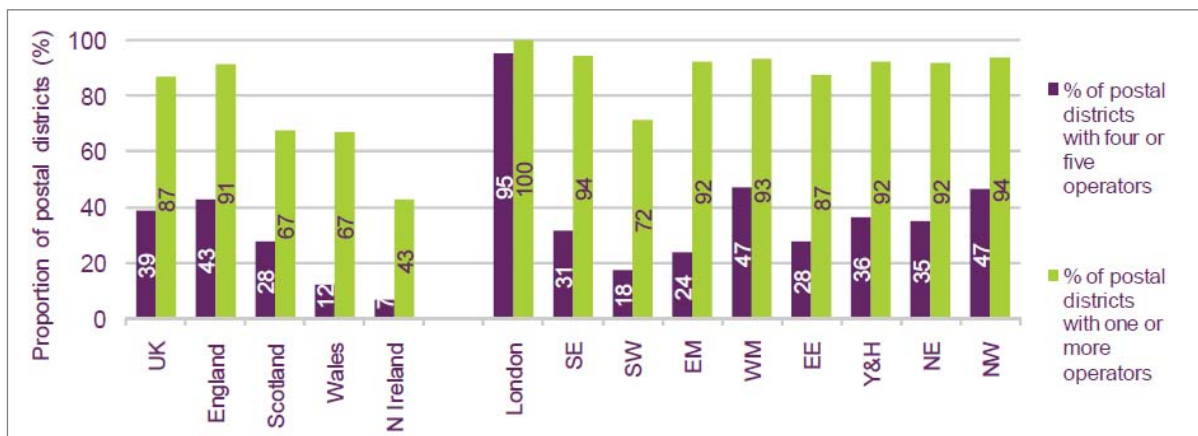
The two main technologies used to supply fixed broadband services in the UK are digital subscriber line (DSL), connected to a local telephone exchange, and cable modem technology over a cable operator's network.

The Ofcom report *Communications Market 2008: Nations and Regions* notes that almost all UK households (over 99.9 per cent) were connected to a DSL-enabled BT local exchange at the end of December 2007. Although not all delivery points in an area served by a DSL-enabled area exchange are able to obtain broadband services, BT estimates that 99.6 per cent of its network is able to support broadband speeds of 512kbit/s and above.

However, even with this level of availability, a significant number of households are either in areas unable to receive DSL broadband services, or in areas that can obtain only relatively slow broadband connectivity.

The recent *Digital Britain* report (2009) estimates that approximately 11 per cent of UK households are unable to access broadband at 2Mbit/s or more, and proposes to make at least 2Mbit/s available throughout the UK by 2012.

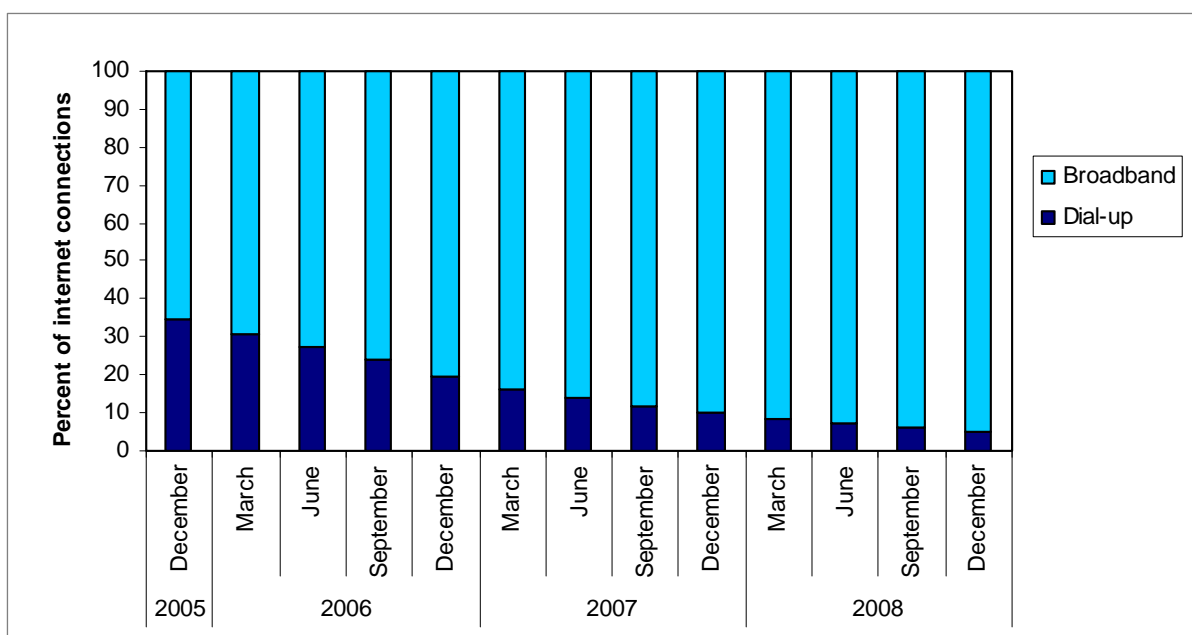
However, whereas fixed broadband is almost universally available now (albeit at less than 2Mbit/s in some areas), the coverage of mobile broadband (3G) has yet to reach some more rural areas. As of early 2009, Ofcom reported that 91 per cent of people in England live in postal districts with at least one operator (with at least 90 per cent 3G coverage), but this proportion is just 72 per cent in the South West (Figure 21). Furthermore, operators' coverage varies: only 18 per cent of people in the South West can choose from between four or five 3G operators.



Source: Ofcom, Communications Market 2009: Nations and Regions.

**Figure 21: Mobile broadband (3G) population coverage in the UK**

Over recent years, broadband has come to dominate as the means of accessing the internet. Total residential and small business broadband connections had grown to 17.3 million by the end of 2008 according to Ofcom, and the ONS estimates that only 5 per cent of internet connections are now via dial-up (Figure 22).



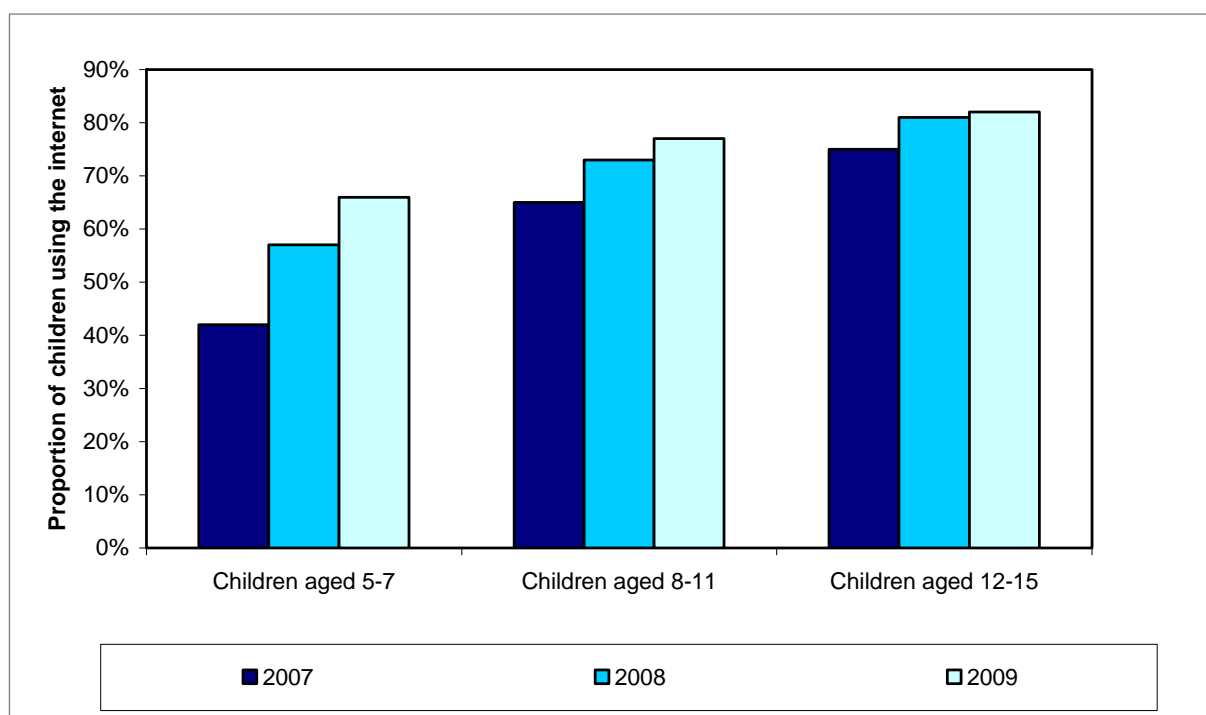
Source: ONS.

## Figure 22: Proportion of internet access by broadband and dial-up

Ofcom notes that in the five months from February 2008 (the first month for which data is available), the UK's five largest mobile network operators sold over half a million mobile broadband connections, 425,000 of which were contract connections (an average of 85,000 contract subscribers a month). Ofcom notes that with similar prices to fixed-line broadband, and with headline speeds similar to low-end fixed-line packages, mobile broadband providers have increasingly targeted the same consumers as fixed-line broadband. However, research commissioned by Ofcom indicates that most mobile broadband users take the service in addition to fixed-line broadband, with over two-thirds of all mobile broadband subscribers also having a fixed-line broadband connection. The latest Communications Market report (2009) estimates that 13 per cent of households in England (2.8 million) now use mobile broadband, with 4 per cent of households (approximately 0.8 million) using mobile broadband as their only means of accessing the internet.

### Children's use of the internet

The Ofcom Children's Tracking Survey found that children's use of the internet increases with age. As Figure 23 shows, in 2009, 66 per cent of parents with children aged five to seven noted that their children use the internet, compared with 82 per cent of parents with children aged 12–15.



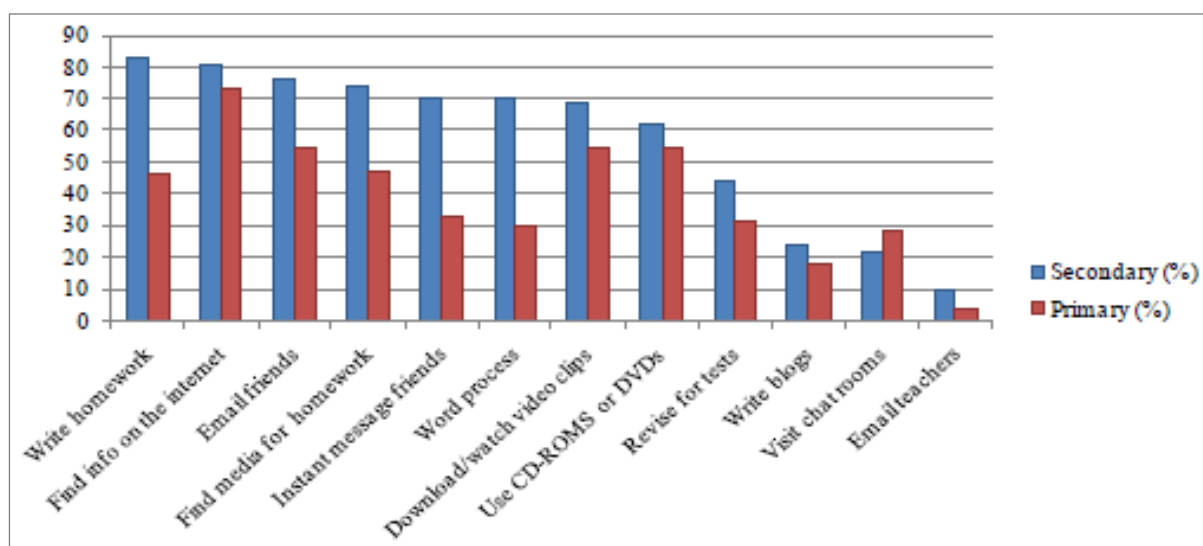
Source: Ofcom, Children's Tracking Survey.

### Figure 23: Internet use of children aged five to 15

In Becta's 'e-maturity: Learner Survey (2009), 94 per cent of primary respondents and 96 per cent of secondary respondents indicated that they have a computer at home.<sup>30</sup> Of those learners who have access to a computer in their homes, around 94 per cent reported using it about once a week or more (92 per cent of primary learners, and 96 per cent of secondary learners).

Moreover, the learner survey revealed that a very high proportion of learners had access to the internet at home: 91 per cent of primary learners and 94 per cent of secondary learners indicated that there was an internet connection in their homes, and of these learners, virtually all were allowed access to the connection (98 per cent and 99 per cent respectively).

Figure 24 shows the types of activities that children use their home computers for. Often-cited learning-related uses include writing homework and finding information on the internet.



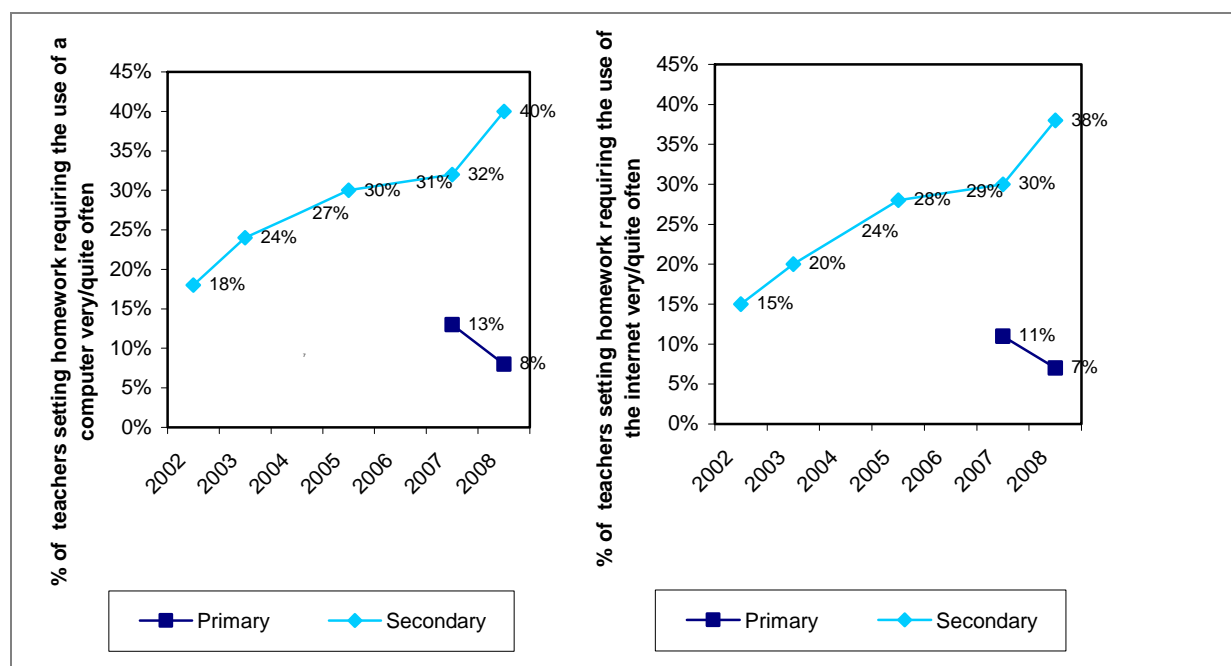
Source: Becta, 'e-maturity: Learner Survey (2009).

**Figure 24: Learners' used of home computers: about once a week or more**

## Pedagogical use of home access

Becta's Harnessing Technology: Schools Survey 2008 found that secondary school teachers are most likely to set homework that requires the use of ICT. The proportion of secondary school teachers setting homework requiring the use of the internet (very or quite often) has increased markedly over the last few years, from 15 per cent in 2002 to 38 per cent in 2008 (Figure 25). Interestingly, though, there appears to have been a decrease in the equivalent response for primary school teachers: from 13 per cent in 2007 to 8 per cent in 2008.

<sup>30</sup> It should be noted that the sample for this survey is of course wider than the low income group targeted by the Home Access programme, for which the home access levels will be lower than the average.



Source: Becta, Harnessing Technology Schools Survey 2008.

**Figure 25: Proportion of teachers setting homework which requires a computer/the internet, very or quite often**

According to Becta's Harnessing Technology: Schools Survey 2008, the use of learning platforms has been increasing, particularly in secondary schools. Between 2007 and 2008, there was a rise of 10 percentage points in the proportion of primary schools using a learning platform (from 11 per cent to 21 per cent), and a 14 percentage point increase in the proportion of secondary schools (from 46 per cent to 60 per cent).

ICT co-ordinators and teachers report that the most common use of learning platforms is as a repository for learning and teaching materials. Additionally, learning platforms are used to store digital learning resources and to help access information about pupils' progress.

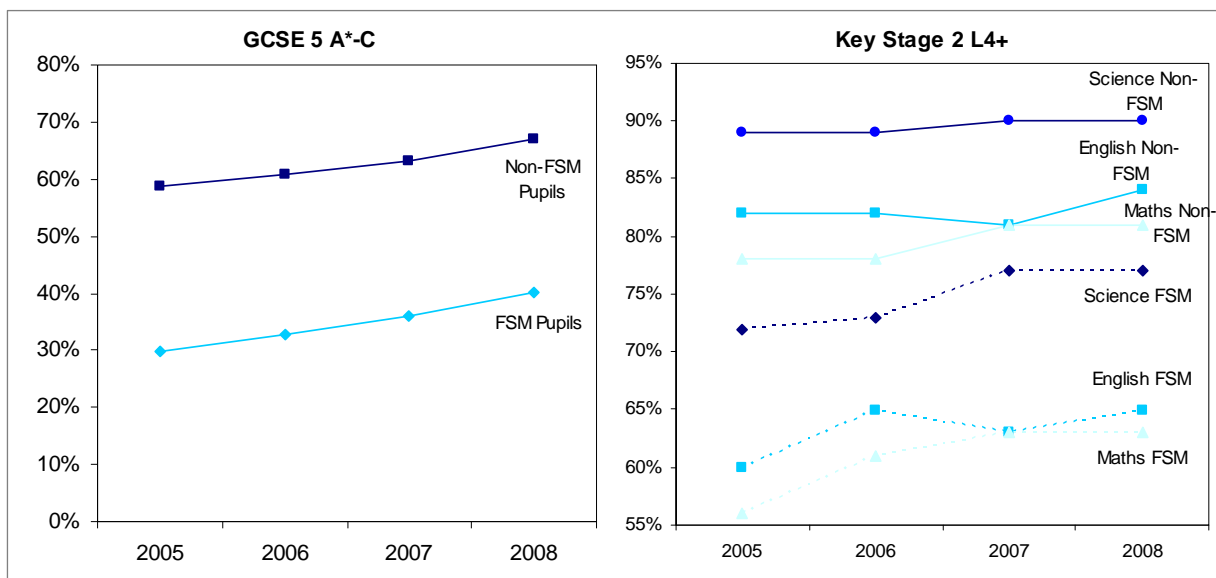
Increasingly, teachers experience improved access to their schools' networks from home. The proportion of secondary school teachers able to access networks from home increased from 27 per cent in 2007 to 40 per cent in 2008. In primary schools, there was a rise from 6 per cent in 2007 to 8 per cent in 2008.

## Educational attainment trends

Nationally, there is a stark attainment gap between the educational performance of pupils who receive free school meals (FSM), learners in target households for the programme, and non-FSM pupils (Figure 26).<sup>31</sup> For example, while 40 per cent of

<sup>31</sup> In 2008, approximately 642,000 nursery and primary school pupils were eligible for free school meals in England. This equates to about 15.5 per cent of the total population of nursery and primary

FSM pupils gain five or more A\*–C GCSEs, the figure is 67 per cent of non-FSM pupils.



Source: DCSF.

**Figure 26: Educational attainment of FSM and non-FSM pupils at GCSE (Key Stage 4) and Key Stage 2**

The difference is narrowing somewhat, however: the national indicator FSM/non-FSM gap for five or more A\*–C GCSEs (including English and maths) reduced from 28.4 percentage points in 2005 to 27.8 percentage points in 2008. At Key Stage 2, the FSM/non-FSM gap for pupils achieving Level 4 or above in both English and maths reduced from 25.6 percentage points in 2005 to 22.3 percentage points in 2008.

The programme logic model (see our scoping report) assumes that the ultimate impact of the Home Access programme will be to reduce the digital divide (in terms of physical access), thereby enabling the educational benefits of home access to be realised by FSM pupils, and raising attainment among this group. The charts in Figure 26 above emphasise that there is still much to be done in closing this educational attainment gap.

school pupils. In secondary schools, the figure stands at just over 433,000, or 13.1 per cent of the total secondary school population.

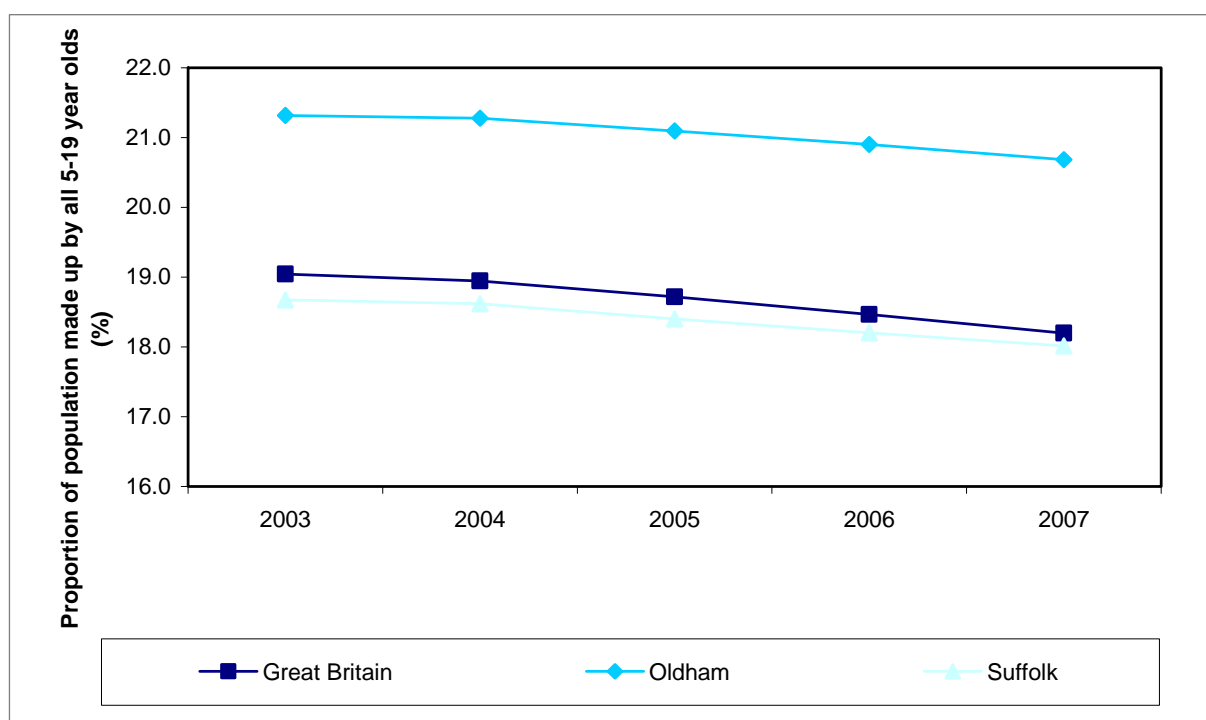


## Annex C: Contextual conditions in Oldham and Suffolk

### Demographics

Throughout 2003–07, Oldham had a higher proportion of young people among its population than the national average. For Suffolk, young people tended to represent a marginally smaller proportion of the population, although the figure here closely matched the national figure (within half a per cent).

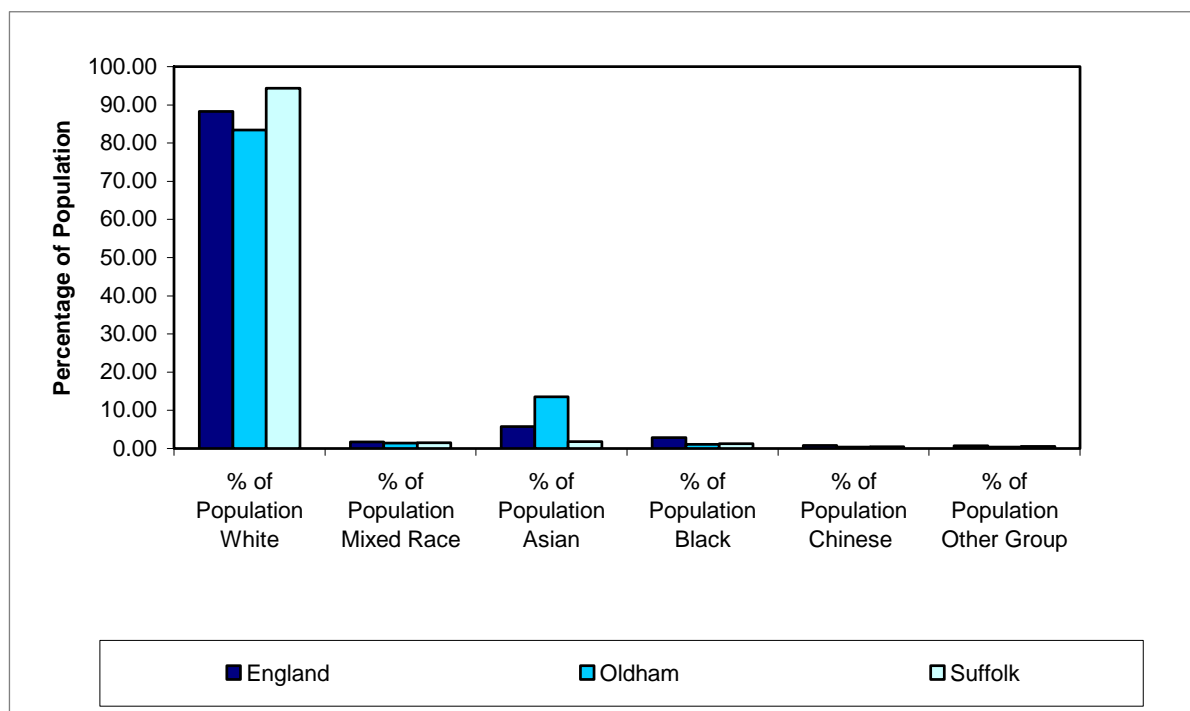
As Figure 27 illustrates, the proportion of the total population aged five to 19 has seen a gradual fall over recent years in both Suffolk and Oldham, a trend also observed nationally. Between 2003 and 2007, the proportion of the populations accounted for by young people in this age range in Great Britain, Suffolk and Oldham fell by around 2 percentage points.



Source: ONS, mid-year population estimates.

**Figure 27: Proportion of the population in Great Britain, Suffolk and Oldham accounted for by people aged five to 19**

Figure 28 compares the ethnic mix of the populations in Oldham, Suffolk and England. Suffolk has a higher proportion of white people compared with Oldham and England, while Oldham has a significantly higher proportion of Asian residents compared with Suffolk and England. Both Oldham and Suffolk have a lower proportion of black residents than the average for England.



Source: ONS, mid-year population estimates.

**Figure 28: Population ethnic mix in England, Oldham and Suffolk (2007)**

## Deprivation

Table 12 below shows the Index of Multiple Deprivation for both Suffolk and Oldham, confirming that Oldham is significantly more deprived than Suffolk. In 2007, Suffolk was in the lowest quartile nationally in terms of deprivation, while Oldham was in the highest.

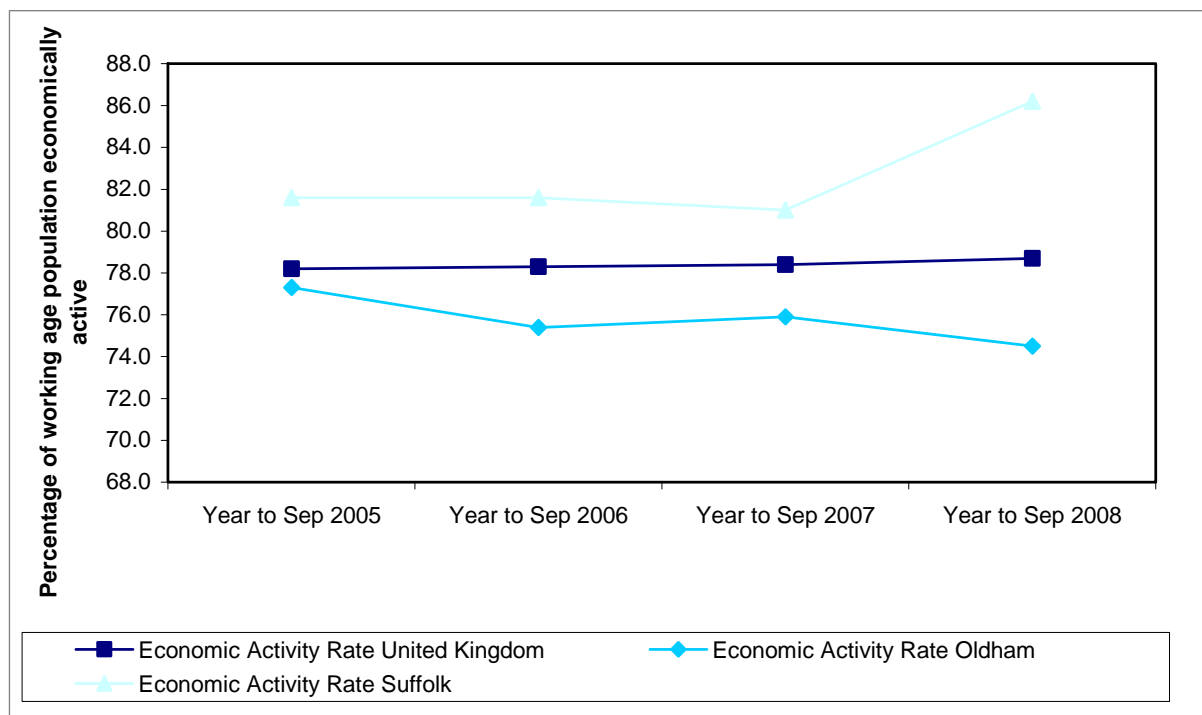
**Table 12: Index of Deprivation for Suffolk and Oldham**

	Average score		Rank of local authority average score (out of 149; 1= most deprived)	
	2004	2007	2004	2007
<b>Oldham</b>	30.73	30.82	37	34
<b>Suffolk</b>	15.04	15.26	114	116

Source: Department for Communities and Local Government Index of Multiple Deprivation (2007).

## Economic activity levels

As Figure 29 shows, between 2005 and 2008 a greater proportion of Suffolk's population were economically active when compared with the UK average, while Oldham's economic activity levels were below the national average.



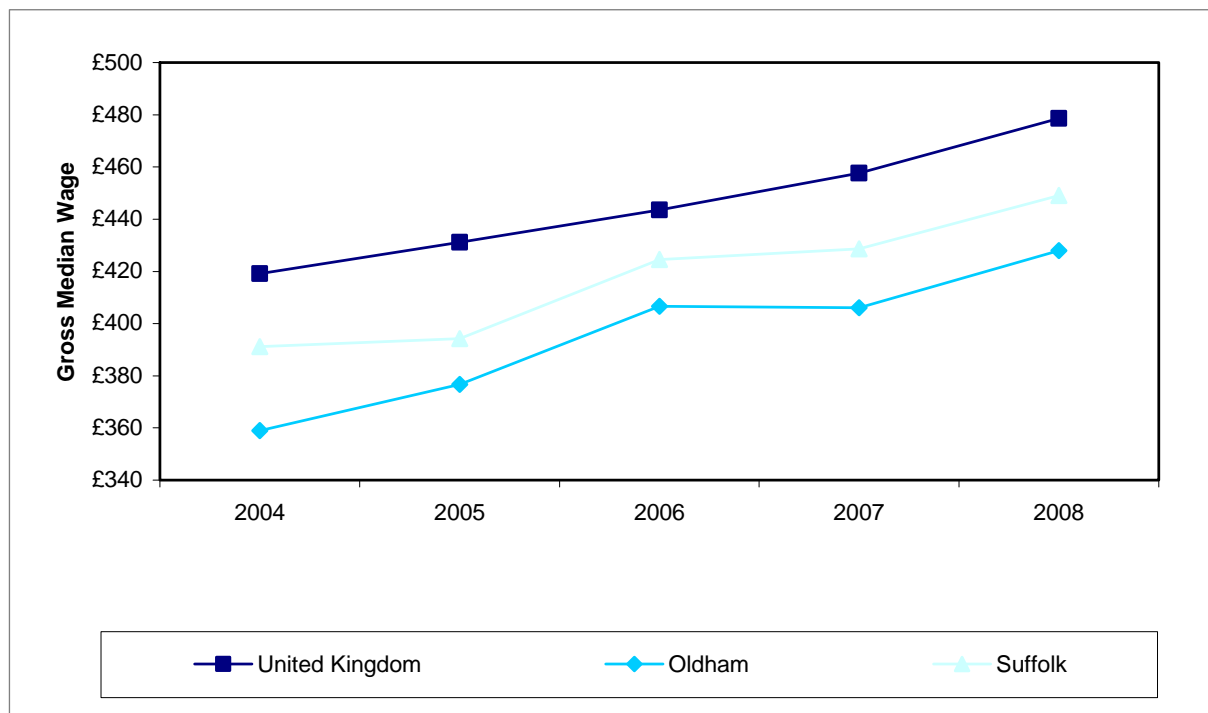
Source: ONS, Annual Population Survey.

**Figure 29: Economic activity levels in Suffolk, Oldham, and the UK**

Figure 29 also shows a sharp divergence away from the national average by both Oldham and Suffolk between September 2007 and the year to September 2008. Suffolk’s economic activity rate rose sharply above the national average, while Oldham’s fell sharply away from the national average. Consequently, by September 2008, Suffolk had nearly 12 percentage points more of its working age population in economic activity than was the case in Oldham.

**Income levels**

Figure 30 below shows the gross weekly median wage for Suffolk, Oldham and the UK. It reveals that wages had been rising for all three areas between 2004 and 2008, with Suffolk and Oldham closely mapping the trends seen generally across the UK. Nonetheless, average wages in both Suffolk and Oldham were below the UK level, particularly in Oldham.

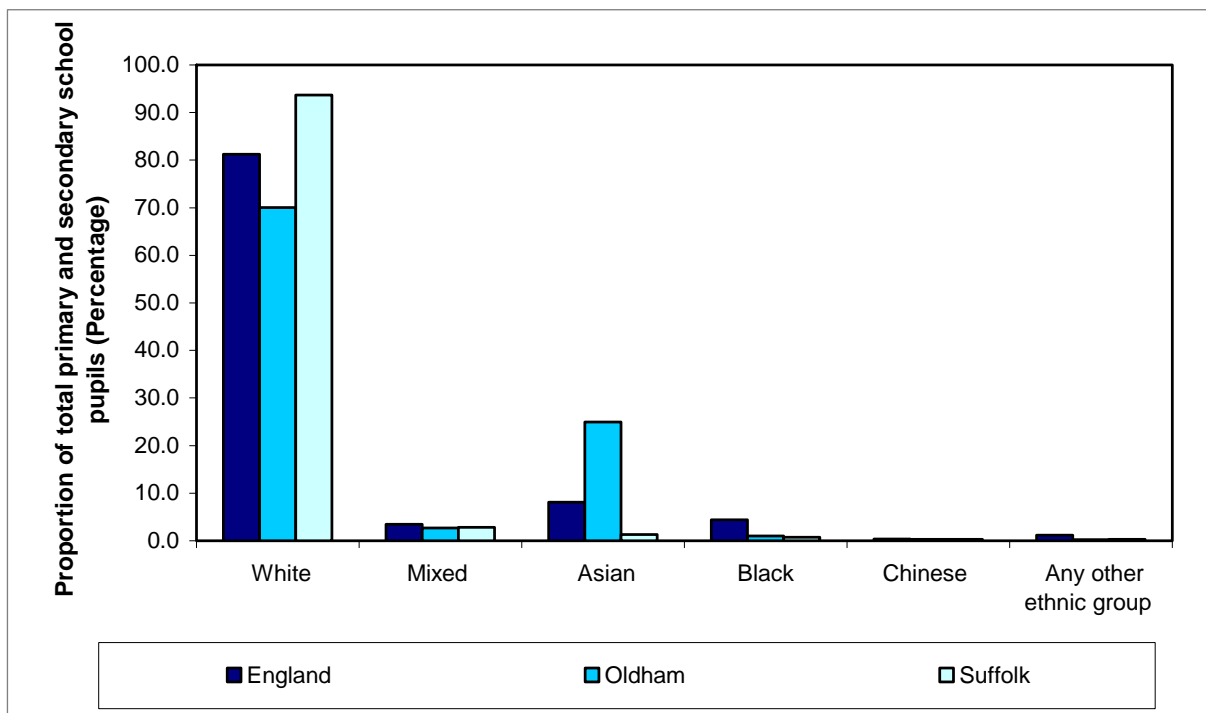


Source: Annual Survey of Hours and Earnings.

**Figure 30: Gross weekly median wage (2004–08) for Suffolk, Oldham and the UK**

### Pupil characteristics

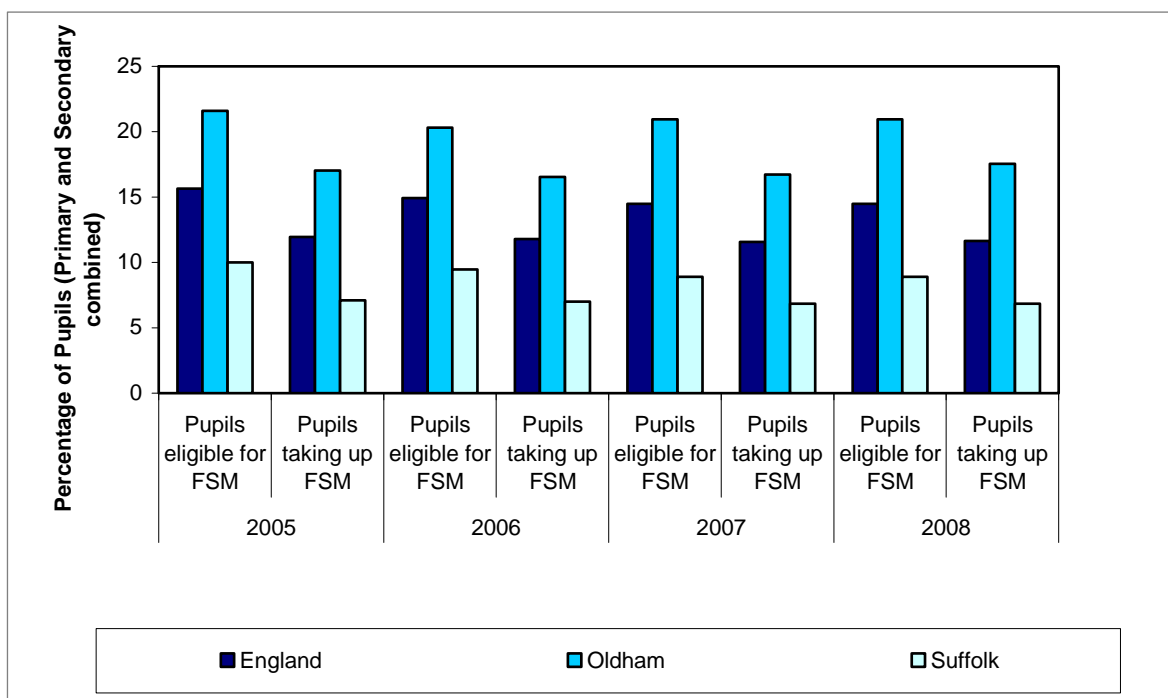
Figure 31 below illustrates the ethnic mix of pupils in England, Oldham and Suffolk. It shows that the ethnic mix of pupil populations in 2008 was broadly similar to that of the general population (shown previously in Figure 28). However, some small differences are apparent among the Oldham pupil population. In particular, the pupil population in Oldham is more diverse than the general population, with 25 per cent of school pupils from an Asian background, compared with just 14 per cent of the general population.



Source: DCSF.

**Figure 31: Ethnic mix of primary and secondary school population (2008)**

As Figure 32 below shows, Oldham and Suffolk differ considerably in terms of eligibility for and take-up of free school meals (FSM). Throughout the period 2005–08, the eligibility and take-up levels of FSM in Suffolk have consistently been below the national level, while those in Oldham have consistently been above average. The levels of take-up and eligibility have remained fairly constant over the period.



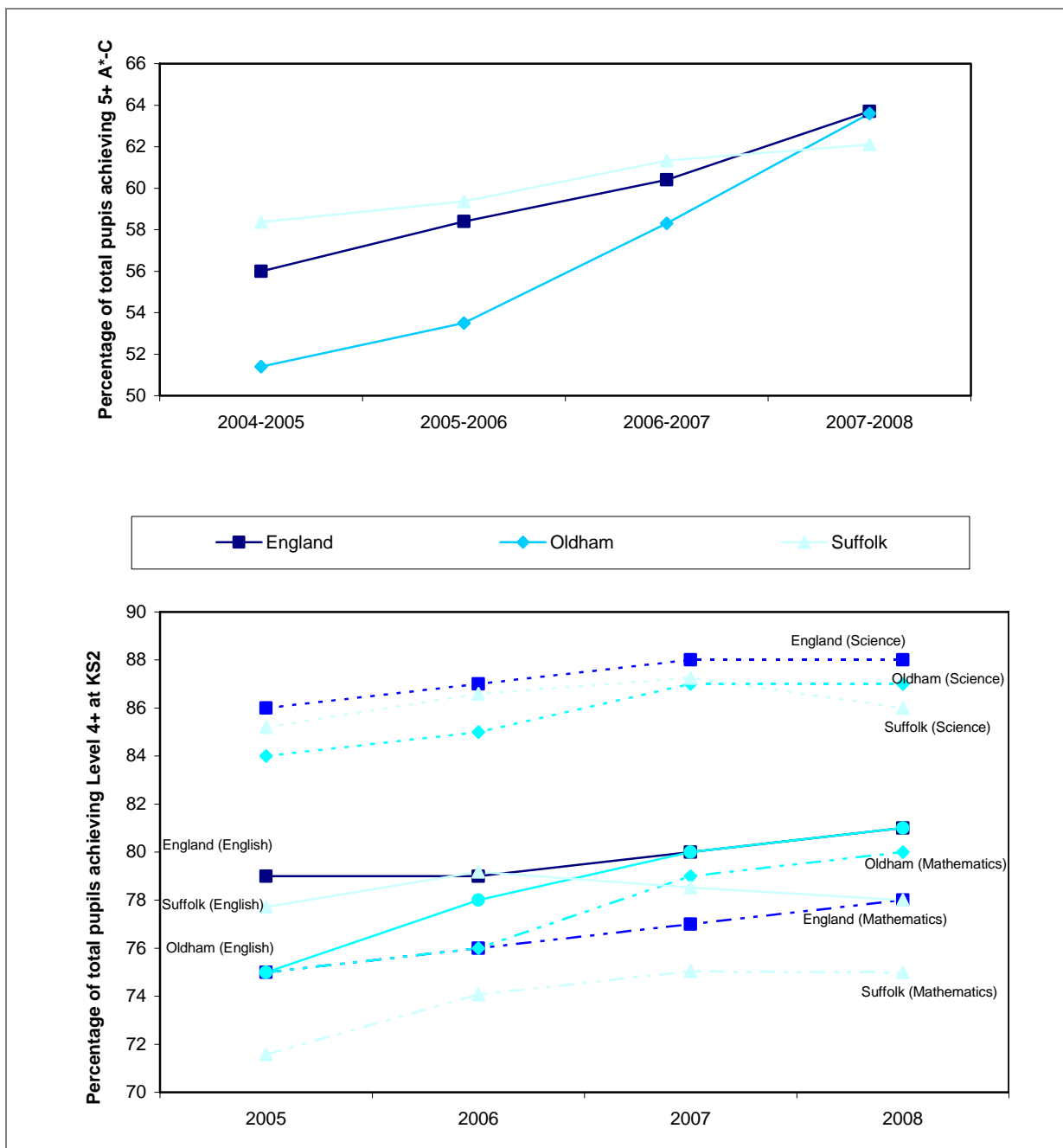
Source: DCSF.

**Figure 32: Eligibility and take-up of free school meals (FSM) between 2005 and 2008**

The difference between take-up of FSM in Oldham and Suffolk is roughly 10 percentage points.

**Educational attainment**

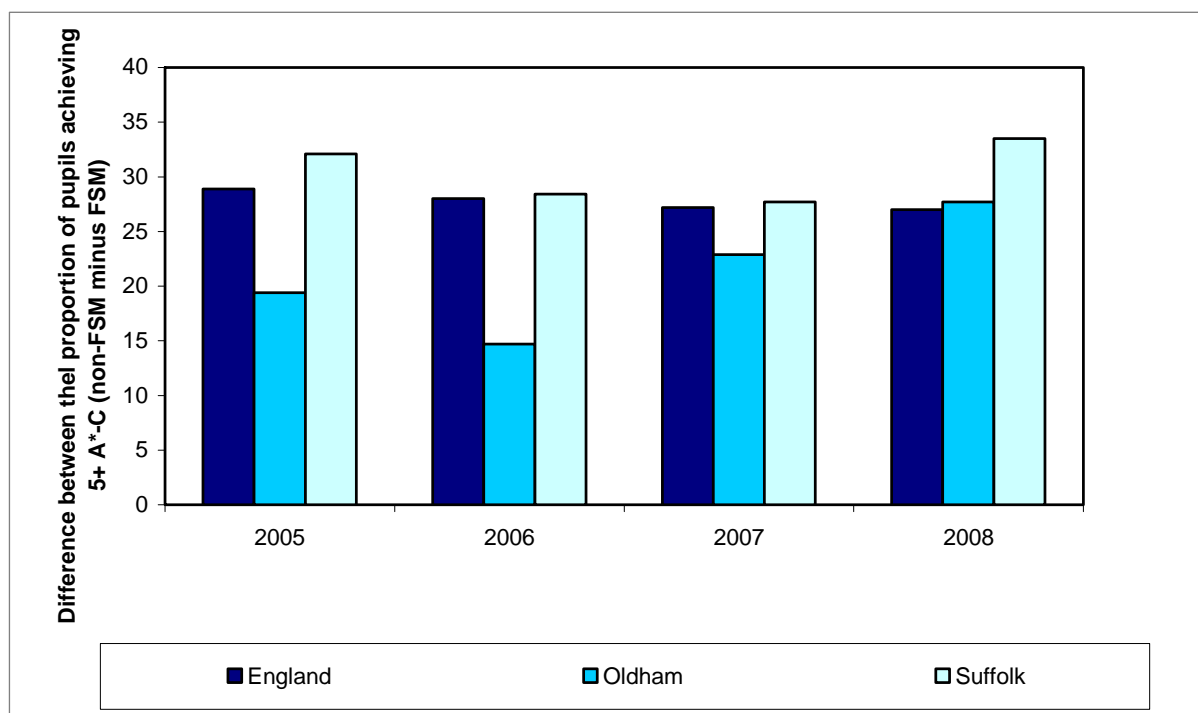
Overall, attainment levels have increased since 2005 at both GCSE and Key Stage 2 in England, Oldham and Suffolk, with particularly marked improvements in Oldham, as shown in Figure 33 below.



Source: ONS Neighbourhood Statistics and DCSF.

### Figure 33: Attainment levels in Oldham and Suffolk, at GCSE and Key Stage 2

Figure 34 shows the difference in the attainment of five or more grade A\*–C GCSEs between FSM pupils and non-FSM pupils. The gap is currently relatively high in Suffolk, while the gap in Oldham increased between 2005 and 2008 to match the England average.



Source: DCSF.

### Figure 34: The performance gap between non-FSM and FSM pupils at GCSE

The situation is somewhat different at Key Stage 2 level. As Figure 35 shows, while the attainment gap has remained broadly unchanged in Suffolk, the gap has generally reduced in Oldham since 2006 – albeit not down to the particularly low level seen in 2005.

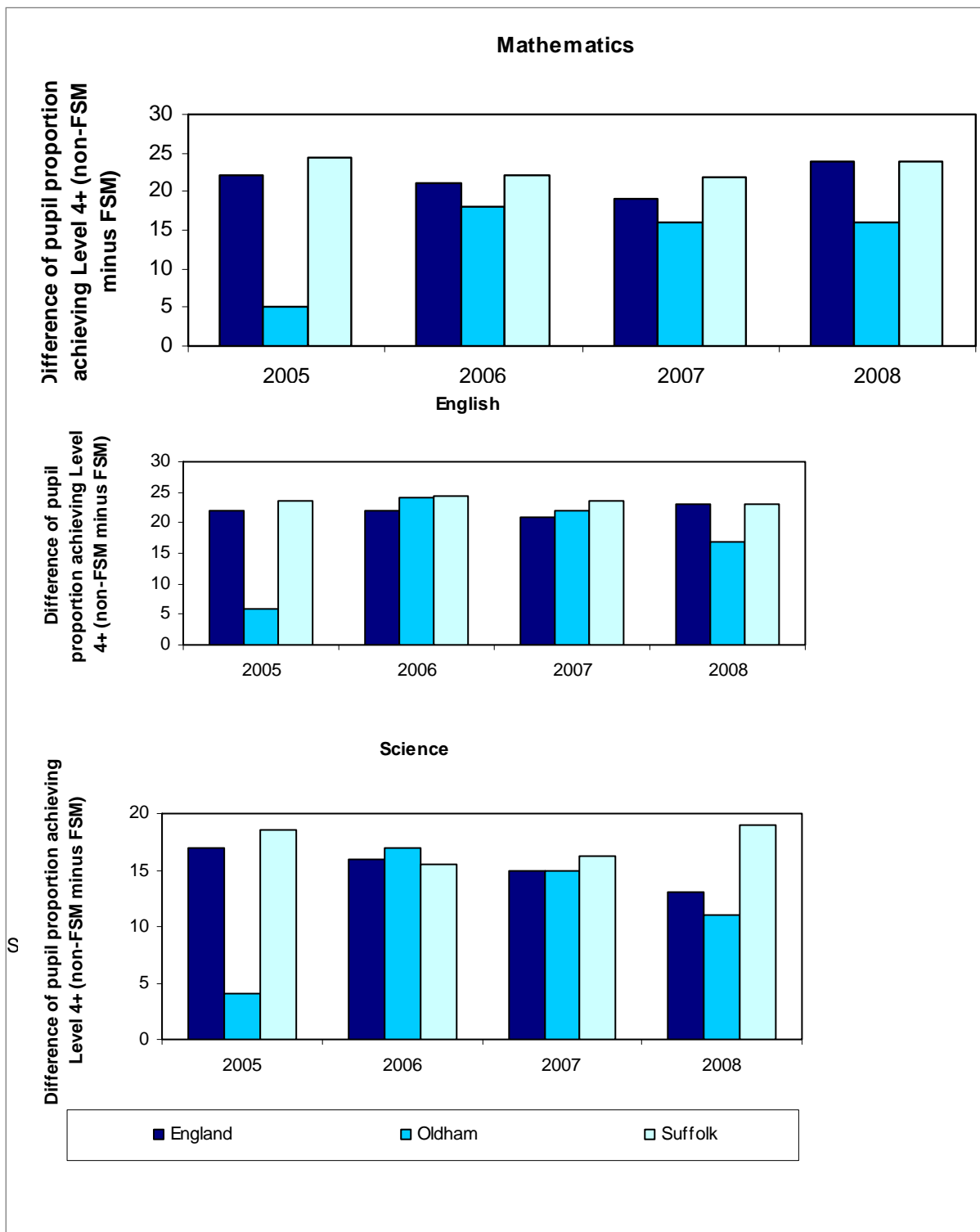


Figure 35: The performance gap between non-FSM and FSM pupils at Key Stage 2



## Mobile broadband coverage

Figures 36 and 37 show the mobile broadband coverage available in Suffolk and Oldham through four major providers.<sup>32</sup> These maps illustrate that there is very variable mobile broadband coverage across Suffolk: across all networks, there is good coverage in and around urban areas, but elsewhere coverage is either of poor quality or does not exist at all. In contrast, mobile broadband coverage is available throughout Oldham.

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<sup>32</sup> Similar maps were not available on Orange's online coverage checker.

PHOTO REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES



**Figure 36: Mobile broadband coverage in Suffolk**

PHOTO REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES



**Figure 37: Mobile broadband coverage in Oldham**

## **Annex D: Oldham case studies**

These summary reports present the perceptions of ICT co-ordinators, teachers and pupils interviewed at four schools in Oldham.

### **Note on case studies**

In some cases, it could be argued that views are not necessarily fully informed. We have deliberately not attempted to 'correct' interviewees' statements in such cases.

Also, it must be emphasised that the value of these case studies is in providing qualitative insights into what teachers and pupils think. The case studies were not designed to provide quantitative data, and they should therefore not be used for this purpose.

### **Case study O1 (primary school)**

#### **ICT co-ordinators and teachers**

##### *Awareness and take-up*

All staff at the school are aware of the programme, as are pupils and parents. Becta launched the programme in the school playground and talked to the parents about the scheme in the school library. Becta provided support to complete the forms.

Interviewees understand that the programme aims to help disadvantaged children access IT, support their studies, allow them to do research for school work, and help them to develop their IT skills and knowledge.

The teachers identified barriers around the application process, including the leaflets, which were not in dual languages, and issues around eligibility raised by parents. Becta suggested that parents could apply for a grant for the computer, but there has been confusion over both the eligibility criteria and the grant availability.

The headteacher was provided with a list of pupils who have benefited, but staff are unsure if this is a complete list. Teachers also helped parents fill in the forms, but do not know whether all of them then submitted the forms and were successful.

On eligibility, working parents in particular may not qualify; this makes the scheme slightly unfair. It is also not clear whether families can make multiple applications.

##### *Benefits*

The teachers think that the programme is a good idea in theory, and identified benefits that include the following:

- Children can do research for their homework at home.

- Children can use the computer at any time and work flexibly around prayer time without having to go the library (when it is open).
- A laptop can increase pupils' knowledge and motivation to learn.
- The children can increase their skills and confidence in using computers, which will make it easier for them to participate in and benefit from school activities such as the computer club for girls.
- Some children look at the school website and email the support staff; also, they may show their parents the website.
- Some children may have a limited experience (the school and the mosque), so the laptop opens up another world for them.

However, a number of downsides are evident:

- There is the potential for children to hack school systems, although it was believed that Studywiz (the learning platform) is secure.
- Children may use the computers for things other than work (YouTube, games, social networking websites).
- Plagiarism was noted as a potential issue, particularly when work is typed and not hand-written, and homework is sometimes written by other people in the family.
- Access to printers is a concern: work often has to be printed at home, as bringing work in on memory sticks can cause virus problems.
- Pupils don't currently have access to Studywiz.
- Computer activities could replace other activities such as playing outdoors.

### *Uses of ICT*

The school's learning platform is not currently up and running, in part due to delays externally and in part due to a decision by the school to wait until curriculum changes had been implemented. Once the learning platform is established and the Home Access scheme has bedded in, it will be easier for parents to communicate with teachers. The school already operates a text alert scheme to keep parents informed, and this has worked well; some pupils and parents do email mentors and technicians.

### *Support for teachers*

Teachers use a range of resources for learning, including Primary Resources, Click Teaching, SAM Learning, Espresso and TES. Internal training and development (including informal help) is provided regularly, the ICT technician being key in providing this. The school also accesses the city learning centre, for staff and pupils, and this has been effective at meeting the needs of the school. External training is also used when required (eg Espresso and SMART Notebook training).

## Learners

### *The computer at home*

All Year 3 pupils have other computers at home, and found it difficult to recall how long they have had their laptops. Pupils keep their laptops upstairs or in their bedrooms. While most do not have to share, those who do said it did not cause arguments. Parents try and control what the pupils use their computers for.

Year 4 pupils had been using their laptops for between one week and two months at the time of the case study, and all had other computers in the home. Most of the Home Access computers were kept in children's bedrooms, although some were kept in front rooms. Some children do not have to share their computers; others do, which causes fights among siblings. One pupil said he was teaching his younger brother how to use the computer. The families sometimes try to control how children use the laptops, with one pupil indicating that his uncle had said the laptop was a "proper computer" and was for school work only.

All Year 5 pupils had had their Home Access laptops for one to three months at the time of the case study, and all have other computers in their households. The Home Access laptops are kept in their bedrooms. Some of the pupils share their laptops, but this does not cause problems. Parents do not control the use of the laptops; some parents do not understand English and/or have no experience of computers.

Year 6 pupils had had their Home Access laptops for between two weeks and three months. All have more than one computer available at home. They use their laptops wherever they want, and keep them in a variety of places (downstairs and upstairs, including in a sister's bedroom). The pupils noted that the signal was better upstairs. All had to share their laptops, particularly with siblings, but this did not cause problems. Parents control what the computer is used for, telling children not to "go on bad stuff" or use games all the time; they limit the amount of time spent not doing homework.

### *Using the computer*

Pupils in all year groups have found it easy to use the computer (the Year 4 group specifically said they were already experienced), and if they need help they look to the (extended) family, although the helpline and shop were also mentioned as sources of help. Most indicated that they use the computers for playing games and music, writing, research, homework, messaging (instant messaging and also social networking websites in the older group) and watching DVDs.

Some Year 3 pupils reported that they logged on to the school website from home. They indicated that they spend one or two hours on the computer.

One Year 4 pupil was waiting for an uncle to connect the computer to the internet. Another said that a baby sister had broken the internet connection, and the family is

now liable to pay for the repair, but not able to do this. Pupils mentioned using the laptops for school-related mathematics, English and science games. One pupil mentioned not using the computer for instant messaging because of warnings about chatting to and meeting strangers. The pupils sometimes log on to the school systems. They use the computer for between 30 minutes and two hours, and spend at least half of this time doing school work.

Year 5 pupils also mentioned using the laptops for mosque work and finding out how to use a computer. The pupils sometimes log on to the school systems to find photographs of the school or the school telephone number. They spend between 20 minutes and one hour on the computer a night. At the time of the interview, they had very little school work.

Year 6 pupils sometimes log on to school from home. Pupils spend at least an hour on the computer each night. At least half of this time is spent doing homework, although one pupil reported using the computer mainly for playing games. During the summer, pupils spend less time on the computer.

A range of technical issues were raised across groups, with numerous pupils having problems with the speed of the laptop, and slow or broken internet connections.

### *Benefits*

Pupils in all year groups indicated they are using a computer at home more now for school work than they were six months ago (although some noted they do not have a lot of homework at this time of year).

The best things about having a laptop were being able to do research and homework, having it available all the time and not having to rely on the library (when it is open), watching DVDs, playing games and not having to pay to use the internet.

For Year 3 pupils, there are number of benefits, including making it easier to find out about things for school work, being able to type homework, and helping with mouse skills. (One pupil noted that the mouse freezes.)

The benefits reported by Year 4 pupils were mixed. One Year 4 pupil was already a competent user. Pupils suggested that having a computer at home made work easier and more fun, and that they can ask friends about work via email and messaging services. There was concern about meeting strangers via the internet. Currently pupils were spending more time with friends than on their laptops, but it was acknowledged that this could be reversed.

The Year 5 pupils are using computers more now to help with homework than they did six months ago. They find homework easier to do on the computer, but not more interesting. One reported that the computer did not work at all. Pupils find the internet connection quicker with a physical wire connection.

Previously Year 6 pupils had to use the library. Pupils described a range of positive impacts, including that computers make it easier to do homework, make homework more fun and interesting, help with revision, and make homework neater. Pupils reported going around to friends to discuss work rather than emailing, as they live close by.

Problems discussed included having to print work out to take to school.

### **Key messages**

Pupils were aware of internet safety in this school. Some of the key benefits of the scheme that teachers identified were echoed by pupils – in particular, having greater flexibility over when work can be done, and making research easier. The teachers noted the existence of a benefit gap, and also that they were not fully informed about who had taken up the Home Access offer.

All of the pupils receiving Home Access laptops lived in households with a computer. Most laptops were located in the children's bedrooms, where computer use was largely unsupervised by parents. Many pupils said they now use computers for homework more than they did six months ago, but it is clear that this is part of generally higher computer usage, including non-educational use.

Many of the pupils who were consulted have encountered technical problems with the laptops, which, when they persist, constrain the benefits. The quality and consistency of the internet connection is a particular issue. Although the pupils consulted all indicated they look to their families for help, language barriers and familiarity with ICT may prevent families from being able to resolve the problems.

### **Case study O2 (secondary school)**

#### **ICT co-ordinators and teachers**

##### *Awareness and take-up*

The staff are aware of the Home Access programme, what it offers, and what it aims to achieve. The scheme has been well promoted by the school, the local authority and local press; the teachers therefore felt that parents were reasonably well aware of the scheme. Although the school does not know which of those who registered an interest completed a full application, it has received a list of successful applicants from the council. The ICT co-ordinators indicated that a similar scheme has been run locally (Computers for Schools), which provided 80 laptops to children in the school in early 2009. The Computers for Schools scheme was more transparent and enabled the school to target those who most needed a computer, whereas the Home Access programme does not involve the school in targeting or decision making.

Teachers thought that stigma and the associated embarrassment at not being able to provide a laptop could be one barrier preventing parents from accessing the



programme, despite the option to remain anonymous. Teachers also identified language and literacy issues, as some of the families may not have very good English skills. However, pupils with English as a second language tend to be second or third generation and also may have older siblings who could help parents with the application.

Generally, teachers felt that the eligibility criteria are fair. The scheme targets those less able afford the equipment, and by borough rather than postcode. Inevitably, some who could benefit will be left out. Similarly, other children may have a computer at home, but it may be broken or not connected to the internet. Also, the children may not be able to get access to computers at home because of use by siblings and other family members. One issue on eligibility for the future was whether and how families benefiting now would be able to replace the laptops when they become outdated.

### *Benefits*

Teachers consider the scheme to be a good idea. It allows less-well-off parents to provide computers for their children, so that their children do not feel isolated compared with their peers. It allows teachers to set homework in different ways, using the technology available to pupils. The laptops should also be used to encourage parents to use the computers, help them understand how their children are using them, and help them maximise the benefits.

Teachers identified the following benefits:

- The scheme allows increased use of ICT for school work out of school, and more engagement around this. Teachers thought that computers encourage pupils to talk with their families about the work they are doing at home, do school work at home at times convenient to them, and research work they are unsure about (and may be embarrassed to ask for help with). An example is the online mathematics facility for homework and test reviews, which gives pupils immediate feedback on their answers. Pupils are becoming more inquisitive in class after receiving the computers.
- There are wider benefits for the family, including saving money by applying for products and services online.

It is, however, too early to tell if there are improvements in behaviour, although teachers expected that the computers may help tackle behavioural issues early on.

A number of disadvantages were discussed:

- Responsibility for the maintenance of the computer is unclear – although this should be with the family (as the applicant), the links with the school may lead them to think the school is responsible.

- The lifespan of the computers and continuity of access when the existing laptops become outdated was an issue.
- Online time may displace offline time, although it was thought that even online networking can help aid the children's development.
- There may be a need for multiple computers in some families, as different family members may require access at the same time.
- It is known that at least two pupils in the school have not used their laptops; greater involvement by the school in targeting and awareness of take-up could help to address this.

Teachers felt that the availability of computers has had an effect on homework. Pupils are able to research into the background of subjects more, and are finding material without being asked to do so. Some pupils who did not previously attempt homework are now actively doing it, and some pupils have achieved noticeable improvements in grades. Computers seem to motivate children, and pupils like presenting typed homework. As the programme is relatively new, there are, so far, only limited impacts on parents communicating with teachers.

### *Uses of ICT*

The school is a maths and science specialist school, so there is a strong emphasis on using ICT in teaching and learning. Looking ahead, ICT will be important to enable the school to continue to improve its attainment by engaging parents more. The school has a learning platform (Studywiz), but its development is ongoing because Oldham Council delayed the decision regarding which platform to use. The learning platform currently includes core Key Stage 4 subjects (maths, English and science) and is being rolled out to Key Stage 3. Each subject has a champion within the school. Pupils will be able to email teachers via the platform and send homework. Teachers can set online homework via the platform (MyMaths is commonly used). The platform will need time to bed in to become fully effective for both staff and pupils. Parents will also be able to access the online learning platform, email teachers and access the message board.

It was estimated at the time of the case study that 15–20 per cent of pupils still do not have access to a computer (compared with around 40 per cent a year before, when a survey to support the Computers for Schools scheme was carried out), but this is constantly changing. Children find alternative ways of accessing a computer (such as at school, at the library or at a friend's house).

### *Support for teachers*

Teachers use various sources (GA website, TES, Training in School and Teach ICT). Information is shared within and between faculties. Training and sharing information is built into faculty meetings and INSET days. The English department has 'bring and brag' elements within its team meetings.

Resources are controlled centrally. Each department has folders on the shared drive for resources. There are ongoing issues in the school about the time staff have available to share, store and organise information.

There is an ICT training programme within the school. Staff also attend regular courses outside school which, although not ICT-specific, may include an ICT element. There are some learning resources on the learning platform for those children who, for a range of reasons, do not attend school. The ICT co-ordinators also use the local city learning centre.

Support and training is readily available. There may be a need to teach parents how to use computers and support their children's learning.

## **Learners**

### *The computer at home*

Year 7 pupils who were consulted indicated, at the time of the case study, that they have had their computers for several months, and all have more than one computer at home. Most indicated they do not have to share, as siblings and parents often have their own computers. Their parents try to control to some extent what they use their computers for, stressing the importance of using them for school work.

Year 8 pupils indicated that they have had their computers for between two and six months, and all have other computers in their homes. The computers are mainly kept in children's bedrooms, with one child keeping it in the communal areas downstairs. Some have to share the computer (although they try not to), and this does cause problems occasionally with siblings; some children mentioned having set times for different members of the family to use the computer. Parents check how their children are using the computers.

Year 9 pupils indicated they have had their computers for a couple of months, and all have other computers in the house. Their laptops are kept in their bedrooms. Some of the pupils have to share their laptops, but this does not cause problems. Their parents do not control what they use their laptops for, as they often don't know what homework they have been set.

All Year 10 pupils have had their computers for at least a week and up to a couple of months. All have at least one other computer at home. The laptops are kept in their rooms. Some of the pupils have to share their laptops, but those who share did not report any problems. Parents often provide advice on how the laptops should be used, for example suggesting (but not enforcing) that they should be used for revision.

### *Using the computer*

Many of the Year 7 pupils who were consulted were already users of computers, but having the laptop has given them more access at times suited to them (for example, allowing them to do homework when they want). Pupils ask parents or other family members for help when they want it. Some also search the internet for solutions to computer problems.

The pupils use the computers for homework (including online homework), typing up notes, research (including using Wikipedia) and accessing BBC Bitesize for revision. They log on to the school website and other school resources, including MyMaths, and can email their homework to school. They also use the computers for playing games, emailing/messaging (social networking websites, instant messaging), listening to and downloading music, and watching DVDs and catch-up TV. Some pupils had notebook computers, so were unable to watch DVDs or listen to CDs.

Pupils estimated that they spend an hour or two on the computer each night. Generally, school work takes up half the time they spend on the computer in the evening, although the level of use depends on the amount of homework set.

The Year 8 pupils consulted found it easy to use their computers. If they had problems, they asked their parents or found out the solution themselves (one pupil consulted the manual). The pupils used the computer for homework (including using MyMaths and revision). They also use the computer for playing games, using social networking websites, playing CDs and downloading music, and watching DVDs. Their use of the computers ranges from one to four hours a night. At least half of the time is spent doing homework.

If the Year 9 pupils consulted have difficulties using the laptops, they ask their families or phone the retailer. Pupils use their computers for a range of tasks and leisure activities, including revision, social networking websites, DVDs, music, games, email and Google Images. They also log on to the school systems to use MyMaths and SAM Learning. In an average week, pupils spend up to an hour a night on the computer, and the amount of time spent doing school work depends on the amount of homework set.

The Year 10 pupils all found it easy to use the laptops. If they have problems, they ask family members (eg brothers, sisters) to help. They also ask friends or try and sort out the problem themselves. The pupils use the computers for a range of activities including revision, homework, accessing websites and social networking websites, instant messaging, using My Maths and SAM Learning, listening to music, and watching TV or DVDs. In an average week, Year 10 pupils spend around 90 minutes a night doing homework.

### *Benefits*

Pupils in all years reported using the computer more since the Home Access scheme than they did six months before (Year 7 pupil estimates ranged from 20 to

50 per cent more). All year groups cited positive impacts on their school work: they can catch up on work at home, achieve higher standards and grades, find information more quickly and revise more effectively. They can also make homework look better or present it in more interesting ways.

Disadvantages mentioned by various year groups included needing to bring work on memory sticks or print it at home or elsewhere (some pupils do not have access to a printer), and the slow speed of the connection and the laptops themselves.

Pupils cited that the best thing about having a computer is the flexibility to access it all the time, making it easier to do work at more convenient times, at home (rather than at school or the library). One Year 7 pupil also mentioned that homework can be more fun, which increases motivation to do it.

Disadvantages noted by Year 7 pupils include siblings wanting to access the computer while a pupil is trying to do homework, blocks on websites that contain relevant information, slow internet connections and computers freezing. Some pupils did spend less time doing other things (eg playing outside), although others noted that in the summer they spend more time playing outside than using the computer.

Benefits mentioned by Year 8 pupils include improving at mathematics as a result of being able to do work at home, and finding work easier to do and more fun as they can have a couple of applications running at the same time.

Negative aspects for Year 8 pupils include slow connections and the time taken for pages to load. One of the pupils with a small laptop noted it was more difficult to use than a larger one. There were different views of the mouse – one reported it moved too slowly, while another reported it moved too quickly.

For Year 9 pupils, benefits include being able to do homework more quickly, as they can access material at times to suit them. They can also email friends about homework. The best things about having the laptop included being able to get more work done for school, making the work easier to do, not having to use the school library, and not getting bored doing the work.

Year 9 pupils did not highlight any negative issues apart from being expected to do homework by their parents.

Benefits noted by Year 10 pupils include being able to access material on the school systems to help with revision (particularly in English, mathematics, and health and social work), and being able to email work to their teachers.

Negative impacts for Year 10 pupils included spending evenings in their rooms.

## Key messages

ICT is seen as key to supporting the future development of the school, the pupils, and links to parents. Schemes such as Home Access and Computers for Pupils are therefore very important in helping to ensure that all pupils and their families have access to ICT at home. Although all pupils consulted already had computers at home, as a result of the programme all pupils now use computers for school work at home more than they did six months ago, and appreciate a range of benefits including flexibility, efficiency and rising standards.

The lack of transparency around the implementation of the Home Access scheme has meant the school has been less able to influence take-up than was the case with Computers for Pupils. While the teachers appreciated the sensitive nature of evaluating eligibility, they felt that the school could play a bigger role in ensuring that the scheme targets those in greatest need.

## Case study O3 (primary school)

### ICT co-ordinators and teachers

#### *Awareness and take-up*

All school staff are aware of the Home Access programme and what it is trying to achieve. Four aims were discussed, which are to:

- improve confidence in ICT use in school, so that pupils can develop skills and try new things at home; children now offer to word process their homework
- improve the quality of pupils' work
- act as a means of communicating with the local community, which is 100 per cent Bangladeshi – the community's understanding of English is poor, and their dialect does not have a written form
- improve the ICT skills of the parents and wider family – fewer than half of the parents have been educated in Britain, and their exposure to and understanding of ICT is low.

Becta gave an initial presentation to the school and parents. However, Becta did not emphasise the benefits of the programme, concentrating instead on the eligibility criteria and application process. The process was quite rigid, and the teachers consider they could have boosted take-up as they know the community better.

The teachers felt they have been poorly informed with regard to which pupils received the laptops. Their own survey of access indicated less than half of families had a computer, and only 30 per cent had internet access. Teachers were proactive in informing the people whom they thought would benefit, but they have not been able to track who applied and was not successful, and who took an application form



and did not apply. The school is aware that of the 66 applications, 55 were successful.

In addition to the language barriers in the community, another barrier is parents' nervousness about computers, particularly issues around inappropriate web content.

Teachers identified two key issues around eligibility:

- Although many families in the area are eligible for free school meals, they do not take them up as they live very near to school and encourage the children to go home for lunch
- Working families claiming working tax credit and other benefits are excluded on income grounds but may still be unable to afford the hardware and internet connection.

### *Benefits*

Teachers consider the programme is a good idea and feel this view is shared by parents and pupils. They have not seen any resentment from other children towards those who have received laptops. Teachers think that the scheme may be more effective if it ensures that all families have at least one computer at home, rather than giving some families two or more. Other families may have greater need because they may be able to afford a laptop but not the connection. Not all families will therefore be able to access the school's learning platform.

Teachers identified a number of benefits, including quicker development of basic ICT skills (in turn making teaching easier) and an increase in the confidence of the pupils; a sharing of skills between peer groups builds confidence further. The teachers felt that ICT generally works as a motivator; laptops have been very effective at engaging and developing the skills of the Year 3–4 boys' literacy group, and bad behaviour, among boys in particular, has decreased. Teachers felt that it is important that all children have access to the internet – something which is now becoming commonplace. Teachers hope that there will be a trickle-down of technology to the rest of the community, and a trickle-up to the parents. They also hope that the scheme will increase the skills levels of school staff, particularly those who are less comfortable with ICT.

The teachers identified a number of downsides:

- Parents may worry about their children accessing inappropriate material, and children may meet strangers or use chat rooms.
- Having accessible ICT can be addictive, and using the computer may displace other leisure time; it may also cause bullying by older siblings.
- Finally, there are a range of issues around maintenance and security: laptops get damaged, stolen, lost or sold. The temptation to sell them may

be high (some children in a difficult home situation have brought theirs into school for security), and responsibility for maintenance may not be clear.

The scheme will help parents communicate with teachers by email, and access and comment on their children's work online. It is hoped that the scheme will encourage parental engagement. However, as the school does not know which families have access to the internet, it will be difficult to target the remaining families that do not have home access.

### *Uses of ICT*

The school has a learning platform which should be fully live from September and should provide the school with huge potential. At present, the potential is limited for staff, as they cannot access reports and records remotely (owing to restrictions set by the council).

### *Support for teachers*

A number of key staff at the school have a good understanding of ICT and sources of support, and are the first point of call for digital learning resources. The school website acts as a depository of links to favourite sites and is the vehicle for sharing information. Some staff also search for their own material. The confidence of staff (which is often linked to age) is often a barrier to them supplying links and sharing material, and the top-down approach to system development operated by the council can cause resentment with 'hard-to-move' staff.

Training is done formally and informally in school, often during INSET days – support from outside is patchy, and the school therefore needs to deliver its own training solutions. The school has held an ICT week to promote use and provide training on specific facilities (eg video conferencing). With the roll-out of the learning platform, teachers will need a range of training to help them maximise its potential.

## **Learners**

### *The computer at home*

Most Year 3 pupils have another computer at home, but for some access to this was limited. Pupils have had their Home Access computers for between one week and three months, and all are kept in their rooms. Most of the pupils have to share their computers, but they said this does not cause problems (although one pupil later reported problems arising from fights with brothers). There is no parental control regarding use.

All Year 4 pupils have another computer at home. Pupils have been using their Home Access computers for between one week and a couple of months. All keep their computers in their bedrooms and some have to share their computers with other family members. This sometimes causes problems, particularly arguments



about when they use the computer and for how long. Parents do not explicitly control use, although some pupils did say they are told to complete their homework first.

All Year 5 pupils have another computer at home. They have been using their computers for between a few weeks and four or five months. All pupils keep their computers in their bedrooms, and most have to share with their siblings, which can cause problems. Some pupils reported having timetables for using the computer. There is some parental control, particularly around pupils having to do their homework first. Pupils reported the use of homework diaries so their parents know when they have homework.

All Year 6 pupils have other computers at home, with one pupil having two computers and five laptops. Most pupils keep their laptops in their rooms, although some said that their siblings or parents keep it. Some have to share their laptops, but this does not cause problems. There is some parental control in terms of pupils being told to do their homework on the laptops.

### *Using the computer*

The Year 3 pupils do not have problems using the computers, as they are already experienced users. Pupils use the computers for a range of activities; these include doing homework, playing games, looking at websites for specific subjects (eg science), listening to music, watching DVDs and emailing friends. One pupil reported not being able to access YouTube. The majority use their computers for one or two hours a night. However, one pupil reported not being able to use the computer much because siblings often use it, while another reported not using it much as there is no internet access.

Year 4 pupils find the computers easy to use. If they have problems with the computers they ask their siblings or other family members (parents, uncles) for help, or return to the shop. Pupils use the computers for homework, watching TV, sending email, instant messaging, playing games, listening to music and watching DVDs or YouTube; they spend between one and two hours each evening on the computer. Of this, pupils reported spending between 10 and 30 minutes on homework.

The Year 5 pupils who were consulted find it easy to use the computers, although in some cases it is a bit slow. One pupil indicated that the computer has never worked properly, and that the helpline is always busy. Pupils generally look to siblings or other family members (eg aunts) if they have problems. The pupils use the laptops for listening to music, playing games, watching YouTube, downloading software, watching movies, and networking (instant messaging and social networking websites). One pupil reported not using the laptop for homework, preferring instead to use another computer in the house, as the connection is faster. In terms of school work, pupils use their computer for homework, particularly literacy, English, science, numeracy and history, as well as for revision (mentioning the BBC revision site and other websites). Year 5 pupils use their computers for a couple of hours a night or

“most of the evening”, with around 30 minutes spent on homework. One pupil noted that only certain types of homework can be done on the computer – questions have to be answered in longhand, while stories can be written on the computer.

Most Year 6 pupils find it easy to use their computers. If they have problems, they ask their family or go to the shop. A number of uses were discussed, namely playing games, listening to music, messaging (social networking websites, instant messaging), watching films and DVDs, and revision (using the BBC website). The year group reported not getting much homework; they are unable to print it out anyway. They use their computers for three or four hours a night, half of which is spent on homework.

### *Benefits*

Pupils in all year groups indicated they use the computers more now for homework than they did six months ago (Year 7 pupils suggested this is one to two hours more). Most year groups mentioned benefits in terms of making homework look better, making homework quicker and more fun to do, and making research easier.

Common problems include not being able to access the internet, having a slow internet connection, lack of printing facilities, and the cost of printing elsewhere.

Year 3 pupils reported that they use the computers for homework for between one and two hours more now than they did six months ago. Additional benefits include being able to find pictures on Google Images and speaking to their families about homework. One pupil mentioned that having fights with siblings was a problem. Playing games was seen as the best thing about having a computer.

Year 4 pupils identified the downsides of printing out work at the library, and spending less time doing other things.

For Year 4 pupils, the best things about having a computer were using the internet for research and playing games.

Pupils in Year 5 find that using a computer makes homework easier, as they can type it rather than write it longhand. Pupils have used the computer for SATs revision and contacting friends about homework.

Problems for Year 5 pupils include spending less time doing other things (such as playing football or watching TV).

One Year 6 pupil mentioned the benefits of improved science results and being able to contact friends about school work. For Year 6 pupils, the best things about having a computer are being able to play games, playing music and downloading music.

Regarding problems with the internet connection, one Year 6 pupil had visited the shop about this; the advised approach of rebooting the machine with a CD had not

solved the problem, so the laptop is unusable. The use of a wireless router had knocked out the connection on another computer.

### **Key messages**

Consultees for the case study consider that the scheme is a good idea and has the potential to help the school, particularly in engaging families in school life; the school is in an area where access to computers, and particularly the internet, is low. Teachers have found that using ICT in the classroom and for teaching groups (such as boys' literacy groups) in general is very effective in engaging and motivating pupils to learn.

There are issues with the eligibility criteria, as take-up of free school meals is relatively low because of cultural factors. Also, while some families may receive more than one laptop, low income working parents tend to be excluded although they are unable to afford a computer. Given these factors, the lack of transparency about applications makes it difficult for the school to promote and target the scheme, and it may be more appropriate to ensure that all families have at least one laptop.

### **Case study O4 (primary school)**

#### **ICT co-ordinator and teachers**

##### *Awareness and take-up*

The teachers were broadly aware of the Home Access programme, what it offers and what it is trying to achieve, although this knowledge is predominantly from handing out leaflets on the programme to pupils at school (rather than any specific information disseminated to teachers). The leaflets helped to raise awareness among parents and pupils, and many were keen to participate. The ICT co-ordinator believes that word of mouth helped to increase uptake. However, teachers believe that some parents didn't really understand why they were getting a laptop or what they should do with it (in their view, this lack of understanding is often due to a lack of familiarity with English as a spoken and written language).

All teachers identified language and literacy problems as the main barriers to uptake – even if the information leaflet is translated, this does not guarantee that parents can read (although parents are generally good at asking friends for help in translation and reading). Those who did not understand the programme were directed to the on-site Sure Start facility for help. There was some suggestion that, on occasion, pupils completed the application forms themselves, because their parents found the forms difficult.

Teachers are roughly aware of how many pupils have benefited from the programme, although this is only because pupils discuss it openly in class. The headteacher has received a list of beneficiaries, but this does not appear to have been shared with teachers.

There are mixed views on the eligibility criteria. The ICT co-ordinator believes that most families at the school are eligible anyway, so eligibility should not be a problem. Other teachers know of families that just miss out on eligibility and cannot afford a computer (a frustration also held by pupils who are not eligible), while other families who are eligible have one or more computers in their households already.

### *Benefits and risks*

All teachers and the ICT co-ordinator thought that the Home Access scheme is a good idea, and they believe this view is shared by parents and pupils (largely because the families do not have to pay: computers are a major cost for many families at the school). ICT skills are vital not only for education (and pupils' ability to find out, apply for and take part in further education courses), but also for social and cultural engagement, informing choices, and networking.

The main benefits of the programme are considered to be:

- Increased use of ICT at home for class work and educational purposes. Teachers find that computers encourage pupils to learn without them realising it (one teacher thinks that the process of typing, spelling and searching on the internet is a positive learning experience for primary school children). However, some pupils have difficulty using their computers, and parents are unable to help.
- Improved ICT skills and confidence for pupils and their families; because pupils practise at home, they pick up ICT tasks up more quickly in the classroom (eg producing presentations). There is also evidence of pupils teaching their parents how to use computers and the internet.
- Improved personal and social skills: teachers have needed to teach the pupils social skills and appropriate use of language more than they expected, but networking on computers is seen to help with interpersonal, social and language skills.
- Improved pupil motivation, partly because of the novelty value of using a computer for school work. Computers help to keep pupils interested and encourage them to be more creative and exploratory (teachers have seen pupils being more proactive in doing additional research), which are considered to be important skills for progression in class. (But computers have less – or possibly a negative – impact on behaviour, as some pupils are easily distracted online.)
- Enhanced parental engagement – but this depends on how IT- and language-literate parents are.

The computers will help provide access to, and enable use of, learning platforms in the future – but learning platforms have not yet been introduced at the school. Work on learning platforms will complement rather than replace paper-based homework. The lack of universal computer access at home is a barrier to rolling out learning

platforms; the Home Access scheme is not believed to solve the problem (because of those families falling outside the eligibility criteria mentioned above). In some cases, teaching staff suggested that a learning platform may actually create additional work, as teachers will have to prepare two sets of homework (paper and electronic).

The main concern of teachers is the risk of pupils being exposed to inappropriate material; related to this is the lack of control and supervision, awareness of risks and knowledge of internet management software among parents. (Some parents, but not all, are starting to ask the school about internet safety.) Teachers have seen pupils sourcing inappropriate material on the internet and then sharing this with other pupils. Plagiarism is not considered an issue among primary-school-age pupils, and use of the computer is not believed to significantly displace leisure-time and other offline activities.

Teachers have not noticed a significant change in pupils' homework, but the school has not implemented learning platforms or computer-based homework yet, so it is too early to tell. Teachers are optimistic about the scope to improve pupils' performance; for example, teachers will be able to set homework for different levels of ability, which has not been possible to date (although unless there is universal computer access for pupils, homework will have to be set in two formats). Teachers also think that learning platforms will enable better two-way communication between teachers and parents.

### *Uses of ICT*

The school uses Studywiz (an Oldham-wide programme, which is activity-based and includes worksheets, chat rooms, forums and picture boards) and is in the process of developing learning platforms. The ICT co-ordinator will be responsible for maintaining the learning platforms. Three teachers have been trained to use the learning platforms, in order to run a pilot this year, although the learning platforms have been used only for maths games and thematic research (alongside library sessions in school time). No teachers appear to be using a learning platform as an integrated part of their work programme as yet, mainly because not all pupils have computer access at home. The school hopes for 'organic growth' of learning platforms. The Home Access programme has played a significant role in the school instigating and developing learning platforms: without the programme, it is thought that learning platforms would have been introduced later, taken longer to implement, and been less effective (eg without the Home Access scheme, the school was considering homework clubs). Teachers are keen to use learning platforms more for homework (one plans to use learning platforms for one out of two pieces of homework per week), but the main barrier to the wider exploitation of learning platforms is the lack of access to home computers (including among those who are not eligible for Home Access computers). If teachers use learning platforms, they will still need to provide pupils with access to computers at school to enable them to complete homework before school and during breaks.

The ICT co-ordinator undertook a survey in September 2008 on computer access, and found that around 45 per cent of pupils had access to a computer and the internet at home. He believes this figure has increased to 70–80 per cent (he will run the survey again to confirm this) and believes the majority of this increase is due to the Home Access scheme.

### *Support for teachers*

Teachers use Espresso, learning resources available via the learning platform programme, Coxhoe, Primary Resources, EducationCity, and general web searches for information.

Three teachers (out of 15) have received training from Oldham Council on learning platforms, and the same three teachers have participated in follow-up in-house training on learning platforms, delivered by the ICT co-ordinator. There appears to have been a mix between technical training (eg on the use of SMART Boards) and exploiting technology for teaching (eg how to develop worksheets for learning platforms), although some training was considered “quite dry”. In the future, the ICT co-ordinator believes more training may be needed on how best to exploit learning platforms for teaching and learning. Teachers would appreciate more training on how best to use home computers to aid homework and learning, and how best to use the internet for teaching.

## **Learners**

### *The computer at home*

The majority of Year 3 pupils have had their computers for only one or two months, and the number of computers in their homes ranged from two (three pupils) to four (two pupils). The pupils’ own computers were located in their bedrooms, although most shared their computers with others at home, which did cause some arguments. Four pupils are supervised by parents or older siblings when on the internet (with parents or siblings by the pupil’s side during internet use), but one is not.

In Year 4, two of the three pupils have had a computer for a year or more, and also have three computers at home. The third pupil received the computer a few months before the case study, and has only one computer at home. All computers are located in bedrooms and shared with others at home (this causes arguments), but all pupils are supervised by parents.

Of the nine pupils interviewed in Year 5, six pupils have three (or more) computers and/or laptops at home, two pupils have two computers at home and one pupil has only one computer. Most pupils acquired their own computers in the few months before the case study. Most computers were in bedrooms or otherwise upstairs, and are shared with others (which causes some arguments); all pupils are supervised while using the computer (or by someone checking the history).



In Year 6, all pupils have two or more computers, which are located in bedrooms and downstairs and shared with others at home (causing fewer arguments in this age group than among younger children). Most pupils do not have parental control, with the exception of one pupil who is not allowed to use the computer for anything other than watching DVDs.

### *Using the computer*

Problems with the internet connection dropping out and slow connections were raised a number of times, and most pupils (from all years) ask older siblings for help. Only a small number ask parents for help, and there was only one example (Year 6) of a parent phoning the IT support helpline.

Pupils use computers at home for the following activities:<sup>33</sup>

- Listening to and downloading music – 86 per cent
- Homework – 73 per cent (low for Year 4)
- Playing computer games and/or online games – 68 per cent (low for Year 4)
- Watching DVDs/films – 68 per cent
- Email and/or instant messaging – 55 per cent
- Social networking – 18 per cent (low for Years 3, 4 and 6).

Only a small number of children (only in Year 5 and 6) log on to school from home to look at the school website and use Studywiz. Time spent on the computer for homework ranges from 10 minutes per week (Year 5) to 45 minutes per day (Year 6), whereas the use of the computer for other things ranges from 10 minutes per week (Year 3) to 14 hours per week (Year 5). However, how much time is spent on the computer appeared to be a question that some of the younger year groups struggled with.

### *Benefits*

All pupils use a computer more to help with homework than they did six months before the case study: estimates ranged from approximately twice as much (25–45 minutes) to four times the amount of time. Pupils are not set homework to complete using the computer at home as yet, but pupils are starting to research topics they find interesting at school (eg history, maths games).

All pupils in all year groups stated that having a computer at home has benefited them in terms of making it easier to find information on the web, and making it quicker and easier to do homework that looks neater. A large number of those interviewed also found they were able to do computer work in school more easily

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<sup>33</sup> Pupils were asked to show hands if they use the computer for each activity – these statistics show the results as a proportion of all pupils interviewed on the day.

and/or quickly (eg using a mouse and typing) than fellow pupils without home access to a computer. Some pupils thought having a computer makes homework more interesting and/or fun, use it for revision and/or ask friends about homework by email or instant messaging. The best things (across the year groups) about having a computer appear to be using the internet, playing games and making it easier and/or quicker to do homework. Some pupils thought a computer makes homework less boring and helps them learn.

Problems with having a computer at home include: internet connection and speed (most highlighted this across all year groups); spam and inappropriate content (all five pupils from Year 3 have come across inappropriate content, whereas none of the Year 6 pupils claim to have come across inappropriate content – the only year group to say they haven't); and family arguments over access to the computer (all year groups). None of the pupils thought they spent less time doing other things (eg playing outside) because they have a computer at home.

### **Key messages**

Teachers are aware that some families who do not qualify under the eligibility criteria cannot afford a computer; teachers therefore cannot set homework using a computer unless they make computer time available to pupils during the school day or design two sets of homework. At present, computers can be used only for 'extra' homework for pupils who are interested in researching topics further and have access to a computer.

The extent to which parents' involvement in supporting their children's learning is being, or has the potential to be, stimulated by Home Access appears to be constrained in part by a lack of familiarity with the technology and language literacy.



## **Annex E: Suffolk case studies**

These summary reports present the perceptions of ICT co-ordinators, teachers and pupils interviewed at three schools in Suffolk.

### **Note on case studies**

In some cases, it could be argued that views are not necessarily fully informed. We have deliberately not attempted to 'correct' interviewees' statements in such cases.

Also, it must be emphasised that the value of these case studies is in providing qualitative insights into what teachers and pupils think. The case studies were not designed to provide quantitative data, and they should therefore not be used for this purpose.

### **Case study S1 (secondary school)**

#### **ICT co-ordinators and teachers**

##### *Awareness and take-up*

The Home Access scheme was publicised in assemblies by the assistant headteacher, leaflets were displayed in the reception area, and a letter went home to parents. The teachers we spoke to felt that:

- they knew who to send children to for more information
- their own knowledge of the scheme is not very good, and they would like to know more because some of their pupils could benefit
- they found out about the scheme in very *ad hoc* ways (by talking to teachers at other schools; signing children's forms)
- they don't know how the laptops have been used.

The ICT co-ordinator described how the school had received no feedback about which or how many children at the school received computers from the scheme. This information would be useful to give an idea of how the scheme works.

When asked about awareness of the scheme among children and parents, teachers suggested that children were quite well aware, but this is less true of parents, who can be difficult to get involved. For example:

- A local school's dedicated information evening attracted very few parents.
- Some parents have poor literacy, and the letter sent home contained too much information; a very short letter might have been better, with contact details to find out more, or a display on review day with teachers talking to parents. School-parent relationships are good, and this could be used to improve take-up.

- Some parents choose not to have computers at home, regardless of whether the family can afford them or is eligible for the Home Access scheme. This means there are still children who need access but don't have it.

When discussing the eligibility criteria:

- Teachers mentioned that computers were given to children who didn't necessarily need them, for example because they already had several computers at home. Teachers think that better decisions could have been made if there had been more teacher involvement in recommending pupils to the scheme, and that this would have overcome the problem of inflexible eligibility criteria, where families just over the income threshold miss out.
- The ICT co-ordinator in particular highlighted that the school wasn't asked for advice about which pupils could benefit. The need for home access is an issue about which the school is aware, and the school could have helped target the scheme; in the past, the ICT co-ordinator gave a laptop to a pupil who needed one.
- Some other teachers criticised the way the scheme was publicised simply as 'a free computer', rather than starting from an analysis of the problem the computer aims to solve – children finding it difficult to complete homework. One teacher thinks that pupils ought to somehow earn the right to the computer.

### *Benefits*

Teachers said that the Home Access scheme is important in creating a level playing field for children, regarding homework and coursework, and that it is valuable to know that children can work at home (and that lack of access is not a permissible excuse for not doing homework). The ICT co-ordinator pointed out that very few families do not have access to the internet. In a survey he carried out two or three years ago, perhaps only one or two in a class of 30 did not have access at home. But some children do spend hours at school doing work because they have no equipment at home, or the equipment is unsuitable (eg without word-processing software).

A few teachers talked about how some pupils, especially those of low ability, prefer to type their work rather than hand-write it. Having a computer at home could make these children more likely to do their homework and to produce better work. This positive view was tempered however: the school work of well-motivated children is likely to benefit from the scheme, but unmotivated pupils are not likely to gain motivation (and the necessary parental support) just because they receive a computer.

Teachers mentioned the disadvantages (that parents told them about) of too much time spent on social networking websites and instant messaging. Again, this problem interacts with pupils' motivation. The discussion with pupils suggested that some do their homework more readily because they can talk to their friends on instant messaging at the same time.

The ICT co-ordinator talked about how working on a computer at home can be part of developing independent learners. Other teachers said that the difficulty children have in appraising and synthesising information from the internet is a teaching challenge; teachers need to direct children's searches so that they are useful for independent learning.

The ICT co-ordinator (and another teacher) did not feel that the need for a computer at home is overwhelming: ICT facilities are available in school during lessons, at lunchtime and after school. But they added that older children, in particular, work well at different times of the day and are more likely to want to work at home. For some children, a computer at home can help with homework, but others just want a computer for instant messaging and social networking. ICT lessons in school cover issues such as cyberbullying and responsible internet use for work and socialising. Plagiarising homework is a limited problem now that GCSE coursework is completed as a controlled assessment.

Having computers and the internet at home means that children are able to access the school's virtual learning environment (VLE), which was introduced in December 2008 and is being developed and improved. Some departments are using the VLE extensively. For example, in media studies, the school directed the exam board to a link on the VLE site, from which it could assess the children's work, including movie clips. Parents can also look at the site to see children's work which is showcased there. The ICT co-ordinator described how the more active the VLE becomes, the more important home access will be. This view was echoed by another teacher who said that home access will be more important when the school starts using the full capability of the VLE, for example in setting and marking homework. The ICT co-ordinator and other teachers talked about how more needs to be done to get the most out of the VLE.

### *Uses of ICT*

Staff use of the opportunities created by home access (in general), varies according to department and individual staff member; it can depend on whether there happens to be a keen and well informed member of staff in a particular department. Staff did not think that worries about whether children have access at home are a major barrier to using technology for homework. Teachers thought that learning through home access makes sense with or without a VLE, but the ICT co-ordinator in particular thought the two together make both more useful.

One teacher thought the Home Access scheme could have gone further had there been a better analysis of how the equipment could be used for learning, and had this analysis then been used to drive the specification of the equipment. Future schemes could be based on smaller netbooks or PDAs, which could be plugged into docking stations at school. This would solve frequently experienced problems from not having reliable equipment both at home and in school, and difficulties in transferring work from one computer to another.

### *Support for teachers*

Among the staff we talked to, most were confident about using the internet to find resources or recommend sites to children. Their views were much more mixed about the technical requirements of using the VLE. The VLE is very difficult to use (that is, it is difficult to design, build and upload pages), and most teachers do not feel confident at using it. This limits how useful the VLE can be for pupils, which in turn limits the benefits of a computer at home.

Teachers have received very little training, with several saying they have had no ICT training for eight years or so. Those who were confident with the technology described how anything they know, they have taught themselves. Teachers thought there should be a more structured framework for training staff how to use technology. The ICT co-ordinator highlighted that the VLE is used throughout the local authority, therefore training is a local authority role; the ICT co-ordinator also mentioned that Becta very rarely provides information or support.

More support is needed for parents, both to raise awareness of the Home Access programme and to help them get the best out of home access and support their children's learning. This could, for example, be through computer courses; parental support could be a good addition to the Home Access package, and would help the school more generally to get parents involved with learning at home.

## **Learners**

### *The computer at home*

The pupils we spoke to had received their computers a couple of months before. Most of them had already had some kind of home access, but not to a laptop. The children valued the flexibility of owning a laptop rather than a desktop computer. Most keep the laptops in their bedrooms, although some parents make sure computers are stored in other places. One pupil's mother keeps the laptop away until younger brothers have gone to bed at 8 o'clock. The young person is then allowed to use the computer for four hours, and usually stays up until midnight.

The pupils reported that their parents sometimes use the computers; some pupils let their brothers or sisters use them too. There is a strong sense that the young people 'own' the laptops. One pupil reported having 'parental controls' on the computer, and can unblock websites.

### *Using the computer*

The young people use their computers for accessing social networking websites, instant messaging, games, and for doing their homework. The level of use they reported ranges from one to four hours each night, of which around three to five hours a week is spent on homework. They accessed the school's VLE from home.

### *Benefits*

For the pupils we talked to, the benefits of the computer are:

- being able to use the computer around the house, not just sit at a fixed PC
- having your own computer; not sharing with others
- having more contact with friends
- being able to work at home rather than school
- being able to type work rather than doing it by hand; this makes the work neater
- it makes it easier and more relaxed to do homework, and more fun because you can talk to friends on instant messaging at the same time; one pupil said she hadn't really done homework in the past, but is doing more since receiving the computer
- that they are now more confident at using a computer (a benefit mentioned by some).

On the downside, some children talked about the computers being very slow and there being conflicts between the different firewalls and protection on them. Another said that the 'free' internet ran out after two weeks. A teaching assistant at the school highlighted that a parent had received very little choice at the shop when she had gone to purchase Home Access computers for her children – she was asked to pay additional money along with what Becta provided.

### **Key messages**

Children and teachers were positive overall about the programme, but some clear messages emerged about how it could be improved. These cover eligibility, engaging with parents, and issues with the technology at home and at school.

On eligibility, teachers thought some children who received computers didn't need them. More importantly, the scheme would be better targeted if the school had a greater role. Teachers value home access and want to develop children's learning, and they could recommend children that would benefit most. This would overcome concerns about inflexible criteria causing deserving children to lose out.

Teachers emphasised the role of parents, both for take-up of the scheme and for making home access useful for pupils' learning. Parent-school relationships are good, and the school could have boosted take-up by using shorter, clearer

promotional materials, followed up by face-to-face discussion, for example at school review days. Once children gain home access, the scheme would have greater impact if it was used as a means to engage parents. Parents could be brought into school for training and support (for example, to introduce them to the VLE). In this way, parents could support their children to get the most learning possible out of Home Access computers.

The interviews also highlighted barriers to do with the technology of the Home Access scheme. Some pupils mentioned problems with their computers; one teacher talked about technological difficulties in the transition between working at home and on (sometimes unreliable) school computers. Finally, and most strongly, staff have not received the training and technical support they want in using the local authority's (cumbersome) VLE, and this is holding back the learning benefits to be gained from home access.

## **Case study S2 (middle school)**

### **ICT co-ordinator and teachers**

#### *Awareness and take-up*

There is high awareness of the scheme among staff, and of what the Home Access scheme offers and is aiming to achieve: teachers commented that the aim is "to pull the bottom up and extend use in home and school" and to remove barriers to access rather than being about learning *per se*. The teachers have a strong sense that access to digital technology is a 'democratic right'.

Teachers had a low awareness of the eligibility criteria and thought parental awareness of the scheme is patchy. Some pupils have told teachers that they have Home Access computers, and there is lots of excitement about receiving the kit. Barriers to the Home Access scheme identified by the teachers include parents' lack of literacy skills to complete the form, and the perception of the scheme being 'charity'. The school has limited knowledge of the take-up, but the perception (from pupils' comments) is that it is high. Overall, teachers say that most parents think the criteria for the scheme are fair, although there was "some muttering" initially from parents on low incomes who had already invested in computers ahead of the Home Access scheme.

The ICT co-ordinator has greater awareness of Home Access take-up ("five times higher than a comparable local school"). He co-ordinated the information to the parents on the scheme, including an assembly presentation, a survey of home computer use, pushing the Home Access scheme at classroom level, and speaking to pupils. He also linked take-up to the prioritisation of the development of the school's virtual learning environment (VLE). He thought the criteria were "easy to work with but crude and not fair", especially for those (eg in large working families) who missed cut-off income by £50 he commented that this generates tension. Poor

communication at local authority level and the removal of the school from the process of roll-out were seen as barriers to take-up.

### *Benefits*

All staff thought Home Access scheme is an excellent idea. The benefits were seen to vastly outweigh the risks. The main benefits identified by teachers were that home access:

- increases the sharing of knowledge
- increases sociability among pupils, via online instant messaging and social networking
- supports new ways of working (eg podcasting – Audacity software) which link home and school and are attractive to pupils as they engage with their interests
- involves pupils more in producing knowledge that becomes a focus for discussion
- increases confidence in ICT use and brings technology to pupils while they are young
- increases the use of the VLE and removes the ethical dilemma/bias concerning setting digital homework
- increases motivation and makes learning more fun and interesting
- gives more control and choice to pupils to organise their work and time – towards becoming independent learners
- engages pupils who are not engaged by paper-based work – “makes the playing field level”
- enhances parents’ and pupils’ conversations about school, by making visible to parents what their children are doing, and supporting more interesting things to share with parents
- is popular with parents: feedback has been good; at a parents’ evening, one commented “You’re now teaching in the 21st century; that’s excellent!”

Risks or downsides identified by teachers were few:

- Pupils may sit in front of a screen for longer.
- The responsibility is placed on the family to manage a pupil’s time on the computer.
- There is anecdotal evidence of a few parents who have “wiped off software and taken over ownership of the kit”.
- Home access may enhance the use of VLE, but this increases the workload for teachers at home and encroaches on home time.

### *Uses of ICT*



The teachers commented that most pupils are online (only 30 out of 547 are not). They identified a range of uses of ICT, notably:

- the use of presentation programs in lessons and to provide templates to scaffold homework (ie a presentation in which pupils write into a template of questions to ensure personal responses and avoid plagiarism)
- the use of the VLE, which is common – but use within subjects varies and is driven by how much the teacher understands the pedagogic opportunities of ICT; the VLE is currently inward facing to the classroom, supporting teacher and pupil communication, rather than outward to the home
- for homework, which is set via the VLE – mainly extension work and project-based work.

The main barriers to ICT use were identified as the following: time, cost and the limitations of the VLE system (which does not support video and has limited publication rights).

#### *Support for teachers*

Primarily, teachers learn how to use ICT on the job; they have had some training on ICT and the use of the VLE, but this is primarily technical. There is a sense that 'those who can do'; these 'leaders' are involved in supporting and training other staff informally. There is a firm focus among the teachers on the pedagogic use of the technology and some innovative development of work schemes using open source software.

### **Learners**

#### *The computer at home*

At the time of the case study, pupils had owned their Home Access equipment for between five months and three days, with most having had it for four months.

Across all years, pupils have experienced considerable problems with internet connections and faulty laptops. Parents have tried to sort out these problems, but have had difficulty in getting help – especially in Year 5, which may suggest that older children can contribute to problem-solving more effectively.

Computers are used either in the young people's bedrooms (80 per cent of Year 8 pupils) or in living rooms, and, despite the portable character commented on by all, the use for most is fairly fixed.

Family size has an impact on pupils' access to computers and how ownership is viewed. Some parents thought the computer belonged exclusively to the young person, and that it is their 'right' to have it. Others thought that the computer should be shared with younger siblings, with older siblings given priority. Others again saw



the kit as a family object to be shared by taking turns. In general, girls appeared to be happier to share than boys. Two parents had taken the kit from the young people and were not allowing them access. Most households had a computer before the Home Access scheme, but these computers were very slow, with poor connectivity, and the children could not get access because of other people using them.

### *Using the computer*

All year groups made use of the computer for homework, but to different degrees that reflect the amount set, variation among individuals and the slow shift from paper to digital homework:

- Year 5 pupils used the computer for homework for 20 minutes to one hour a day.
- Year 6 pupils used the computer for homework for up to three hours a week, but commented that most homework is paper-based and so they cannot use the computer for it. A few pupils use SAM learning and Maths for Kids.
- In Year 7, most pupils used a computer for homework two or three times a week for 15–30 minutes. Several pupils commented on problems using the VLE, regarding account information and how to log on.
- In Year 8, homework is not always set for the computer, and pupils spend up to 30 minutes a day using a computer for homework, mainly for researching projects, but homework has to be hand-written for English.

The year groups all engaged with similar uses of the computer:

- Pupils use the VLE mainly for maths homework (although one young person scans all homework and emails it in case he loses it).
- Social networking websites and instant messaging are used by all year groups, although parental restrictions are applied to girls; some use instant messaging to catch up and discuss homework, but most just to chat.
- Several pupils have laptops with webcams, which they use.
- All year groups listen to music (less often downloading) via YouTube (some expressed concerns about viruses and download capacity).
- Art packages (DeviantArt) are used by one pupil in Year 7 for researching homework, and a few others use Paint.
- Writing and reading are fairly popular activities among Year 7 pupils.
- Few children watch films or DVDs (as they have no DVD drives).
- Games and puzzles (eg CBBC games) are played mainly by Year 5–7 pupils.

All students thought the Home Access scheme makes a difference to their school work and homework, but for different reasons:

- Year 5 pupils interviewed thought home access makes a difference to their school work by helping them to find out more information, chat online to their teachers, use instant messaging to catch up, make use of online resources, and generally have more fun.
- Year 6 pupils said that a computer makes their work neater (eg choice of fonts), and half said it makes work more fun.
- Year 7 pupils commented that their home computer makes it easier to research, makes work neater, removes concerns about handwriting and drawing skills, and makes work quicker.
- Year 8 pupils all thought a computer makes a difference by making it easier to find information and removing the need to find books.

The pupils tried to sort out problems themselves, with girls seeming more willing to ask for help. Children got help mainly from their parents and older siblings, followed by other relatives (eg uncles, nephews, grandfathers) and neighbours.

Overall, pupils reported very little parental control or monitoring of their use of the computer and time on the internet. A few girls in Year 6 said their parents don't want them to put photos on social networking websites (for fear of sexual offenders) and a few parents (again of girls) restrict their use of social networking websites, although the pupils "sneak a look". Most pupils think their parents do not know what they are doing online. The Net-intelligence parental control software was raised as an issue for those who don't know how to disable or adapt it.

### *Benefits*

Pupils identified a number of things they like about the Home Access scheme (in order of frequency):

- Having access to a computer and internet without having to wait or ask
- Not being embarrassed about not having a computer
- Instant messaging and communicating with friends and people in other places, as well as making new friends at school and connecting with family (one young person found his father on a social networking website)
- Having time alone to work, and a new-found privacy
- Gaining extra 'credit' for ICT skills at school
- Collaborating with others on projects
- Being able to make things: films, games and animations.

Pupils identified some downsides to the Home Access scheme:

- Difficulties accessing the VLE (eg their account locked, or password forgotten)
- Lack of stable connectivity, with frequent crashing and faulty equipment

- The role of Net-intelligence, which pupils commented blocks many appropriate sites of interest and use
- Finally, a few pupils commented that their parents have taken the computer and they cannot use it.

## **Key messages**

The school has a sense of being out of the loop of the programme, and would like to be more involved. There is also a sense that the Home Access scheme needs to support the move from having a PC to linking with the school more effectively. The scheme helps to make visible to the family the work of the school and the pupil, which is an area to build on. Teachers are involved in the design of digital pedagogical materials.

While instant messaging and social networking may be the primary uses of the equipment, the scheme does appear to be having an impact on motivation, interest, and pockets of change regarding the ways of working and learning, with a shift to more independent learning processes. The scheme supports the development of learning processes that put the pupil more in control of their learning through project-based work, occasionally enabling pupils to really explore a subject. The impact on homework increases with age, but homework continues to be primarily a paper-based activity, although there are signs of a shift to digital project-based work. The ability to disable or adapt Net-intelligence may be creating two tiers of pupil access (which are gendered as well as classed). Parental control and monitoring is minimal, and any concerns expressed focus on sexual safety in relation to girls not boys.

Many difficulties with connectivity and kit were raised; these take time and effort to resolve, which may serve as a barrier to the effectiveness of the programme. Ownership of the kit is perceived in different ways – positioning the kit as rightfully the child's may increase its usage and the uptake of the scheme.

Overall, there is considerable excitement about the scheme.

## **Case study S3 (secondary school)**

### **ICT co-ordinator and teachers**

#### *Awareness and take-up*

There is a good general awareness of the Home Access scheme among staff, but there is low awareness of what the kit offers and the criteria for eligibility. The roll-out was described as “a bit underground”, as the school discussed it only with parents who take up free school meals. Teachers have a sense of what Home Access is aiming to achieve: teachers commented it is trying to “narrow the gap between poor and not so poor” and “reduce inequity and extend school hours”. Two teachers linked Home Access to the need to increase the setting of internet-based homework. Overall, there was a positive response to the idea of the Home Access scheme, but

two teachers expressed negative views of the fairness of the scheme: they commented that “a lot of money was wasted”, that computers “should only go to those who don’t have a computer in the home” and that the perceived unfairness caused a “big uproar” among parents who are earning but do not earn enough to buy a laptop. These views seemed to have currency across others in the school.

The ICT co-ordinator had a greater awareness of scheme and take-up. He co-ordinated the parental information regarding the scheme. He chose to target parents via free school meals rather than talk to the whole school, and he texted parents of pupils who take up free school meals. Overall, parental awareness of the scheme is thought to be low. The ICT co-ordinator has had some local authority feedback that overall take-up is good, which suggests that take-up is higher in other schools. A few pupils have told teachers they have the kit, but teachers have a poor sense of who has taken up the Home Access scheme. This suggests that the benefits from Home Access for the use of the VLE will be hard to realise.

Teachers identified several barriers to take-up, including a lack of knowledge of the Home Access scheme, poor advertisement of the scheme, social stigma or discomfort, parental “embarrassment that they can’t afford something that is common these days”, and the perception of the scheme being ‘charity’. Two teachers commented that some parents think the criteria for the scheme are unfair; overall there is a sense that some parents may find the scheme unfair – hence the targeted approach and ‘underground’ character of the information in the school.

### *Benefits*

All staff thought the Home Access scheme is a good idea in principle. Two teachers thought the benefits strongly outweigh the risks; two were less positive about the benefits, one of whom thought the scheme has had little positive impact.

The main benefits identified by the teachers are:

- An increased sharing of knowledge between parents and pupils, and parental involvement in pupils’ work
- The supporting of more direct communication with parents and schools
- Increase use of ICT and increased confidence
- The potential for flexible learning during long-term absences, and increased pupil control of technology and learning
- Improved pupil motivation and behaviour
- The supporting of the development of the school’s VLE, and extension of work outside the school
- The provision of pupil access to a wider range of information to support research
- Improved pupil presentation of work and reduced time for homework (eg through editing features)

- Access for pupils to social interaction via instant messaging and social networking websites, which enhances their “personal confidence to be part of a community; there is a huge amount of social interaction online and it would be very hard to be out of the loop”
- Access to games (cited as a positive thing by one teacher) – a part of the technological world that pupils should have access to and which “helps develop their skills”; however, access to online games is regarded as a negative factor by another teacher.

Several areas of risk and downsides were also identified:

- The reduction of time outdoors exercising
- The potential need to increase controlled conditions for coursework (eg English coursework can be done only in school and has to be handwritten in order to remove the risk of plagiarism)
- Concerns regarding the selling of the kit
- Children spending more time on instant messaging and social networking websites or playing games than doing homework (ie not using the computer ‘properly’ for ‘the right reasons’ – meaning homework).

### *Uses of ICT*

The school had introduced a couple of ICT initiatives over the preceding year (before the Home Access scheme). In 2008–09, it introduced a handheld device scheme for Year 7 pupils, and in 2010 it intends to roll out ultra-mobile PCs (UMPCs) to all Year 7 pupils (parents opt in via a £10 monthly payment to take the laptop home). The VLE is in development, but is mainly inward-facing for the school. Some staff are reticent to use ICT; other staff are leading the development of materials for the VLE. Currently the VLE is focused on information rather than communication. Some subject areas (eg modern foreign languages) connect with local-authority-based consortia which use wikis to bounce ideas, share resources and problem-solve, and use Yacapaca for quizzes and assessment.

At the time of the case study, 5–10 per cent of pupils are estimated as not having internet access at home, although it is not clear what this figure is based on, given the lack of awareness of take-up of the Home Access scheme. Access to a printer is not assured, and the cost of ink cartridges was raised as an issue. The percentage of pupils considered not to have internet access is seen as a barrier “as [teachers] can’t rely on them to access the internet at home”, especially as access to ICT in school time is limited. (However one teacher thought all pupils can get access via family members.) The roll-out of UMPCs to Year 7 pupils will provide certainty of access and increase the use of the VLE.

### *Support for teachers*

Teachers get their resources from a range of sites. They draw on the internet and YouTube, the local authority school portal, TES, specific curriculum sites and exam board sites, and commercial software. They have received INSET training on the use of the VLE, but the focus was on technical skills rather than pedagogic uses. Some lead teachers informally train others (eg on interactive whiteboard use) and there is school-wide training (eg Yacapaca, the use of video cameras in the school, and Movie Maker). Again, this training is primarily technical rather than pedagogical in focus. All teachers commented that the ICT technicians provide very good support for teaching.

## **Learners**

### *The computer at home*

At the time of the case study, pupils in the school had mainly had their Home Access kit for five months. Some had faulty laptops: three had broken but are now replaced, and some pupils experienced problems with dongles. Most had computers in the home before the Home Access scheme, but these were old and not dedicated for pupil use. Some pupils commented that the Home Access computer is a bit slow, but easy to use, while others commented that it is faster than their previous computer. One pupil commented that the screen is too small – “so I hooked it up to the TV” – suggesting that insufficient support was provided when purchasing the kit.

There was a fairly even split across year groups concerning where the computer is used; all pupils commented on the mobile use of the laptops, but mainly they are used in the young people’s bedrooms or the living room. One Year 9 pupil commented that he is not allowed to use the laptop in his bedroom. In Year 10, pupils mainly use the laptops in their bedrooms.

Most Year 8 pupils share their computers with a younger sibling, but they have priority. No Year 9 and Year 10 pupils share their computers. Pupils who need help mainly ask their parents and older siblings.

### *Using the computer*

Year 8 pupils, overall, do not seem to use the computers for homework, although one once looked for pictures for a project. They mainly use social networking websites and instant messaging (but not to discuss school work), and listen to music on YouTube.

Year 9 pupils use the computer for homework for approximately one hour a night for revision, exams and when homework is set. They use it to do other things for about two hours a day. They use the MyMaths website, do research for English projects and some history and ICT, and type up homework, as well as using instant messaging and social networking websites, playing games and listening to music (including on YouTube). None use the school VLE, which is in development – all said



they do not know how to log on to the VLE, and that homework is set in class on paper.

Year 10 pupils use the computer for homework on a couple of days a week, for 30 minutes, if it is related to the internet. They also make use of the MyMaths website and do research for projects and some revision; one group of friends share notes of missed lessons by scanning notes and sending them by email. They use instant messaging to chat about homework, check deadlines and discuss projects. Some said they do not use the computer at all for homework, other than for the presentation of their work. The pupils commented that they make daily use of social networking websites (15 minutes per day) to check email, and rarely use social networking websites for things other than homework.

Year 9 and 10 pupils thought their Home Access computers make a difference to their school work, and use them mainly for research, as an alternative to going to the library. They commented that the computer is quicker, neater and makes work look more 'professional' and more interesting, and they prefer writing on computer to hand-writing.

Overall, parents do not try to control or monitor what their children do on the computer, with a few exceptions where pupils are not allowed onto social networking websites. Two young people mentioned that parents monitor their late-night use and tell them to stop using the computer if it is late. One Year 10 pupil was told by a parent "not to go on porn and stuff". Several pupils have disabled Net-intelligence without their parents knowing, but others were not aware that this is possible. If they need help, pupils ask their parents or older siblings.

### *Benefits*

The best things (in order of frequency) that the pupils identified about internet access are:

- Instant messaging, as it is free compared with texting, making it possible to talk to people without using up phone credit
- Ease of access (eg checking email, playing games, doing homework).

Downsides commented on by pupils are:

- The use of Net-intelligence to restrict appropriate websites
- Parents' and pupils' concerns about viruses
- Staying up late on social networking sites and being less focused on homework
- Not going out as much
- Using the computer can be frustrating
- The need to monitor the use of the computer by younger siblings, who are not careful with it.

## Key messages

In general, the Home Access scheme is seen as a good idea, but it has generated concerns for some teachers (and parents) regarding equity and value for money. It appears to have had limited impact on the work of teachers and pupils to date. However, the Home Access programme seems to be contributing to an increasing impetus within the school to design the VLE.

The school has targeted information to a select audience – parents with children taking up free school meals – rather than informing all parents about the scheme. This appears to be underpinned by a level of discomfort about the eligibility criteria and the possibility of a negative parental response. The school has received limited feedback from the local authority regarding take-up of the Home Access scheme, and also little feedback from beneficiary families. As a result, there is limited knowledge about the take-up in the school. This makes it difficult to see how the Home Access scheme can be used to remove the barrier to setting internet-based homework, which continues to be a concern for teachers.

Homework continues to be primarily a paper-based activity within the school, with little use of project work requiring the internet. Home access is not seen to have produced changes in how pupils work (eg increasing project-based work and independent learning), and while benefits were identified, they are rather limited. Pupils' comments suggest there are a few pockets of innovation, and that the social aspects of the scheme are engaging pupils with digital technologies for communication.

Parental concerns appear to be low, and where there is concern it is focused on the amount of usage and on inappropriate content. The ability to disable or adapt Net-intelligence may be creating two tiers of pupil access to the internet. There have been some problems with broken kit, but most seem to have been resolved, despite difficulties and the time taken to do so.

Ownership of the kit does not seem to be linked strongly to ideas of rights and access, and the relationship between the Home Access scheme and the school's ICT strategy (eg the roll-out of UMPCs) is unclear.