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Llywodraeth Cymru
Welsh Government

Christine Chapman AM
Chair,
Children and Young
Peoples Committee
National Assembly for Wales

13 February 2012

Dear Chris,

I am writing with regard to the Children and Young People Committee's request for additional information as part of their inquiry into the implementation of the Learning and Skills (Wales) Measure 2009. You will recall that during our evidence session, on 26 January 2012, the Committee requested additional examples of the financial savings resulting from collaborative working and further information on the laptop pilot scheme.

I think that it is important to recognise that the main drivers for greater collaboration has been to ensure that all pupils have access to wider choice and that all schools and further education institutions are able to meet their responsibilities under the Measure. Money savings was never the main driver but greater collaboration does deliver better value for money and ensure better use of resources by reducing unnecessary duplication. However, the examples contained at Annex 1, which have been provided by 14-19 Learning Networks, demonstrate instances where collaboration is delivering financial savings for schools.

Secondly, the Committee has also requested information on the laptop pilot scheme. I have appended a note on the scheme at Annex 2.

I trust that the additional information provided is sufficient for your needs. However, should you require any further information then please do not hesitate to contact me.

Yours sincerely

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ANNEX 1

EXAMPLES OF WHERE GREATER COLLABORATION BETWEEN PROVIDERS IS DELIVERING FINANCIAL SAVINGS

1. Cross boarder collaboration between Ysgol y Preseli, in Pembrokeshire, and Ysgol Dyffryn Teifi, in Ceredigion, in the delivery of a joint course, is providing savings of £7,739 for each school.

   The schools have jointly appointed a teacher who works 0.5 in each school to deliver AS/A level Psychology and Sociology. The course was previously delivered as a video-conferencing option, which although cheaper to deliver, resulted in low pupil take-up and poor educational outcomes. Take-up rates have now increased and the first results under the new collaborative arrangements are due this summer.

2. The Dyffryn Clwyd Partnership comprises four 6th forms and two college sites who have come together to form a common timetable. The Partnership, by comparing data from the two years of the partnership with the situation in 2009-2010 before collaboration, has identified efficiency savings. The average class size has increased from 10.7 to 12.8; the number of classes with fewer than 10 learners has reduced by 36% (comparing 2009/10 with average of 2010/11 and 2011/12); participation has increased; and attainment at the L3 Threshold is up from 94.2 to 97%. The Partnership has reduced unnecessary duplication; for example the members of the Partnership previously ran three French AS/A level groups, while there is now one course delivered at a common centre; similarly two Welsh Second Language courses has reduced to one; and the same for Economics and PE.

   The Partnership estimates that each course reduction has resulted in savings of £8,000 per year, for AS, or £16,000 over a two-year period, for an A level. In addition, the collaboration has secured wider choice for pupils, who can now choose from around 60 courses, whereas previously, they only had access to around 20 course choices.

3. In Blaenau Gwent collaboration in the delivery of school based vocational courses at KS4 has resulted in savings of around £15,000. Courses, including level 2 Retail and Business Administration, NVQ Business French, level 2 Travel and Tourism and Performing Arts L2 Diploma and Certificate were included as pilot courses in Blaenau Gwent's curriculum offer for 2011/12. The initial cost of the pilots was over £20,000. The authority's Quality Assurance and Partnership Exchange returns indicated that the majority of learners undertaking the courses of study were from the base school, with only a minority from other schools.

   The authority devised a strategy whereby they discontinued the wholesale funding of the courses in favour of providing the base school with £300, plus examination fees, for each learner they provided learning to from other schools. As a result, the number of learners from non-base schools has increased and initial feed back from schools and

from learner voice surveys have been encouraging. The new strategy has realised a cost saving of around £15,000 with no dilution in the collaborative offer. The strategy has been fundamental in enabling the Network to absorb the reduction in grant funding for 2012-13.

4. Four schools in North Wales, Ysgol Glan Clwyd, Ysgol Maes Garmon, Creuddyn and Dyffryn Conwy all had pupils studying GCSE Spanish, who wished to progress to a post-16 Level 3 Qualification. However, the number of pupils who wished to follow a course in the individual schools was low, ranging between two and six pupils. It was impractical, therefore, to deliver a course in the individual schools but feasible to deliver the course across the schools by video conferencing. Discussions were held with Coleg Meirion Dwyfor and arrangements were made to use video conferencing to deliver the course to two of the schools at the same time i.e Dyffryn Conwy and Creuddyn in one session and Glan Clwyd and Maes Garmon in another session. The course is now being delivered successfully. The North Wales Welsh Medium Forum gave a £5k contribution towards the costs of delivering the course from its revenue grant and the schools arranged one hours contact time to supplement the video conferencing sessions. By delivering the course in this way not only did it secure its delivery, it also provided a more cost effective delivery model than trying to deliver four courses, one at each school.

5. A L3 course in Public Services is also being delivered at Morgan Llwyd for pupils from Morgan Llwyd and Maes Garmon. At present there are 17 students in year 13 and 12 in year 12. The course is delivered by a member of staff at Morgan Llwyd with a Welsh speaking tutor coming to the school from Yale College to deliver some elements of the course. It is envisaged that any student attending Yale College who wishes to study the course though the medium of welsh will be able to join the course from next September. Again the Forum has used some funding to support the delivery of this course.

6. In Powys, the local authorities Schools Service has been working with the senior management at seven schools in the South of the County, and Coleg Powys, to improve the efficiency of the delivery of Post 16 provision at the same time as increasing the range of subjects offered to the learners.

   The work commenced at the end of the 2009-10 School year with an initial implementation date of 1 September 2011 for those learners commencing year 12 at that date.

   A detailed analysis of the provision offered across Powys in the academic year 2009-10, the funding delivered through the National Planning and Funding System (NPFS) and the full direct cost of delivering the provision was undertaken. This analysis showed that the post-16 provision was costing between £800k and £900k per annum more than the authority was receiving through the NPFS mechanism.

The curriculum offer for South Powys year 12 students from September 2011 is based on each of the six schools providing a common core of 9 / 10 popular subjects, with the remaining subjects within the offer being offered from a reduced number of sites. This revised offer has reduced the number of courses being run across the area from 127 in 2010/11 to 99 for 2011/12, while the improved collaborative arrangements have allowed all learners to have access to the required minimum of 30 subjects. The reduction of 28 courses from the start of the 2011/12 academic year has resulted in a financial efficiency saving of approximately £300,000. This efficiency will increase to £600,000 in the 2012/13 academic year when the agreed curriculum is extended to year 13 in September of this year.

Following the success of the joint planning and delivery system in the South the authority has commenced discussions with schools in the North of the county. It is anticipated that the adoption of a similar planning system will result in similar financial saving efficiencies being achieved.

7. In Ceredigion, a cross-boundary partnership, Trisgell, between Ygsol Gyfun Gymunedol Penweddig, Ceredigion and Ysgol Bro Ddyfi, Powys, is developing courses and expanding the number of courses at Key Stage 4 and post-16. The main objectives of the partnership are to share resources and teaching staff in order to expand the choices available to learners at both schools, and to provide training and professional development opportunities for specialist staff. It also aims to prioritise Welsh-medium and bilingual education, ensure the sustainability, quality and range of courses available across the partnership and provide relevant and engaging courses for learners.

8. Also in Ceredigion, two schools and a further education institution, Ysgol Emlyn, Ysgol Aberteifi and Coleg Ceredigion have come together to form the BECA partnership. The Partnership was formed through the creation of a memorandum of agreement, signed by the partners in May 2011. The current agreement for the delivery of post-16 provision has been projected through to September 2014. Each of the three partner institutions offers a range of courses to the other partners and the aim is to increase the range of courses offered through this arrangement.

   The current delivery model is the partnerships first attempt at designing a partnership model and will be the starting point for future discussions, at the BECA management and school levels.

9. The Committee might also find it helpful to receive additional information about the Bryn Tawe – Gwyr Partnership, which was highlighted in our previous evidence to the Committee. You will recall that the schools have estimated that, as a result of delivering the majority of their post-16 provision collaboratively, they have each made estimated savings of around £83,000, per annum.

The schools have developed a common calendar, with identical Inset days, PSE days and common timetabling for their 6th forms. The schools have also aligned their start and finish times and extended their morning break to accommodate travelling between their sites. Where the combined number of pupils from the schools choosing a particular course is less than 24 pupils, it is run as a shared course at one school. Where a subject attracts combined pupil numbers of 24 or more the course is run at each school.

Following a successful first year, collaborative provision was expanded. While school minibuses had been used during the first year, for the second year a bus service was contracted to transfer the pupils. Where there are less than eight pupils being transferred taxis are used. The Heads of 6th form for both schools work closely to monitor pupils and pass on any concerns. Pupils are very positive about the collaborative provision and travelling for a lesson from one school to another has become the norm.

Three courses in year 12 are also being offered in collaboration with Ysgol Gyfun Ystalyfera.

The schools have estimated that the travel costs for each school were around £17,000 last year. The schools offered 34 courses at post-16, 20 of which were offered collaboratively. The estimated costs of running each course (teachers salary and use of facilities) was £10,000; so if these 20 courses were run individually at each school the costs to each school would have been around £200,000 (20x£10,000). Given that the costs are shared each school's costs are only £100,000 for delivery and £17,000 for travel – giving a potential of £83,000 to each school. Only half of these costs are being incurred via the partnership model, giving each school a potential saving of £83,000 (£100,000 - £17,000 travel costs).

10. Flintshire Network has provided an example of where collaboration has enabled them to expand existing provision to meet the requirements of the Measure within the available resources. Without collaborating the schools would not have been able to meet the requirements of the Measure as they would not have had sufficient financial resources.

    The Deeside Consortium involves four schools in delivering post-16 provision. All four schools offer a common curriculum and also work with two other schools to provide some courses collaboratively. The Network has commented that the only way it would be possible to ascertain whether or not this arrangement had resulted in savings would be to calculate the costs to each school of providing the courses individually – which would not be financially viable. For them, therefore, the main focus is on how collaboration is making wider choice possible rather than how it is making financial savings.

ONE WALES LAPTOPS PILOT – REVIEW

Introduction

The One Wales Laptops pilot provided 965 laptops and other portable devices for use by 1360 year 6 pupils in Communities First and Flying Start areas.
The average cost per device was £493.58 and the average supplementary cost per device (including wi-fi equipment, insurance and training) was £169.91.

The aim of the pilot was to give children from disadvantaged backgrounds the opportunity to use ICT for learning at home and at school which is enjoyed by their peers.

Aspects for evaluation were:

- achievement of the pilot's overall aims;
- achievement of the specific goals identified for each school project;
- embedding of practice in teaching and learning;
- drawing together lessons from the One Wales pilot and other projects; and
- case studies of good practice.

Background

The 2007 One Wales agreement included a commitment "to pilot the provision of laptops for children." The then Minister for Children, Education, Lifelong Learning and Skills announced in October 2008 that the pilot would provide laptops for up to 1,200 children in year 6 of primary schools located in Communities First and Flying Start areas. Funding for the pilot was £300,000 in year 1 and £400,000 in year 2.

Detailed guidelines for the pilot were drawn up in discussion with local authority ICT advisors and the UK elearning foundation.The guidelines for the project were also informed by a literature review of similar projects including early evaluation of Computers for Children in England and the Maine State laptops project. These highlighted the importance of:

- projects having a clear educational focus;
- projects being locally owned and developed;
- support for professional development; and
- starting with schools which were already confident users of technology.

The pilot was delivered through a network of projects developed by eligible schools which were nominated by the ADEW ICT regional consortia. To be eligible, schools should be located in a Communties First or Flying Start area;have a track record of effective use of ICT as evidenced by ICT Mark accreditation, Estyn assessment or progress measured through use of the Becta ICT Self Review Framework. Nominated schools were invited to develop local projects for the use of laptops to support one or more of the following educational objectives:

- improving literacy, numeracy and/or ICT skills
- increasing learner engagement
- improving boys' attainment
- extending opportunities for learning
- promoting inclusion
- promoting participation.

It was for schools to determine which of their pupils should be given access to laptops as well as the detailed project delivery arrangements. However, the project guidelines specified that:

- schools should have arrangements for ensuring that the children receiving laptops are those most likely to benefit (having regard to comments in the Chief Inspector's 2008-09 annual report about focussing on disadvantaged groups of children);

- laptops funded through the One Wales pilot would belong to the school (or the LEA if agreed locally) but children should have the opportunity to use them for learning at home and/or in community learning venues such as public libraries. Home or out of school use could include:

    access to learning software installed by the school or authority on the laptops;

    limited Internet access e.g. providing connections to school or authority learning platforms or agreed online educational resources *only*; or

    "normal" Internet access filtered through parental control software.

- children receiving laptops and their parents/carers should be provided with guidance on safe and appropriate use of the Internet. Parents/carers would be asked to sign a home use agreement.

- children whose first language is Welsh or English, and children with additional needs, should have equal opportunities to take part in projects supported through the pilot;

- schools could prioritise in-school use of the laptops during the first term of the project (summer 2009-10) whilst they developed appropriate teaching and learning resources and engaged with parents and carers on home use arrangements;

- schools could allow children to keep the One Wales laptops at the end of their project.

Project proposals were expected to include clear success criteria and expected outcomes, and indicate how schools would embed good practice into future teaching and learning.

Overview of Pilot Projects

The One Wales Laptops pilot supported laptop projects for pupils in 52 primary schools in Communities First and Flying Start areas across Wales. For the evaluation, each school was asked to submit an end of project report which set out:

- progress against the objectives set out in their original project proposal;
- how the laptops had been used to support learning at home;
- strengths and weaknesses of the methodologies and process employed; and
- future opportunities to embed good practice developed through the project.

Summaries of information provided in the individual project reports are attached at the **Annex** to this report in order to illustrate the range of activities and outcomes supported. These represent the "state of play" for each project at the end of the One Wales pilot on 31 March 2011. In many cases, schools were continuing activities beyond the pilot end date, which provides opportunity for further study (in particular of the embedding of good practice) in 2012.

Key features of the pilot projects:

- Schools used a **range of portable devices** in their projects – laptops, macbooks, netbooks and specialist "fizzbooks" combined in some cases with other digital devices such as cameras, kindles and ipod touches. In April 2010, Apple launched their highly successful ipad device and several schools requested permission to include this in the later stages of their projects. The OWLs project was not originally intended to include "smartphones" but these requests were approved on the basis that the new device had greater potential for replacing some types of laptop. Many of the ipad projects were still at an early stage at the project end date on 31 March 2011 and will be subject to further evaluation.

- The projects involved a range of **activities with the laptops**, including research, preparation of presentations, use of spreadsheet tools, spelling and maths software. Projects using Apple technology tended to have a stronger focus on creative and multimedia applications. One project focussed on the use of tools for emotional engagement learning. Ready accesses to devices for use across the curriculum and a strong sense of personal ownership of the devices were cited as strong factors in the success of project in terms of learner engagement.

- All projects reported **positive impacts on boys' learning**, especially for boys who were reluctant readers and writers and in terms of willingness to stay on task. Some projects made specific reference to benefits for children with **additional needs** – for instance where using the laptops to improve the presentation of their work enabled and encouraged children with additional needs to take part in activities with other learners as well as specific activities geared towards pupils with additional needs..

- A number of projects made good use of the laptops to support **family learning activities**, either in the school or through activities which pupils and parents

could use the laptops for at home. One authority opted to implement its pilot project through the family learning service rather than selected schools. Home/school projects were reported to be extremely beneficial for engaging parents in their children's learning, in particular for parents who had previously been hard to reach, and in some cases had a positive impact on attitudes to learning for all children in the family.

- Some projects provided opportunities for pupils to take part in activities beyond the school (eg Formula 1 Competition), for pupils to mentor other students (and teachers) in their use of ICT, and for pupils to develop teaching materials for use with younger children.

- Most projects involved a strong focus on **literacy and numeracy** and all schools reported improvements in pupil performance in these areas in addition to improved ICT skills. In many cases, improvements were identified based on teacher observation and some evidence was "early days" and anecdotal. However, a number of schools provided data on before/after pupil assessments eg results of reading tests, which showed very clear improvements during the project period.

- At the start of the project, **allowing children to take laptops home** was regarded as a key objective for the pilot. Many schools and authorities had strong reservations about this and for the most part devices were used in school only. However, some schools and authorities did allow pupils to take laptops home, putting measures in place to educate both parents and children about safe and responsible use and adopting a range of strategies towards securing devices and minimising the risk of children being exposed to harmful or inappropriate content on the Internet.

Issues

A number of issues and lessons learned were identified through planning, implementation and review of the pilot projects:

- **Loss or damage of laptops.** Authorities reported that their existing insurance arrangements did not cover loss or damage of school owned laptops which were taken off site. The Welsh Government arranged for participating schools to have access to insurance which did provide this cover which had been negotiated by the elearning foundation.

- **Access to Welsh language resources.** The Welsh Language Board provided free Welsh language software for installation on the One Wales laptops. The Welsh Government also funded a licence for a Welsh language grammar and spelling checker to be available to all participating schools.

- **Local authority support.** Funding for the pilot covered the costs of laptops and other equipment and workshops for participating schools. It did not cover costs of local authority support. The extent of local authority engagement with the pilot therefore varied. Some authorities approached the pilot as a collaborative

endeavour. Others engaged closely with schools on a one to one basis. In some cases, laptops were not purchased or distributed until late in the pilot and, in one authority, no expenditure on laptops was incurred within the eligible period.

- **Child Internet safety.** All authorities expressed concern about the risks of children (or family members) using school issued laptops to access harmful or inappropriate materials, and the liability to schools or authorities which might arise from these risks. In many cases, this risk was regarded as a serious impediment to pupils taking laptops home although other authorities allowed this. The Welsh Government arranged the provision of workshops with the UK elearning foundation in order to share experience on how these issues had been tackled in other projects and provided a template home use agreement. In many cases, schools and authorities continued to have strong reservations about the risks of allowing children to taking laptops home and the liabilities to which this might expose the school/authority.

- **Distribution of grant.** The guidelines for the project invited the ADEW ICT regional groups to nominate schools to take part in the project – funding for the project was distributed equally between the consortia as a 100% grant (no match funding requirement). In view of the limited scale of the pilot, it was recognised that projects would not necessarily involve schools in every authority within the consortia. In practice, however, each consortia opted to divide its share of grant equally between authorities and for each authority to nominate one or two schools.

- **Project management.** The Welsh Government team responsible for managing the OWLs project was relocated to Llandudno Junction in 2010. In practice, all but one member of the team ceased to be in post during this period, which was then followed by a recruitment moratorium whilst the Welsh Government responded to major cuts in public spending. The outgoing project manager visited all participating schools during Autumn term 2010 but subsequent monitoring was carried out by correspondence only in the form of updates on expenditure from local authorities and interim and final project reports from participating schools.

- **Evaluation.** Final project reports from schools varied significantly in terms of the amount of detail on the projects and the way in which outcomes had been evaluated locally. In some cases, this reflected delays in the implementation of laptops until the late stages of the pilot. In others, the evaluation provided was brief and appeared to be subjective – whereas other schools had carried out planned reviews of pupils attainment before/after the project and had surveyed teachers and pupils for their views. Proposals for embedding effective practice beyond the pilot project also varied in terms of detail and firm commitment.

OWLs in Context - Key Points from Literature Review

One objective for the OWLs project was to draw together lessons from the local pilot

projects with lessons from similar projects elsewhere in the UK and internationally. A literature search on laptop project was commissioned from the Welsh Government library in summer 2010, from which the following results were of particular interest.

- The UK government in 2009 launched the **Home Access grant programme** in order to provide vouchers for 270,000 low income families to purchase computers for home use. The programme was specifically aimed at families with a child aged between 7 and 14 who qualified for free school meals. The programme was initially run the British Educational Communications and Technology Agency (Becta) which has since been closed. The programme has since ended and been evaluated – the evaluation identified significant concerns about "substitution" as more than 50% of families receiving computers through the scheme already had at least one computer/device at home, 20% had at least two and 10% had three or more. Young people who had benefited from the project also provided mixed feedback on the extent to which they had used the Home Access computers for learning.

- Several studies have been carried out of the **Maine Learning Technology** initiative (early evaluation of this project was considered in drawing up the initial requirements of the One Wales Laptops project). It is generally recognised that a key element of that project is the substantial investment in professional development for teachers. Berry and Whintle (2009) reviewed the project in its seventh year in terms of its impact on academic achievement in science. Student assessment indicated higher levels of comprehension, retention and engagement among students who were asked to complete technology rich projects.

- Research into the **effects of computing at home** led to a number of different conclusions. A 2010 National Bureau of Economic Research study of students in North Carolina linked access to computing at home with small but persistent negative impacts on mathematics and reading. However, Fairlie, Beltran and Das (Home Computers and Educational Outcomes, 2010) reviewed data from the Current Population Survey and National Longitudinal Survey of Youth, and reported that teenagers with access to home computers were 6-8% more likely to graduate from high school than teenagers who did not have home computers, after controlling for individual, parental and family characteristics.

- "In-Class Laptop Use and its Effects on Student Learning" (Carrie B Fried, 2008) concluded that students who used **laptops in class** spent considerable time multitasking and the laptops posed a significant distraction to both users and fellow students – with the level of laptop use negatively related to several measures of student learning including overall course performance. "The Impact of 1:1 Laptop Use on Middle School Math and Science Standardized Test Scores ("Dunleavy, Heinecke, 2008) found significant improvements following a 1:1 laptops programme on science attainment, especially for boys, but no significant improvement for maths – suggesting that 1:1 technology was effective in certain conditions.

- A comparison of the Becta ICT Test Bed project (which "saturated" schools with technology) and an ESRC/EPSRC/DTi funded project researching **home school**

links in the South East found that access to portable technology could be used to help develop parental engagement – but that "simpler" tools such as websites and email also provided opportunities for "quick" wins, without presenting concerns in relation to the transportation of technology between home and school.

- "Home Computer Use and the Development of Human Capital" (NBER 2010) reviewed data on children in Romania who had received vouchers from a government programme to provide **computers for children in low income families**. The study showed that children who won a computer voucher had significantly lower grades in Maths, English and Romanian but had significantly higher scores in a test of computer skills and in self reported measures of computer fluency. Evaluating the Implementation Fidelity of Technology Immersion and its Relationship with Student Achievement (Shapley, Sheehan, Maloney, Caranikas-Walker, 2010) reviewed a pilot study in technology immersion for high needs middle schools. Teacher level implementation was found to be inconsistent, and unreliable as a predictor of student achievement. The strongest "implementation predictor" of achievement was students use of laptops outside school for homework and for **learning games**.

- Safe At Home (Charlene O'Hanlon) reviewed the experience of US schools in **securing 1:1 project laptops for use at home** using an "image management system", antivirus software and parental education.

- Other research found:

    - strong positive correlations with "Internet self-efficacy" and improved academic performance;

    - different "generational" perceptions of ICT – "baby boomers" regarded ICT as information and communication, their offspring and emerging generations regarded the same devices as entertainment and socialising;

    - some schools had terminated laptop projects following incidents with cheating, hacking and network security;

    - learners from lower income households had less opportunity to develop ICT skills and tended to be less confident in their use of ICT; but

    - increased access to laptop computers did not always lead to increased student engagement (when off task behaviours were assessed);

    - Internet access could have a negative impact for younger and poorer students but, in general, a small positive effect on test results for older students;

    - teachers use of computers or Internet as pedagogical tools had little or no effect on student test results in some studies – others found that teachers who had personal laptops in school were more positive towards the use of ICT in teaching and learning.

Conclusions

The One Wales Laptops pilot provided further strong evidence of the positive impact which ICT can have in primary schools, in particular when the technology is portable, can be used across the curriculum and for a range of activities. Feedback from the children who were involved in the project was consistently positive and teachers also reported improvements in their confidence and enthusiasm for ICT (sometimes as the result of mentoring from their own pupils).

Some caution needs to be exercised about the evaluation, however, where evidence was primarily anecdotal and based on how teachers and pupils "felt" about the use of laptops rather than measurable evidence on outcomes. Research findings from other projects suggest that the use of laptops and similar devices in school and at home can have both positive and negative effects. However, the design of the One Wales pilot was informed by earlier research findings to this effect, including research by the Child Poverty Action Group which had stressed how the benefits of access to technology at home did not automatically outweigh the disadvantages of a less affluent home environment, or lack of access to structured social activities.

The initial research had stressed the importance of introducing laptops through projects with a strong educational focus which was understood and "owned" by participants. Also, on selecting schools to participate this project which were already effective users of ICT – to ensure that introducing laptops would magnify the positive aspects of school life rather than becoming a source of classroom disruption. Reports on the school projects at 31 March 2011 suggest that this approach was successful – and that the success extended into those projects which allowed children to continue their educational activities on laptops at home.

It was not clear from the project evaluation whether the pilot introduced a "substitution" effect along the lines of the England Home Access scheme (i.e. did children already have access to computers at home). One authority conducted a survey of participating children and established that they did all have access to computers at home and that the children wanted to be able to use their own computers for their homework. The organisers of the family learning service project, however, observed that children were strongly encouraging their parents/carers and other family members to sign up for the project so that they could have a laptop at home.

It is recognised that having a computer in the home does not automatically mean that children have access to that computer in order to do homework or take part in online activties with their classmates. One positive "side effect" of the project was the increased recognition from some parents of the value of their children being able to use computers at home for their schoolwork.

It was disappointing, however, to note that in one school were children were allowed to take laptops home, a small number of children were unable to do so because of lack of confidence in their families. This highlights the extreme importance of supporting the most vulnerable children and ensuring that they have the same opportunities in education as their peers.

The key challenge for the project was undoubtably home access and this points to the

need for more central guidance and support on safe and responsible use of the Internet. However, several schools were able to deal with this challenge and there is a clear case for greater sharing of knowledge and experience between schools and authorities on this issue. Some authorities and schools approached the pilot as a regional enterprise with shared activities including staff training in the use of ipads. Individual school reports made reference to exchange visits with other participating schools and to themselves taking on a mentoring or cascading role within their authority area. However, there was a missed opportunity to develop a pan-Wales OWLs community through the use of an NGfL Cymru forum and support from the JISC Regional Support Centre in Wales, as was offered at the start of the project. The report from the Minister's Task and Finish Group on Digital Learning is likely to be relevant in this context, as well as on wider issues related to the use of ICT in teaching and learning.

No school project report identified any actual examples of loss/damage or inappropriate use (although it remains possible this occurred).

Arrangements are in hand for visits to OWLs participant schools to be included in an upcoming Estyn review, which will provide information on the embedding of good practice after the pilot ended.

ICT Strategy Branch, DfES

ANNEX: INFORMATION FROM SCHOOL PROJECT REPORTS

ANGLESEY	**Ysgol Llanfawr** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Yes – evidenced through Suffolk test and teacher assessment
Increasing learner engagement	Yes - boys' attitude to work changed
Improving boys' attainment	Yes – boys' performance improved in numeracy and literacy
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Laptops not sent home due to concerns about child safety.
Methodology	Strengths: use of creative media, collaborative working across authorities, support and training for teachers, innovative use of hand held technologies, pupil and teacher enthusiasm. Areas for development: creation of Welsh medium Apps and a bank of resources for ipad use in the classroom, further guidance on child safety/home use.
Embedding practice	Sharing of lessons learned with the increasing number of schools interested in investing in ipads. Opportunity for cluster courses for Anglesey and Gwynedd schools.

ANGLESEY	**Ysgol Tywyn** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Language and ICT skills improved especially through use of multimedia
Increasing learner engagement	Pupils more willing to work in pairs and groups
Improving boys' attainment	Boys worked well with Moviemaker and Comic Life
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	

Learning at home	Laptops not sent home due to concerns about child safety.
Methodology	Strengths: use of creative media, collaborative working across authorities, support and training for teachers, innovative use of hand held technologies, pupil and teacher enthusiasm. Areas for development: creation of Welsh medium Apps and a bank of resources for ipad use in the classroom, further guidance on child safety/home use.
Embedding practice	Sharing of lessons learned with the increasing number of schools interested in investing in ipads. Opportunity for cluster courses for Anglesey and Gwynedd schools.

ANGLESEY	**Ysgol Y Graig** ipads (whole class) **Ysgol Amlwch** ipads (small group)
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Year 2 project ipads distributed near end of project period in order to maximise lessons from phase 1 project. Further evaluation required in 2012.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	
Methodology	Regional training days for staff organised on educational use of ipads.
Embedding practice	Sharing of lessons learned with the increasing number of schools interested in investing in ipads. Opportunity for cluster courses for Anglesey and Gwynedd schools.

BLAENAU GWENT	**Deighton Primary** **Rhos y Fedwen** Laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Evaluation from phase 1 project in Deighton Primary showed that: 67% year 6 pupils attained English level 4 in 2011 compared to 30% in 2010.

	75% year 6 pupils attained Maths level 5 in 2011 compared to 51% in 2010.
Increasing learner engagement	Yes – direct impact on pupils' motivation and self esteem.
Improving boys' attainment	
Extending opportunities for learning	Extended range of activities for developing key skills including use of learning platform, blogs and forums. Rhos y Fedwen planning to use laptops in PACT sessions to establish online community.
Promoting inclusion	
Promoting participation	
Learning at home	Both schools planning to send laptops home but had not done so within life of project.
Methodology	2mbps broadband connectivity insufficient when 30 pupils tried to connect at same time.
Embedding practice	Participation has enabled schools to review teaching methods and curriculum design and influenced plans for future use of ICT (i.e. mobile classrooms rather than ICT suite).

BRIDGEND	**Betws Primary School** Laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Project benefited children in a number different ways including pupils ICT skills, learner engagement, use of ICT across the curriculum, boys attainment and inclusion.
Increasing learner engagement	Yes
Improving boys' attainment	Yes
Extending opportunities for learning	Pupils extended their learning opportunities through a range of different programmes particularly the use of CAD.
Promoting inclusion	Yes. ALN pupils more willing to participate in research activities and use ICT in web quest.
Promoting participation	
Learning at home	Backbone of project – home school agreements drawn up and implemented throughout year 6. Pupils and parents attended safety lessons at the start of the project in order to understand their role and responsibilities. The school invested in home learning through Espresso Home Link. Also used school website to deliver VLE links.
Methodology	Concerns re. planned obsolescence of laptops and financial sustainability.
Embedding practice	Future opportunities for embedding practice included: rotating laptops on termly basis through year groups,

	roll out philosophy of project to other staff, build on use of VLE and home learning platforms, more involvement of wider community e.g. offering basic skills support to parents and community members.

CAERPHILLY	**Park Primary School Bargoed** laptops, ipads and kindles
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Kindle club established to improve attitudes to reading. Mix of devices increased enthusiasm for use of ICT in schools.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	Project focussed on extending learning opportunities with use of online software such as Purple Mash for children to use in school and at home.
Promoting inclusion	
Promoting participation	
Learning at home	Parents introduced to software which children were able to use at home.
Methodology	
Embedding practice	

CARDIFF	**Tredegarville Primary School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	OWLs project supported 14 children who had not achieved functional literacy, 8 of whom had were subsequently assessed as having achieved functional literacy in May 2011.
Increasing learner engagement	Staff observed improvements in learner engagement and behaviour.
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	Project focussed on disadvantaged children and engagement with parents.
Promoting participation	Improved participation in parent and children reading/writing workshops.
Learning at home	Y6 pupils emailed work from home to laptops. Y5 pupils have been using the laptops (including education on responsible use) with a view to introducing a home loan scheme after the pilot.
Methodology	School would like further guidance on home use. Use of spelling software enabled teacher to create differentiated spelling programmes for each child and

	maths software Tutpup and Mathletics encouraged children to participate/compete in maths activities. Use of laptops also encouraged children to work together and enabled teachers to interact more freely with the class and assess progress.
Embedding practice	Project being extended to pupils in years 3 and 4.

CARDIFF	**Mount Stuart Primary School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	68% of Y6 pupils achieved functional literacy reading ages of over 9 years and 6 months. 81% of Y6 boys achieved functional literacy. 92% of Y6 boys achieved level 4 in English.
Increasing learner engagement	Positive impact on pupil behaviour and engagement.
Improving boys' attainment	Positive impact on behaviour and engagement especially noticeable among boys.
Extending opportunities for learning	Project resources plus wifi enabled ICT to be fully integrated into the classroom.
Promoting inclusion	
Promoting participation	
Learning at home	School concerned about safeguarding implications of children using school laptops for Internet at home.
Methodology	
Embedding practice	School decided to rethink its vision for ICT in 2011-12.

CARMARTHENSHIRE	**Richmond Park Primary School, Carmarthen** macbooks
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	
Increasing learner engagement	Team success in Formula 1 competition for primary schools – innovative thinking award. Children took ownership of the project and made presentations about their work to the judges in each round of the competition.
Improving boys' attainment	
Extending opportunities for learning	Children participated in Formula 1 competition for Primary School children with 3 teams passing successive "heats" and 1 team winning an award for innovative thinking in the London final. Macbooks were used to produce multimedia activities including use of iWeb, iMovie, Garage Band and Comic Life.
Promoting inclusion	Pupils with additional needs found the work interesting, learned from each other and worked

	alongside their peers. EAL pupil helped complete voice over for a Christmas story iMovie.
Promoting participation	Pupils provided mature and positive feedback in class on each others musical compositions.
Learning at home	Pupils did not take macbooks home during the project period but this was planned to start in summer/autumn 2011.
Methodology	Children shown exceptional examples to aspire to. Children giving purposeful tasks within their school eg presentation for Christmas concert, school magazine, preparing visual resources for infant classes. Children able to use the project to present and develop their own interests.
Embedding practice	Children were taught new ICT skills in small groups then cascaded these skills to larger groups – this practice worked well and is being retained by school.

CARMARTHENSHIRE	**Carway Primary School, Kidwelly** macbooks
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Basic skills improved dramatically – every member of class can use ICT confidently.
Increasing learner engagement	Significant rise in learner attendance and punctuality.
Improving boys' attainment	
Extending opportunities for learning	Access to laptops and frequency of use provided opportunities for quicker development.
Promoting inclusion	Less able pupils showed an aptitude to learn and be part of lessons. They were able to record work instead of writing.
Promoting participation	
Learning at home	Children took macbooks home and were able to share and discuss their work with their parents.
Methodology	Each pupil in Y6 had access to macbooks. Key project staff received one day training with additional support from LA staff (visits and helpdesk). Access to macbooks made it easier to teach whole class new skills as they could all follow and try out the new skills at the same time. Working in pairs also helped pupils learn from each other.
Embedding practice	Opportunities to use software in association with different forms of communicating eg creating ringtones for mobiles with garageband, sharing presentation and

	work via iWeb.

CARMARTHENSHIRE	**Maes y Morfa** macbooks
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Project cohort achieved a CSI (literacy/numeracy measure) of 88% and demonstrated clear improvement in ICT skills.
Increasing learner engagement	Development profile for each pupil showed improvement in several measures of emotional engagement. Pupils were motivated to bring work they had completed at home to share with the class.
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	School set task and finish projects for pupils to complete with parents at home. Also provided direction to websites to support homework tasks and revision exercises.
Methodology	As above. School used an emotional engagement-learning tool (Boxall profile) as well as interviewing and inviting feedback from parents on children's attitudes to learning.
Embedding practice	Pupils to teach ICT skills to other pupils on fieldtrip to Barafundle Bay. School rolling out own school resources from September 2011 in order to give similar opportunities to a wider range of pupils. Will focus strongly on involving families in future projects to create a Family Digital Curriculum project. Highlighted impact of laptops on pupils' curiosity to learn and opportunities for securing greater parental involvement with toolkits such as Family Learning Signature.

CEREDIGION	**Ysgol Llwyn-yr-Eos** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	School able to promote ICT skills in all lessons instead of taking pupils out of class to IT suite. Able to use sites for maths lessons, develop e-reading

	during RWI synthetic phonics lessons and introduce children to emailing, skype and other forms of electronic communication.
Increasing learner engagement	Children have developed a system for removing and storing laptops in order to avoid wasting time at start and end of lessons.
Improving boys' attainment	
Extending opportunities for learning	Children producing a far higher standard of homework as they are all completing tasks on a level playing field.
Promoting inclusion	OWLS project extended to "other pupils of similar age" in order to include the high number of pupils with additional needs throughout the school.
Promoting participation	
Learning at home	Laptops remained in schools for the duration of the project due to concerns over pupil safety and local connectivity issues. Parent/carer engagement pursued through in school activities.
Methodology	Focus on improving literacy, numeracy and ICT skills through rich multimedia activities in order to encourage independent, paired and group activities. Establishment of an ICT club for parents/carers and a film club for pupils and parents/carers to produce films and animations for annual Film Festival. Delayed implementation due to difficulties with suppliers and initial teething problems with wifi connection.
Embedding Practice	Pupil ownership of laptops has positive impact on motivation, enthusiasm and responsibility – can be built on when other devices introduced to the school.

CONWY	**Ysgol Morfa Rhianedd, Llandudno** **Ysgol Ffordd Dyffryn** macbooks and ipod nanos
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Teachers survey reported positive effect on children's attitudes and achievements espeically in literarcy and substantial improvements in ICT skills (Apple). ICT also used in maths and across the curriculum. 80% pupils reported that using the laptops had improved their computer skills. Just under 40% felt that the laptops had improved their maths skills and just over 40% felt that the laptops had improved their writing skills.
Increasing learner engagement	Teachers survey reported enthusiastic and positive response from leanrners. Children all on task when using laptops.

Improving boys' attainment	Boys enjoyed using the equipment and learning through this. Pupils survey reported that boys particularly enjoyed using the macbooks for "doing work", going on the Internet, animations, creating advertisements, videos and comics. (Girls enjoyed the same things but also enjoyed using the laptops for writing, music, language lessons and presentations.) Around 45% pupils stated that access to laptops had helped them see what was excellent work.
Extending opportunities for learning	Website to showcase work and school home link. Promoted independent learning. 40% pupils stated that the laptops had helped them with their homework. Around 60% pupils stated that using the laptops had helped them think for themselves, convey their thoughts and work better, .
Promoting inclusion	Teachers survey reported that children with ALN had more self confidence in their work and were producing more attractive work and getting help with spelling. Nearly 70% pupils stated the laptop project had helped them work better with other children.
Promoting participation	80% pupils said using the laptops made them enjoy showing their work to others and around 50% pupils said using the laptops made them want to come to school.
Learning at home	Laptops were not sent home during the project period due to concerns over liability (in relation to safeguarding) and child safety.
Methodology	Use of iLife '09, iWork and Comic Life, Write On Line and Mobile Me for activities including animation, podcasting, science investigations, research and different kids of writing.
Embedding practice	Proposal to deliver full report to ICT coordinators conference in March 2012.

CONWY	**Ysgol Tan y Marian, Colwyn Bay** Ipads
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Year 2 project ipads distributed near end of project period in order to maximise lessons from phase 1 project. Further evaluation required in 2012.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	

Learning at home	Laptops were not sent home during the project period due to concerns over liability (in relation to safeguarding) and child safety.
Methodology	Collaborative working between North Wales authorities. Support and training for teachers. Use of handheld technologies.
Embedding practice	

DENBIGHSHIRE	**Ysgol Emanuel** Laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Laptops used for media project in literacy based around the production of a Dragons Den style pitch and advertisement for a product chosen by pupils.
Increasing learner engagement	
Improving boys' attainment	Priority was boys' literacy and motivation with a particular focus on less able boys.
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Laptops were not sent home because of concerns over liability in the event of inappropriate Internet use in the home and risks of equipment theft.
Methodology	School would have liked to be involved in initial selection of equipment.
Embedding practice	

DENBIGHSHIRE	**Christchurch School, Rhyl** ipads
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	ipads distributed towards end of project period in order to maximise lessons from phase 1 projects and to be used in school until at least July 2012. Further evaluation required in 2012.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Laptops were not sent home because of concerns over liability in the event of inappropriate Internet use in the home and risks of equipment theft.
Methodology	Regional training days for staff organised on

	educational use of ipads.
Embedding practice	Proposal to share lessons learned with other schools in Rhyl.

FLINTSHIRE	**Ysgol Bryn Pennant** ipads
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	28% percent of year 6 pupils made gains of 2 or more years in standardised reading tests. Four ALN pupils made gains of 2 years in the Neale test. Reluctant readers were encouraged to engage with text and present their work with confidence. Year 5 pupils whose work was giving cause for concern showed great improvement in their reading and written work. Staff noted considerable improvements in pupil's literacy and information handling skills which they attributed to having access to a wider range and style of reading materials on the Internet and to improved opportunities to edit, present and evaluate ideas (including use of multimedia). Quality of vocabulary and sentence formulation improved. Use of voice recorders, digital cameras and digital video helped pupils evaluate their performance in Welsh, drama and in movement promoted/supported oracy, thinking and communication.
Increasing learner engagement	Pupils benefited from increased independence in planning, designing and evaluating tasks and took ownership of their learning. Pupils had high expectations of themselves and their standard of work and were constantly striving to improve. Pupil questionnaire responses revealed that pupils had enjoyed reading and writing more as well as a range of new activities.
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	Laptops offered opportunities for all pupils to produce work of high presentational standard regarless of ability. Many activities had an open ended element with a range of choices catering (and providing challenge) to differing abilities. Access to ICT helped pupils work at their own pace. Pupils integrated from the Nurture group took pride in having a laptop which they used in a responsible manner.
Promoting participation	Pupils were given the opportunities to work in pairs

	and groups or individually. They made use of their own expertise to help each other and to act as advisors.
Learning at home	Laptops were not sent home because of concerns over liability in the event of inappropriate Internet use in the home and risks of equipment theft. Kit also considered too heavy and awkward for children to carry home. Survey of pupil's home access revealed that all pupils in the class had access to computers and to the Internet at home. Headteacher and class teacher reported that use of laptops in schools strongly influenced how pupils used their own computers. Pupils were keen to complete homework assignments using their home computers.
Methodology	Regional training days for staff organised on educational use of ipads. Write OnLine was not used in the project as even pupils with additional needs felt confident to use software such as Word, Powerpoint and Logo without the additional level of support.
Embedding practice	Staff involved have expressed a wish to improve their own skills in ICT and use of ICT in the classroom, following the example of the pupils.

FLINTSHIRE	**Ysgol Bryn Deva, Connah's Quay** Ipads
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	ipads distributed towards end of project period in order to maximise lessons from phase 1 projects and to be used in school until at least July 2012. Further evaluation required in 2012.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	
Methodology	Regional training days for staff organised on educational use of ipads.
Embedding practice	

GWYNEDD	**Ysgol Cymerau**

Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Developed pupils' communication skills across curriculum, literacy skills through recording of oral workk reading strategies through use of information on the Internet. Developed pupils' numeracy skills through use of ICT to gather and record information, interpret and present findings. Developed ICT skills through regular access to ICT tools in the classroom.
Increasing learner engagement	Pupils were enthusiastic and keen to develop new skills. Laptops promoted independent learning.
Improving boys' attainment	Project generated interest amongst boys in particular.
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Laptops not sent home due to concerns about child safety. Proposals for developing home access scheme with ipads with Welsh Government guidance.
Methodology	Strengths: use of creative media, collaborative working across authorities, support and training for teachers, innovative use of hand held technologies, pupil and teacher enthusiasm. Areas for development: creation of Welsh medium Apps and a bank of resources for ipad use in the classroom, further guidance on child safety/home use.
Embedding practice	Sharing of lessons learned with the increasing number of schools interested in investing in ipads. Opportunity for cluster courses for Anglesey and Gwynedd schools.

GWYNEDD	**Ysgol Maesincla**
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Improved ICT skills - children able to discuss their tasks, discover and present information from several sources. School observed improvements in reading skills.
Increasing learner engagement	School observed pupils planning work in advance, and reflecting on tasks with peers.
Improving boys' attainment	Boys continued on task for longer than usual with the use of laptops. Formation of joint tasks between boys and girls.

Extending opportunities for learning	
Promoting inclusion	Later stages of project to include matching of phase 1 participants with children who are included in literacy lessons in the morning but pulled out of mainstream lessons in the afternoon due to behavioural and learning difficulties.
Promoting participation	
Learning at home	Laptops not sent home due to concerns about child safety. Proposals for developing home access scheme with ipads with Welsh Government guidance.
Methodology	Strengths: use of creative media, collaborative working across authorities, support and training for teachers, innovative use of hand held technologies, pupil and teacher enthusiasm. Areas for development: creation of Welsh medium Apps and a bank of resources for ipad use in the classroom, further guidance on child safety/home use.
Embedding practice	Sharing of lessons learned with the increasing number of schools interested in investing in ipads. Opportunity for cluster courses for Anglesey and Gwynedd schools.

GWYNEDD	**Ysgol Y Traeth** ipads (whole class) **Ysgol Maenofferen** ipads (small group)
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Year 2 project ipads distributed towards end of project period in order to maximise lessons from phase 1 projects and to be used in school until at least July 2012. Further evaluation required in 2012.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	
Methodology	Regional training days for staff organised on educational use of ipads.
Embedding practice	

MERTHYR TYDFIL	**Ysgol Gynradd Coed y Dderwen** laptops
Educational Objectives	
Improving literacy,	Project supported numeracy through activities with

numeracy and/or ICT skills	data handling spreadsheets, graphs, pie charts and analysing data. Project supported literacy through use of powerpoint, email to other schools, Moodle, Google docs, Microsft publisher and use of photo and video software such as Photostory and flipshare.
Increasing learner engagement	Learner engagement "vastly improved" with all pupils producing quality work and the quantity of work produced by pupils increasing.
Improving boys' attainment	Boys attainment improved in terms of quantify of work and some aspects of language.
Extending opportunities for learning	Laptops enabled ICT to be used thorughout the curriculum and especially the more research intensive IPC curriculum.
Promoting inclusion	All pupils able to use laptops. Project provided support for EAL pupils with regard to translation of simple instructions and early literacy games. ALN had access to specific software to meet their needs eg WordShark for pupil with dyslexia.
Promoting participation	All pupils keen to use laptops and laptops used in a variety of situations e.g. class assemblies, school councillor presentations to governors.
Learning at home	Authority planning to purchase dongles for home Internet access but issues regarding (1) need for schools to fund these beyond project period and (2) concerns about child safety.
Methodology	Strengths: use of laptops promotes paired and independent working, self assessment and peer assessment (using Google docs and Moodle). Pupils enjoyment and willingness to work. Weaknesses: initially, laptops charging due to delay in obtaining charging unit.
Embedding practice	

MONMOUTHSHIRE	**Deri View Primary School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	All pupils had the opportunity to improve ICT and literacy skills. Development of literacy skills included use of Internet for research on cross curricular topics and reading software used by individual pupils to improve reading skills (particularly boys).
Increasing learner engagement	Home/School project had 100% attendance over 4 weeks. Improved learner engagement in thematic lessons and improved skills across the curriculum.
Improving boys' attainment	80% of pupils attending evening sessions were boys.
Extending opportunities	Laptops facilitated a wide range of learning

for learning	opportunities.
Promoting inclusion	Home/School project promoted parent participation and was well received.
Promoting participation	Deri View has run previous Family Learning schemes but this project was more successful in engaging parents of KS2 pupils. Parents encouraged pupils to carry out further research and to complete maths and science tasks at home.
Learning at home	Pupils were each given a laptop computer to take home to follow up the work in the classroom through the project period. Resources were also downloaded onto memory sticks so that pupils could continue their work at the end of the project period.
Methodology	In addition to classroom use, laptops were used in a spring term Home/School project which involved pupils and parents working together on ICT, literacy, maths and science skills development. Project Some concerns about Internet safety and need to educate parents to ensure pupils were appropriately supervised when using Internet at home. Some pupils (often from most challenging background) didn't access the Home/School project due to lack of confidence in their parents.
Embedding practice	Continued use of laptops and reading software by Y5 and Y6 pupils. Development of Home/School project as model for future engagement with parents.

NEATH PORT TALBOT	**Croeserw Primary School** **Sandfields Primary School** netbooks
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Netbooks used to support literacy strategies including Talk/write Pie Corbett programme and rapid reading, and boys' engagement. Both schools considered that the netwooks provided a opportunity to develop pupils' ICT skills. Schools obtained benchmarking data including reading and spelling ages, typing speeds and prior knowledge of individual pupils' capability and reviewed similar data in March. Most pupils had made gains, many significant, to which netbook use was thought to contribute. Local authority ICT development officer ran initial, interim and closing workshops. Schools visited for monitoring and progress. Pupils interviewed during visits. Some outcomes were anecdotal and difficult to quantify.

Increasing learner engagement	Both schools felt that pupils engagement and responsibility had increased during the project.
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	Netbooks were used to demonstrate pupils' work during parental consultation sessions.
Learning at home	Schools were concerned about esafety and wanted to use the autumn and spring terms to address this with participating classes prior to using netbooks for home learning. Schools agreed to undertake a small staged pilot including meeting with parents, sending netbooks home without Internet access, use of 3G Dongle with embedded filtering and staff monitoring. Outcomes to be reviewed 2011-12.
Methodology	Authority reported that local responsibilty for project meant an appropriate focus on local issues and priorities, ensured equipment was compatible with local networks and allowed local authority to provide support via existing relationships. Home access concerns provided opportunity to develop and test new protocols. Working with e-confident schools (both have obtained ICT Mark) supported evaluation of the additional impact of the netbooks. Use of netbooks was not restricted to Y6 pupils as the schools had mixed classes including Y4 and Y5 pupils. Regional consortia had opted to access most pilot funding in year 2 of project - in practice this meant that netbooks were not given to schools until late in the pilot and this limited time for evaluation. Both schools are committed to continuing to work on the project aims including home access and there is scope for further evaluation in 2011-12.
Embedding practice	School projects to be developed into case studies for sharing with ICT consultative groups and secondary standards forum, and publication on NPT Learning Gateway. Teachers worked hard to integrate netbooks into most aspects of their planning and teaching and pilot schools are being challenged to consider best ways of using netbooks in future. Headteachers expressed concern about (financial) sustainability with one school considering the introduction of a leasing scheme for parents.

NEWPORT	**Somerton Primary School** **Alway Primary School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Digital storytelling project focusssed on literacy and ICT sklls with use of Mathletics to improve numeracy. Use of digital storytelling was a late change to the original planned project approach. Early indications were that it had positive impact on pupils' ICT skills through use of multimedia; evaluation of impact on literacy was scheduled for July 2011 (post pilot). All participating pupils increased assessed numeracy scores during the school year 2010-11, some by 100%. Percentage of pupils expected to achieve level 4 and above at end of Y6 rose from 71% to 78% in Somerton Primary and from 62% to 78% in Alway Primary. Programme saw a significant increase in speed of pupils' mental recall. ICT skills and confidence improved through daily use of laptops.
Increasing learner engagement	Competitive element of Mathletics led to engaged enthusiastic learners who were motivated to continue learning at home. Evidence of far higher levels of engagement from the lower achievers.
Improving boys' attainment	Staff in both schools observed that boys in particular were more engaged with mathematics than previously and more willing to take part in maths activities.
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Laptops used in school following as the authority was unable to develop a technical filtering/access solution which would allow laptops to be safely used for learning at home despite significant effort.
Methodology	
Embedding practice	Use of Mathletics website being rolled out across all primary schools in Newport.

PEMBROKESHIRE	**Ysgol Gelli Aur Golden Frove** **Pennar Community School** **St Mary's V.R.C. School** macbooks, ipads, ipod touch
Educational Objectives	
Improving literacy,	Project started in year 2 of pilot so evaluation in early

numeracy and/or ICT skills	stages. Schools reported a significant improvement in pupils' ICT skills in a short period of time. ipads purchased towards end of project expected to have significant impact on literacy, in particular for boys. Positive comments from Estyn about use of laptops during school inspection.
Increasing learner engagement	Access to Apple creative tools made significant impact on pupils' willingness to engage in learning. Improved pupil confidence and self esteem. Improved parental engagement.
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Pupils shared work with parents on online personal area of Pembrokeshire portal. After school clubs established with parents and home access scheme planned for introduction in summer 2011. Further evaluation required.
Methodology	Development of creative literacy skills through use of Comic Life, Key Notes, Photobooth and iMovie and access to flip cameras. Comprehensive local authority training programme for staff including joint central training day, regulat twilight sessions and onsite classroom support. Collaborative working between the three schools e.g. pupil visits to support film making and share good practice. Success to date resulted in schools making further investment in ICT equipment and arrangement of learning visits with OWLs schools in neighbouring authorities to share good practice and discuss impact of sending laptops home.
Embedding practice	Continuing local authority support for schols and sharing of good practice via Pembrokeshire Portal and network groups. Exploring possibility of establishing a Professional Learning Community. Exchange visits planned with schools in neighbouring authorities and possibility of school partnerships.

POWYS	**Penrhos C.P. School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Pupils used higher order reading skills for skimming and scanning for research work across all curriculum areas. Pupils used ICT skills to develop electronic books for infant classes to help with their reading skills. Made powerpoint presentations to other pupils and school visitors on eco and healthy schools initiatives. Used Excel spreadsheets to analyse weekly spelling and tables results and prepare graphs for maths, science and geography work. During June 2010 to June 2011: 100% boys progressed in reading age by more than 2 years; 50% boys progressed by more than 3 years; 25% boys progressed by more than 4 years; 100% girls progressed in reading age by more than 1 year; 42% girls progressed by more than 2 years; 25% girls progressed by more than 3 years; 17% progressed by more than 4 years. 100% pupils with literacy difficulties progressed by more than 2 years; 75% of this group progressed by more than 3 years; 25% of this group progressed by more than 4 years. For mathematics standardised scores: 100% pupils progrees by at least 1 year; 42% progressed by more than 2 years; 25% progressed by more than 3 years; 17% progressed by more than 4 years.
Increasing learner engagement	
Improving boys' attainment	Boys and pupils with literacy difficulties benefited from the use of laptops as they were engaged and interested in a wider range of subjects, leading to improvement in overall attainment.
Extending opportunities for learning	Pupils commented that they enjoyed the independent learning opportunities which laptops provided.
Promoting inclusion	Laptops used in a mixed age class of 22 children and with 2 children in the Specialist Teaching Facility within the school. Laptops particularly benefited those with dyslexic tendencies and literacy problems.
Promoting participation	
Learning at home	Pupils used laptops to research and find information for termly projects at home, leading to 100% completion of projects in year. Pupils used the

	www.thinkuknow.co.uk Internet safety at home and to share information with parents.
Methodology	Project gave all pupils equal opportunity to learn using new technology. Some difficulties with use of the wireless network and Deep Freeze software.
Embedding practice	Proposals to extend work on mathematics following review of outcome data. Pupils to twin with school in Australia in 2011-12 using the Global Gateway project.

POWYS	**Ysgol Cynlais** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Observed improvements in ICT skills, writing across the curriculum.
Increasing learner engagement	Introduction of laptops improved attitudes to learning and behaviour in a difficult class. Pupils took responsibility for laptops.
Improving boys' attainment	Reluctant writers (mainly boys) were always prepared to engage in literacy lessons if using laptops.
Extending opportunities for learning	See Learning at home.
Promoting inclusion	
Promoting participation	
Learning at home	Pupils regularly took laptops home to complete homework activities. Parents attended open evenings to learn about the project and its aims. Activity was linked to use of the Becta ICT Self Review Framework (element 6 extending opportunities). Home/school links were "excellent". Not all pupils had access to wifi at home and dongles were considered too expensive for the school to provide.
Methodology	Laptops widely used across a range of activities including entrepreneur project, use of Powys Archives. Some problems with initial set up.
Embedding practice	Next step in project will include use of J2E learning platform. Also, further development of film making and multimedia projects. However, increase in pupil roll would mean that more laptops were required to maintain home/school links.

RHONDDA CYNON TAF	**Glaenboi Primary School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT	Headteacher reported improved standards of ICT for nearly all pupils involved in the project plus

skills	improvements in literacy and numeracy.
Increasing learner engagement	Headteacher reported positive impacts on learner engagement, pupil behaviour, self esteem and wellbeing.
Improving boys' attainment	Headteacher reported improved boys' attainment.
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Parents joined pupils in learning activities which were were organised in school. Proposal to develop use of laptops at home subject to addressing concerns on safety issues.
Methodology	Late start to project; school would have liked closer involvement in initial project bid and selection of equipment.
Embedding practice	Proposal to work with Bridgend OWLs school in order to share practice, and to develop school wiki for sharing of project work.

SWANSEA	**Family Learning Service/10 Schools** fizzbooks
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Family Learning Programme in Swansea facilitated the delivery of the OWLs project to improve literacy, numeracy and ICT skills of children and parents attending Family Learning sessions. Project worked with 48 children and 48 parents in partnership with 10 schools. All sessions developed skills and knowledge in literacy, numeracy and ICT skills through use of Fizzbooks. Literacy skills were also developed through looking at different text types and producing resources to reflect these.
Increasing learner engagement	Courses developed a positive attitude to learning within the family. Use of Fizzbooks were successful in engaging parents and children in the development of literacy, numeracy and ICT skills. Schools commented on the success of the OWLs courses in engaging parents and families who had previously been difficult to engage resulting in improved relationships with the school and positive approach to learning for all children in the families involved. Parental attendance and retention was good throughout the project.
Improving boys' attainment	Sessions engaged boys in learning activities especially use of storyboards and use of graphics packages to illustrate their stories. One tutor used

	current cartoon characters for tracing and illustration so boys could make cartoons of their favourite characters e.g. SpongeBob SquarePants.
Extending opportunities for learning	Project extended opportunities for learning both in the classroom and at home.
Promoting inclusion	Project provided opportunity for parents and children to access ICT where it wasn't previously available at home. Not all parents could attend course sessions but children encouraged grandparents/other family members to attend as they were very keen to have a Fizzbook at home.
Promoting participation	It was observed that children often had more advanced ICT skills than parents and tutors and this provided opportunities for intergenerational learning (pupils teaching parents).
Learning at home	All children attending courses took the Fizzbooks home for the duration of the course. A loan agreement was signed with parents. Fizzbooks were loaded with resources which could be used during course sessions and at home. The opportunity to use Fizzbooks at home particularly developed parents' interest and confidence in using ICT. Parents were keen to extend and continue their child's learning at home. The OWLs project encouraged development of home/school links through the Family Learning programme. Authority reports that (as expected) there was no inappropriate or careless use of the equipment. However, (mobile) Internet access was not provided largely due to patchy 3G coverage in project area.
Methodology	Fizzbooks are child friendly tablet/laptops. They were a new resource to the Family Learning service. Training was provided on new functions but tutors also needed time for familiarisation. Wide range of open source software eg Open Office and Textease provided in addition to maths resources. Parents were recruited to the project through a letter of invitation to an initial meeting. The initial meeting procided information on the aims of the project and the availability of Fizzbooks for use at home. Children were noticed encouraging their parents/carers to attend when they knew that a Fizzbook was available to use outside school.

	Facilitating home use required considerable planning but was invaluable element of project. Tutors devised courses to embed the use of Fizzbooks into family learning sessions and continuation activities were provided for home use.
Embedding practice	Success of pilot resulted in local authority plan to continue the learning programmes into 2011-12 and to extend participation to year 3 and 4 pupils. Good practice was shared through regular meetings of the delivery tutors, which will also continue.

TORFAEN	**Hillside Primary School** **Pontnewydd Primary School** laptops
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Project met most objectives set out in initial proposal including development of pupils' literacy and numeracy. Schools used laptops to develop pupils' drafting skills and worked on developing pupils' vocabulary and sentence structure, paragraphing etc. Progress verified through lesson observation.
Increasing learner engagement	Laptops used to enhance traditional curriculum delivery with positive impacts on pupil engagement.
Improving boys' attainment	
Extending opportunities for learning	One school used the project to engage with parents about esafety and safe/responsible use of the Internet.
Promoting inclusion	
Promoting participation	
Learning at home	Objective not met due to technical issues/concerns - flagged up for continuing work in 2011-12. Participating schools set up access to ICT outside schools hours e.g cybercafe for pupils.
Methodology	Access to laptops and supporting resources (eg via NGfL Cymru) useful for improving digital literacy skills and pupil engagement. Key foci of project gave schools clear direction. However, providing home access proved a difficult concept to sell to schools and compromised local authority ICT system arrangements. Need for stronger central steer on how to deal with this.
Embedding practice	One OWLS school commended for use of ICT in Estyn inspection and achieved ICT mark. Work

	produced by the school is now being shared via regular school network meetings and cluster activities.

VALE OF GLAMORGAN	**Holton Primary School** netbooks
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	School achieved ICT Mark during project. Considerable improvement in pupils' ICT skills.
Increasing learner engagement	Access to individual netbooks encouraged independent learning.
Improving boys' attainment	Use of netbooks across curriculum clearly motivated and engaged boys in learning, evidenced in length and quality of writing tasks.
Extending opportunities for learning	Individual ready access to INternet activities provided opportunities to improve literacy, numeracy and Welsh skills.
Promoting inclusion	
Promoting participation	
Learning at home	Netbooks not taken home due to unresolved security issues.
Methodology	All year 6 pupils and teachers provided with netbooks so that both could become familiar and confident with the technology. Strength: use of netbooks supporting independent learning. Weakness: lack of software to enable teachers to access and monitor children's netbook screens as they were working.
Embedding practice	School did not network with other OWLs schools during the project period but this was still under consideration.

WREXHAM	**Rhosymedre Community Primary School** laptops (Apple Macs)
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	Project documented the rebuilding of the school through use of iMovie (interviews and recording), research into and presentations on the old building, time lapse photography of the demolition and building, poetry and review of budgeting issues.

	Pupils developed excellent range of ICT skills, particularly in working with video and audio.
Increasing learner engagement	
Improving boys' attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	Laptops were not set up to go home. Main areas of concern were the safety of pupils while using school equipment (e.g. risks of grooming) and risk of physical harm to pupils carrying a laptop home. Further guidance welcomed.
Methodology	Strength: increasing ratio of pupils to computers, range of software on Apple Macs to support digital literacy and creativity, flexibility of laptops for use in and outside classrooms.
Embedding practice	Need to develop [more] robust home school esafety contract/protocols. Further investigating security issues of devices used at home connecting back to school and authority networks. Experience of mobile classroom using Apple Macs led to a number of schools purchasing similar set ups to move away from the traditional ICT suite. Use of ipads and laptops also influenced the local authority's 21st Century strategic development plans. Handheld devices, wireless networks and laptops installed in two more primary school rebuild projects.

WREXHAM	**Ysgol Heulfran, Wrexham** ipads
Educational Objectives	
Improving literacy, numeracy and/or ICT skills	ipads provided for all pupils in year 6 in April 2011. Early observations from teachers on use and impact were very positive. Subsequent drop in visits to the school revealed the devices being used in a variety of ways to support learning. Further evaluation planned for 2012 including school visit.
Increasing learner engagement	Pupil (and teacher) enthusiasm. Strong feature of project is the personal nature of the device and pupils' sense of ownership.
Improving boys'	

attainment	
Extending opportunities for learning	
Promoting inclusion	
Promoting participation	
Learning at home	ipads being used in schools only to December 2011. Planned introduction of home loan scheme for weekends in January 2012 followed by later introduction of arrangements for pupils to take ipads home every night.
Methodology	Collaborative working across authorities. Support and training for teachers. Innovative use of handheld technologies. Huge range of applications for ipad available at low cost. Continuing to explore use of online storage and learning platforms to facilitate transfer of files from ipads. Need to develop [more] robust home school esafety contract/protocols. Further investigating security issues of devices used at home connecting back to school and authority networks. To address security concerns about ipads being connected to home networks, the local authority is implementing a large scale wireless system that will allow "public" wireless connectivity in schools whilst reducing the risk of unknown devices accessing school networks. The system will pave the way for pupils own devices to have filtered internet connectivity in school in the future. Teachers attended one day regional course on use of ipads with additional regional activity days planned for teachers and advisors
Embedding practice	Experience of mobile classroom using Apple Macs led to a number of schools purchasing similar set ups to move away from the traditional ICT suite. A number of schools were also interested in purchasing ipads and lessons learned from the OWLs project will support these. Use of ipads and laptops also influenced the local authority's 21st Century strategic development plans. Handheld devices, wireless networks and laptops installed in two more primary school rebuild projects.