



**Ultraportable 1 to 1 Project
Evaluation**

Phase Two

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Contents

Evaluation brief.....	4
Executive summary	5
Part One: Teacher Experiences	7
Summary	15
Part Two: Pupil ICT use: the personal background.....	16
Part Three: Pupil Netbook use; personal responses.....	18
Summary	24
The Impact of the Ultraportable Project.....	24
Appendix One: School Leader Questionnaire	27
Appendix Two: Class Teacher Questionnaire	30
Appendix Three: Pupil Questionnaire.....	36

Evaluation brief

MirandaNet¹ was commissioned by Teesside City Learning Centre to evaluate the Ultraportable 1 to 1 project. The evaluation covered the two years of the Ultraportable Project: 2009 – 2011. This report forms the second part of the evaluation and presents a picture of the ways in which the Ultraportables (referred to as 'Netbooks' by pupils and teachers, and hereafter for the rest of this report) have been integrated into classroom activities and pupil use.

The research collected data from the user base of the Samsung Netbook Project to investigate perceptions of pupils, teachers and school leaders of the impact of the Netbooks on learning, teaching, pedagogies and workflow. Data was collected through online questionnaires and followed up with telephone calls and email contact. Four schools were involved in the project: Brambles Primary School, Middlesbrough; Overfields Primary School, Redcar & Cleveland; Frederick Natrass Primary School, Stockton and Ward Jackson Primary School, Hartlepool. The associated City Learning Centres supported these schools.

78 pupils completed the second online questionnaire.

This report has three parts:

the first describes teacher experiences, pedagogical applications and assessments of the impact of the Netbooks;

the second describes pupil use and experience of ICT use outside school.

The substantive third section explores the ways in which pupils have integrated Netbooks into the ways in which they work and learn, together with their reactions to using these devices.

¹ The MirandaNet Fellowship, founded in 1992, is an e-community of practice for international ICT policy makers, teachers, teacher educators, researchers and commercial developers who are passionate about digital technology in teaching and learning and about using technologies to promote cultural understanding and democratic participation. Currently there are over 600 members in over 50 countries worldwide. The website, online forums, seminars, workshops and projects run by members are funded by international partner companies and government agencies.

Executive summary

Teacher and school use of ICT

The teachers participating in this project who responded in both the first and second of the project evaluations (2010; 2011) can be considered e-mature in terms of their personal and professional use of ICT. They use a range of technologies in the classroom to enhance their teaching and can evaluate their effectiveness. They identify interactive whiteboards, projectors and the Internet as having the greatest impact. Their use of a learning platform varies. Its impact increases with frequency of use.

The use of Netbooks in the curriculum

All teachers reported that the Netbooks were easy to use and integrate into curriculum activities. In two schools pupils decide how and when the devices are used: in the others, they are allocated for specific activities. Most of the teachers found it easy to manage the use of the Netbooks in the classroom, although all have needed technical support. The amount of support required decreased in the second year of the project.

Teacher assessment of the impact of the Netbooks

All teachers reported that the introduction of the Netbooks has had an impact on attainment and motivation.

Pupil use of a computer at home

97% of pupils report that they have the use of a computer at home (2010: 94%): 30% have one of their own (2010: 42%), the others share a computer with a member of their family. Three quarters of the pupils use the computer in a public space; the others use it in their bedroom. For the majority of pupils, computer use is a social activity: although 28% use it on their own (2010: 40%), almost 70% use it with family members (2010: 60%). They use their computers for a range of activities, many of them creative. Most use their computer daily.

Pupil perspectives on Netbook use at school

Almost all pupils report that they find their Netbooks easy to use.

They use their Netbooks for a range of activities, many of which mirror their home computer use. The activities that they undertake – producing slideshows and podcasts, creating animations, undertaking Internet research – would be difficult, if not impossible, without a personal computing

device that was easily integrated into class work: portable, easy to use and that took up little space on the desk.

They all recognise the impact that these devices have had on the way that they work and learn. All of the pupils said that their work had improved since starting to use the Netbook.

The majority of pupils reported that work was 'more fun' with the Netbook, and said that they liked using them and wanted to keep them.

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I would also like to thank Maria Kingham of Teesside City Learning Centre for originating and supporting the project and this evaluation.

All pupils participating in the project have been awarded a World Ecitizenship Certificate by World Ecitizens, the international charity of the MirandaNet Fellowship: <http://www.worldcitizens.net>

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Part One: Teacher Experiences

This first section describes teacher experiences, pedagogical applications and assessments of the impact of the Netbooks. These were reported in the first phase of the evaluation, in 2010 and are now updated to reflect staff changes.

Background to the study

Classroom teachers and school leaders were invited to complete separate online questionnaires, designed to examine the role of existing learning technologies in teaching and learning within the schools. Four schools were involved in the project, all of which responded to the Teacher survey: one school responded to the School Leader survey. Pupils in all four participating schools completed the pupil questionnaire.

Learning technologies – a school leader’s perspective

One school leader, whose management role in the school was that of ICT co-ordinator responsible for teaching and learning with ICT, e-safety and parental engagement, responded to the survey. The decision to participate in the Netbook project was made because *“It was offered by an LA advisor and we jumped at the chance as we only have 15 PCs in our suite and this allowed extra flexibility of teaching.”*

Personal use of ICT covered the full range of activities, with the exception of audiobooks, writing and commenting on blogs, and making digital videos. This school leader agreed that ICT makes a significant difference to learning and teaching, and that good leadership is important for successful ICT implementation. In terms of technology, the school had provided teachers with the following items:

My school has provided me/staff with	How much impact has this had?				
	None at all	A slight impact	Some impact	Quite a lot	A lot
A laptop	N/A				
An IWB & projector					Y
A projector					
A hand-held device					
A Learning Platform			Y		
Other					

At this stage of the project, therefore, the technology that had made the most impact on staff at the school was an interactive whiteboard and projector. The learning platform used by the school was considered to have had some impact. Some three to four hours of CPD had been given to support the use of both technologies.

What CPD have you or another ICT leader given to support its use?

	None at all	1 – 2 hours	3 – 4 hours	A number of sessions	Continuous CPD with others
A laptop	N/A				
An IWB& projector			Y		
A projector					
A hand-held device					
A Learning Platform			Y		
Other					

Learning technologies – classroom teachers’ perspectives

What technology do you have in your classroom?											
Please put a tick in the appropriate box.		How often do you use it?					How much impact has this had?				
		Sometimes	When appropriate	Most of the time	Always	For (subject)	None at all	Slight impact	Some impact	Quite a lot	A lot
A laptop	75%		25%				50%				25%
Internet access	100%				50%				25%	50%	25%
An IWB & projector	100%		25%		75%					75%	25%
A projector							50%				25%
A hand-held device	25%		25%			Science	100%				
A Learning Platform	100%	25%	25%	25%	25%			25%	25%	25%	25%
Other			25% Visualiser	25%		Cameras, camcorders - creative literacy, science		25%	25%		

Three of the teachers reported having the use of a laptop; all had Internet access, an interactive whiteboard and a learning platform for use in their classroom. One teacher reported using a handheld device. Frequency of use varied from one school to another: interactive whiteboards and projectors were used most frequently, and were considered to have the most impact, as was use of the Internet. A handheld device was used by one teacher, but considered to have had no impact at all. The use of a learning platform varied, although all schools had been provided with one. Teachers who used it more frequently reported a greater impact than that produced by occasional use.

What technologies do your pupils use?

Please put a tick in the appropriate box.	How often do they use it?				How much impact has this had?						
	Sometimes	When appropriate	Most of the time	Always	For (subject)	None at all	Slight impact	Some impact	Quite a lot	A lot	
A laptop		25%	25%		25%	For most subjects					
Internet access			75%		25%	They use mymaths.co.uk daily and a variety of other sites for different subjects Research to support curriculum topics			25%	25%	25%
An IWB & projector			75%	25%		I deliver from it and they interact Whole class work Whole class teaching			25%	25%	50%
A projector											
A hand-held device		25%						25%			
A Learning Platform		25%	25%					25%	25%		

Those technologies that pupils use most frequently would appear to have the greatest impact, with teachers perceiving a correlation between frequency of use by pupils and the impact on their learning.

Teachers were asked about professional collaboration in the classroom. All reported working with a HLTA; experience in working with an AST, a School Improvement Partner (SIP), CLC staff or an LA adviser varied from school to school.

Have you worked with any of the following colleagues?					
	Never	Sometimes	For particular subjects	Quite a lot	A lot
Advanced Skills Teacher	50%		50%		
HLTA	25%		50%		25%
School Improvement Partner	50%	25%			25%
CLC Staff	25%	25%	25%		25%
LA Adviser	25%	25%	25%		25%

I use technology professionally and personally for

Booking tickets, purchasing flights and holidays, and resourcing lessons	100%
Professional development	100%
Purchasing books or CDs	100%
Banking and finance and purchasing items	75%
To support teaching and learning	100%
Providing e-learning for students	75%
Online communities – Facebook, etc	75%
Online storage of documents, images and other things	100%
Communicating with friends and family	100%
Archiving and distributing photographs	100%
Listening to music on an iPod or MP3	50%
Listening to audiobooks	0
Writing, or commenting on, blogs	50%
Making digital videos	25%

The teachers' use of technology in their personal and professional life suggests that these teachers are what Becta referred to as 'e-mature'², in that they have integrated a range of technologies into their personal and professional practices.

In the next section of the questionnaire teachers were asked to report on the ways in which they have integrated the Netbooks into their classroom activities.

Using the Netbooks

What CPD have you been given to support the use of the Netbooks?				
None at all	1 – 2 hours	3 – 3 hours	A number of sessions	Continuous CPD with others
	75%		25%	

All teachers had received CPD to support the introduction of the devices into their classrooms. Three teachers had received between one and two hours; the other, a number of sessions. The focus of the CPD was the use of the devices to support Literacy, how a range of programmes could be used across the curriculum and the use of specific programs. Podcasting and Mindmapping were quoted. These tended to reflect the teachers' own curriculum concerns.

All teachers reported that the Netbooks were easy to use and integrate into curriculum activities.

How easy do you find it to use the Netbooks?				
Difficult	Not easy	Relatively	Quite easy	Very easy
		25%	50%	25%

How easy did you find it to integrate the Netbooks into curriculum activities?				
Difficult	Not easy	Relatively	Quite easy	Very easy
		25%	50%	25%

² Becta (2009) Personalising Learning <http://research.becta.org.uk> An e-mature school can be described as making strategic and effective use of ICT to improve educational outcomes.

One school reported that the Netbooks were used across the curriculum, and for 'mymaths.co.uk': the school also used Ript for note making, and Audacity for speaking and listening activities. This school had also loaded Open Office onto the Netbooks to provide word processing, spreadsheet and graphing capability. Open Office also linked to the school wireless Internet point, so that pupils could access the Internet at any time for research or Bitesize revision. Another school reported that it was sometimes difficult if a full class was trying to access the Internet at the same time. An additional router was purchased to help with this.

Another school reported that pupils have made ongoing mindmaps to record learning about the Tudors, and make presentations about trips.

Two teachers commented that it was relatively difficult to manage the use of the Netbooks in the classroom: the other two teachers reported that they found it quite, or very, easy to do so.

How difficult do you find it to manage use of the Netbooks in the classroom?

Difficult	Not easy	Relatively	Quite easy	Very easy
		50%	25%	25%

One school has also provided memory sticks for each child: this helped obviate the problem of lack of external drives for the Netbooks.

Have you had any problems in using the Netbooks?

Distributing machines to the class	Charging the batteries	Using the Internet	Accessing the school server	Networking
	25%	50%	25%	25%

One school reported a few initial technical difficulties but once all programmes were installed 'we got on fine'. The problems that were identified were related to using the Internet, accessing the school server and networking. Two areas that might have created problems, those of managing the distribution of machines to the class and charging the batteries, were not mentioned by any of the teachers, although one school reported that their initial difficulties in charging batteries had been overcome. All schools reported that they sometimes needed technical support.

Do you ever need technical support for the Netbooks?

Always	Often	Sometimes 100%	Rarely	Never
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We had to have a special socket put in to charge the laptops because they fused the original socket. Also sometimes the children did not plug them in correctly at the start. These issues were quickly ironed out.

They lost the Internet link and one screen seemed to turn upside down.

Some Netbooks have locked themselves but this was resolved quickly.

Technical support was provided when getting them set up for Internet access and putting programmes onto them.

Netbook use in the classroom

How are the Netbooks used?

They can use them at home and at school for everything

The pupils use them at school for everything.

The pupils use them in class when they need to.	50%	If the children get 5 minutes of free time they often choose to play maths games and other things on the Netbooks.
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The Netbooks are distributed for specific activities.	50%
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The Netbooks are used on certain days

In two schools pupils decide how and when the devices are used: in the others, they are allocated for specific activities.

Impact on affective factors

Other questions asked teachers to comment on pupil attitudes to using the Netbooks within the curriculum. All teachers described the positive effects that had been observed. *“They have been really enthusiastic.” “Enthusiastic, engaged in tasks, eager to learn.” “Very positive.” “Very positive. Children have enjoyed using them”*

Pupils were seen to be more motivated. Teachers reported that: *“The children were really keen to get started on the Netbook project and love using them. I would definitely say that it has improved motivation.” “They are more willing to record their ideas.”*

Teachers were also asked to reflect on the impact of the Netbooks on pupil behaviour. One school reported no marked change. For another school the difference was that, *“as the children all have their own Netbook it means they stay on task much more than they did when they had to share PCs between 2.”* One school reported *“Children are allowed to use Netbooks in their free/golden time so behaviour is good as they know they wouldn’t be allowed to use them otherwise.”* However, in the first year of the project one school reported that, *“pupils who are less confident/motivated by ICT have been more difficult to manage.”* For this aspect of affective factors, then, the evidence is varied, although the balance shows Netbooks as having a positive impact.

None of the schools had observed any impact on attendance because, as they all pointed out, attendance has always been good.

Impact on attainment

Three teachers reported an improvement in the quantity and quality of work produced by pupils since the start of the Netbook project. The fourth teacher had not noticed any marked change. For one teacher, *“Because the Netbooks are in the classroom on the tables ready for use all day, they get picked up at a moment’s notice and children can find answers to questions, do 5 minutes mental maths etc. We can do more of these activities because we don’t have to factor in time to move between class and suite, logging in etc. Consequently we seem to get more done.”*

In one school, *“Reluctant writers don’t have a problem with typing so get more down.”*

However, another teacher commented that the *“Quantity of work is different. It sometimes takes longer to produce using ICT compared to a similar quantity of hand-written work.”*

The final teacher had observed *“No marked change.”*

In terms of the quality, rather than quantity, of work produced by pupils, one school had observed, *“the extra time gained shown above impacts on the quality of their work – particularly in maths.”* For another school, *“because of the creative approach quality, especially in writing, is difficult to measure.”* For two schools, there was again no marked change.

Pedagogical organisation

How often do you organise the following learning activities with your class?					
	Always	Often	Sometimes	Rarely	Never
Individual work	25%	75%			
Pair work	50%	25%	25%		
Group work	25%	50%			25%
Project work		75%	25%		
Collaboration outside the classroom				75%	25%

All of the schools use a range of organisational approaches to pupil learning and work. Individual work, pair work, group work and project work are all a feature of classroom learning activities. However, it is rare for the schools to involve their pupils in collaborative learning outside the classroom.

Summary

These teachers can be considered e-mature in terms of personal and professional use of ICT.

They use a range of technologies within their classroom.

They identify interactive whiteboards, projectors and the Internet as having the greatest impact on pupil learning.

Use of a learning platform varies. Its impact increases with frequency of use,

All teachers reported that the Netbooks were easy to use and integrate into curriculum activities.

In two schools pupils decide how and when the devices are use: in the others, they are allocated for specific activities.

Most found it easy to manage the use of the Netbooks in the classroom, although all have needed technical support.

All report that the Netbooks have had an impact on attainment and motivation.

Part Two: Pupil ICT use: the personal background

This second part of the report describes pupil use and experience of ICT use outside school. The first set of questions was designed to elicit background information about the uses that pupils made of computers in their personal lives. 78 pupils responded to the questionnaire in 2011, 93 in 2010.

All figures have been rounded to the nearest percentage.

76 of the respondents – 97% of the total – reported that they had the use of a computer at home.

When asked to whom it belonged, the majority of the responses were that it belonged to the pupil (30%) or the family (30%). Of the other responses, the majority indicated that the computer belonged to another member of the family – parents; siblings; grandmother or other named family member. Responses in 2010 suggested that 42% of computers belonged to the pupils. Despite this, almost all pupils said that they had the use of a computer at home.

To whom does it belong?

Me	Family	Parents	Siblings	Grandmother	Other
30%	30%	22%	12%	3%	3%

N=76

The second question asked where the pupil used the computer. The majority of the responses – 72% – indicated that it was used in a public space; the living room; the dining room; the kitchen, and so on. 27% of pupils reported that they used it in a bedroom. One claimed that they did not use the home computer.

When asked about how the computer was used, 28% reported that they did so on their own, compared with 40% of responses in 2010. There was a range of other responses – 69% – that indicated a range of family members with whom it was used. Some pupils chose more than one response

Do you use it with anyone?

Alone	Family & friends	Parents	Siblings	A friend	Grandmother
28%	35%	20%	9%	4%	1%

The computer was used for a range of activities. Pupils indicated that they pursued multiple activities. Games and Internet use were the most frequently cited activities (43% each), followed by homework (9%) and use of the learning platform (9%). These responses were very similar to those reported in the previous survey in 2010.

What do you use it for?							
Games	Social networking	Music	Learning platform	Internet	Homework	Art	
84%	3%	1.5%	9%	36%	9%	2%	

When asked how often they used the computer just over half indicated that they did so daily.

How often do you use it?					
Daily	4 times a week	3 times a week	1 or 2 times a week	Infrequently	Nil response
54%	25%	1.5%	16%	1.5%	1.5%

The picture that emerges from both of the surveys is one in which almost all pupils have access to a computer at home, where most of them use the computer frequently, do so with other members of the family or friends, and use the computer in a public, rather than private, space.

For these pupils, therefore, a personal computer is a consumer good used in a social context for a range of activities, many of which are related to the young people's sense of personal development.³

³ The use of a computer as a tool with which young people can realise their ideas and creativity, and the ways in which they learn to do this autonomously, have been explored in a number of studies. See, for example, Cuthell, J. P. (2002) *Virtual Learning*. Aldershot, Ashgate; and Cuthell, J. P. (2006). *Steering the Supertanker: Changing Teaching and Learning*. In: *Computers in the Schools: Technology Applications in Education* (2006) 23 1/2 Ed. Maddux, C. Binghamton, N.Y. The Howarth Press.

Part Three: Pupil Netbook use; personal responses

This substantive third section explores how pupils have integrated Netbooks into the ways in which they work and learn, together with their reactions to using these devices.

Given the number of pupils who either have their own computer, or access to one at home, a key question relating to the use of Netbooks was that of competence: how the pupils learned to use the device. Pupils were able to select more than one response to the question.

How did you learn how to use your Netbook?					
	'Help' tells you how to use it	I worked it out myself	My friends and I worked together	We had a demonstration in an ICT lesson	We had lessons on how to use it
2011	7.5%	55%	22%	36%	49%
2010	3%	51%	36%	48%	61%

Although many of the pupils reported that they had lessons on how to use their Netbook, what was significant was the number of pupils who said that they, or their friends, had worked autonomously to learn how to use the Netbook.

When do you use your Netbook?						Before school	After school
At Home						6%	27%
At School	Before lessons	During lessons	During break	At lunchtime	After school	Anything else?	
	9%	60%	3%	5%	12%	39%	
2010 totals:	13%	77%	16%	20%	22%	15%	

Pupil responses to the question of when they used the Netbooks were, as with those of the previous year, ambiguous: they were able to select more than one response, yet only 60% of pupils responded that they used them in lessons (77% in the 2010 survey). Perhaps this question item was regarded as self-evident. However, it is clear that the use of Netbooks extended throughout the day.

What do you use it for?

Taking photos	Filmmaking	Using the Internet	Email	Writing	Podcasting
31%	33%	94%	0%	64%	7.5%

Pupils also listed a range of additional uses for their Netbooks. These included Podcasts; Maths; Homework; Games; PowerPoint; Social networking; Music; Reading and Slideshows A number of other uses were mentioned: Animation; emails; MindMapping; Painting; Research; Revision and the all-encompassing 'Everything'.

Pupils were then asked about the frequency of use of their Netbooks at school. Some pupils failed to respond to this question: another claimed not to use the Netbook at all.

How many times a week do you use your Netbook at school?

Never	Once a week	Up to three days a week	Every day	Every lesson
1%	27%	41%	27%	4%

In the 2010 survey almost half the pupils – 46% – reported using them every day; others, less frequently. In the current survey this figure had reduced, with only 31% reporting daily use.

When I use my Netbook I like to ...

Work on my own	79%
Work with another person	43%
Use information from the Internet	58%
Email other people and work with them	9%

In terms of styles of working, pupils could select more than one response, and this resulted in a picture of varying work patterns. What is interesting is that, in response to a previous question, no-one said that they used email, yet here 9% of pupils said that they emailed other people and

worked with them. It could be that their use of the term 'email' included such utilities as Chat, which facilitated contact with their peers.

When pupils were asked about the subjects for which they used the Netbooks the full range of curriculum areas was covered.

Netbook use ...	2011	2010
I use my Netbook to send messages to my teachers about my work	13%	22%
I use my Netbook to work with my friends	58%	61%
I use my Netbook when I am at home *	15%	13%
I do online quizzes or tests	57%	46%
My teachers use the Netbook to send messages to me about my work	3%	7%

* Some pupils may own their own Netbook. This was not a response item in the first part of the pupil survey: the two question items were "Do you use a computer at home?" and "Who does it belong to?".

I use my Netbook				
Every lesson	Every day	Up to three days a week	Once a week	Never
1%	35%	41%	22%	1%

Using the Netbook improves my work.				
I strongly agree	I agree	Neutral	I disagree	Nil response
27%	54%	16%	0	3%

Of those pupils who responded, 81% felt that their work had improved since starting to use the Netbook: no-one disagreed.

Affective factors in Netbook use	Yes	No
Working with a Netbook makes schoolwork more fun.	82%	7%
I look forward to coming to school.	79%	21%
I enjoy working at home.	45%	55%
Working with a Netbook makes the work take longer.	12%	88%
I find it difficult to use a Netbook for my work.	10%	90%

Not all questions received a full response rate. Despite that, there are some clear trends: the majority of pupils feel that their Netbook makes schoolwork more fun; most look forward to attending school; almost half enjoy working at home. Most pupils do not feel that using their Netbook makes the work take longer, and most pupils do not find it difficult to use one for their work. Indeed, most pupils feel that using their Netbook makes it easier to do work that is “*Complicated, tricky, hard & difficult*”, and that they are able to do “*Research/information search(es)*”. Many of the other activities that pupils identify would be impossible for them to undertake without the use of their own personal digital device.⁴

⁴ See, for example, Cuthell, J. P. (1998). Thumbs Up for the Digital Kids? Computers, Equality and Opportunity.

MirandaNet: Institute of Education. University of London; Cuthell, J. P. (1998). The House that Strauss Built. D.I.Y in Cyberspace: Bejeaned Student Bricoleurs. Media 98. Institute of Education. University of London; Cuthell, J. P. (1997). Cyborgs Sitting in the Classroom. Writing the Future: Writing and Computers 10. Brighton.

The Netbook helps me do work that is ...

2010	2011
Complicated, tricky, hard & difficult work: 56%	Complicated, tricky, hard & difficult work: 39%
Research/information search: 21%	Research/information search: 10%
More fun: 10%	More fun: 5%
Writing: 6%	Writing: 2%
Subject-based: 3%	Subject-based: 5%
Animation: 2%	ICT We don't have an ICT slot. We benefit from every subject as it possible for us to do so.
Writing poems: 2%	Like what nobody knows about (sic)
Making slides: 2%	Work that's difficult to find out and it helps you work your hardest.
Logical; Quicker; Interesting; Not finished; Games; Helpful for our SATs; maths; ... you haven't heard about before ...	

Since I started using my Netbook my work has improved

A lot	Quite a lot	Some	Not much	Not at all
27%	25%	44%	3%	1%

Almost all pupils felt that their work had improved – even if 3% felt that it had improved by 'not much'.

Using the Netbook makes my work more fun.

I strongly agree	I agree	Neutral	I disagree	I strongly disagree
59%	34%	4%	1%	1%

The majority of pupils reported that work was 'more fun' with the Netbook.

They were then asked how using the Netbook changed the way they worked. There was an eclectic range of responses. Many reported that they felt happier, more relaxed and less stressed when they used their Netbooks; some said that they now looked forward to work; others spoke of enhanced concentration and understanding; a great many pupils spoke of improvement

in their work and specific subjects, saying that it helped them to learn faster. Use of the Internet for research was identified as a key way in which their work had been changed.

Not surprisingly, almost all pupils said that they liked using their Netbook.

I like using my Netbook.				
I strongly agree	I agree	Neutral	I disagree	I strongly disagree
72%	24%	3%		1%

The thing I like best about my Netbook is ...

For pupils, a key feature of the Netbooks was that they had one each: they didn't have to share them. The ability to use the Internet for research was also cited by a number of pupils, as was the use of online sites for revision and improvement in a range of subjects, particularly with Maths games. A range of programs was identified, with a number of pupils mentioning the ability to produce presentations and slideshows for curriculum subjects. Other pupils cited creative activities: music, the ability to take photographs; produce animations and create podcasts using their machine. Pupils clearly felt that they were able to produce independent work that was a reflection of their ideas and imagination. Not only that, "*It is my own and when I am on it I feel relaxed.*" "*... the work that seems hard becomes easy ...*" However, the underlying message was that all of this work was regarded as 'fun'. "*You get to work more freely and it makes my work more fun too!*" "*The idea of not writing stuff down by pen and doing it on a laptop persuades children to do work.*"

These comments were supported by responses to the next question, in which they were asked about interesting things they had done with their Netbooks: all of the responses supported those previous examples, with an emphasis on the creative powers unleashed by their Netbooks.

The final question asked pupils whether they would like to add anything to their previous responses. 74% responded: almost all said how much they had enjoyed them and expressed thanks for having them.

It has been really fun to have them in work it is fun to work with each other.

It has been very good for our lessons to help us to not struggle. Thank you!

It has been great having them thank you.

It inspired me because I am getting my own one.

It's been great having the Netbooks so please could you leave them with us. Thank you for letting us have them.

I love going on the Netbooks!!! Thank you service people!!!

Yes a very handy little device with very good features.

They are great as we can play fun and educational games such as my maths.co.uk.

They are really fun and when you have some spare time its nice to play on them or write an impressive story

I think having a Netbook is a great idea because it makes lessons more fun and exciting foe everyone.

I think the Netbook is a great way of learning and lots of other kids would like to use them too.

Having our Netbooks is great fun as children look forward to working with them and that encourages them to try and make their work to a masterpiece.

Summary

97% of pupils have the use of a computer at home.

37% consider their computer as belonging to them..

72% use the computer in a public space; 27% use it in a bedroom.

28% use it alone. 69% use it with family members.

They use their computers for a range of activities, many of them creative. Most use their computer daily.

Almost all pupils find their Netbooks easy to use. They do so for a range of activities, many of which mirror their home computer use..

96% felt that their work had improved since starting to use the Netbook.

All pupils felt that their work had improved.

The majority of pupils reported that work was 'more fun' with their Netbook; they liked using them and wanted to keep them.

The impact of the Ultraportable Project

The first part of this evaluation painted a picture that showed almost all pupils having access to a computer at home, where most of them use the computer frequently, do so with other members of the family or friends, and use the computer in a public, rather than private, space. The second stage of the evaluation confirmed this. All of these pupils see the computer as a personal consumer good that is used in a social context for a range of activities. Many of these activities are seen by the young people as part of their social and cognitive developmental process.

When the Netbooks were introduced into their classrooms a powerful tool was placed in the hands of these pupils, most of whom already had experience of the creative use of computers. All of these pupils – across the two years of the evaluation – value the fact that everyone has a Netbook, and that they do not have to be shared. The autonomy that this hands to young learners – the ability to use the Internet for research, the use of online sites for revision and development, with constant non-judgmental feedback for improvement, the ability to produce presentations and slideshows for work, rather than being limited to pen and paper – has had a significant impact on these groups of young people in a short period during Year 6.

The Netbooks also unlock and enhance pupils' creative activities: music, the ability to take photographs; produce animations and create podcasts using their machine. Pupils clearly feel that they are able to produce independent work that is a reflection of their ideas and imagination. During the second year of the evaluation the new cohort of Year 6 pupils showed similar confidence and competence in using the Netbooks.

The initial challenge was to continue the improvements that were seen during the first year of the study, and to develop learning and teaching strategies to embed these into daily practice. However, the data suggests that frequency of use decreased slightly, so that in a number of the classrooms the Netbooks were seen as tools to be used when the teacher deemed their use appropriate, rather than ubiquitous tools in the hands of the pupils.

We have noted that other learning technologies have an impact that is directly related to the frequency of their use. Although the frequency of Netbook use by class teachers has decreased during the second year of the study the impact on pupils has not. Pupils see them as liberating tools – and, as hand-held technology, whether in the form of Netbooks, smart phones, iPod touches or gaming devices, becomes increasingly owned by younger and younger children – that places access to learning and knowledge in their own hands.

The challenge for schools and teachers is to recognise that these young people should feel in greater control of their own learning. Current debates that increasingly focus on improved performance and outcomes must recognise the role that personal digital technologies can play.

Unless the potential of these technologies is recognised and deployed many of our pupils will continue to feel that teaching, learning and education are processes that are done *to* them, rather than processes in which they are the central actors.

Appendix One: School Leader Questionnaire

As part of the evaluation of the Ultraportable – Netbook – Project it would be most helpful if you could answer the following questions. Please feel free to add any comments that you feel would expand your answers.

All data will be confidential and responses in the report will be anonymised. However, if you are willing to discuss the project further, email me at john.cuthell@mirandanet.ac.uk and we can arrange a discussion.

Background information	
What is the name of your school?	
What is your job title?	
What is your classroom role?	
What is your subject area?	
What is your management role in school?	
Who, or what, made you decide to take part in the Netbook project?	

I use technology professionally and personally for	
Booking tickets, purchasing flights and holidays, and resourcing lessons	
Professional development	
Purchasing books or CDs	
Banking and finance and purchasing items	
To support teaching and learning	
Providing e-learning for students	
Online communities – Facebook, etc	

Online storage of documents, images and other things	
Communicating with friends and family	
Archiving and distributing photographs	
Listening to music on an iPod or MP3	
Listening to audiobooks	
Writing, or commenting on, blogs	
Making digital videos	

Are there other digital technologies you use personally or professionally?

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How much do you agree with these statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
ICT makes a significant difference to learning and teaching					

Good leadership is important for successful ICT implementation.				
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

My school has provided me/staff with	How much impact has this had?				
	None at all	A slight impact	Some impact	Quite a lot	A lot
A laptop					
An IWB& projector					
A projector					

A hand-held device					
A Learning Platform					
Other					

	What CPD have you or another ICT leader given to support its use?				
	None at all	1 – 2 hours	3 – 3 hours	A number of sessions	Continuous CPD with others
A laptop					
An IWB& projector					
A projector					
A hand-held device					
A Learning Platform					
Other					

Appendix Two: Class Teacher Questionnaire

As part of the evaluation of the Ultraportable – Netbook – Project it would be most helpful if you could answer the following questions. Please feel free to add any comments that you feel would expand your answers.

All data will be confidential and responses in the report will be anonymised. However, if you are willing to discuss the project further, email me at john.cuthell@mirandanet.ac.uk and we can arrange a discussion.

Background information	
What is the name of your school?	
What is your job title?	
What is your classroom role?	
What is your subject area?	
What is your management role in school?	
Who, or what, made you decide to take part in the Netbook project?	

What technology do you have in your classroom?										
Please put a tick in the appropriate box.	How often do you use it?					How much impact has this had?				
	Sometimes	When appropriate	Most of the time	Always	For (subject)	None at all	Slight impact	Some impact	Quite a lot	A lot
A laptop										
Internet access										
An IWB & projector										
A projector										
A hand-held device										
A Learning Platform										
Other										

What technologies do your pupils use?										
Please put a tick in the appropriate box.	How often do they use it?					How much impact has this had?				
	Sometimes	When appropriate	Most of the time	Always	For (subject)	None at all	Slight impact	Some impact	Quite a lot	A lot
A laptop										
Internet access										
An IWB & projector										
A projector										
A hand-held device										
A Learning Platform										
Other										

	Have you worked with any of the following colleagues?				
	Never	Sometimes	For particular subjects	Quite a lot	A lot
Advanced Skills Teacher					
HLTA					
School Improvement Partner					
CLC Staff					
LA Adviser					
Others – please specify					

Your personal technology use

I use technology professionally and personally for	
Booking tickets, purchasing flights and holidays, and resourcing lessons	
Professional development	
Purchasing books or CDs	
Banking and finance and purchasing items	
To support teaching and learning	
Providing e-learning for students	
Online communities – Facebook, etc	
Online storage of documents, images and other things	
Communicating with friends and family	
Archiving and distributing photographs	
Listening to music on an iPod or MP3	
Listening to audiobooks	
Writing, or commenting on, blogs	
Making digital videos	

Using the Netbooks

What CPD have you been given to support the use of the Netbooks?				
None at all	1 – 2 hours	3 – 3 hours	A number of sessions	Continuous CPD with others

If you had CPD in the use of the Netbooks, on what did it focus?

How easy do you find it to use the Netbooks?				
Please provide examples where necessary.				
Difficult	Not easy	Relatively	Quite easy	Very easy

How easy did you find it to integrate the Netbooks into curriculum activities?				
Please provide examples where necessary.				
Difficult	Not easy	Relatively	Quite easy	Very easy

How difficult do you find it to manage use of the Netbooks in the classroom?				
Please provide examples where necessary.				
Difficult	Not easy	Relatively	Quite easy	Very easy

Have you had any problems in using the Netbooks?				
Please provide examples where necessary.				
Distributing machines to the class	Charging the batteries	Using the Internet	Accessing the school server	Networking

Do you ever need technical support for the Netbooks?				
Please provide examples where necessary.				
Always	Often	Sometimes	Rarely	Never

How are the Netbooks used?		Please provide examples where necessary.
They can use them at home and at school for everything		
The pupils use them at school for everything.		
The pupils use them in class when they need to.		
The Netbooks are distributed for specific activities.		
The Netbooks are used on certain days		

How have the pupils reacted to using the Netbooks?	
Has motivation improved?	
How has the use of the devices impacted on the quantity of pupil work?	
How has the use of the devices impacted on the quality of pupil work?	
How has the use of the devices impacted on pupil behaviour?	
Has there been any impact on attendance?	
Have Home – School links been changed by pupil use of the Netbooks?	

How often do you organise the following learning activities with your class?					
	Always	Often	Sometimes	Rarely	Never
Individual work					
Pair work					
Group work					
Project work					
Collaboration outside the classroom					

Thank you for providing these answers. The information from this evaluation will help to improve the second phase of the project.

If you wish to contact me, my contact details are:

John Cuthell

Research and Implementation Director
 MirandaNet Academy
john.cuthell@mirandanet.ac.uk
<http://www.mirandanet.ac.uk>

Appendix Three: Pupil Questionnaire

Background information

Name of School:

Gender:

These questions will help us to understand how you use computers	Yes or No – or provide information
Do you use a computer at home?	
To whom does it belong?	
Where do you use it?	
Do you use it with anyone?	
What do you use it for?	
How often do you use it?	

How did you learn how to use your Netbook?:				
'Help' tells you how to use it	I worked it out myself	My friends and I worked together	We had a demonstration in an ICT lesson	We had lessons on how to use it

When do you use your Netbook?						Before school	After school
At Home							
At School	Before lessons	During lessons	During break	At lunchtime	After school	Anything else?	

What do you use it for?						
Taking photos	Filmmaking	Using the Internet	Email	Writing	Podcasting	Anything else?

How many times a week do you use your Netbook at school?				
Never	Once a week	Up to three days a week	Every day	Every lesson

When I use my Netbook I like to ...	Please tick
Work on my own	
Work with another person	
Use information from the Internet	
Email other people and work with them	

For which subjects do you use your Netbook?

Do you ...	Please tick if you do
Use your Netbook to send messages to your teachers about your work?	
Use your Netbook to work with your friends?	
Use your Netbook when you are at home?	
Ever do online quizzes or tests?	
Do your teachers use the Netbook to send messages to you about your work?	

I use my Netbook				
Every lesson	Every day	Up to three days a week	Once a week	Never

Using the Netbook improves my work.				
I strongly agree	I agree	Neutral	I disagree	I strongly disagree

Which of these statements describes how you feel? Answer Yes or No for each one.	Yes/No
Working with a Netbook makes schoolwork more fun.	
I look forward to coming to school.	
I enjoy working at home.	
Working with a Netbook makes the work take longer.	
I find it difficult to use a Netbook for my work.	

The Netbook helps me do work that is ...

--

Since I started using my Netbook my work has improved				
A lot	Quite a lot	Some	Not much	Not at all

Using the Netbook makes my work more fun.				
I strongly agree	I agree	Neutral	I disagree	I strongly disagree

How has using your Netbook changed the way you work?

--

I like using my Netbook.				
I strongly agree	I agree	Neutral	I disagree	I strongly disagree

The thing I like best about my Netbook is ...

Tell me what interesting things you have done with your Netbook?

Is there anything else you would like to say about the Netbook?

If you would like to say more about your Netbook and the ways in which you use it speak to your teacher. You will then be able to provide us with more information.

Thank you very much for answering these questions