Agenda No

AGENDA MANAGEMENT SHEET

Name of Committee	**Resources, Performance And Development Overview And Scrutiny Committee**
Date of Committee	**4th September 2007**
Report Title	**ICT and Schools**
Summary	This report outlines the views and recommendations of the joint scrutiny panel established to scrutinise ICT and schools.
For further information please contact:	Paul Williams Scrutiny Officer Tel: 01926 418196 paulwilliamscl@warwickshire.gov.uk
Would the recommended decision be contrary to the Budget and Policy Framework?	No.
Background papers	None

CONSULTATION ALREADY UNDERTAKEN:- Details to be specified

Other Committees	☒	Children, Young People and Families Overview and Scrutiny Committee
Local Member(s)	☐	.....
Other Elected Members	☒	Councillors Booth, Atkinson, Haynes, Councillor Grant "Agrees that the OSC consider thereport"
Cabinet Member	☒	Councillor Alan Cockburn
Chief Executive	☐	.....
Legal	☒	Sarah Duxbury
Finance	☐	.....
Other Chief Officers	☒	Dave Clarke, Strategic Director, Resources Marion Davis, Strategic Director, Children, Young People and Families, David Carter, Strategic Director, Performance and Development

Warwickshire County Council

District Councils	☐	.....
Health Authority	☐	.....
Police	☐	.....
Other Bodies/Individuals	☒	John Parmiter - Head of ICT Development Service, Tonino Ciuffini - Head of ICT

FINAL DECISION YES

SUGGESTED NEXT STEPS: Details to be specified

Further consideration by this Committee	☐	.....
To Council	☐	.....
To Cabinet	☐	.....
To an O & S Committee	☐	.....
To an Area Committee	☐	.....
Further Consultation	☐	.....

Executive Summary

Over the last few years considerable resources have been expended to ensure that schools are provided with and supported in their use of Information and Communications Technology (ICT). Whilst intuition suggests that this must be a good thing some elected Members considered that the time was right to establish that the widespread use of ICT in schools was actually improving educational attainment. At the same time Members wanted to be reassured that schools were satisfied by the service they received. Following consideration by panel comprising members from this and the Children, Young People and Families OSC this report explores the issues outlined above.

Agenda No

Resources, Performance and Development Overview and Scrutiny Committee - 4th September 2007

ICT and Schools

Report of the Chair of ICT and Schools Panel

Recommendation

The Resources, Performance and Development Overview and Scrutiny Committee is recommended to agree that:

i) Further scrutiny work should be undertaken during 2010 to feed into discussions regarding the future of the We-Learn project.

ii) The issue of equality of access needs to be addressed during the technology refresh in 2008, and further reports made to the Committee regarding options.

1. A joint panel was established between this committee and the Children, Young People and Families Overview and Scrutiny Committee to undertake a scrutiny review into ICT and Schools. The joint panel met on 20th April 2007 and resolved that in order to ascertain what type of scrutiny activity, if any, would be appropriate for this subject, a contextual report from officers should be submitted to the next meeting of the panel.

2. The panel met again on 19th June 2007 to discuss the contextual report and to establish a way forward. The attached report outlines the contextual picture presented to the panel and includes the panel's views and recommendations for further scrutiny.

3. The Panel reviewed the following issues:

    i) The relationship between ICT use and attainment levels,
    ii) Information regarding user satisfaction levels
    iii) Benchmarking information relating to value for money

4. Panel recommend that the Committee endorses the proposals for further scrutiny work outlined in the report.

CLLR JOHN WHITEHOUSE
Chair of ICT and Schools
Panel

Shire Hall, Warwick, 03 August 2007

ICT and Schools **Appendix**

1. Background

1.1. A joint Scrutiny Panel was established between the Children, Young People and Families Overview and Scrutiny Committee and the Resources, Performance and Development Overview and Scrutiny Committee to undertake a scrutiny review into ICT and Schools. The panel members were,

Councillor Booth	Councillor Caborn
Councillor McCarthy	Councillor Moss
Councillor K Singh	Councillor Whitehouse

1.2. The joint panel met on 20th April 2007 and resolved that in order to ascertain what type of scrutiny activity, if any, would be appropriate for this subject, a contextual report from Officers should be submitted to the next meeting of the Panel.

1.3. The Panel met again on 19th June 2007 to discuss the contextual report and to establish a way forward. This report outlines the contextual picture presented to Members of the panel and includes the Panel's views and recommendations for further scrutiny.

1.4. The Panel reviewed the following issues.

1. The relationship between ICT use and attainment levels
2. Information regarding user satisfaction levels
3. Benchmarking information relating to value for money

2. ICT and Attainment

National Research

2.1 A vast amount of research has been conducted nationally to investigate the links between the use of ICT within schools and raised educational attainment. Measuring the impact ICT has on educational attainment can be achieved by analysing changes in performance levels of key tests, for example Key Stage tests and GCSE exams. However, there are "softer" outcomes which also give an indication of the impact of ICT, for example, increased motivation, increased engagement, independent learning, improved skills and improved communication, which in turn can also lead to improved attainment.

2.2 Whether or not ICT effectively impacts upon performance levels in tests or the "softer" outcomes is dependent upon a range of factors. Firstly, research studies suggest that the use of ICT is more effective when schools have managed to integrate a number of technologies (laptops, interactive whiteboards and the internet) into the learning experience. (Passey, 2005) Secondly, BESA (2006) highlighted that a fundamental contributor to the effective use of ICT is the existence of a school level e-strategy, outlining how ICT will be incorporated into the whole school experience. Finally, the effective use of ICT is inevitably dependent upon corresponding changes in teaching styles and approaches. Cox et al (2003) found that teaching styles had a huge impact upon pupils' attainment. Factors like the types of technology used, the ways in which they were deployed and the extent,

to which the teacher planned and prepared for the lesson, had a significant influence. Such is the importance of teaching style and ability in the effective use of ICT it is suggested that the way to bring about the effective use of ICT in schools is through the professional development of teachers. (Cox et al, 2003)

2.3 Overall, the evidence consistently finds that impacts upon attainment are greater where ICT is an integral part of the day-to-day learning experiences of pupils (Passey et al 2004). However, isolating the impact ICT use has on attainment is problematic. Schools are consistently involved in a number of initiatives designed to improve performance and attainment, thereby making it difficult to identify the impact of individual factors. Additionally, it is impossible to isolate the impact that out-of-school ICT use has on pupil's attainment. Therefore the evidence relating to the impact ICT has on "softer" outcomes (motivation, engagement, communication etc) tends to offer a more reliable cause and effect anaylsis.

2.4 Overall, the use of ICT can improve the presentation of pupils' work and has also been shown to support collaboration, improve the quality of discussion and facilitate the development of problem-solving skills. Additionally, ICT can support the development of basic literacy and numeracy skills, particularly where pupils are experiencing difficulties. In terms of the impact ICT has on different subject areas, Cox et al (2003) found evidence of positive effects upon pupil attainment in almost all National Curriculum subjects. Core subjects of English, Maths and Science saw the most significant impact, largely due to the greater developments of subject specific technologies in these areas.

Literacy and English language

2.5 The ImpaCT2 research (Harrison et al, 2002) found that ICT use promoted greater pupil engagement in literacy and English language, allowing opportunities for reflection and analysis and contributing to the development of skills associated with communication. In addition, the use of word processing accelerated and enhanced writing development.

2.6 A particular concern in recent years has been the under-achievement of boys in literacy. A small-scale research project (Fisher, 2005) focused on the impact of ICT on boys attitudes to literacy in the early foundation stages. It found that the use of Interactive Whiteboards made boys more interested in literacy activities, particularly writing. This interest was maintained and in some instances heightened when linked to computers.

Maths

2.7 In Maths, the key benefits identified from research into ICT use have been increased pupil motivation, a more concentrated focus on strategies and interpretation, faster and more accurate feedback to pupils and greater pupil collaboration and co-operation (Becta 2003)

Modern Foreign Languages

2.8 In Modern Foreign Languages, ICT offers many advantages, including aiding the acquisition and development of reading, writing, listening and speaking skills. A range of resources are used to motivate students and generate powerful learning

effects, for example, word processing, blogging, video conferencing to communicate with native speakers, internet to access foreign language entertainment and information, e-mail, interactive video, presentations and Interactive Whiteboards. (Taylor et al 2005, Becta 2004)

Science

2.9 As well as making science more interesting, authentic and relevant for pupils, ICT use has been found to allow more time for post-experiment analysis and to foster discussion, communication and collaboration.

2.10 McFarlane and Sakellariou (2002) found that difficult to grasp concepts could be considered more readily and that ICT could take over many of the mechanical aspects of practical investigations, allowing pupils to concentrate on interpreting and analysing data.

Impact upon Pupils with Special Educational Needs

2.11. In an overview of the impact of government initiatives in schools, Ofsted concluded that pupils with a wide range of special educational needs were helped, through the use of ICT, to overcome barriers to learning, thereby raising achievement, increasing self-esteem and encouraging participation in group and class activities. (Ofsted 2004)

Equality of Access

2.12 The Panel expressed concern regarding equality of access to ICT within and outside School. There is currently a lack of research in relation to identifying any potential differences in educational attainment and "soft" outcomes between those pupils who have access to ICT at home and those who do not. The Dfes initiative *Computers for Pupils* aims to address this issue within secondary schools. *Computers for Pupils* is a £60m 2 year programme aimed at helping disadvantaged pupils improve their education and life skills by putting a computer into their home. Local Authorities identified as having eligible schools and pupils, based on a formula to determine disadvantage among KS3 and KS4 children, have been given funding to buy equipment, as well as help and advice covering all aspects of the scheme. Based on this formula Warwickshire received no funding during 2006/07 and £21k for 2007/08. In comparison Birmingham received £6m funding for this year.

2.13. Other Local Authorities are experimenting with methods to tackle the equality of access issue in primary schools. Wolverhampton City Council has provided a PDA device to year 5 and 6 pupils, and similarly the London Borough of Newham have provided laptops for year 6 pupils. Despite concerns surrounding the risk of loss and theft, evidence from these two initiatives indicates that there have not been any problems relating to this.

Panel's View

The Panel is satisfied that where ICT is incorporated into the whole learning experience and is accompanied by corresponding changes in teaching styles and approach it can have a positive impact upon education attainment and "softer" outcomes such as increased motivation, increased engagement, independent learning, improved skills and communication, which in turn can also lead to improved attainment. The panel is concerned that there is currently no research being undertaken in relation to the differences between those who have access to ICT at home, and those who do not. As such the Panel feel that it is vitally important to examine how this potential disadvantage can be addressed in Warwickshire.

3. Best Practice

Barking and Dagenham – ICT Test Bed Project

3.1. The London Borough of Barking and Dagenham achieved "Beacon" status for secondary education. Barking and Dagenham is an outer London Borough to east of London on the north bank of the Thames. The adjoining boroughs are Newham to the west, Redbridge to the north and Havering to the east. The population of the Borough is around 165,000 with one in eight coming from ethnic minority backgrounds.

3.2. Barking and Dagenham were 1 of 3 Local Education Authorities to be selected by the Dfes to be part of a 4 year £20m ICT Test Bed Project. The project was designed to demonstrate the impact that high levels of investment in ICT can have on:

- Raising standards of attainment across the curriculum
- Improving the effective management across schools
- Enabling teachers to focus on core teaching tasks

3.3. The project directly involved 3 secondary schools and 6 primary schools, although all schools in the Borough benefited through the re-distribution of funding, developed procurement routes and the numerous technical, procedural and educational outputs from a major project.

3.4. By being involved in the Test Bed Project Barking and Dagenham sustained a focus of raising the educational attainment of local children, as result there has been a significant and consistent rate of improvement. The Ofsted inspection in January 2002 described the LEA's achievement to the service as "striking".

3.5 Barking and Dagenham have pioneered the development of technology to enhance and support interactive whole class teaching. However, the Borough maintained that use of technology in itself was not transformational, but in conjunction with changes in pedagogy real and substantial improvements to attainment have been achieved.

Panel's Views

The Panel acknowledges the progress made by the London Borough of Barking and Dagenham as a result of the significant funding received. It demonstrates what can be achieved by high level funding, however, such funding is not sustainable.

4. ICT within Schools in Warwickshire

Public Service Agreement

4.1 Warwickshire was one of a small number of County Councils to have entered into a Public Service Agreement (PSA) with the Government. This PSA brings Warwickshire additional funding and allows exemption from some reporting requirements in return for agreeing to meet "stretched" targets on service delivery. Warwickshire's PSA targets for education included promoting learning and increased achievement at Key Stages 2, 3, and 4. For each Key Stage performance indicators were identified and specific targets set for June 2003. These targets were 1% or 2% higher than without the PSA.

4.2 A number of activities were devised to impact upon the performance indicators. Two of these activities are outlined below.

Mathematics / ICT at Key Stage 2 in Nuneaton and Bedworth

4.3 The aim of this project was to raise the attainment of pupils from Nuneaton and Bedworth in Mathematics at Key Stage 2 by providing selected Nuneaton and Bedworth Schools with high quality interactive learning materials. Year 6 teachers from 13 schools identified as having the potential to raise attainment in Maths at Key Stage 2 through the use of interactive whiteboard technology were given training and support to enable them to address areas of weakness in Mathematics learning.

4.4 An evaluation of the project was undertaken with both teachers and pupils. An analysis of the teachers' responses showed that before the project began most of the class teachers (60%) used ICT occasionally in their Mathematics teaching. However, none used it every day, only 15% used it each week and 25% used it rarely. All the teachers thought their ICT skills were at least OK, with 20% rating them as good and 25% as very good. By the end of the project, all those but one who responded felt that they were using ICT in their Mathematics teaching more than they had been a year ago and all felt that the experience they had gained from the project would enable them to use it more in the future.

4.5 The expectation at the start of the project was that pupils generally would be motivated, excited and stimulated by the interactive whiteboards. Almost all teachers felt that it would have a positive effect on concentration (90%) and motivation (95%). Comments gathered from the teachers after working with the interactive whiteboards for a year supported the expectations that understanding, motivation and confidence of pupils had increased.

4.6. At the end of the project teachers were asked to consider the pupils' performance in the Year 6 national tests and comment on any noticeable improvement in the areas they had specifically targeted in their Mathematics teaching. A number of schools reported an improvement in the children's understanding of equivalent fractions, decimals and percentages and the interactive learning materials were felt to have been effective in this area. There was also a marked improvement in the way that pupils dealt with questions relating to scale. Problem solving and interpreting graphs remained problem areas in some schools, though others reported improvement.

4.7. The performance indicator for this project, the number of pupils from Nuneaton and Bedworth attaining at least level 4 in Maths at Key Stage 2, remained almost static between 2002 and 2003 (68.9%). The target of 75% in 2003 was missed by 6%.

4.8. The target was very challenging. As performance in Nuneaton and Bedworth area was consistently lower than that of the County as a whole and, in both 2002 and 2003, the number of pupils from Warwickshire attaining level 4 or above in Maths at Key Stage 2 was 75%. It was unlikely that a project involving just 13 of the 35 mainstream Primary and Junior schools in the area would impact significantly on the target. See appendix 6 for the Level 4+ Key Stage 2 Mathematics results for the schools involved in the project.

Interactive Whiteboards at Key Stage 3

4.9 In 2001 37 mainstream secondary schools in Warwickshire became involved in the Interactive Whiteboard Project. The aim of the project was to raise pupils attainment in core subjects at Key Stage 3. Each school was asked to identify a core subject department (English, Maths or Science) where an interactive whiteboard would have the most impact on raising pupil attainment. 15 Mathematics, 16 Science and 6 English Departments were nominated and during the spring term of 2002 the interactive whiteboards were installed.

4.10 The next phase of the project involved developing specialist materials to support the use of the interactive whiteboards and providing specialist training for the main users of the boards. Teacher Advisers worked with commercial partners to produce support materials for English, Mathematics and Science. Five half-day training sessions were held and schools were invited to nominate a teacher from the department with the PSA funded interactive whiteboard.

4.11 In May 2002, a questionnaire was sent to all Heads of Department involved in the project to find out whether the interactive whiteboards were installed satisfactorily and to gather information about their usage. This was followed up by a further questionnaire in January 2003 also asking teachers to comment on the impact of the interactive whiteboard on teaching and learning. Feedback was also gathered from approximately 60 pupils within each of the subject areas.

Analysis of feedback from teachers:

4.12 The response to the interactive whiteboards was overwhelmingly positive and a number of benefits were identified that were common to all subject areas:

- **More enlivened teaching**
- **Pupils more motivated**
- **Improved pupil understanding**
- **More effective planning**
- **Easy to "capture" and save lesson**

Analysis of feedback from pupils

4.13 Learning with the interactive whiteboard was extremely popular with pupils. 83% of pupils enjoyed working with it and 82% liked it when the teacher explained using the

interactive whiteboard compared with just 42% when a blackboard or ordinary whiteboard was used.

4.14 Pupils were asked what was good about lessons with the interactive whiteboard. The most common responses were:

- **It's fun**
- **You get more involved**
- **It's quick**
- **It's clear**
- **It helps you understand**
- **You can look at pictures, videos, presentations, the internet**
- **You concentrate more**
- **You pay more attention**

Impact on targets

4.15 The project contributed positively to the overarching PSA Target to promote learning and increased achievement at Key Stage 3. The number of pupils attaining at least Level 5 in each of English, Maths and Science at Key Stage 3 in 2003 was 61.6% against the target 55%. The improvement on the 2002 figure was 4%, a higher rise than that seen the previous year.

4.16 Although the target for the project related to attainment at Key Stage 3, the interactive whiteboards were also used for teaching at Key Stage 4 and so also contributed to the meeting of the PSA target (39.2%) for the number of pupils attaining at least 5 grades A*-C at GCSE including English, Maths and at least one Science. (Actual 39.8%)

4.17 An analysis of the Key Stage 3 results for each school, looking only at the subject department that had a PSA project interactive whiteboard, shows that in 12 schools (just under one third of all those involved) the percentage of pupils attaining at least Level 5 in that subject was either 100% or was higher than had been estimated. This suggests that the interactive whiteboard has contributed to raising the performance of pupils in those subjects above expectations.

We-Learn

4.18 The Warwickshire e-learning community project, known as We-Learn is one of four DfES ICT PFI Pathfinder projects. Its aim is to raise educational standards through the innovative application of ICT over an 8-year period until 2012. There are 175 schools in Warwickshire involved, these include 139 primary and 36 secondary schools, engaging a total of 1,800 teachers and 40,500 pupils.

4.19 We-Learn provides the opportunity to introduce a new approach to teaching, extending the learning environment beyond the classroom and supporting teachers to introduce high-quality, digital resources to enhance lessons and increase engagement and interactivity with pupils.

4.20 The objectives of the We-Learn project are to raise pupil attainment through:

- Supporting teachers' teaching and pupils' learning, by focusing on reducing bureaucracy and workload for teachers and helping to provide enriched and motivational content and material for pupils
- Raising the quality of teaching and dissemination of good practice across the county, encouraging collaboration among schools
- Increasing pupil's motivation and encouraging life long learning
- Developing a high quality e-learning service which is sustainable, innovative and available to all those involved – 24 hours a day, 365 days a year
- Creating a successful and sustainable teaching and learning model

4.21. The We-Learn Project will come to a stop in 2012, with the last update of equipment taking place in 2008. Consideration will need to be given prior to 2012 as to how the project will be sustained or alternatively whether an exit strategy should be developed.

Outcomes of We-Learn

4.22 Case studies of schools involved in the We-Learn project, outlining outcomes of the project, are attached in Appendix 1.

Panel's View

There are a number of initiatives currently being undertaken in relation to ICT in Schools which have their own review mechanisms within the next few years. Therefore, it is the view of the Panel that a more in-depth scrutiny of this issue at the present time would be premature.

5. ICT Development Services to Schools

5.1 Following extensive consultation with schools, the decision was taken to bring all ICT support services for schools under one organisation. Prior to 2005, four independent ICT support teams provided individual and diverse services from four different locations.

- ICT Technical Support to schools was under the leadership of CAMS
- User Support for Management Information Systems (MIS) was the responsibility of WES
- ICT training for teachers was the responsibility of the EDS Service
- Broadband Services together with Research and Development, management of the We-Learn Project and Strategic Leadership and Advice to Schools was the responsibility of the School Inspectorate.

5.2 The decision to bring these separate teams together was to provide greater integration and coherence leading to overall service improvements to schools.

5.3 Detailed below are the results of the 2006 WES School Survey.

In particular, the survey posed three questions:

1. Does the service meet the needs of my school?
2. Does the service provide value for money?

3. Does the service strive to improve? (year-on-year)

The responses in relation to the ICT Development Service are detailed below.

ICT Management Systems (MIS) (Appendix 2)

The service meets the needs of my school	83% were satisfied
The service provides value for money	73% were satisfied
The service strives to improve	67% were satisfied

ICT and Technical Support (Appendix 3)

The service meets the needs of my school	72% were satisfied
The service provides value for money	67% were satisfied
The service strives to improve	57% were satisfied

5.4. A chart highlighting the responses from the WES Survey over the last 3 years for the above criteria is attached as Appendix 4. Where schools had given negative responses regarding the services they received, these were followed up, reviewed and appropriate action sanctioned.

5.5. In addition to the WES survey, schools are able to feed their suggestions or concerns back to the service by a number of mechanisms, including one to one meetings with the Head of Service and Annual Head Teacher meetings.

Panel's View

Based on the results of the WES Survey, the Panel is confident that overall schools are satisfied with the service, and where issues have been raised there are appropriate mechanisms in place to address these.

6. Broadband Services to Schools

6.1 In 2000, the DfES provided funding to all Local Authorities to connect all schools to the National Educational Network (NEN) at Broadband speeds.

6.2 The DfES provide a detailed specification for connectivity which must be a minimum of 2Mbs for primary schools and a minimum of 8Mbs for secondary schools. In reality, because of the design of the network, most primary schools benefit from a minimum of 6Mbs connections and most Secondary schools benefit from a minimum of 16 Mbs.

Connections

6.3 Warwickshire has a mixture of urban and rural areas and the cost of connecting schools in rural areas is particularly more expensive than those in urban areas. Warwickshire took a particularly innovative decision to combine the connectivity needs of Schools, Libraries and Social Services sites into one coherent and integrated network. This has led to the Warwickshire WAN that is in use across the authority. Without the collaboration of the four separate directorates (including CAMS) the individual costs to each directorate for connectivity would be much greater.

Annual Service Costs

6.4 Included in the annual service costs to schools is:
Full Internet Service Provision – including connection to the National Educational Network.
Firewall protection – essential protection against viruses etc.
Filtering – essential protection against access to inappropriate material etc.
Monitoring – essential to support the safeguarding of children against grooming etc.

6.5 Comparative Broadband Costs

Average Primary School Costs	Warwickshire	£3,985
	Shropshire	£6,200
	Worcestershire	£3,510
	Northamptonshire	£5,300
	County in the South West	£4, 500
Average Secondary School Costs	Warwickshire	£7,857
	Shropshire	£8,300
	Worcestershire	£10,329
	Buckinghamshire	£14,000
	County in the South West	£18,000

6.6 The aggregation of service demands has led to reduced costs for everyone within the Warwickshire WAN network.

6.7 Details of Connectivity & Performance are includes as Appendix 5.

Panel's View

The Panel acknowledges the difficulty in trying to establish bench marking data that is accurate and compares like for like. However, the Panel is of the view that where possible further bench marking data should be sought to enable a broad comparison in relation to costs of equipment, to feed into discussions about the future of We-Learn leading up to 2012.

7. Conclusion

7.1 By undertaking this review the Panel is satisfied that:

i) Where ICT is incorporated into the whole learning experience and is accompanied by corresponding changes in teaching styles and approach, it can positively impact upon educational attainment and softer outcomes such as increased motivation, increased engagement, independent learning, improved skills and communication, which in turn can also lead to improved attainment.

ii) Overall schools are satisfied with the services being provided and there are appropriate mechanisms in place to address concerns raised. In addition there are a number of ways in which schools are able to express any concerns or suggestions that they may have.

iii) The Council is providing value for money in terms of broadband costs in both Secondary and Primary Schools.

7.2. The Panel is of the view that any further scrutiny work at this stage would be premature and recommends:

i) Further Scrutiny work should be undertaken during 2010 to feed into discussions surrounding the future of the We-Learn project. This timing would allow Scrutiny to take place 2 years after the technology refresh and 2 years prior to the project funding ending.

ii) The issue of equality of access needs to be addressed and possible options should be considered during the technology refresh in 2008. The Children, Young People and Families OSC and the Resources, Performance and Development OSC should be kept informed of possible options in relation to this.

Wellesbourne Primary School
Focus on: We-Learn working with Year 4

"The use of the We-Learn software in our school has enhanced the way in which our children have engaged with their lessons and accelerated their learning opportunities, thus enabling them to work more quickly towards achieving their potential,"

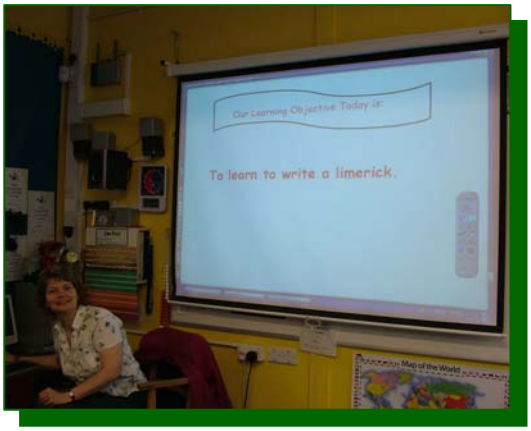
Graeme Burgess, Head teacher,

Learn

Before the We-Learn equipment was installed, the Year 4 class had just one computer in the classroom which meant that it was very hard for even small groups of children to see the screen and impossible for the whole class to view at once. Designated ICT lessons took place in the computer suite but with We-Learn the computer equipment is available every period of every day and the whole class can focus on the whiteboard screen making it easier to check that all children are concentrating on the task. A recent smartboard programme has ensured that every year in the school now has access to We-Learn (Years 4 to 6) or a smartboard, helping make the transition through school easier for pupils. Year 4 teacher, Julie Barr, developed many of the resources she now uses herself, following the day's initial training on We-Learn equipment. Julie devoted some months to really getting to know the equipment and by starting gradually to develop short segments herself, she now has a bank of materials to draw on in lessons. Julie recommends creating resources using Easiteach on the Tablet so that she can work on lesson development at home as well as in school.

About the School

Wellesbourne Primary School serves pupils aged 4 to 11. 216 pupils attend the small village school which is split across two sites with reception and Year 1 classes on one site and Years 2 to 6 on the second site. The 2002 Ofsted report commented that "this is an increasingly effective school that fully deserves parents' confidence and its growing reputation". In 2004 the school achieved in the top 25% of all schools nationally for value added attainment from Key Stage 1 to Key Stage 2 and this was repeated in 2005.



We-Learn in action

In literacy lessons Julie uses We-Learn to help inspire pupils to write limericks and to show them illustrated with pictures from various websites. As a whole class exercise, Julie writes the limericks and blanks out words so that the children have to suggest or guess a word

that will fit the rhyming pattern. She finds that having images on the board helps to encourage the children to stay interested and to generate ideas. In Maths, a combination of tasks using technology and traditional methods adds variety to the lessons and children enjoy working in teams for exercises such as finding the answers to multiplication questions which are 'hidden' under cards drawn in a Powerpoint presentation. Previously this exercise would have been carried out using paper plates on the floor which did not hold the children's interest as well and meant that some children could not see properly.

Pupils' comments

◊*"This is really good fun especially when we do geography and we have to put dots onto maps"*

◊*"It's better than doing work on paper"*

◊*"With this we can all see the work – with books the teacher had to hold the book up and we still couldn't see properly"*

◊*"I like it when we see DVDs on the whiteboard"*

◊*"It's useful to see how other children do their work and set it out"*

Considerations

Unfortunately high tech equipment is very attractive to thieves as the school found out when much of its new equipment was stolen over the summer holidays. It was swiftly replaced but would have been very inconvenient if it had happened during term-time. Taking measures such as stacking resources on window ledges adds another deterrent to the existing school alarm system.

Benefits

- The Tablet is particularly good to use with less academically able groups of children who derive great self-esteem from seeing their work projected onto the board for the rest of the class to see and model
- The pupils love the different characters that can be used in Easiteach
- The equipment really helps to engage the children and they love to use it
- Children now move more smoothly through to Years 5 and 6 which also have We-Learn resources in place

Tips

- Ask the students to hold the Tablet on the sides not the top and bottom where the buttons are
- Enjoy the Tablet and use it!
- Relax and use the Tablet in your lessons – you and the pupils will have endless ideas about how to use it
- Ask for time 'off curriculum' to explore the bank of resources and to develop your own
- Don't use light blue text, it is hard to see on the whiteboard
- Turn off the classroom lights at the front of the room to reduce glare on the whiteboard and to reduce heat in the

Next steps

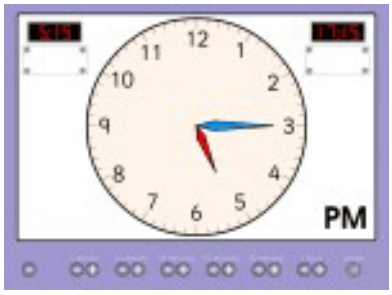
Julie plans to further develop more of her own resources for use with Year 4 and to build on the two years of experience she has had with the equipment to use it in an ever more imaginative way and to discuss and explore this with Year 5 and 6 colleagues.

Bawnmore Infant School: Interactive Whiteboards helping to raise standards in teaching and learning

Bawnmore Infant School have been using Interactive Whiteboards for the whole of the academic year with Year 2 classes and have achieved some remarkable results, particularly in making a significant improvement in mathematics. SMART Boards were used successfully in the classroom and are the only different factor that the staff have identified that could have affected this year's Key Stage 1 Test results:

- Pupils achieving level 3 was 54% – up 18% on the previous year
- Pupils achieving level 2A and above was 86% - up 18% on the previous year
- Pupils achieving level 2B and above was 95% - up 2% on the previous year
- 19 pupils were targeted at level 3 and 30 actually achieved it
- The targeted question was answered correctly by 21% more children

The Numeracy Subject Leader at Bawnmore Infant School is justly proud of the excellent results and commented "This is an incredible achievement brought about by hard work from both staff and children."



Teachers have used resources like the Interactive Resources Maths Packs to beneficial effect during the mental/oral starter. They particularly valued the ease of use and the high visual impact for the children, especially those who were less able. The Interactive Whiteboards have also saved considerable time in lesson planning and preparation as it is quick and easy to select a number of resources for use as teaching tools.

The teaching staff at Bawnmore also acknowledged the importance of high-quality training that is available to explore resources and develop confidence in using Interactive Whiteboards. They also appreciated the series of training sessions that provided them with the opportunity to revisit and consolidate their understanding of how to optimise the use of Interactive Whiteboards. The training manual itself has become highly regarded as an invaluable reference to specific resources.

This remarkable success would not have been achieved without the ICT vision of the Head Teacher and ICT Subject Leader who have provided additional support, time and expertise. And of course the teachers have been a great support for each other!

If you would like to know how your school may benefit too from the ICT Development service, in particular Interactive Whiteboards then please telephone 01926 414100.

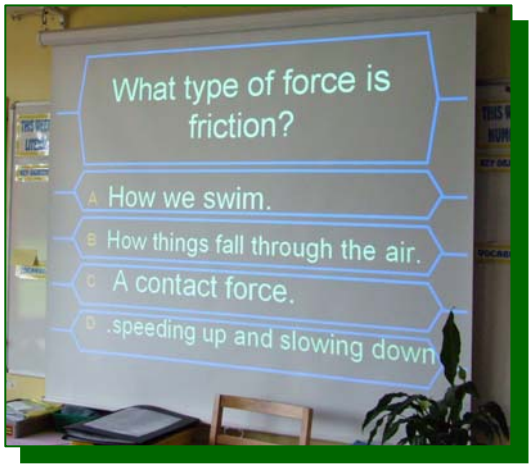
Canon Maggs Church of England Junior School, Bedworth

Focus on: My Site and the portal

"We're very positive about We-Learn. It has more than enough resources and after the initial induction phase we are now entering a period of consolidation where we are keen to develop our own resources using Kaleidos,"

Introduction of We-Learn Equipment

Canon Maggs had a good Ofsted inspection in 2004 where it was highlighted that pupils' standards of work in ICT are above national expectations and that their achievement reflects very good leadership and effective use of ICT across the curriculum. However Ofsted did comment that there was limited access to whiteboards and other classroom computer systems to further enhance the quality of teaching. Since then, the We-Learn Teacher Toolkits have now been in use for two years and are utilised on a daily basis in Years 5 and 6 which have three form groups in each year. All teachers using the Teacher Toolkits were ICT-literate prior to the introduction of the We-Learn project. To supplement the We-Learn training, Tim also carries out in-house tutoring with his colleagues and the six teachers support each other and collaborate well as a team. The staff found the We-learn Kaleidos training and supporting notes extremely useful with user-friendly language plus tutorials. Teachers have found time to use the equipment as much as they can and invested much of their first year getting to know the resources available in Kaleidos.



We-Learn in action

SPM Tim Barnes finds the Teacher Toolkits particularly useful in numeracy and literacy and has stored the resources he has created in the shared area to make them accessible to all Year 6 staff. He has created most of the materials using Microsoft Office programs such as Word and Powerpoint as these are familiar to staff and pupils. The resources that staff have created and those on Kaleidos are used a tremendous amount and are organised so that they are easy to find.

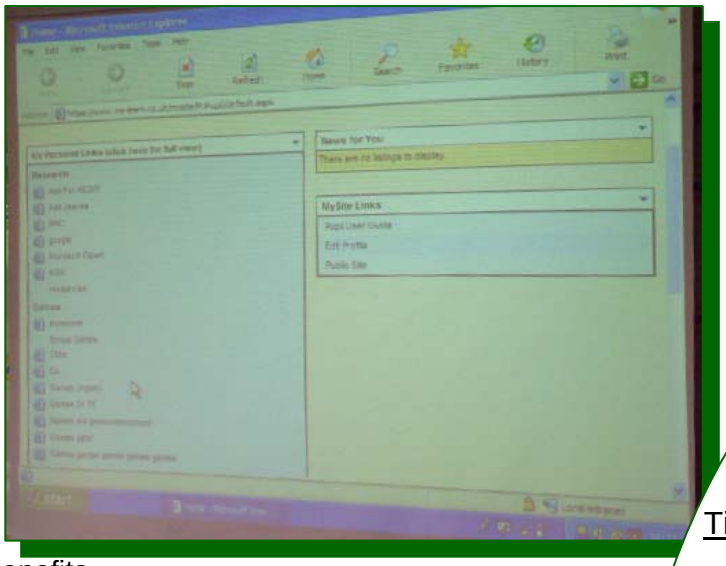
The optional wireless mice and keyboards have proved a useful investment for the school as they allow one set of pupils to use the Tablet and another to use the mouse and keyboard with the interactive whiteboard.

About the School

Canon Maggs is a junior school for 356 pupils aged 7 to 11 which attains above average aggregate key stage 2 results. The school won a '*Blue Friday'* anti-bullying campaign competition for the Warwickshire area in the November 2005 competition and runs a peer mentoring scheme to prevent bullying. The school receives IT support from Nicholas Chamberlaine Technology College and supported it in its bid for technology centre status in 2003. www.canonmaggs.co.uk

'My Site' has been very popular since it was introduced to Year 6 with 90% of pupils using it to put their homework onto the portal and to print out in school – which reduces printing costs for the children. They all have passwords and have put lots of materials into their portfolios which they can take to their next school. Most pupils go onto Nicholas Chamberlaine Technology College, another We-Learn user and technology partner for Canon Maggs. Resources such as links to the Puffin Books website and Channel 4 literacy are saved by Tim into the 'My School' area as well as materials such as 'Who wants to be a millionaire' games used to revise science on topics from keeping healthy to temperature and water. *(See links at the end of the case study).*

The We-Learn Portal is a means of communication within schools and enables collaboration between teachers, departments, schools and the Local Authority (LA). Pupils can access their own area of the portal and can access, receive and return work between themselves and their teachers. Parents have access to their own portal area and are able to access areas of interest to them and monitor some elements of their child's school work.



Benefits

- All teaching resources are now organised by the teachers ready for the year ahead
- The Internet is used a lot in the classroom by the teachers
- The We-Learn technicians have been quick to respond to queries and the same technicians have visited each time so that they know their way round the school and know the teachers
- 'My School' allows teachers to post links to resources, websites and materials they have developed themselves in one place and to annotate website links with notes on the content
- Children can use the ICT equipment themselves, helping to build confidence, dexterity and ownership

Pupil comments:

◊ *"I love having my own site"*

◊ *"I enjoy being able to show my parents my own work on My Site"*

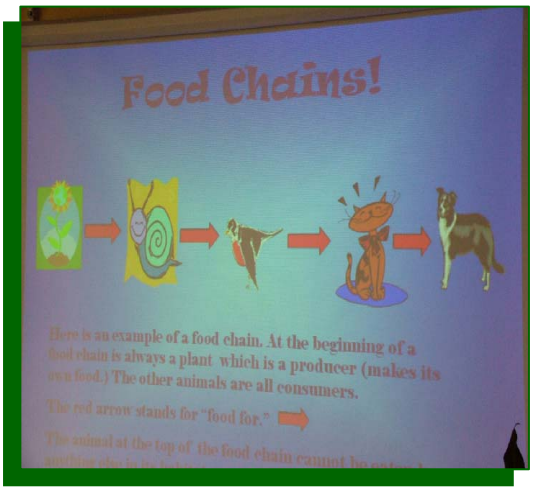
◊ ***"I played the 'Forces' millionaire game with my dad last night"***

If someone changes year group or joins the school, Tim plans to do the catch-up training with colleagues in school

Tips

- Dip into the folder after the initial training, it's a useful reference document
- Request 'off timetable' hours for the SPM so that they can help to maximise staff use of the investment in We-Learn equipment and resources
- British Pathe is a fantastic resource with footage such as World War 2 Normandy landings, the 1966 World Cup Final, and Winston Churchill available free to schools. www.britishpathe.com
- Try to have a day immediately after the We-Learn training to put into practice what you have learnt
- Don't expect to implement massive changes overnight, set realistic goals for what you can achieve

and to add to the training as the staff get further into using We-Learn. The training will be cascaded in school and as he is part of the school team he can talk to colleagues in their own language and the training can be carried out after the school day ends. From Autumn 2006 We-Learn hopes to put Kaleidos onto the curriculum network via the LA free of charge for teachers to use at home to make it easier for pupils to use the resources in extended learning. Canon Maggs has recently been cabled and a new server installed so the curriculum network and hence We-Learn will be available in all classrooms. Tim will also be focusing on teaching ICT across the school from the new term focusing on preparation and assessment and will be integrating We-Learn into his work. He will continue using the portal with the new Year 6 and will start setting tests for them through Kaleidos on the portal. Bringing parents into the portal is also a goal for the coming months and Tim is organising a parents evening where they can come and see the portal in action, to encourage them to use the passwords they have already been allocated to view their children's work.



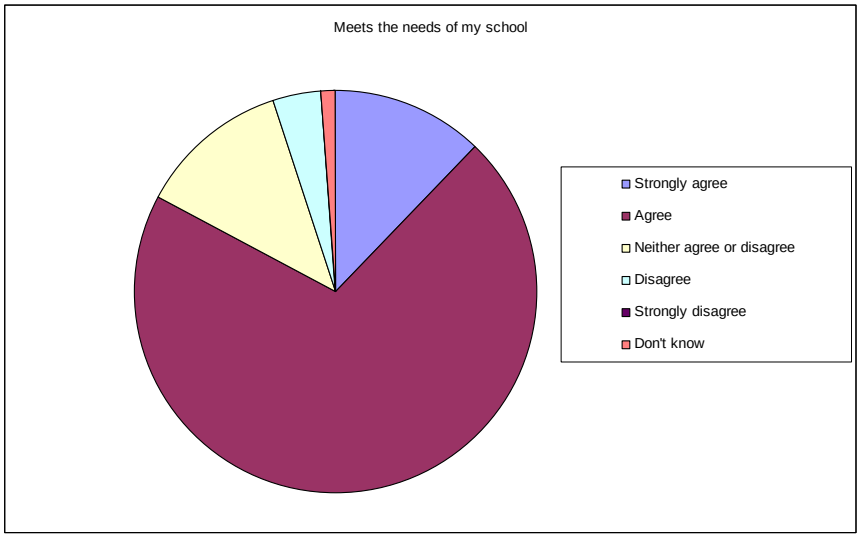
Suggested websites mentioned;

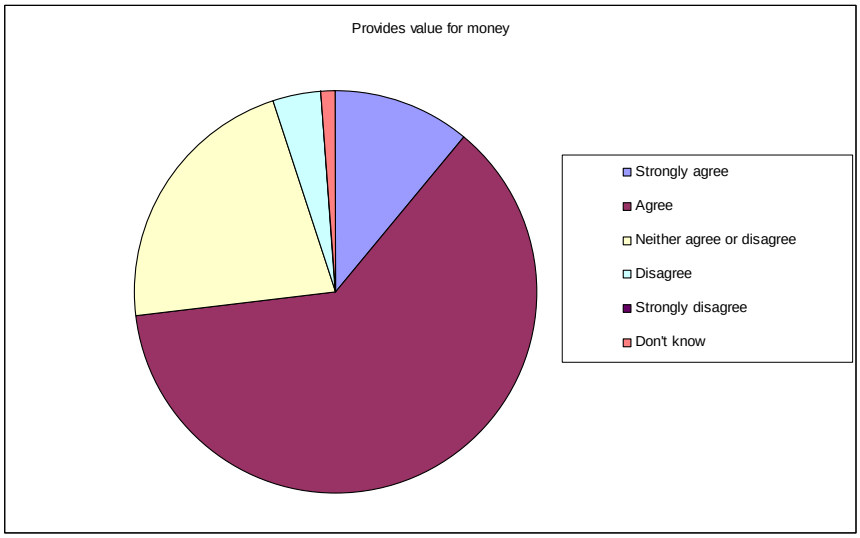
http://www.channel4.com/learning/microsites/B/bookbox/games/missinglinks/home.htm

http://www.puffin.co.uk/

WES Services to Schools – Survey 2006 Appendix 2

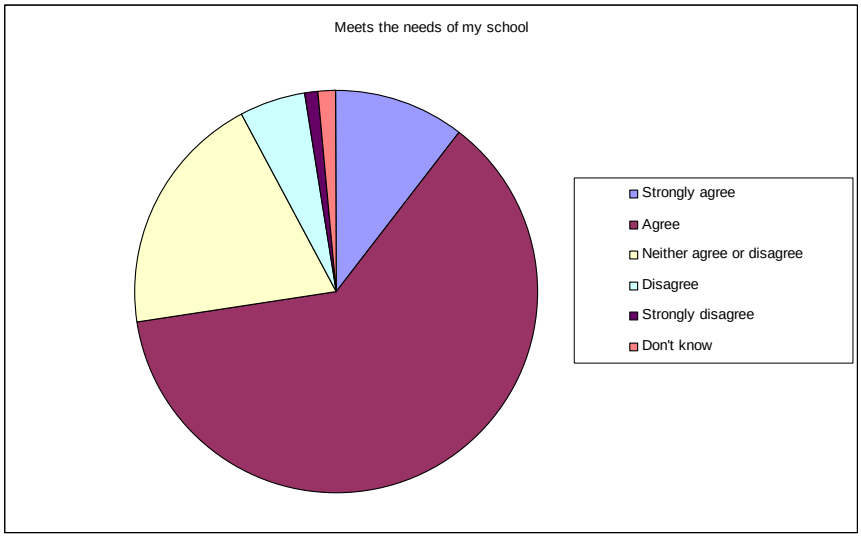
ICT Development Service – Management Information Systems (MIS) Support

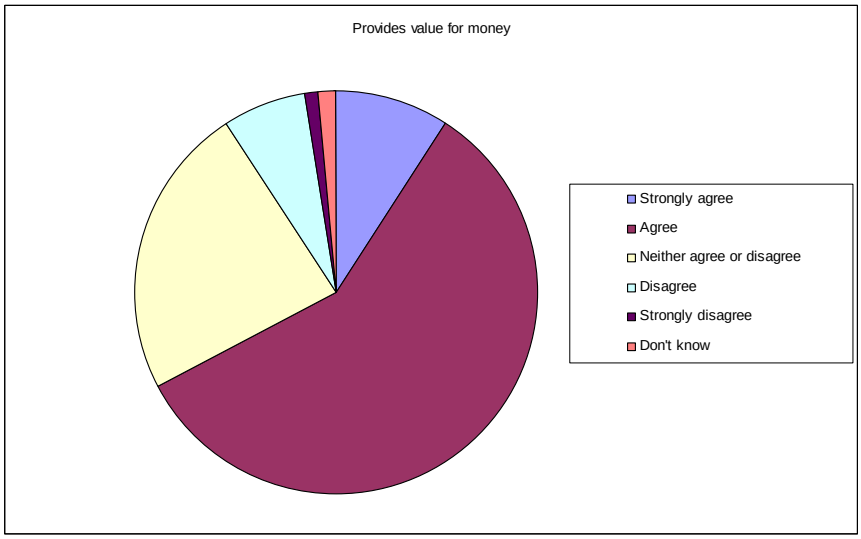


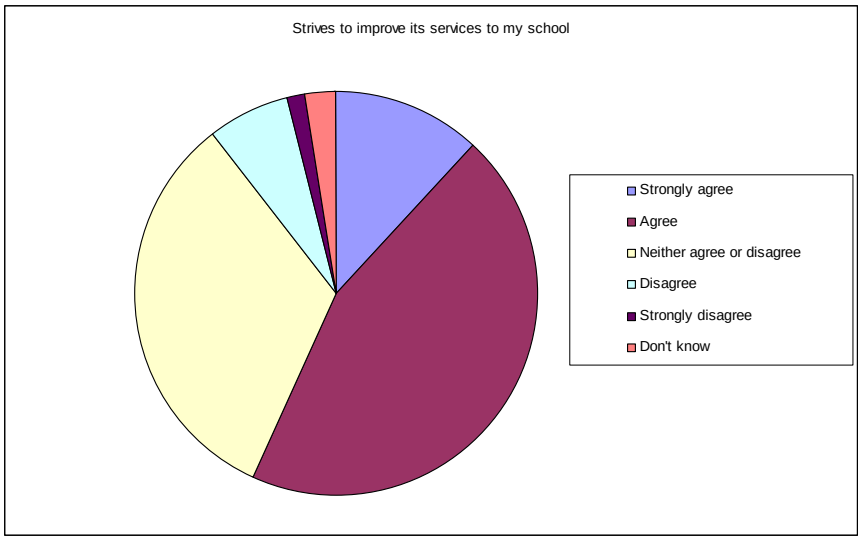


WES Services to Schools – Survey 2006 Appendix 3

ICT Development Service – Technical Support

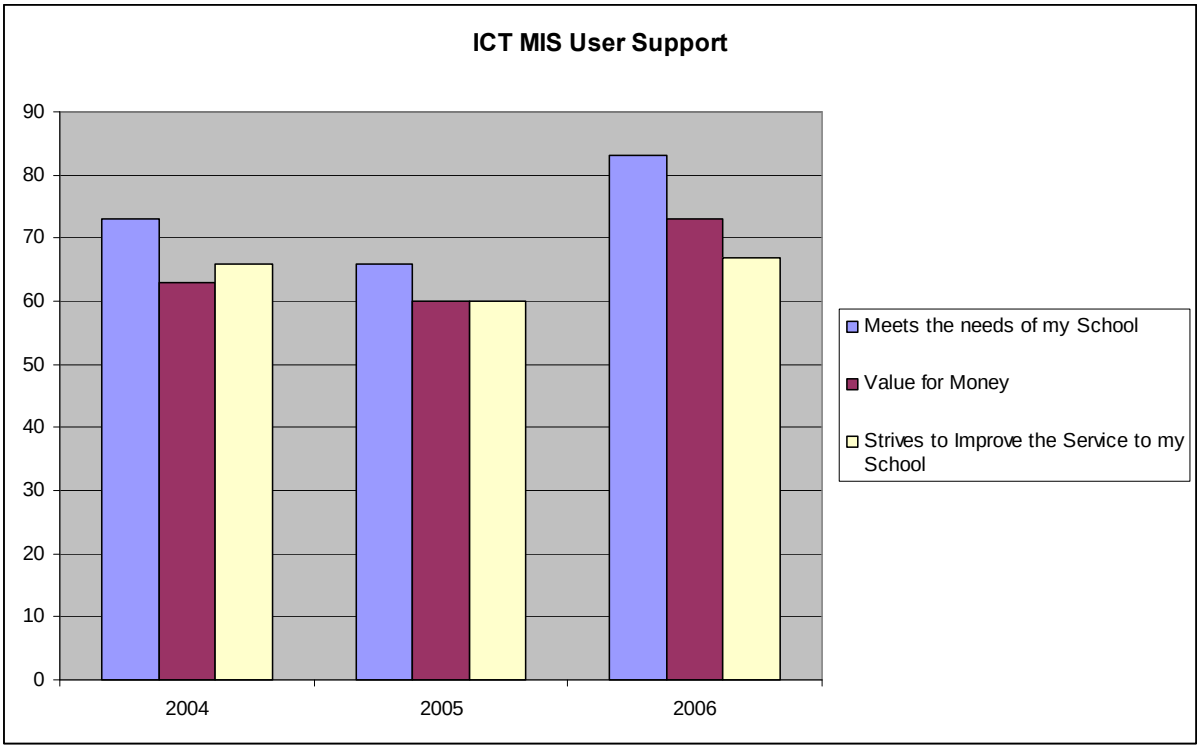


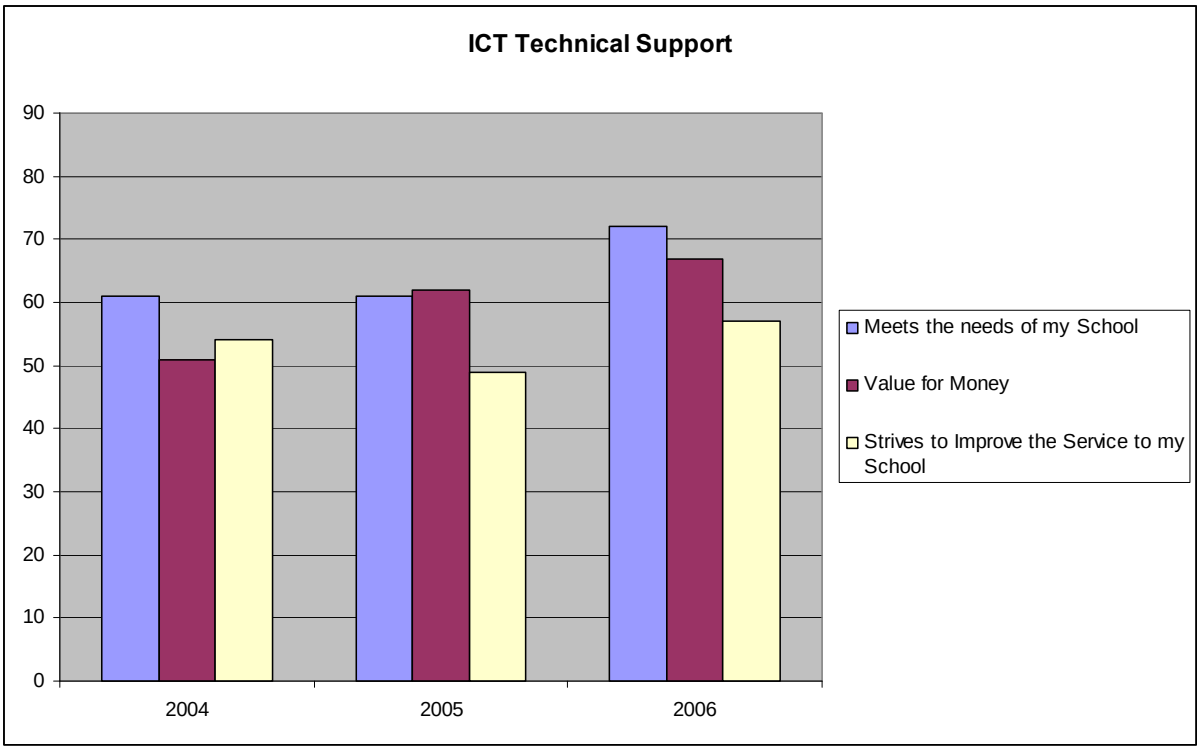




WES Services to Schools – Survey 2006 Appendix 4

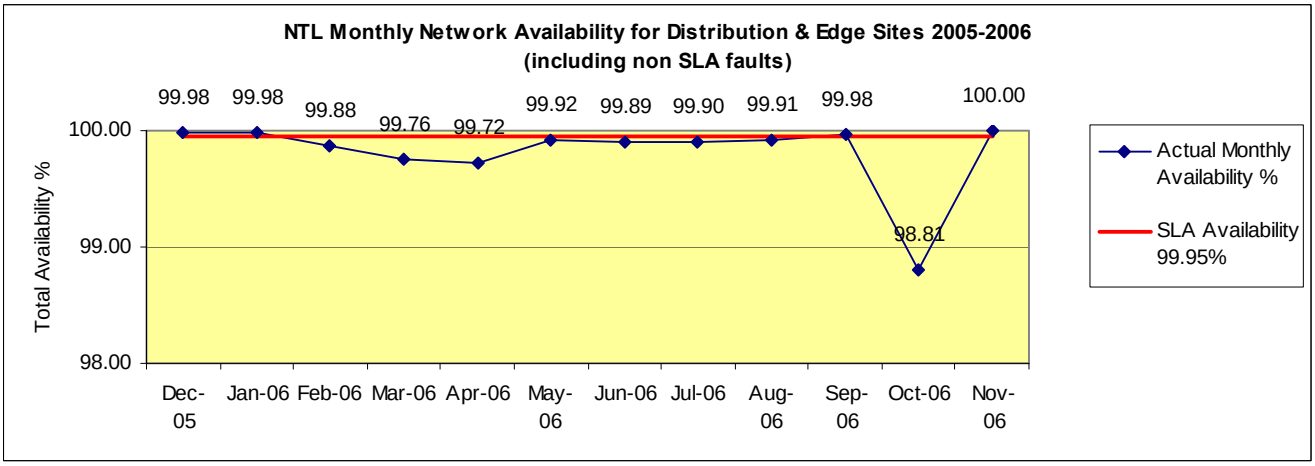
ICT Development Service – Service Improvements



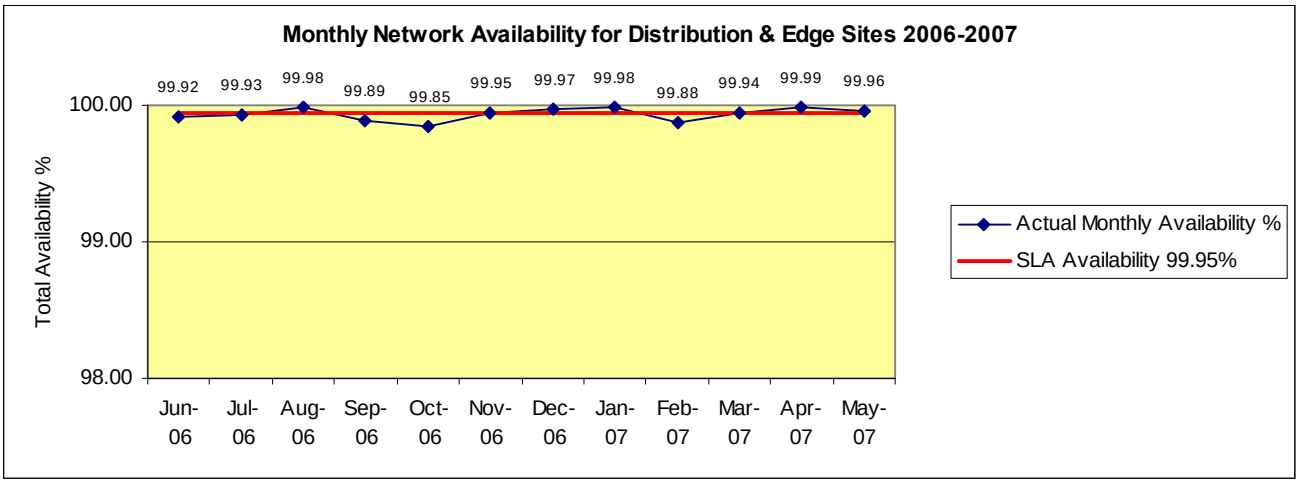


Broadband Connectivity & Performance Appendix 5

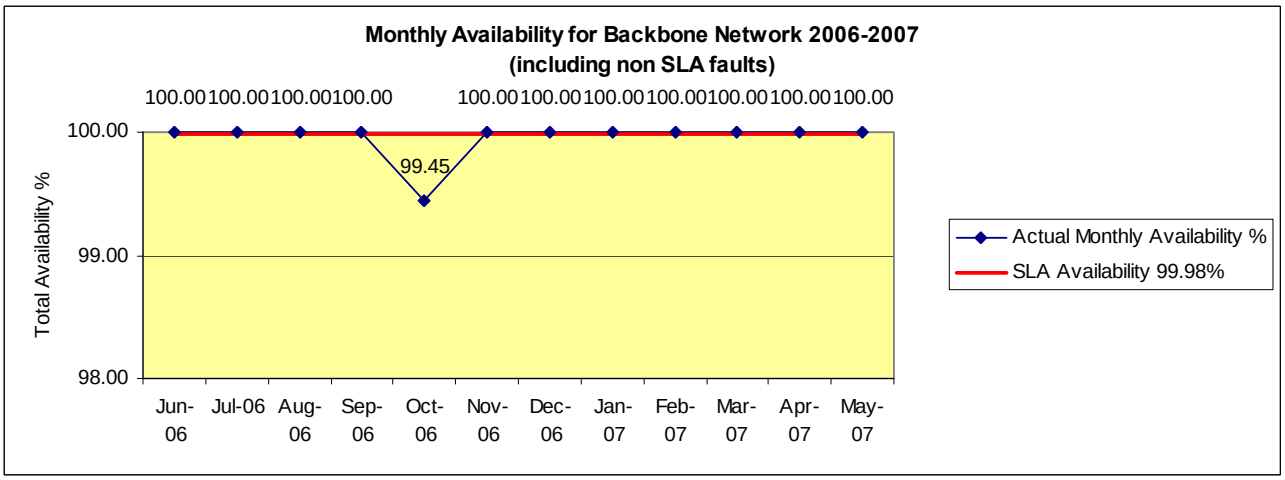
December 2005 – December 2006



January 2006 – May 2007



January 2006 – May 2007



Appendix 6

Level 4+ Mathematics KS2 Results (Nuneaton and Bedworth Project)

	%	%	%	%	%	%
	2001	**2002**	**2003**	**2004**	**2005**	**2006**
Chetwynd	77	77	75	81	72	82
Croft	53	59	56	71	77	75
Park Lane	43	53	43	54	54	71
Race Leys	68	62	63	67	80	70
St. Michaels		54	48	44	66	68

Commentary

With the exception of St. Michaels, all schools indicated a dip in performance in 2003. However, it is thought that this indicates the insufficient teacher training and support and insufficient time to embed the technology into classroom teaching.

Interestingly in 2004, again with the exception of St. Michaels, all schools showed a significant improvement in results. This could be partially attributed to continued teacher support in the schools and time to allow staff to become more confident and competent, especially with the range of digital resources.

References

Becta (2003), *What the research says about using ICT in Maths.* Coventry: Becta

Becta (2004), *What the research says about use ICT in modern foreign languages*, Coventry, Becta

BESA (2006), *ICT in UK State Schools 2006 – summary report*, BESA

Cox, M, Abbott, C, Webb, M, Blakeley, B, Beauchamp, T and Rhodes, V (2003), *ICT and Pedagogy: A Review of the Research Literature, ICT in Schools Research and Evaluation Series No 17.*, Coventry

Fisher, J (2005), *An evaluation of the impact of ICT on boys' attitudes to literacy in early foundation stage. A focussed study on four learners.* ICT Test Bed Project Case Study no P33, St Cuthbert's RC Nursery, Durham

Harrison, C, Comber, C, Fisher, T, Hawe, K, Lewin, C, Lunzer, E, McFarland, A, Mavers, D, Scrimshaw, P, Somekh, B and Watling, R (2002) *ImpaCT2: The Impact of Information and Communication Technologies on Pupils Learning and Attainment. ICT in Schools Research and Evaluation Series No 7*, Becta / DfES, Coventry

McFarlane, A and Sakellariou, S (2002), *The role of ICT in science education.* Cambridge Journal of Education, 32 (2) 219-232

Ofsted (2004) *ICT in Schools – the impact of Government initiatives five years on,* London : Ofsted

Passey, D (2005), *E-Learning: an evaluation review of practice across the West Midlands Regional Broadband Consortium,* Published by WMNet

Passey, D and Rogers, C with Machell, J and McHugh, G (2004), *The Motivational effect of ICT on pupils,* University of Lancaster

Taylor, A, Lazarus, E and Cole, R (2005) *Putting languages on the (drop down) menu: innovative writing frames in modern foreign language teaching,* Educational Review, 57 (4) 435-455