Technology in Schools: Characteristics, the Global Picture and a Pre and Post Use Study

Stage 3: April – September 2013

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Abstract

This report summarises findings from an evaluation study that is looking at the feasibility and educational impact of giving one-to-one Tablets to every child in school. Research for this stage was carried out between April and September 2013 and follows Stage 1 (published December 2012), which assessed three schools that had introduced one-to-one Tablets and one control school, and Stage 2 (published July 2013), which looked at nine schools that had introduced one-to-one Tablet schemes. This report is divided into three sections. The first analyses the results from questionnaires and from the face-to-face interviews and ethnographic observation carried out in 21 schools. The second section updates the global study that was completed at Stage 1 and looks at the introduction of one-to-one Tablets in schools across the globe. The third section assesses and compares staff, pupil and parental attitudes before and after Tablets were given by Tablets for Schools to Year 7s in three schools.

The first section in this stage of the research is based on an evaluation of 21 secondary schools that had chosen, or were in the process of choosing, to give pupils one-to-one Tablets, including six schools that had used one-to-one schemes since 2011, three schools that were given Tablets by Tablets for Schools for Year 7s between January and April 2013, and twelve schools that have introduced or are in the process of introducing one-to-one Tablet schemes this year. Methodology included qualitative and quantitative research. Twenty-four questionnaires were sent to leadership in schools identified as using or embarking on one-to-one Tablet schemes in the UK, and 21 responded. In addition visits were made to the 21 schools at which leadership were interviewed in depth, and lessons were observed using an ethnographic methodology. Individual case studies for each of these schools are available separately on the Tablets for Schools website.

While the research methodology in Stages 1 and 2 was largely qualitative, including ethnography carried out in schools, Stage 3 attempts to quantify some of the findings that had been highlighted in the previous reports, including issues such as financing, insurance, employing outside guidance and assistance, the process of engaging staff, parents and pupils, and the perceived benefits of introducing Tablets to schools. It also assesses drawbacks and concerns that leadership in the schools had during the process, and what advice leadership would pass to other schools that are considering the introduction of Tablets. While it looks at changes to pedagogy and concerns about issues such as pupil distraction and teacher wellbeing through a constant need to be always in communication with each other, highlighted in the previous report, these issues are not explored in such depth at this stage, but are important objectives for the next round of research, which involves 40 schools and is to be carried out between November 2013 and September 2014.

The second section gives an up-to-date overview of the global picture of one-to-one Tablet use in education.

The third section looks at the three schools that were given Tablets by Tablets for Schools. To assess this process, questionnaires were sent to schools before Tablets were introduced early in 2013, and

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1 Please note that Techknowledge for Schools changed its name from Tablets for Schools in May 2015

2 It should be noted that the sample size of 21 Tablet-using schools at this stage is small, and the quantitative analysis should be viewed in this context
staff, pupils and parents completed these. Questionnaires were then sent to staff, pupils and parents after the trial, at the end of the summer term, and the beginning of the autumn term 2013.

The findings indicate that the adoption of one-to-one Tablet use is best managed within the schools through a collective agreement on the principles of the pedagogical changes that are likely to be brought about, and an objective to ensure parental and staff engagement at an early stage. Comprehensive management of the school’s infrastructure, including sufficient wifi provision, technical support, provision for repair and insurance, is essential. Allowing enough time and training for staff to become familiar with the devices, and a clear policy on usage including apps, other content, communication tools, and firm boundaries with, if necessary, the instillation of firewalls, appear to drive successful adoption. Preparing pupils for life and work in the 21st century is the common objective of these schools, and learning how to manage time and the possibility of distraction through one-to-one Tablet use is an important part of this preparation.
Key Words and phrases

Tablets in education; One-to-one devices in schools; Tablets and pedagogy; Tablets and the democratisation of education; Educational content; Educational apps; Teacher satisfaction with Tablet teaching; Pupil satisfaction with Tablet learning; Parental satisfaction with Tablets in schools; Independent learning; Collaborative learning; Motivation to learn; global Tablet use.

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3 See http://www.tabletsforschools.co.uk/
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Tables for Schools

Introduction
Tables for Schools is a not-for-profit initiative that aims to enable all schoolchildren to have access to Tablet technology to transform the way they learn. It is led by companies including Carphone Warehouse, Dixons, Google, Samsung, Pearson, Virgin Media, TalkTalk and 9ine, working in partnership with schools and academics. Its focus continues to be to inspire schools, teachers and parents and to provide a blueprint for them to adopt Tablet technology; to help them change the way they teach and significantly improve children’s engagement and attainment.

While there is as yet little empirical evidence that looks at the use of Tablets to enhance pupil learning, there are many studies on the effectiveness of digital learning for children, and the benefits of, for example, educational video games that can hone critical-thinking skills and help teach academic curricula, while also evaluating what students learn. A 2010 report from the European Commission concludes:

Despite the increase in the numbers of computers in schools, our survey shows that hands-on access for pupils remains limited. Allowing pupils to play with and explore new tools could enhance their motivation to think, understand, learn and conceptualise in creative ways.

Many countries are trialling the use of Tablets in schools. Tablets for Schools believes that it is not a matter of if but when Tablets will be universally adopted as a learning device in schools. A recent report found that most US schools are testing Tablet devices. Emerging economies in Asia and Eastern Europe have also announced the adoption of Tablets in schools, including South Korea, India, Kazakhstan and Turkey. Trials have already begun to explore the benefits for children’s learning through the use of Tablets in France, the Netherlands, Japan, Singapore and Australia.

Research background
As Tablets become cheaper and more manufacturers produce high-quality, portable devices that can be used by pupils at school and at home, it is believed that it is important to monitor their use in school and find out the effects of that use. While several trials have run in schools in the UK in the past five or six years with one-to-one devices (such as notebooks and laptops), infrastructure, cost and maintenance, and lack of teacher training appear to have been restrictive factors in their

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widespread adoption. Tablets, it seems, offer a faster, easier, more cost-effective and more manageable route to giving every child in secondary school access to the internet at home and at school, and to the possibility of providing the best educational content through each child having their own device.

**Stage 1 research: September 2011 – July 2012**

Since September 2011 Tablets for Schools has been carrying out a scoping study to explore the possibilities of Tablet learning for children. It appointed Family Kids and Youth (FK&Y) to help carry out this study. Three state-funded secondary schools that had introduced one-to-one Tablet learning (with iPads) in September 2011 were identified in the research: Honywood Community Science School, Essex; Wallace High School, Belfast; and Longfield Academy, Kent. FK&Y’s research focused on Honywood School in Essex. It included a ‘control’ school in a similar catchment area, Alec Hunter Humanities College in Braintree, Essex, and two primary schools within the catchment area, St Peter’s Primary School and St Andrew’s Primary School, at which Year 6 (10 to 11-year-old) pupils were interviewed as well as teachers and parents. In total eighteen focus groups were held with pupils, teachers and parents. Observation and ethnography were carried out, looking at what teaching was like when Tablets were introduced into the classroom. Observation research was also carried out at Wallace High School, Belfast and Longfield Academy, Kent. In the three Tablet-using schools, in-depth interviews were held with the Head Teacher, Deputy Head, Head of IT, and at Honywood and Wallace High School the Heads of Special Educational Needs (SEN). The full report of the research results was published in December 2012 ([http://tabletsforschools.adheredev.com/wp-content/uploads/2012/12/2011-12-Final-Report.pdf](http://tabletsforschools.adheredev.com/wp-content/uploads/2012/12/2011-12-Final-Report.pdf)), and results of the research were presented to the Tablets for Schools team and stakeholders on 4 December 2012.

**Stage 2 research: January – April 2013**

To extend the research further, the research was divided into three cohorts:

1. **The ‘longitudinal’ schools – four schools**
   Research in the three state-funded schools already identified: Wallace High School, Northern Ireland; Longfield Academy, Kent, and Honywood Community Science School, Essex and included in Stage 1 of the research. We added Cramlington Learning Village, Northumberland, which had introduced the Samsung Galaxy Tab to Years 7 and 8 in September 2011.

2. **Non-iPad schools – three ‘new’ schools**
   Research in three schools to which one-to-one Tablets were introduced, provided by Tablets for Schools stakeholders, in Year 7 in January 2013 (Alec Hunter Academy, Braintree, Essex; Dixons City Academy, Bradford; Greenford High School, Ealing, London). Tablets were given to four or five Year 7 classes in each school in the spring term, and devices were then switched to the remaining classes in the summer term. The handout of the devices at Alec Hunter Academy was delayed until the

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7 Now Alec Hunter Academy.
summer term, and findings from research of the actual use of the devices at the school are included in Stage 3 of the research programme (see Appendix 1).

**Ethics**

In any research we must consider respondent sensitivity, and to withhold the Tablets from some children while giving them to others could be seen as unethical. Tablets were therefore given to half the classes in Year 7 in the spring term, and then to the other half in the summer term, so that throughout Year 7 in the schools there were pupils learning and teachers teaching with and without Tablets, but all children had the opportunity to access Tablets at some point in the duration of the trial.

3. **Two additional schools**

UCL Academy, Swiss Cottage, London (http://www.uclacademy.co.uk/) – a new school that opened in September 2012 and was supplied with iPads – and Essa Academy in Bolton. Essa had introduced one-to-one iPods in 2009 and had decided to replace these with iPad 3s in the autumn term 2012. The manufacturer, Apple, alerted Tablets for Schools to these schools, and we are grateful for their assistance in this.

The research report for Stage 2 was published in July, 2013.

**Stage 3 research: April – September 2013 – 21 schools**

In addition to the nine schools already taking part in our research, an additional twelve schools were identified as adopting, or about to adopt, one-to-one Tablets, and were willing to take part in the research. A full description of the research sample and methodology is in Appendix 1.

These reports can be downloaded from the Tablets for Schools website.

A full description of our current research, Stage 4, November 2013 to September 2014, is in Appendix 2.

**Research objectives**

The overall research objectives for the research study were to find out whether the provision of Tablets to secondary school pupils in the UK can be justified in terms of pupil benefit, teacher benefit, pupil learning, potential risks including safety and security, cost, and acceptance by pupils, teachers and parents. The study also continues to consider the impact of Tablet use in other countries on UK learning and pupil progress. The full research questions and objectives can be found in Appendix 3.

**Family Kids and Youth**

Family Kids and Youth (FK&Y) is an independent full service research agency that focuses on the lives and needs of children, young people and their carers. It is on the Government Procurement roster and its clients include government agencies, universities, commercial organisations and charities. FK&Y works under the strict codes of conduct of the Market Research Society (MRS), the British Psychological Society (BPS) and the British Educational Research Association (BERA) in carrying out
robust independent research with children and young people. FK&Y is a Company Partner of the MRS, and founder Dr Barbie Clarke is a Fellow of the MRS, and its spokesperson on issues relating to research with children and young people. For more details please see Appendix 6.
Tablets for Schools Research Stage 3

Management Summary

Overview

The report is in three sections. Section 1 includes face-to-face interviews, ethnography and questionnaires sent to twenty-one Tablet using schools. Section 2 summarises the global picture of Tablet adoption in schools, and Section 3 summaries the findings from research conducted with teachers, parents and pupils in three schools that were given Tablets by Tablets for Schools for use in Year 7. Case studies from twenty Tablet using schools are available separately.8

It is clear from the research that the introduction of technology will not necessarily bring about change. There is plenty of anecdotal evidence from the schools visited in the research, and from global research, of technology and devices that had previously been acquired by schools, but not used to their full potential. The successful implementation of technology to aid teaching and learning relies on a willingness to accept change across the whole school, a collective determination to make the most of what the technology offers, training and familiarisation for staff, and a consideration of the changes to pedagogy that are likely to come about.

Each school in the research has managed the change brought about by the introduction of Tablets differently, but strong leadership has been essential and the adoption of a Tablet working party which includes members of the leadership team, technical expertise, a business manager and outside support from, for example, another Tablet-using school has been a common characteristic. As more information becomes available for schools (e.g. the Tablets for Schools website) this process will become easier.

The findings indicate that the adoption of one-to-one Tablet use is best managed within the schools through a collective agreement on the principles of the pedagogical changes that are likely to be brought about, and an objective to ensure parental and staff engagement at an early stage. Comprehensive management of the school’s infrastructure, including sufficient wifi provision, technical support, provision for repair and insurance, is essential. Allowing enough time and training for staff to become familiar with the devices, and a clear policy on usage including apps, other content, communication tools, and firm boundaries with, if necessary, the instillation of firewalls, appear to drive successful adoption. Preparing pupils for life and work in the 21st century is the common objective of these schools, and learning how to manage time and the possibility of distraction through one-to-one Tablet use is an important part of this preparation.

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8 See: http://www.tabletsforschools.org.uk/case-studies-stage-3-research/
Section 1: Characteristics of Schools in the UK Using One-to-one Tablets

Introduction
This section of the report summarises the findings from in-depth research in twenty schools, including interviews with teacher leaders, ethnographic observation of Tablet use in lessons, and comprehensive questionnaires received from 21 Tablet-using secondary schools in the UK. Schools were a mix of longer-established Tablet schools, included in Stages 1 and 2 of the Tablets for Schools research, and additional schools that had been identified as having adopted, or being in the process of adopting, one-to-one Tablet schemes. Ongoing dialogue has been maintained with many of these schools to ensure that the research is as up to date as possible at the time of publication.

Reasons for introducing one-to-one Tablets
Strong leadership remains the common thread in this larger sample of (21) schools. As reported in the previous Tablets for Schools research, it is noticeable that Tablet adopter leaders tend to be prepared to take some risk, and to be driven by and share a long-term vision of what skills students will need when they leave school. Such leadership has the ability to articulate this vision and to develop trust and engagement among staff, pupils, parents and governors.

Teacher leaders associated such skills with living and working in a digital age, which in the survey was cited as the main reason for introducing Tablets by twenty (92%) of the schools. The second main reason was to support self-led research and problem solving, mentioned by nineteen schools (91%). A further eleven schools (52%) said that they wanted to ensure equality of access to the internet and nine schools (43%) cited potential cost savings as a motivational factor.

Characteristics of schools in the UK using one-to-one Tablets
While there may have been common objectives in terms of introducing one-to-one Tablets, it is significant that the 21 secondary schools involved in this stage of the research differed greatly in terms of their physical characteristics, and there was no common pattern.

Schools ranged from those in areas of deprivation, with one school having more than half its pupils on free school meals, and in terms of pupils with English as their second language. Four schools had English as an additional language in 44% to 78% of cases. Size of schools differed, with three secondary schools having fewer than 500 pupils, and two schools having more than 2,000 pupils.

Ofsted ratings also varied, with thirteen schools rated as Grade 1 or Grade 2, three schools rated as Grade 3, and two schools rated as Grade 4. Two schools are new, and have therefore not yet received an Ofsted rating, and one is independent.

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9 See Stage 1 Tablets for Schools research published December 2012, and Stage 2 Tablets for Schools research published July 2013: http://www.tabletsforschools.co.uk/
Fourteen of the 21 schools are academies, four are state schools, one is a state/academy, one is independent, and one is selective.

**Infrastructure**
The introduction of Tablets frequently called for a substantial additional investment alongside the direct cost of purchasing or leasing the devices themselves. An important and necessary additional cost was that to ensuring sufficient broadband capacity, a challenge which nine out of the 21 (45%) research schools claimed they had faced. The cost of this was mostly between £1,000 and £10,000, although in one case it was as high as £125,000. Sixteen schools (80%) had other associated IT costs, such as those concerning wifi, storage, charging facilities, servers, staff support (administration, IT, etc.), and complementary technologies (for instance, large TV screens/monitors). The costs of these were in the thousands or tens of thousands, depending on individual circumstances.

**Choosing the device**
Six of the 21 schools reported that they had had previous experience of using other one-to-one devices, mainly laptops and netbooks, before opting to introduce Tablets. Some of these schools had experienced such high levels of device breakages in the former trials that the programme had had to be abandoned. Teacher leaders argued that while Tablets can break, there are no moving parts, and if a robust case is used breakages are far less likely to occur.

Overall the benefit of Tablets over other devices was thought to be their light weight and portability, which made it easier for pupils to collaborate and share. The immediacy of switching on the Tablets, the lack of boot-up time required and the intuitive interface were thought to be an essential part of engaging pupils in lessons, allowing the technology to integrate seamlessly into learning. There were several descriptions from teachers of previously spending as much as half a lesson trying to ensure that everyone was logged on to the system through a laptop or netbook, or a desktop PC in a computer suite, and the frustration this caused. Equally it was felt that the mobility and immediacy of the device would expand learning outside the classroom and school building.

The majority of the schools in this stage of the research (fourteen, or 67%) chose to introduce iPads (models 1, 2, 3, or Mini). Five of these schools trialled alternative devices before making their decision, and the reasons for choosing iPads varied. The schools that introduced iPads in 2011 argued that at the time when the decision had to be made there were very few other devices available. Schools that have introduced one-to-one Tablets in the years following this benefited from the experience and knowledge of the early adopters. Other devices used in five schools included Samsung (Galaxy/ATIV Tab3), Sony (S), Acer (W510) and Toshiba (AT100/Excite) Tablets.

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10 The first iPad was introduced to the market in spring 2010. The iPad 2 was launched in spring 2011.

11 See Tablets for Schools Case Studies [http://www.tablesforschools.org.uk/case-studies-stage-3-research/](http://www.tablesforschools.org.uk/case-studies-stage-3-research/)
Mixed economy

The decision to allow several different devices to be used in the school is one that is often considered. Most schools in our research decided against this on the grounds that one common device is more democratic, and easier to integrate into the school system, as well as being easier to maintain. An important distinction for these schools is that the device is personal; the pupil has ownership of their own device.

The support sought before introducing Tablets

At the stage of planning the introduction of the Tablets, schools are likely to require considerable technical support with issues including wifi, finance, insurance and protective covers. Thirteen (62%) of the nineteen schools involved in the Stage 3 research had needed help with acquiring insurance; twelve (57%) with financial issues; eleven (52%) with wifi infrastructure; and ten schools (48%) with acquiring protective cases. Four (19%) schools stated that they needed help with ‘Other’ issues. ‘Other’ issues included the need to research pedagogical uses; to ensure that the school’s infrastructure and that of two partner primaries would support the Tablets; and to look at how other schools had deployed schemes previously.

Informing parents

All the schools in the research set aside time to inform and engage with parents in order to tackle any concerns or questions they might have. Parental concerns included safety, theft, breakages, and inappropriate and excessive use of the device at school and at home. They also included questions about teachers’ knowledge of technology and their ability to deal with pupils having personal devices. For some schools this was more challenging than for others, and demanded repeated meetings with parents to explain the school’s intentions and how the Tablets would be managed in the school.

Professional development

This stage of the research shows the importance of teacher training relating to Tablet teaching and learning. In many schools teachers were supplied with Tablets for several months before the pupils. Seventeen (81%) of the 21 schools said that they had funded the provision of Tablets to teachers, as well as to pupils, free of charge, versus four (19%) that had not.

The majority of the schools surveyed had offered professional development for teaching staff associated with the use of Tablets. Eighteen of the 21 schools had offered training before the introduction, nineteen during introduction and seventeen schools had offered training associated with the use of Tablets during the time since.

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Funding the Tablets

Schools have taken a variety of approaches to funding the Tablets. These usually included a mix of parental contributions and school funding, and for some schools additional grants. Two schools have decided to give Tablets to pupils free of charge, while Cedars School of Excellence, which is the only independent school included in the research, includes the cost of Tablets in the overall school fee. The cost of the Tablet is not specified in the fee, as the school wants it to be perceived as a part of the overall infrastructure of the school. Five (24%) schools funded Tablets entirely from their own budgets; four (19%) funded them via parental contributions; and eight (38%) favoured a blended funding approach between school funding and parental contributions. Most schools that receive parental contributions do this on a monthly basis, while others have decided to receive them once a term. The monthly fees range between £10 and £18.

Insurance and breakages

Schools have also taken a variety of approaches towards insurance. While some schools have purchased insurance policies, eight schools in the research had chosen to self-insure, and one teacher leader said the school intends to do so in the future. The schools that have decided to self-insure felt that the costs given to them by insurance companies were far too expensive. One school calculated that for the same price as an £18,500 insurance premium they could afford a breakage rate of 12%. Another explained that in terms of its decision to self-insure it had spent £1,900 on repairs to date, compared to the £7,000 that it would have cost to insure the devices.

The benefits and challenges of introducing Tablets

In several of the 21 schools in the research, Tablets had either not yet been introduced or had been introduced very recently, and it was considered to be too early to make any judgement on the impact on learning. Some recurring themes were raised, however.

When asked about the perceived benefits of using one-to-one Tablets, our survey found that seventeen of the sample of 21 teacher leaders mentioned the opportunities for pedagogical change, to shift pedagogy towards independent learning, increase pupil motivation and support collaborative learning as the greatest benefits of introducing one-to-one Tablets. Another ten mentioned improving access to IT and learning content, and two cited the speed of the devices and software. Three schools had removed their computer suites after introducing Tablets in order to redirect funds towards the financing of Tablets as well as to support overall changes to IT strategies, while a fourth school was planning to gradually reduce the number of stationary computers after the introduction of Tablets.

Lack of preparation and teacher training, insufficient wifi, a lack of time spent engaging with parents before the introduction of Tablets, and issues with breakages and insurance were listed as challenges associated with introducing Tablets.
The potential for Tablets to act as a distraction both during lesson time and at home was voiced as a concern by parents and pupils in the Stage 2 research\(^\text{13}\). In Stage 3 the 21 teacher leaders were asked to what extent Tablets presented a source of distraction during lessons. Eleven teacher leaders did not agree that distraction is a problem in their school; a further seven felt that this was a matter of classroom management, and that distraction did not necessarily present any new challenges to teachers. As the Tablets are given to each pupil as a personal device, and are used both at school and at home, it is important to note that some parents and pupils may find it challenging to limit the use of the device outside of lessons. The teacher leaders in this research did not however recognise this as a challenge in their school.

**Section 2: The Global Picture of the Educational Tablet Market**

The educational Tablet market has experienced significant growth over the last year. At the time of Tablets for Schools’ first report,\(^\text{14}\) large-scale Tablet programmes had been announced or launched in Turkey, India, Thailand, South Korea, Singapore and Australia, among other countries. Since then a number of new programmes have been launched, and interest continues to grow among individual schools and school districts.

The last twelve months have also seen a number of competitors to Apple’s iPad Tablet come onto the market, and some of these have begun to have an impact in the educational market. In Australia, where some of the first large-scale Tablet programmes were launched, Apple’s iPad has until now been the most common device, but a drop in prices by, for example, Windows 8 has led to contracts with brands such as Lenovo, Microsoft Surface and Acer.

The US continues to be one of the biggest educational Tablet markets; 2012 saw a 103% increase in sales of Tablets to schools and school districts. Although the iPad remains the most popular device, large-scale Tablet projects using other devices have been announced, including the Amplify programme, which is running in 21 schools in North Carolina. Critics have questioned, however, whether schools were well enough prepared for large-scale Tablet deployments, as the Amplify programme as well as an iPad programme in Los Angeles, the US’s second-largest school district, have had to be temporarily discontinued due to unforeseen problems such as breakages and inappropriate use.

The educational Tablet market is also growing sharply in Latin America, where countries such as Brazil, Mexico and Colombia have announced major investments in Tablets for public schools.

Spending on IT is increasing in Europe, and the majority of funds are going towards one-to-one schemes of some sort. Major Tablet trials are currently running in France and the Netherlands, while in Scotland the government has announced plans to let schools purchase Tablets at a reduced cost.

\(^{13}\) See Tablets for Schools Stage 2 report (July 2013) [http://www.tabletsforschools.org.uk/research-programme/](http://www.tabletsforschools.org.uk/research-programme/).

In Turkey eleven domestic and international companies in July 2013 bid for a contract to supply over 10 million Tablets for all primary school children for the main phase of the Fatih project, which aims to integrate technology into the public education system. General Mobile last year won the bid to supply Tablets for the pilot part of the project, and Türk Telekom won the contract to build the infrastructure for the project. Although the trial phase of the programme was hailed as a success by the government, critics have argued that the development of infrastructure is behind schedule and that the Tablets have yet to show any major impact on pupils’ learning.

In Africa major growth in the use of mobile technology has been observed over recent years, and this is expected to transform education in many areas in the region. Several governments in the region are hoping that Tablets can offer access to educational content and communication technologies, especially in more rural areas, and programmes have been launched in Kenya, South Africa and Mauritius, for example.

In Asia new large-scale Tablet programmes exist in Thailand and Japan. Small-scale trials are currently running in China, but this market is expected to grow significantly in coming years.

In India the government’s ambition to introduce Tablets in schools is seen as one of the driving forces of the development of IT and connectivity in the country, which has high levels of illiteracy and lack of connectivity in rural areas. Thanks to their perceived high quality and low cost, Aakash Tablets have been included in government-backed Tablet programmes in schools. By March 2013 100,000 Aakash 2 Tablets were used in schools, and the order for the third generation of Aakash Tablets is expected to be for around 5 million devices.

**Section 3: Response and Attitude to the Introduction of Tablets in Year 7 in Three Schools Pre- and Post-Use**

**Introduction**

Three schools were identified by Tablets for Schools to trial one-to-one Tablets in Year 7 in the autumn term 2012. The purpose was to help identify the process that schools underwent when adopting one-to-one Tablets, and to explore the use of a range of Tablets.

Tablets were provided by Tablets for Schools stakeholders and introduced to three schools: Alec Hunter Academy, Braintree, Essex received Acer and Samsung Tablets running on Microsoft Windows 8; Dixons City Academy, Bradford received Samsung Tablets; Greenford High School, Ealing, London received Sony Tablets.

Tablets were given to four or five Year 7 classes in each school in the spring term 2013, and devices were then switched to the remaining classes in the summer term, thus ensuring that all pupils in Year 7 had access to a Tablet. The handout of the devices at Alec Hunter Academy was delayed to the summer term, and this stage continued in the autumn term 2013.
Questionnaires were given to all Year 7 pupils, parents and teachers before the Tablets were introduced (pre-trial), and after pupils had used the devices for the duration of the trial (post-trial).

**Use of the Tablet devices in school**
The notion of a roll-out of Tablets to all secondary school pupils in the UK was well supported; 84% of pupils and parents agreed that this should happen.

Tablets were most likely to have been used frequently (i.e. several times a week, or once a week), rather than every day, according to pupils. Tablets were most commonly used every day in IT (17%) and Science (17%) lessons. Over three-fifths of pupils indicated that Tablets were used frequently in their Maths, Geography, Science, History, Languages and English lessons. Tablets were used rarely in Sport (47%), Drama (45%) and Technology (41%).

Staff, pupils and parents were in agreement that the Tablets were used predominately in class for doing research (86% staff; 85% pupils; 80% parents).

Pupils and parents reported a much greater use of Tablets in lessons than school staff. Using the Tablets for tasks such as writing notes/essays, making presentations (65%) and using the calculator (63%) and dictionary were much more commonly reported by pupils. Pupils gave examples of 6.9 tasks/activities on average that they used their Tablet for in the classroom, compared to staff, who on average identified 4.1 tasks/activities.

**Use of the Tablet devices outside school**
Tablets were mainly used outside class and at home for playing games for fun, doing research and sending emails to teachers, according to pupils, parents and staff. Parents and pupils reported a much higher usage of the Tablets outside of the classroom and at home compared to staff.

**Perceived benefits of using a Tablet in school – pupils**
Increased or improved ability to communicate were listed as benefits of having used one-to-one Tablets by many pupils. Although most of these pupils would have been able to email teachers before the Tablets trial, the ease with which they could do this appeared to be a positive aspect of having a one-to-one Tablet.

Pupils were very positive about their enjoyment of learning at school at both stages of the research, with use of the Tablets appearing to consolidate this. Nine-tenths (90%) of pupils at the pre-use stage agreed that they enjoyed learning at their school. At the post-use stage 87% of pupils agreed that using the Tablet had helped them to enjoy learning at the school.

Pupil engagement in learning also appeared high at both stages. Nearly all (96%) pupils agreed that what they learned at school would be relevant to their future at the pre-use stage. At the post-use stage nearly three-quarters (73%) of pupils agreed that using a Tablet at school will be relevant to their future.
Perceived benefits of using a Tablet in school – staff

Staff were enthusiastic and optimistic about their school and the potential contribution that introducing Tablets could have. At the pre-use stage 87% reported really enjoying teaching at the school and believed it was forward-thinking in its attitude to learning. A similar proportion (88%) felt that the children at the school enjoyed learning. There were limited differences in opinion across schools.

Introducing the Tablets meant that the school was thinking about the children’s future, according to 81% of staff at both the pre-use and post-use stage.

Pupil and parent engagement

Both parents and pupils agreed that Tablets had a motivational effect. At both stages parents (79% and 77%) agreed that Tablet use helped motivate and engage their children with their school work. Similarly, 83% of parents at the post-use stage felt that the Tablets had made their child’s lessons much more interesting and engaging (92% at the pre-use stage felt that this could be the case).

Pupils felt that teachers had planned exciting and interesting ways to use the Tablets (73% agreed with this statement, 45% strongly agreed). Furthermore, over two-thirds (69%) agreed that the Tablets had been useful for teachers being able to help them with the subjects they found hard.

Nearly nine-tenths (87%) of pupils agreed that using the Tablet had helped them to enjoy learning at school.

Being able to continue school work at home, or even ‘on the go’, appeared to make the gap between school and home less wide. Several parents reported that the Tablet was being shared at home with the whole family, used both to share the child’s learning and also for parents to familiarise themselves with the device.

Perceived drawbacks of the Tablet trial in Year 7

Although they were generally very positive about the use of Tablets, the open-ended questions revealed that parents of pupils in the three Tablets trial schools had a number of concerns about their child’s use of a personal Tablet, such as making sure it was charged and looked after, as well as the potential for loss or damage. Some parents felt that these were additional responsibilities placed on them by the school.

Open-ended questions revealed that some parents felt that the use of Tablets had not yet reached its full potential. This was partly thought to be due to a lack of teacher training and preparation, as well as a lack of time for pupils and teachers to become accustomed to using the Tablets.

Some pupils also experienced technical difficulties and breakages with their Tablet, which disrupted their use of the device. In two of the schools, problems with wifi and broadband connection appeared to limit these pupils’ use of the Tablet both at school and at home.
Conclusions – success of the Tablet trial in Year 7

The exercise was worthwhile in that it emphasised the need for schools to be prepared in many different ways before the deployment of Tablets takes place. Time to adjust to a new form of pedagogy, a need for teacher training, and engaging parents in the process was found to be essential. It is interesting to note that many of the Tablet schools that took part in Stage 3 of the research (see Section 1 of this report) emphasised these points as most important to ensure the successful introduction of one-to-one Tablets. Teachers in the Tablets trial were enthusiastic about using the Tablet, but many would have liked far longer to become accustomed to the device, and more training in how to use the Tablet in teaching effectively. Pupils enjoyed the increased communication with teachers and with peers that the Tablet enabled, as well as access to information and help with school work in an easy format, but were somewhat frustrated that the device was not used more in lessons. Parents were pleased that their child had the opportunity to use a state-of-the-art device and recognised the benefits to learning that this brought, but were concerned about the responsibility this brought with it in terms of loss and breakages. They did, however, like the fact that their child had access to the internet in a way that ensured equality and opportunity for the future.
Section 1:

Characteristics of Schools in the UK Using One-to-one Tablets
Section 1: Characteristics of Schools in the UK Using One-to-one Tablets

1.1 Introduction
As the number of schools involved in Tablets for Schools’ research has increased, it has become important to create an overview of the characteristics of the schools that have chosen to adopt one-to-one Tablets. To do so a mix of quantitative and qualitative methods were used between April and September 2013. An online survey methodology was employed and sent to teacher leaders in 24 schools that had been identified by the research team as using, or about to introduce, one-to-one Tablets. Twenty-one schools responded between 24 June and 21 August 2013. These teacher leaders were asked to define key characteristics of the school, for example school type, number of SEN pupils etc., and to describe the ways in which Tablets had been introduced including what guidance or help had been sought and how initiatives had been funded (see Appendix 4). In addition the research team visited 21 schools and carried out in-depth interviews with school leaders and ethnographic observations in a selection of different subject areas. The face-to-face interviews included an in-depth exploration of the background of the school, the reasons for introducing one-to-one Tablets, the preparation and introduction process, upgrades to infrastructure, funding and use of content. These have been put into individual case studies which can be seen separately. This chapter summarises the overall findings from the quantitative teacher leader research, and the individual case studies.

1.2 Key characteristics of the 21 research schools
The 21 schools included in this stage of the Tablets for Schools research project vary greatly in terms of key characteristics. While some schools are located in more deprived areas of the country, others are located in predominantly middle-class areas. As a result the number of pupils on free school meals (FSM) varies. In five (24%) of the schools, under 10% of the pupils were on FSM. In nine (43%) schools, the rate was between 11% and 20%. In six schools, between 21% and 50% of pupils were on FSM, and in one school between 61% and 70% of pupils were on FSM (*16 NA 18.3%). Numbers of children with Special Educational Needs also varied. The Department for Education defines SEN (*NA 19.8%) as children who have learning difficulties that require special educational provisions to be made for them.17 Total numbers include School Action and School Action Plus, defined as children who are not making sufficient progress and require additional internal or external support, as well as children with full statements provided by the local authority.18

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15 http://www.tabletsforschools.co.uk/


18 https://www.gov.uk/children-with-special-educational-needs/overview
The size of the school and student cohort varied greatly, as did the percentage of ethnic minorities and the mix of nationalities and languages spoken within the school. Three schools had cohorts of under 500 pupils. Six (29%) had between 501 and 1,000 pupils; ten (48%) had between 1,001 and 2,000 pupils; and two (10%) had between 2,001 and 2,300 pupils. Some of the schools, especially those in rural areas, can be described as predominantly British White, while several of the urban schools had a large ethnic cohort. In nine schools the percentage of EAL (English as Additional Language) pupils was under 5%. In the three London schools in the survey, Chiswick School, Greenford High School and UCL Academy, this was the case for 44%, 45% and 55% respectively. At Essa Academy in Bolton 78% of pupils speak English as a second language (*NA 13.6%).

Table 1: Key characteristics of research schools

<table>
<thead>
<tr>
<th>Number of pupils</th>
<th>Total</th>
<th>% of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student cohort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 250</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>251-500</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>501-1000</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>1001-2000</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>2001-2300</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

Base total: 21 schools

<table>
<thead>
<tr>
<th>Pupils eligible for FSM</th>
<th>Total</th>
<th>% of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of pupils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10%</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>11-20%</td>
<td>9</td>
<td>43</td>
</tr>
<tr>
<td>21-30%</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>31-40%</td>
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<td>14</td>
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<tr>
<td>41-50%</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>51-60%</td>
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<td>0</td>
</tr>
<tr>
<td>61-70%</td>
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<td>5</td>
</tr>
<tr>
<td>71-80%</td>
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</tr>
<tr>
<td>81-90%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Base total: 21 schools

<table>
<thead>
<tr>
<th>Number of pupils with SEN</th>
<th>Number of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>&lt; 50</td>
<td>6</td>
</tr>
<tr>
<td>51-100</td>
<td>1</td>
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<tr>
<td>101-150</td>
<td>5</td>
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<tr>
<td>151-200</td>
<td>4</td>
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<tr>
<td>201-300</td>
<td>3</td>
</tr>
<tr>
<td>301-400</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 401</td>
<td>0</td>
</tr>
</tbody>
</table>

Base total: 21 schools
Table 2: Percentage of EAL pupils

<table>
<thead>
<tr>
<th>Percentage of EAL pupils</th>
<th>Number of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of pupils</td>
<td></td>
</tr>
<tr>
<td>-10 %</td>
<td>12</td>
</tr>
<tr>
<td>11-20</td>
<td>2</td>
</tr>
<tr>
<td>21-40</td>
<td>1</td>
</tr>
<tr>
<td>41-60</td>
<td>3</td>
</tr>
<tr>
<td>61-100</td>
<td>1</td>
</tr>
</tbody>
</table>

Base total: 19 schools

In terms of academic achievement and Ofsted ratings, while a large group of schools have consistently had high achievement over many years, others have made more recent but significant improvements to exam results and inspection results. Four (27%) of the schools are classed by Ofsted as Grade 1 / Outstanding; nine (60%) are Grade 2 / Good; three are Grade 3 / Satisfactory; and two (13%) are Grade 4 / Poor.

Fourteen (67%) of the schools are academies (*NA for secondary schools: 50%), four (19%) are state schools, one (5%) is a state/academy, one (5%) is independent, and one is selective (5%).

Fig 1: Ofsted grades and school types of research schools

<table>
<thead>
<tr>
<th>Ofsted Grade</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1 (Outstanding)</td>
<td>4</td>
</tr>
<tr>
<td>Grade 2 (Good)</td>
<td>9</td>
</tr>
<tr>
<td>Grade 3 (Requires Improvement)</td>
<td>3</td>
</tr>
<tr>
<td>Grade 4 (Inadequate)</td>
<td>2</td>
</tr>
</tbody>
</table>

Base: 18 schools (Two schools are new and have not yet had Ofsted inspections and one school is an independent school in Scotland and therefore not under Ofsted’s remit).

School type

Base total: 21 schools
1.3 Reasons for introducing one-to-one Tablet devices

The schools which have introduced one-to-one Tablets had different reasons for doing so and they can be roughly divided into two categories. The first category, approximately half of the schools, has had a pattern of steadily higher achievement and each has a good local reputation. These schools have acknowledged that although their exams results and inspection reports are very good, they also want to teach their pupils skills that are not yet part of the national curriculum. The introduction of technology therefore comes from the perspective of teaching and learning, with motivational factors creating a sense of independent learning, responsibility, critical thinking, collaboration and generally equipping their pupils with what are perceived to be 21st-century skills. Many of the schools had already had a focus on this, and in some schools technology had played an important part in teaching and learning. The motivation behind introducing the technology was to further improve and enhance the learning experience for pupils.

In the second category, the introduction of one-to-one Tablets played a part in a cultural change in the school towards a deliberate move to improve teaching and learning. Many of these schools had struggled in the past, some had been earmarked for closure, and some were failing. The process of improving the schools had been carried out through a new focus on understanding the way pupils learn, developing teaching standards and re-launching approaches to pedagogy. Several of these schools had had new leadership introduced to the school during this process. In these cases technology was regarded as integral to the process of improving the standards of teaching in the school and, importantly, as a way of re-engaging and motivating pupils and staff.

As has been reported in the previous Tablets for Schools research,\(^1\) it is noticeable that the common thread in this larger sample of (21) schools continues to be strong leadership who share a long-term vision of what skills students will need when they leave school, along with the ability to articulate this vision, and to develop trust and engagement among staff, pupils, parents and governors. Similarities were observed in schools in terms of the skills and abilities that leadership wanted the Tablets to promote. They included a sense of independence, problem solving, critical thinking and project- and enquiry-based learning. Teacher leaders associated such skills with living and working in a digital age, which in the survey was cited as the main reason for introducing Tablets by twenty (92%) of the schools. The second main reason was to support self-led research and problem solving, mentioned by nineteen schools (91%).

Furthermore, eleven schools (52%) said that they wanted to ensure equality of access to the internet and nine schools (43%) cited potential cost savings as a motivational factor. Several schools had considered their previous IT resources to be outdated or lacking a long-term vision or plan and wanted to move away from a framework of large or multiple IT suites. Teacher leaders instead wished to integrate the use of technology into learning, making it constantly available for pupils and teachers. There was also a sense in several schools that despite the amount of money spent on IT in the form of IT suites, teachers and pupils were not experiencing adequate benefits from this.

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\(^1\) See Stage 1 Tablets for Schools research published December 2012, and Stage 2 Tablets for Schools research published July 2013 [http://www.tabletsforschools.co.uk/](http://www.tabletsforschools.co.uk/)
Nine schools (43%) in the survey cited ‘Other’ reasons, which included improving or transforming teaching and learning. One respondent explained that they had decided to introduce Tablets in order to ‘ensure the relevance of education in a world with easy access to technology’. Another said Tablets had been introduced because:

*The nature of learning will change within a mobile age. Children currently live and develop within this mobile age; not to engage and enthuse them with the technology that is most relevant to them would seem to be illogical. Equally, for the first time in my teaching career the development and use of technology in the classroom is no longer in the hands of teachers and reliant upon their knowledge, training and enthusiasm. Mobile technology is a learning tool that children will develop and grow with alongside the teachers, not at their pace and not in a manner controlled by teachers – truly the advent of independent learning.*

Head Teacher, Penwortham Priory Academy

Many schools had expectations that the devices would be a valuable resource for teachers as well, allowing them to make lessons more diverse and offer pupils options in their learning. Tablets were introduced with the intention of relieving teachers and pupils from what were considered to be the technological barriers to learning, such as the need to pre-book IT suites, delays in and frustration with the process of logging on, and a dependency on teachers’ technical knowledge. It has been pointed out in the previous Tablets for Schools research that there appears to be an increase in pupil motivation once one-to-one Tablets are introduced. Several of the school leaders interviewed in our current larger sample of schools reiterated this, viewing the Tablet as a means of engaging and motivating pupils by giving them responsibility and freedom in the form of a personal device.
It is important to point out, however, that the teacher leaders in all twenty research schools that were visited wished to stress that they did not believe that Tablets alone would make a positive impact on learning. As emphasised above, it was felt to be essential that the devices should be introduced, or indeed integrated, alongside a model of teaching and learning which was adapted to prepare pupils for the future. The Tablet was merely a means to facilitate this. As one Assistant Head Teacher explained:

[The introduction of Tablets was used] as a backdoor way to re-engage my staff with what good pedagogy is.

Assistant Head Teacher, Harrogate Grammar School

Three schools\(^{20}\) (14%) had been given Tablets as part of the Tablets for Schools initiative by project partners Samsung, Microsoft, Carphone Warehouse, Dixons and Acer. Tablets were supplied to half of the school’s Year 7 cohort for use in the spring or summer terms.\(^{21}\)

### 1.4 Infrastructure

The introduction of Tablets frequently called for a substantial additional investment alongside the direct cost of purchasing or leasing the devices themselves. An important and necessary additional cost was the need to ensure sufficient broadband capacity, a challenge which nine out of the 21 (45%) research schools claimed they had faced. The cost of this was mostly between £1,000 and £10,000, although in one case it was as high as £125,000. Sixteen schools (80%) had other associated IT costs concerning wifi, storage, charging facilities, servers, staff support (administration, IT, etc.), and/or complementary technologies (for instance, large TV screens/monitors). The costs of these were in the thousands or tens of thousands, depending on individual circumstances (see Fig 3).

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\(^{20}\) Dixons City Academy; Greenford High School; Alec Hunter Academy. In the first two of these, to enable all Year 7 pupils to experience one-to-one Tablets, pupils received them in two cohorts. The third school, Alec Hunter Academy, introduced Tablets (Acer and Samsung with Windows 8) in the summer term with one-third receiving them in the first half of the term, and one-third in the second half of the term; the remaining third were given them in the new Year 8 of the autumn term.

Fig 3: Additional costs of introducing Tablets (% of teacher leaders citing additional costs)

The investments made to infrastructure varied across the different research schools. Generally, older schools had to make greater overhauls to their wifi and management systems. As was shown in the Tablets for Schools Stage 2 report, many schools lack the internal expertise to plan the necessary improvements or to lead a procurement process. Acquiring external guidance and making sure the school received the appropriate solution was, for some of the 21 schools, a time-consuming process, and several schools had to delay the introduction of Tablets to ensure the infrastructure was sufficient. For example, Alec Hunter Academy had to have a major overhaul of its system, delaying the beginning of the Tablets trial, and Chiswick School decided to spend one year on updating the broadband, servers, wiring and switches before investing in hardware.

Investing in new infrastructure and the maintenance of this in the future can be a significant financial burden for schools and one that needs to be factored into long-term financial plans. Some schools have designed five-year financial plans around the maintenance of their infrastructure to cope with the increasing number of devices and data traffic in the school.

Those schools that have had a focus on technology for a longer time, and that were adding the Tablets to an already sophisticated IT resource, tended to need fewer improvements to their infrastructure. Several schools already had sufficient broadband at the time of introducing Tablets, partly because they had already trialled one-to-one netbooks, and these schools had not experienced problems. Many schools in the research, however, acknowledge that data traffic is continually increasing and that the networks will need to be regularly updated.

The process of introducing wireless infrastructure is likely to depend on the architecture of the school. Older schools, with vast corridors, many small classrooms and several dispersed departments tend to be more difficult to equip, whereas newer school buildings have inevitably been designed in collaboration with network managers and architects so that the building has been planned with the technical infrastructure in mind.
Several schools updated their infrastructure as part of larger refurbishments, which often meant they had funds set aside for an overhaul of the broadband network and wiring, as this is part of the current school building guidelines. Six schools had moved into brand new school buildings before or at the same time as the introduction of Tablets took place, which meant that the technical infrastructure was up to date, and in some cases designed with mobile devices in mind. One school was also able to redirect money from closing one of three IT suites towards additional infrastructure for one-to-one Tablets.

Cramlington Learning Village had decided to introduce the Tablets one year at a time to each new Year 7 cohort. This gave it the ability to monitor the impact of each new cohort of Tablets on the current infrastructure and anticipate and plan when it would realistically need to be updated. The school’s infrastructure was already up to date when the school first decided to introduce Tablets.

As part of the process of designing its technical infrastructure each school needs to design safety and firewall policies. Schools have had to decide how much control network managers will have and how much freedom the individual student will be allowed, as well as whether apps will be purchased in bulk and pushed out to all devices or whether pupils download apps themselves. This includes the question of whether to block certain websites, such as Facebook, YouTube, Twitter and gaming websites. Some schools argue that trusting pupils to self-regulate in terms of what sites they visit at school is an important part of self-led learning, while others feel that young people need to be protected from content that is likely to distract or harm them. Future research will look at this important aspect in more detail.

1.5 Choosing the device

Six of the 21 schools reported they had had previous experience of using other one-to-one devices, mainly laptops and netbooks, before opting to introduce Tablets. Some of these schools had experienced such high levels of device breakages in the former trials that the programme had had to be abandoned. Teacher leaders argued that while Tablets can break, there are no moving parts, and as long as a robust case is used, breakages are far less likely to occur.

Overall the benefit of Tablets over other devices was thought to be their light weight and portability, which made it easier for pupils to collaborate and share. The immediacy of switching on the Tablets, the minimal boot-up time required and the intuitive interface were thought to be an essential part of engaging pupils in lessons, allowing the technology to integrate seamlessly into learning. There were several descriptions from teachers of previously spending as much as half a lesson trying to ensure everyone was logged on to the system through a laptop or netbook, or a desktop PC in a computer suite, and the frustration this caused. Equally it was felt that the mobility and immediacy of the device would expand learning outside the classroom and school building.

The majority of the research schools (fourteen, or 67%) chose to introduce iPads (models 1, 2, 3 or Mini). Five of these schools trialled alternative devices before making their decision, and the reasons

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for choosing iPads varied. The schools that introduced iPads in 2011\textsuperscript{23} argued that at the time when the decision had to be made there were very few other devices available. Schools that have introduced one-to-one Tablets in the years following this benefited from the experience and knowledge of the early adopters such as Honywood Community Science School in Essex; Wallace High School, Belfast; Longfield Academy, Kent; and Cedars School of Excellence in Inverclyde, Scotland. The experience of these schools appeared to make iPads a safe choice. Some schools opting for iPads believed that because the brand was well known and popular, the process of engaging parents and governors in the decision to adopt Tablets would be easier.

Three schools in the research had previous experience of using Apple devices (iPod Touches and Macs). In other schools teachers and IT coordinators were familiar with the apps available on the iOS operating system from personal experience, and believed that these were superior to the Android system. The introduction of iBooks Author and iTunes U has since been popular with many schools and has led to an increased interest in iPads. Eight of the nineteen schools visited were currently integrating iTunes U and/or iBooks Author into their teaching and learning. In some of these schools this was a specific focus of the leadership team, while in others a group of teachers were doing this on their own initiative. King Richard School, Portsmouth had had a positive experience with Toshiba devices previously and therefore decided to invest in Toshiba Tablets.

In total five schools in the research chose devices other than iPads, such as Samsung and Toshiba Tablets. Android devices were chosen for a variety of reasons, including the ability to use Flash, compatibility with the school’s VLE, and the option to create their own apps. The availability of cheaper Android devices compared to the iPad was also a contributing factor. In the three schools that were given Tablets by Tablets for Schools\textsuperscript{24} the Windows and Android operating software was thought to be familiar to teachers and pupils from previous use of Microsoft Office and Android smartphones.

\subsection*{1.5.1 Mixed economy}

The decision to allow several different devices to be used in the school is one that is often considered. Most schools in our research decided against this on the grounds that one common device is more democratic, and easier to integrate into the school system, as well as being easier to maintain. An important distinction for these schools is that the device is personal: the pupil has ownership of his or her own device. The five schools that had elected to choose a device other than an iPad did not consider there to be a great difference in the availability of apps for the different operating systems. One of the schools surveyed, however, has allowed pupils to bring their own device as long as it is the same brand and operating system as used in the rest of the school. At Hove Park School, East Sussex, pupils have been given a choice of any iPad model. Increasingly it seems that several schools are choosing to have the iPad Mini, while others have chosen the most recent iPad 4. Others are considering allowing students to bring their own iPad from home to school, especially in the Sixth Form. This has been acknowledged by one school to be an administrative

\textsuperscript{23} The first iPad was introduced to the market in spring 2010. The iPad 2 was launched in spring 2011.

\textsuperscript{24} Alec Hunter Academy, Braintree, Essex; Dixons City Academy, Bradford; Greenford High School, Ealing, London.
challenge, but the Head Teacher felt it was an important part of giving pupils ownership of the devices.

**Fig 4: Type of Tablet used**

![Bar chart showing the types of tablets used: 14 iPad Devices, 1 Various pupil-owned devices, 1 Samsung Galaxy 1 or 2, 1 Sony / Motorola Xoom 1, 1 Toshiba AT100/Excite, 1 Samsung Galaxy / Nexus, 1 Acer / Samsung, 1 Unknown.]

**Base total: 21 schools**

### 1.6 The support sought prior to introducing Tablets

At the stage of planning the introduction of the Tablets, schools are likely to require considerable technical support with issues including wifi, finance, insurance and protective covers. Thirteen (62%) of the nineteen schools involved in the Stage 3 research had needed help with acquiring insurance; twelve (57%) with financial issues; eleven (52%) with wifi infrastructure; and ten schools (48%) with acquiring protective cases. Four (19%) schools stated that they needed help with ‘Other’ issues. ‘Other’ issues included the need to research pedagogical uses; to ensure that the school’s infrastructure and that of two partner primaries would support the Tablets; and to look at how other schools had deployed schemes previously.

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25 See Tablets for Schools Stage 2 report (July 2013).
**Fig 5: Did you require external guidance or help?**

![Bar chart showing percentages of schools finding various issues easy or difficult](chart.png)

*Base total: 19 schools (2 schools did not respond)*

### 1.6.1 How easy or difficult was it to find support?

Teacher leaders were asked how easy or difficult it had been to access the guidance/help required. Seven out of the eleven schools that responded to this question (64%) said that they had found it easy in respect of financial issues, whereas two (18%) had found it difficult (the remaining three answered neither/nor). Seven out of the twelve schools (58%) had found it easy in respect of wifi issues, while two (17%) had found this difficult (three answered neither/nor). Six schools out of twelve (50%) had found accessing help/guidance around protective cases/covers to be easy, versus three (25%) who had found it difficult (three answered neither/nor). Seven out of sixteen schools (44%) had found accessing help/guidance with insurance to be easy, whereas five (31%) had found it difficult (three answered neither/nor). Guidance came from a variety of sources across these topics, and were rarely the same between schools. Schools which have introduced Tablets more recently, however, have been able to access the knowledge and experiences acquired by the schools that first introduced one-to-one Tablets, and many cited Tablets for Schools research as a useful source for this.
An important part of the process of preparing to introduce one-to-one Tablets to the school is the need to engage staff, governors, parents and pupils and explain the school’s reasons for introducing the device, the pedagogical goal behind the decision, and the planned method for achieving these goals. Our research has shown that a clear pedagogical philosophy and the support from and engagement of the whole school are essential to ensure the successful deployment of Tablets. Research schools were asked if they had needed any external guidance or help with communicating their intention to any of these groups. Twelve schools (63%) said that they had not. Five schools (26%) had needed help with communicating with parents, one (5%) with teachers, one (5%) with governors, and none with pupils. All had found accessing help to be easy. Help had come from a variety of sources, including Tablets for Schools (two), Apple Distinguished Educators (two), the e-Learning Foundation (two), or schools’ own research (two; for example, on the internet).

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26 See Tablets for Schools research Stage 2.
Fig 7: Did you need external guidance or help in communicating your intention to introduce one-to-one Tablets?

Base total: 19 schools (2 schools did not respond)

1.6.2 Informing parents

All schools set time aside to inform and engage with parents in order to tackle any concerns or questions they might have. Parental concerns included safety, theft, breakages, and inappropriate and excessive use of the device at school and at home. They also included questions about teachers’ knowledge of technology and their ability to deal with pupils having personal devices. For some schools this was more challenging than for others, and required repeated meetings with parents to explain their intentions and how the Tablets would be managed within the school. One school also engaged a PR company to help them communicate the idea to parents.
1.7 Professional development

Teacher training has also been shown to be an important consideration at this stage in Tablets for Schools’ research. In many schools teachers were supplied with Tablets for several months before the pupils. Seventeen (81%) of the 21 schools said that they had funded the provision of Tablets to teachers, as well as to pupils, free of charge, versus four (19%) that had not.

**Fig 8: Have you provided teaching staff with Tablets free of charge?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>81%</td>
<td>19%</td>
</tr>
</tbody>
</table>

*Base total: 21 schools*

In most cases the Tablets had been introduced to teachers before the summer holiday to allow them to familiarise themselves with the device.

In three schools where Tablets had not been supplied to staff\(^{27}\) 40%, 70% and 90% of teachers respectively had opted to purchase or lease Tablets independently. In a fourth school, King Richard School in Portsmouth, fewer teachers had done so, but the teacher leader at King Richard argued that:

> All have access. It is a misleading question, it is about 'bring a browser' not 'bring a device'. In subject areas teachers are able to use their laptops or netbooks.

Head of IT Systems, King Richard School

Previous research has found that it is beneficial for teaching staff and pupils to use the same device.\(^{28}\) This belief is held to support the successful incorporation of Tablets into teaching and learning via a collaborative process of change, and a shared process of learning about the device and feeling comfortable with the technology among both teachers and pupils. Three of our longitudinal schools that have supplied Tablets to teachers (Wallace High School, Essa Academy and Longfield Academy) believed that doing so is an essential part of planning effective pedagogical change. In addition, both longitudinal schools and others that have introduced Tablets more recently have argued that providing teachers with the devices is essential, as it ensures that they are familiar with them and capable of planning lessons around them.

\(^{27}\) Cedars School of Excellence; Cramlington Learning Village; Honywood Community Science School.

The majority of the schools surveyed had offered professional development for teaching staff associated with the use of Tablets. Eighteen schools had offered training before the introduction and nineteen during introduction, and seventeen schools had offered training associated with the use of Tablets during the time since.

**Fig 9: Professional development associated with the use of Tablets**

![Bar chart showing professional development associated with the use of Tablets](chart.png)

*Base total: 21 schools*

Professional training mainly addressed the need to support teaching staff in using the Tablets in lessons, as can be seen from Fig 10 (before, during and since the time Tablets were introduced). Schools also often provided professional development in respect of technical advice or training in how to use the device. Twelve schools said training during the time before the introduction of Tablets had focused on supporting teaching staff, whereas nine said it had focused on technical advice. Fifteen schools said training during the introduction had focused on supporting teaching staff, whereas eleven said it had focused on technical advice. Thirteen schools said training during the time since introduction had focused on supporting teaching staff, whereas ten said it had focused on technical advice. Two schools provided professional development specifically concerned with pedagogy, which it said was ‘vital to have right before introducing Tablets’, and self-training for web designers to allow them to develop bespoke apps.
**Fig 10: What was the nature of the professional development?**

The qualitative research carried out for this stage of the study has shown that professional development is focused on allowing teachers to become familiar and confident with using the technology, working collaboratively with colleagues and pupils, experimenting and becoming aware of the device as an integrated part of learning. Many schools had identified leaders in each department who would meet on a regular basis to collaborate and subsequently share their knowledge within their department. Much of the training took place internally, although external assistance was also employed, as illustrated in Fig 11 (before, during and since the time Tablets were introduced). Seventeen schools organised internal training before and during introduction; fifteen schools had organised internal training associated with Tablet use since introduction. Ten schools took part in externally organised training before the introduction of Tablets, eleven schools did so during the period of transition, and only five schools had done so in the time following introduction.
Fig 11: Internal versus external professional development

Base total: 20 schools (one school did not respond)

It is worth noting that schools that were in the process of considering the introduction of iPads had tended to visit other schools that had made the same decision in order to learn about their approach and their experience of any benefits at first hand.

As many of the schools had a clear vision of how the Tablet might support the development of pedagogy within the school, professional training was taken very seriously, as is apparent in the quotes below:

*Apps like Showbie provide an excellent workflow for handing in work and our staff seem to prefer training that is directly useful. Edmodo use has been an epidemic with no training as it is highly useful for handing in work.*

  e-Learning Project Manager, Trentham High School

*Technical training is not required. Training focus has been on the use of Tablets for accelerating learning.*

  Director, Essa Academy

*The pedagogy needs to be the focus for the staff and they should be discouraged from being obsessed by content. Learners will use the devices to express their learning outcomes without staff intervention. The most successful deployment is one where the embedding of the device as a learning tool is the focus, so the device is not used as a bolt-on. The learning should remain the focus, not the technology.*

  Acting Assistant Head Teacher, Honywood Community Science School

*Schools we have spoken to seem to view training on the use of iPads as an extension of other training, i.e. learning how to use apps. These devices fundamentally change learning in the*
classroom and therefore to train staff in traditional ways is inappropriate ... There are countless apps out there that children will trawl, play with, explore and experiment with – will teachers do the same to the same extent? Facilitate learning, do not train teachers.

Head Teacher, Penwortham Priory Academy

It is essential that staff understand the strengths and weaknesses of the device. It is not a PC replacement and has a different role. Embedding an enquiry- or project-based approach before issuing Tablets was key for us, as was ensuring that staff plan the use of Tablets into schemes of work specifically.

Assistant Head Teacher, Cramlington Learning Village

Another teacher leader suggested that training needs to be in-house if it is to be sustainable.

Ten out of the 21 schools had involved pupils to some degree in this process as ambassadors of the project, allowing them to trial the device prior to the introduction, often in collaboration with teachers:

Much of the best CPD has occurred in an informal way between teachers or between teachers and pupils.

Assistant Head Teacher, Harrogate Grammar School

I feel pupils training staff supports the process.

Head of IT Systems, King Richard School

We are trying to make it as organic as possible and also needs-related. We have student leaders and I hope they will become the real champions, as well as an action group of real enthusiasts. We have a fantastically enthusiastic young member of staff working on this and he has been great in identifying staff training needs and breeding enthusiasm and confidence.

Principal, Dixons City Academy

1.8 Funding the Tablets

Schools have taken a variety of approaches to funding the Tablets. These usually include a mix of parental contributions and school funding, and for some schools additional grants. Two schools have decided to give Tablets to pupils free of charge, while Cedars School of Excellence, which is the only independent school included in the research, includes the cost of Tablets in the overall school fee. The cost of the Tablet is not specified in the fee, as the school wants it to be perceived as a part of the overall infrastructure of the school. Five (24%) schools funded Tablets entirely from their own budgets; four (19%) funded them via parental contributions; and eight (38%) favoured a blended funding approach between school funding and parental contributions. Most schools which receive parental contributions do this on a monthly basis, while others have decided to receive them once a term. The monthly fees range between £10 and £18.

Two schools have decided to use an ‘at home’ scheme, which means parents only contribute if pupils take the devices home. This was done to ensure that all pupils have access to a device at school. One school described being financially dependent on parents contributing, but felt confident
that reluctant parents will choose to contribute in order to let their children take the device home once they see the benefits they offer. Following a lack of parental contributions, another school decided to give Tablets to all pupils in Years 7 to 10 to ensure equality of access. Some schools have allowed parents to purchase the devices outright from the school, as well as allowing pupils to bring devices from home instead of purchasing or leasing a school device (see 1.5.1 above). In schools that have decided to purchase insurance (see 1.9 below), this is included in the monthly fee, as are protective covers.

All schools which ask parents for contributions have designed their funding plan in order to offer discounts to parents of children on free school meals. Children in care are often provided with a device free of charge. Many schools also engage with parents who are concerned about costs, especially parents with more than one child attending the school, in order to find a suitable contribution. Most schools make use of the Pupil Premium to fund devices for pupils on free school meals.

Several schools anticipate making cost savings over the coming years, and a few have already begun to make savings. Two schools are planning to discontinue IT suites in order to save money, while three schools reduced their number of suites and another three fully decommissioned all their IT suites at the same time as the Tablets were introduced. One Head Teacher explained that while it was difficult to convince all staff, he expects that, rather than having overnight changes, by the gradual removal of the current IT infrastructure and the moving of tasks to personal devices, staff will become accustomed to the changes.

Three (14%) of the schools funded their initiatives via Tablets for Schools. Tablets for Schools worked with Microsoft/Acer or Dixons in two of these cases, while CPW/Sony and Google supplied Tablets to the third.

**Fig 12: How were the Tablets financed? (% of teacher leaders citing different funding models)**

![Bar chart showing the distribution of funding models among schools.](chart.png)

*Base total: 21 schools*
1.9 Insurance and breakages

Schools have taken a variety of approaches towards insurance. While some schools have purchased insurance policies, eight schools in the research had chosen to self-insure, and one teacher leader said the school intends to do so in the future. The schools that have decided to self-insure felt that the costs quoted to them by insurance companies were far too expensive. One school calculated that for the same price as an £18,500 insurance premium they could afford a breakage rate of 12%. Another explained that in terms of its decision to self-insure it had spent £1,900 on repairs to date, compared to the £7,000 that it would have cost to insure the devices.

Two schools in the survey did not respond to the question about insurance. Four schools outlined their insurance costs at, respectively, £11.50, £14, £37 and £57 per device per year. Two schools outlined the annual costs of insuring all devices, which were £3,500 (for 130 devices) and £5,378. Thus the cost of insurance remains an important issue for these and other schools, with some quoted high premiums and costs that can vary considerably, leading many to adopt a self-insurance model over time. For those schools choosing to self-insure, protective cases and responsible use policies are especially important, and much time and effort have been invested in finding the best cases, and teaching pupils how to transport the device in a way likely to minimise breakages. Fifteen schools have chosen to insist on a particular protective case that the Tablet must be kept in, while another school lets pupils choose a case provided that the case complies with guidelines outlined in the school’s insurance policy.

One school limited the insurance to one breakage per device only, after which the parents must pay for a replacement device. Following a large number of breakages in the first year of use, another school began to ask parents for a £50 contribution towards the insurance claim, and decided not to let pupils take the devices home with them over the summer holiday.

How each individual school wishes to deal with breakages must be carefully considered. Some schools have tried to limit the turnaround of repairs, or keep spare devices in stock to ensure that pupils will not have to go without a device, which is thought to disrupt the flow of learning. Other schools feel that being without a device for a period of time might make pupils take better care of it in the future. Two schools have become certified repair centres, in order to shorten the waiting time for repairs. This also generates a stream of income from the insurance claims made for the repairs.

The schools that introduced Tablets in 2011 (the longitudinal schools) have mostly seen a decline in breakages, as better-quality protective cases, specifically the Griffin case, have become available. Some of these schools, however, have had disputes with their insurance company over the number of breakages, and they may not be able to sign a renewed insurance deal when their three-year contract runs out in 2014. Schools that allow pupils to bring in their own device, or offer pupils the option to purchase the device outright, advise parents to take out private insurance to cover the devices.

Breakages and the cost of insurance continue to be a challenge for all schools. Breakage rates vary, but mostly lie between 3% and 6%. Fourteen of the schools surveyed said that the breakage rate was less than 10% per term (and for nine schools less than 3%), although in one case it was as high as 20%. In five cases the rate was claimed to be unknown, although two of these schools noted that it was higher than they would like it to be.
1.10 The integration of Tablets into the school

The percentage of pupils who have a Tablet in school varies depending on how the devices are funded. In three schools where pupils are provided with Tablets free of charge all pupils use a Tablet at school and at home. At another school each pupil has access to a Tablet but currently these are not personal to each pupil and are kept in school, although it is worth noting that this model is likely to change to a personal model, since there are challenges with storing individual work and material. In schools where parents are contributing financially uptake varies from approximately 70% to nearly 100%. The uptake among parents also varies between year groups within the schools. While 96% of parents of Year 7 pupils in one school opted in, only 75% of parents of Year 11 pupils in the same school were prepared to contribute. This led to teachers preparing lessons for Year 11 pupils that did not require a Tablet. In another school, however, where between 70% and 80% of pupils across the school have a Tablet, this was not considered to be a problem as it was felt that pupils were easily able to share a device during lessons.

Views can change. At Harrogate Grammar School, for example, leadership explained that parents increasingly opt in and begin to contribute to the cost of the Tablet as they see the benefits the devices are having on teaching and learning. At Trentham High School and Chiswick School leadership have ensured universal access at school by introducing an ‘at home scheme’, where parents are only asked to contribute financially if the child takes the device home. This is especially important in those homes where families do not have internet access.

Most schools have followed up the training provided before the Tablets were introduced to the school with regular teacher training events throughout the academic year (see 1.7 and Fig 9). Recommendations and ideas are also shared via emails and newsletters. Several schools that have introduced iPads have made use of Apple Distinguished Educators (ADEs) to train and prompt enthusiasm among their staff before and during the introduction process. Three schools have ADEs among their staff to support the development of teaching with the Tablets, and a further two have regular contact with local ADEs.

Immediately following the introduction several schools reported high levels of enthusiasm among pupils, which in some cases led to heavy use of the device. This attracted some concern from parents, but schools argue that the initial excitement has worn off and the majority of pupils now use the devices responsibly. Several schools have also introduced restrictions on when the device can be used, such as banning it during break times.

1.11 Apps and content

The majority of schools have ensured that all pupils have a set of basic, cross-subject apps. Some have distributed the Tablets along with download vouchers and have asked pupils to download these apps themselves. Others have managed the devices centrally and have downloaded content onto them before they are distributed to pupils. The set of apps varied, but frequently used apps for schools using Apple devices included Keynotes, Evernote, Popplet, iMovie, GarageBand, Pages.

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29 Apps that are not targeted at a specific subject or topic, but rather are used across various subjects, such as mind-mapping, note-taking or video-recording applications.
Notes and Showbie. Schools varied in the degree to which they let children download additional apps, such as games, freely to their device. One school decided not to pre-load any apps, but asked pupils to download one app (Showbie), after which pupils were free to spend £25 on whatever educational apps they felt they needed. Apart from key cross-subject apps, schools make use of a wide variety of apps, but most schools claim they rarely spend money on these. While some schools will only use apps that are free, beyond the initial set of apps provided, at least five schools have the ability to purchase apps for pupils. It was generally felt among schools that parents should not have to pay for any additional apps to be used in school.

Although some teachers had felt some uncertainty about the perceived lack of content at the beginning of the Tablets for Schools project (2011), most have subsequently been able to explore alternative content and have discovered innovative ways of using the device in teaching and learning, without being dependent on learning material in the strictest sense. For example, teachers are using a wide variety of websites, asking pupils to access documents by scanning QR codes or creating iBooks or presentations. Many schools therefore have now begun to create their own learning material. This is linked with disappointment at the availability of good digital interactive learning content from traditional sources, and a belief that teachers themselves are best suited to know what their pupils need. For many school using iPads, this process occurs through apps such as iTunes U and iBooks Author. This is still in its early phase in most schools, but teacher leaders have a focus on encouraging collaboration among their colleagues to create these resources. Schools are also increasingly creating and making use of web-based content to ensure access across devices and platforms, such as Google Apps for Education.

1.12 The benefits and challenges of introducing Tablets

In several of the 21 schools visited, the Tablets had either not yet been introduced or had been introduced very recently, and it was considered to be too early to make any judgement on the impact on learning. Some recurring themes were raised, however.

When we asked about the perceived benefits of using one-to-one Tablets, our survey found that seventeen of the sample of 21 teacher leaders mentioned the opportunities for pedagogical change, to shift pedagogy towards independent learning, increase pupil motivation and support collaborative learning, as the greatest benefits of introducing one-to-one Tablets. Another ten mentioned improving access to IT and learning content, and two cited the speed of the devices and software.

One Deputy Head Teacher believed that the greatest impact on teaching was expected to be the fact that teachers will have to give up some of their control over the classroom and let pupils work independently with the resources available to them. Similarly, in another school the Head Teacher felt that the main benefits of introducing Tablets would be that teachers would award pupils more freedom and creativity in their lessons. The ability to work in different groups or outside the classroom was also mentioned as a benefit. The Tablet was viewed as a means to facilitate project-based work in several schools, as it was considered to be easy to share ideas and content via the devices. Seven teacher leaders mentioned increased independent learning, four mentioned increased engagement and three mentioned improved abilities to share. Increased communication was mentioned by six schools as a benefit; communication was thought to have increased between staff and pupils as well as between staff and parents.
Across several schools, the ability to differentiate between learners’ ability and their perceived motivation was cited as a benefit, which was likely to re-engage pupils who had previously been less motivated in their schoolwork.

**Fig 13: Main benefits of using one-to-one Tablets**

- **Impact on pedagogy**: 80%
- **Access to technology and content**: 47%
- **Speed and ease of technology**: 9%

*Base total: 21 schools*

- **Collaboration and sharing**: 6 schools
- **Independent learning**: 9 schools
- **Instant access**: 6 schools
- **Relationship with parents**: 3 schools
- **Pupil engagement**: 5 schools
- **Feedback and communication**: 3 schools
Four schools cited the main benefits of Tablets as wide-ranging:

*Significant improvements to independent learning, group work, feedback, engagement and sharing with parents.*

Head Teacher, Hove Park School

*Increased access to content and learning, providing transparency for teachers, parents and pupils. Operational cost savings for the institution.*

Director, Essa Academy

*Personalisation of learning and independent study.*

Head of IT Systems, King Richard School

*Tablets are already changing the way lessons are structured, making them much more focused on the student working rather than the teacher. We have also noticed greater parental enquiry over what students are working on in and out of school. Also, in an area of acute deprivation students have the feeling that they are at the leading edge of something rather than bringing up the rear.*

Principal, Carter Community School

One school said that a main benefit of introducing Tablets had been cost saving. An example of the ways in which costs can be saved is through the removal (or reduction) of other computer facilities once Tablets are in place. Three schools had removed their computer suites after introducing Tablets in order to redirect funds towards the financing of Tablets as well as to support overall changes to IT strategies, while a fourth school was planning a gradual reduction of the number of desktop computers after the introduction of Tablets.

Teacher leaders were also asked what they think are the main disadvantages of introducing Tablets. Most perceived this to be a question of challenges rather than disadvantages and this is reflected in their answers. The main challenges raised by schools revolved around fully integrating Tablets into teaching and exploiting their possibilities. It was believed that this can be achieved through initial and regular staff training, changes to the curriculum and pedagogy, ensuring a strong learning ethos, and continuous evaluation of teaching and learning with Tablets. While seven schools mentioned integrating Tablets, another eight highlighted the need for the training of teachers to ensure that this happens. As was shown earlier, and in Tablets for Schools’ previous research in longitudinal Tablet schools, continual professional development is an important part of the process of introducing Tablets and fully incorporating them into teaching and learning.30 Five schools expressed the belief that a one-to-one Tablet scheme was dependent on strong and clear leadership, both in terms of administration and vision.

Four schools stated loss of or damage to Tablets as a challenge. As indicated above, breakages and insurance claims are a considerable administrative task, as well as a financial responsibility for schools (see 1.9). Four schools argued that the cost and sustainability of one-to-one Tablet deployment was a potential challenge. For the majority of the schools, this involved engaging with

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parents to secure financial contributions, which was considered to be a potentially time-consuming administrative task. Three schools felt that online security was a challenge, while three schools highlighted issues associated with pupils’ propensity for distraction and overuse. Other individual issues raised included parental concerns, an increase in associated printing, the challenge of persuading governors that Tablets were worth the investment, and a perceived lack of educational digital content.

**Fig 14: Main disadvantages/challenges of using one-to-one Tablets**

- **Effective administration and leadership**: 5 schools
- **Staff development**: 8 schools
- **Integration into learning**: 7 schools
- **Cost and sustainability**: 4 schools
- **Safety**: 3 schools
- **Breakages**: 4 schools
- **Cost and sustainability**: 3 schools

*Base total: 20 schools (one school did not respond)*

Three teacher leaders explained some of the potential problems:

*The significant challenge can be a lack of leadership vision in a school, and schools continuing with old systems and processes and trying to introduce Tablets at the same time. Having staff development on a weekly basis to support the introduction of Tablets is a real positive.*

Director, Essa Academy

*The biggest pitfall is having people who only think in terms of deploying Microsoft Windows desktop PCs in charge of your deployment. One-to-one Tablets require entirely new thinking.*

Head of Computing and IT, Cedars School of Excellence

*[There are] none. It just takes a lot of work to get the scheme off the ground and requires constant evaluation and modification to make sure it is a success.*

Assistant Head Teacher, Harrogate Grammar School
1.13 **To what extent do Tablets present a distraction to pupils in lessons?**

In Stage 2 of the Tablets for Schools research the potential for distraction in class when using the Tablet – for example playing games, using social media – was raised by pupils, and by some teachers and parents. In Stage 3, teacher leaders were asked to what extent Tablets presented a distraction in lessons. Eleven teacher leaders did not agree that distraction is a problem in their school. A further seven schools felt that this was a matter of classroom management that did not necessarily present any new challenges. This reflects our findings in the Stage 2 report, where it was found that it tends to be pupils, not teachers, who believe that Tablets represent a distraction and may want restrictions to be placed on their use during lessons in order to prevent this.\(^{31}\)

Rather than thinking that distraction was a problem, the teacher leaders in this survey felt that the issue came down to appropriate classroom management and that Tablets presented no more of an issue than note-passing or window-gazing, reflecting the finding from the Stage 2 research. Some also said that allowing pupils to play with the Tablets outside of lessons can help to remove temptation in class and that it is possible to restrict the use of certain apps if necessary. Two teacher leaders stated that distraction had been reduced over time (particularly since the first term of use). The quotes below illustrate school leaders’ attitudes towards this issue:

[Distraction is] not much of a problem. [It] was a fear which did not come to fruition. Students are taught to be responsible with the devices. Allowing them to use them in their own way outside of lessons helps.

Assistant Head Teacher, Cramlington Learning Village

*This is a teaching and learning issue. You might equally ask how interactive whiteboards are a distraction. Good teachers will not allow these to be a distraction but will instead use them to enhance the quality of learning.*

Head Teacher, Chiswick School

*Learners who have taken ownership of their learning will work confidently and purposefully with the device. Those who are unmotivated or not engaged with learning will use the device as they would a window or any other distraction.*

Assistant Head Teacher, Honywood Community Science School

1.14 **What has surprised teacher leaders most about the introduction of Tablets?**

The teacher leaders were asked what they considered to be the biggest surprise about the use of one-to-one Tablets. For ten schools the biggest surprise was the degree to which pupils became engaged in their learning, the creativity of their work, their motivation, and the way they were learning rapidly through using the device. One school described the way in which the process of demonstrating to other pupils and teachers ways of using the Tablet had become the new ‘cool factor’. Another was surprised by the degree to which pupils were sensible and reflective in their use

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of the devices, not seeing them as an exciting fad but as a serious instrument for learning. Conversely, one teacher leader was surprised at how difficult it was to get some pupils to charge their Tablet and to remember to bring it in each day.

For four of the teacher leaders the biggest surprise concerned not pupils but staff responses. The degree to which teachers had incorporated the devices into lessons and how quickly teachers had warmed to the concept and embraced training were among factors that had surprised school leaders; another, however, cited the length of time it took teachers to understand and use them to their full potential. One respondent found that the biggest surprise was a ‘shift in culture to one of greater levels of trust and respect’ between staff and pupils, while two schools mentioned increased parental engagement thanks to the use of Tablets. The speed of transformation in the classroom was among the biggest surprises for two teacher leaders. Two schools cited cost savings on traditional resources, and how robust and less easily broken Tablets were than had been expected.

In Alec Hunter Academy the staff expressed some surprise that the majority of pupils preferred using keyboards with their Samsung/Acer Tablets. The school was provided with Tablets by Tablets for Schools partners Acer, Samsung and Microsoft. Both the Acer and Samsung Tablets ran on Windows 8 and came with keyboards. Pupils were observed using the Tablets as notebooks or laptops; Tablets were connected to the keyboards and the touch screen facility was used to click and switch between screens or windows. One History teacher explained that she rarely saw the pupils using the devices without the keyboards attached. The pupils used the Microsoft Office package for writing notes and creating presentations, often in combination with carrying out research on the internet.

Fig 15: Main surprises associated with introduction of one-to-one Tablets

<table>
<thead>
<tr>
<th>Impact on pedagogy</th>
<th>Increased creativity, collaboration, independence</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 schools</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff response</th>
<th>Increased pupil engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 schools</td>
<td>5 schools</td>
</tr>
</tbody>
</table>

| Parent response    |                                               |
|--------------------|                                               |
| 2 schools          |                                               |

Base: 19 schools (two schools did not respond)
1.15 What do teacher leaders wish they had known before introducing Tablets?

Teacher leaders in the survey were asked what they wish they had known before the Tablets were introduced to the school. While two said they had ‘done their homework’ and so did not feel they lacked any information, most schools felt that certain aspects had been lacking. For nine schools, it was practical or pragmatic information that could have been improved:

*The need for a durable case such as the Griffin Survivor case for iPads – it would have prevented the earlier breakages we suffered through genuine accidents.*

Acting Assistant Head Teacher, Honywood Community Science School

*The protection given by cases.*

Vice-Principal, Mounts Bay Academy

*I wish we had known the consequences of not insisting on robust cases. I wish mass gifting of apps had been available when we started.*

Principal, Longfield Academy

*Deployment protocols and wifi solutions that can support mobile devices.*

Director, Essa Academy

*[I wish we had had] a clearer idea of capabilities in advance – we were unsure whether they could connect to the network until near to implementation.*

Assistant Head Teacher, Alec Hunter Academy

*[I wish we had known that] insurance is time-consuming as iPads get broken! It has been challenging to ensure that we have been able to provide appropriate insurance cover and keep track of individual iPads due to the process of sending them away for repair.*

e-Learning Project Manager, Trentham High School

*It is early days, but we would like to have more of an idea of how this is going to pan out financially and whether we can reduce PCs in order to make this sustainable.*

Principal, Dixons City Academy

Another three teacher leaders said that they wished that they had prepared their staff more, or contemplated how teaching styles would change:

*[I wish we had had that it is] best to give staff the Tablets first, and let them get used to them before providing to students.*

Assistant Head Teacher, Cramlington Learning Village

*I wish we had thought more about how teaching styles would change and whether the curriculum needed to change with it.*

Head of Computing and IT, Cedars School of Excellence

Other things that teacher leaders wished they had known before the introduction of Tablets included:
That it would be tricky to manage iMessage.
Assistant Head Teacher, Harrogate Grammar School

[About] which schools were doing the most innovative and interesting work. The importance of working with pilot schools cannot be overstated.
Head Teacher, Hove Park School

1.16 Conclusions
As these 21 schools have introduced Tablets at different times, the impact of the device clearly varied. Schools were at different points on their journey. While some had been using the Tablets for two academic years and had therefore had time to make improvements to their use of the device, others had only recently introduced them and were still not sure what challenges could lie ahead. Some common experiences and recommendations, however, could be made.

All the schools have benefited from strong and clear leadership. Different aspects of the projects have been delegated to various staff members, such as funding, network management and professional development, but the overall project has a clear leader. This individual tends to be passionate about the use of technology in teaching and learning, and have a well thought through vision of the scheme, which – importantly – is communicated to pupils, staff and parents. Ambassadors are often identified among both teachers and students, which helps build a sense of ownership of the technology. Student engagement is described as crucial.

Several school leaders argue that the vision of Tablet use and how this should support the pedagogical approach of the school must be developed at an early stage, before the introduction process begins. It was also pointed out that the project should be led by teacher leaders, since IT staff, although essential to the process, are expected to know about technology but not necessarily pedagogy.

IT professionals find themselves in positions of power because of procurement, but they don’t know about the application of the technology in the classroom, which is a concern to me.
Deputy Head Teacher, Homewood School

Most schools are adamant that the need for teacher training cannot be overstated. Teachers need guidance, reassurance and support in order to adapt their teaching to accommodate integrated use of technology. Encouraging collaboration among staff appears to be a common factor in building long-term trust and confidence.

Schools have experienced the challenges of engaging parents in the scheme and maintaining their involvement in the project. Parents may express concern about safety, excessive and inappropriate use of the device, cost, and the impact on learning; such concerns must be tackled early.

It is worth pointing out how long the preparation and development process has been in those schools that have chosen to adopt one-to-one Tablets; the process of development and pedagogical change is constant and remains an essential element to ensure the scheme’s success. In some schools the process of pedagogical change in the school to a model of independent pupil-led learning has been in place for some time, and Tablets have been introduced to support this. In other
schools the introduction of the Tablet came as part of a long process of turning a struggling school around and followed other significant improvements and changes in the way the school was managed.
Section 2:

The Global Picture of the Educational Tablet Market
Section 2: The Global Picture of the Educational Tablet Market

2.1 Introduction

This chapter updates the global picture first outlined for Tablets for Schools by Family Kids and Youth in September 2011 and revised in Stage 1 research in December 2012. Inevitably this is a fast and constantly moving market, and one that Family Kids and Youth continues to monitor regularly. At the time of the publication of the first Tablets for Schools research report, the use of Tablets in education was very much in its early stages. Nonetheless, there was already substantial interest in the transformational potential of Tablets in education. Apple’s iPads held the majority of the market, but other manufacturers were launching educational devices as well as software. Educational publishers were observing the developments closely, but had not yet invested heavily in content for this market. A brief summary of Tablets for Schools Stage 1 report describing the global picture at the end of 2012 is as follows:

- Tablets were expected to outnumber computers in American schools within five years.
- In Europe trials were being carried out in France, the Netherlands and Scandinavia.
- Turkey was undergoing initial trials of their ‘Movement of Enhancing Opportunities and Improving Technology’ (Fatih) project, which involved Tablets provided by General Mobile in 52 schools. The aim of the project was to supply 16 million students with Tablets by 2015.
- Kazakhstan had announced plans to introduce Tablets to 83,000 students by 2020.
- In India trials were being carried out with the solar-powered iSlate. In March 2012 it was announced that 50,000 of these devices would be introduced to 10 to 13-year-old students in the district of Mahabubnagar in Andhra Pradesh over the next three years.
- In Zimbabwe a similar project focusing on solar-powered Tablets was being developed.
- In Singapore, the education minister proposed to give all schoolchildren iPads by 2013.
- In South Korea the Ministry of Education announced that all textbooks would be replaced by Tablets by 2015.
- Thailand had announced plans to introduce Tablets in all schools.
- In Australia trials were being carried out in New South Wales, Queensland and Victoria.

Nearly one year on it is notable that spending on IT is increasing and the majority of this appears to be going towards one-to-one schemes. According to a recent survey by European Schoolnet an average of 8% of students in Europe have access to a personal laptop or Tablet, but there are large differences between countries. For example, in Year 9 or Grade 8 (13 to 14-year-olds) 40% of Spanish pupils have access to a one-to-one device, whereas in Finland, Lithuania, Estonia and Slovenia hardly any pupils at the same age have access. In Year 12 or Grade 11 (16 to 17-year-olds)

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34 http://www.eun.org/c/document_library/get_file?uuuid=56f0b01a-844e-479c-994a-419bf2333ded&groupid=43887
almost 90% of Norwegian students have access to a one-to-one device, but in countries such as Austria, Turkey, Italy, Lithuania and France access to computers is currently far less common. The survey also shows that especially in Denmark, Norway and Portugal BYOD\textsuperscript{35} schemes are popular and over 50% of students in these countries are allowed to bring their own smartphones, Tablets or laptops to school.

### 2.2 Tablets in the US and the Americas

The popularity of Tablets in the US continues to rise, and during 2012 the educational Tablet market increased by 103\%.\textsuperscript{36} The country faces some challenges, however, before the majority of the schools can access digital learning devices. Limited funding has been available for upgrading school infrastructure, and according to US government data 80\% of schools currently lack the necessary infrastructure to support digital learning.\textsuperscript{37} To address this President Obama announced in June 2013 the ‘ConnectED program’, which aims to provide broadband for 99\% of schools and teacher training to prepare teachers to use technology. While schools wait for these upgrades to come into effect many have chosen BYOD schemes as temporary solutions. Approximately 25\% of schools allow students to bring their own smartphones, as even in more deprived areas children tend to own their own phone.

In spring 2013 the Los Angeles school district, the second largest in the country, announced that it would be introducing iPads to all school students.\textsuperscript{38} The total cost of the programme was estimated at $30 million, approximately £19 million, but the Los Angeles Board of Education claimed that this was the cheapest device that would meet its specifications. Content for the devices, however, will be delivered through Pearson rather than Apple’s own iBooks application.

Apple is supplying devices to several other school districts. The state of Maine recently introduced nearly 40,000 iPads to teachers and students.\textsuperscript{39} Schools in McAllen, Texas have also announced a deployment of 6,800 iPads.\textsuperscript{40}

Other manufacturers, however, are increasingly entering the market. Amplify, the educational Tablet manufacturer owned by News Corp, announced in spring 2013 that it would be supplying a

\textsuperscript{35} BOYD: Bring Your Own Device.


\textsuperscript{37} http://www.usatoday.com/story/tech/personal/2013/08/07/views-shift-on-cell-phones-in-schools/2607381/

\textsuperscript{38} http://www.huffingtonpost.com/2013/06/20/lausd-students-ipad_n_3472714.html?ncid=edlinkusaolp00000003&ir=Education

\textsuperscript{39} http://m.imore.com/ despite-hps-preferred-status-maine-schools-stick-apple

\textsuperscript{40} http://news.yahoo.com/schools-shift-textbooks-tablets-081047398.html
total of 21,215 Tablets to 23 middle schools in North Carolina.\textsuperscript{41} The deal runs from the beginning of the academic year 2013 until 2016.

It has recently been announced that Aakash 2, the low-price Tablet introduced across schools in India, is to be supplied to 2,000 children in schools in North Carolina.\textsuperscript{42} One hundred devices were successfully trialled there at a summer school for disadvantaged children and led to the purchase of a further 2,000 Tablets, which it is hoped will go some way to close the digital divide that exists in the state.

As research from the Pew Research Centre’s Internet and American Life Project\textsuperscript{43} shows that Tablets are being used by 43% of teachers and students in the US, content providers are increasingly creating learning material for this market. Discovery Education is currently the largest provider of digital content across a variety of platforms.\textsuperscript{44} The growth in digital content is likely to offer significant cost savings for schools. Discovery’s lessons, known as Techbooks, are priced at between $38 and $55 per student for a six-year subscription, while the average textbook costs $70 per student. While the educational Tablet market continues to grow, critics\textsuperscript{45} have questioned whether American schools were well enough prepared for large scale Tablet deployments as both the Amplify programme in North Carolina and the iPad programme in Los Angeles have had to be temporarily discontinued due to unforeseen problems such as breakages and inappropriate use.

The Jamaican government has announced that it is to distribute 400,000 Tablet computers to schools over the next five years. It has sought competitive bids from companies to distribute 30,000 Tablets to 35 shortlisted early childhood, primary and secondary schools in the 2013–14 school year. A stipulation is that the Tablets must have the facility to be disabled, and tracked, should they be stolen.

Sales of mobile devices are rapidly increasing in Latin America, especially in the major emerging economies such as Brazil and Mexico, and this growth is driven by substantial purchases from both private academic institutions and the public sector.\textsuperscript{46} These investments are driven by the significant digitisation efforts of the education systems. In Brazil the federal government has announced plans to purchase 900,000 Tablets for more than 58,000 schools. The state government of São Paulo announced in spring 2013 that it was considering a $2.73 billion project which includes one-to-one

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{41} http://www.educationdive.com/news/amplify-to-deploy-over-21000-tablets-to-nc-school-district/135695/
\item \textsuperscript{42} http://www.firstpost.com/tech/forget-india-aakash-tablet-being-used-in-pilot-projects-in-us-schools-1044293.html
\item \textsuperscript{43} http://www.pewinternet.org/~/media/Files/Reports/2013/PIP_Tablet%20ownership%202013.pdf
\item \textsuperscript{44} http://news.yahoo.com/schools-shift-textbooks-tablets-081047398.html
\item \textsuperscript{45} http://www.businessweek.com/articles/2013-10-11/tablets-in-schools-what-could-go-wrong
\item \textsuperscript{46} http://blogs.edweek.org/edweek/marketplace12/2013/06/growing_demand_in_latin_america_for_mobile_devices_in_schools.html
\end{itemize}
\end{footnotesize}
Tablet roll-out and digital content provision.\textsuperscript{47} Meanwhile in Colombia plans have been announced to introduce 500,000 Tablets for public schools.

### 2.3 Europe

A pilot project run by Acer and European Schoolnet evaluating the use of Tablets in schools was completed in 2012 and the final report was published in 2013.\textsuperscript{48} Tablets were supplied to 263 teachers across Estonia, France, Germany, Italy, Portugal, Spain, Turkey and the United Kingdom. In addition three class sets of Tablets were given to students, one in the UK and two in Spain. The researchers reported increased motivation among pupils, and teachers were observed to enjoy using the devices in lessons. Due to the limited sample size of the research, however, and the fact that the Tablets were spread across several countries and schools, the implications for research on one-to-one Tablets are currently somewhat limited.

In the UK, the Scottish Government has introduced plans to supply schoolchildren with Tablets.\textsuperscript{49} The IT specialist XMA will be supplying Samsung and Apple Tablets to schools and other public services at a reduced cost. The feedback has been very positive, although some IT specialists have argued that the plans ignore the additional costs of introducing mobile devices, such as infrastructure and network management. A spokesperson for the Scottish Government stated that the programme was intended to support collaborative learning, parental engagement and greater motivation to learn.

In France approximately 15,000 Tablets are currently trialled around the country.\textsuperscript{50} Evidence so far is showing that the ease of use and transportation of the device, as well as the ability to personalise it, are having a positive impact on students and teachers and altering the way in which IT has traditionally been used in the classroom. Certain drawbacks have been highlighted, however, such as the fragility of the device, cost and lack of interactive content.

In the Netherlands the O4NT Foundation (Education For A New Era) has distributed iPads to seven primary schools across the country, with a further three schools to be supplied before the end of the year, in an attempt to bridge the mismatch between children’s use of technology at school and at home.\textsuperscript{51}

In Scandinavia individual schools and school districts continue to trial Tablets, but so far there have been few large-scale projects. The reason for this may be that IT in Scandinavian schools has been an

\textsuperscript{47} http://blogs.edweek.org/edweek/marketplacek12/2013/05/major_brazilian_education_project_reflects_burgeoning_market_abroad.html

\textsuperscript{48} http://1to1.eun.org/web/acer/evaluation

\textsuperscript{49} http://www.tes.co.uk/article.aspx?storycode=6324506

\textsuperscript{50} http://eduscol.education.fr/cid71927/retour-des-experimentations-tablettes-tactiles.html

\textsuperscript{51} http://www.bbc.co.uk/news/world-europe-24015255
important focus for some time, and computer access is already provided to almost all pupils, with less of a need for updating. Scandinavia is also leading the use of laptops and netbooks in schools.

One research project in Sweden, however, is currently assessing the impact of Tablets and smartphones in secondary schools for students with SEN. Another significant recent survey carried out with over 800 Swedish head teachers indicated that one-to-one laptops and Tablets have a significant impact on student motivation and the quality of student work, but teachers’ lack of confidence in utilising the technology stands in the way of large-scale introduction. In Denmark at least three local districts have introduced Tablets, and interest among teachers and school leaders is high, but politicians and officials remain sceptical of the long-term implications.

In Kazakhstan the government continues to invest heavily in e-learning. The Ministry of Education has doubled the investments in education, and has set goals to involve 90% of schools in e-learning programmes by 2020. Several technology companies are involved in the project, which runs from 2011 to 2020, including Microsoft, which is collaborating on software use and teacher training, and Apple, whose iPad Tablets are used in many middle-education institutions.

### 2.3.1 Fatih project in Turkey

In July 2013 in Turkey eleven domestic and international companies bid for a contract to supply over 10 million one-to-one Tablets for all primary school children in the country for the main phase of the Fatih project. Apple, Samsung, HP, Toshiba and Microsoft constitute the international bidders. The winner will supply the Tablets over three years, and will have to commit to manufacturing the Tablets in Turkey, in order to contribute to the Turkish economy. The Ministry of Education is also planning a research and development facility for the project. The Turkish company General Mobile won the bid last year to supply Tablets for the pilot of the project and Türk Telekom won the contract to build the infrastructure for the project.

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53 [http://psyoh.se/file/erikadahlin.pdf](http://psyoh.se/file/erikadahlin.pdf)


Although the project has received much international attention, critics have argued that the implementation of hardware and infrastructure is behind schedule, and the use of Tablets in the pilot has yet to have any impact on students’ learning.\(^{59}\)

2.4 Africa

Major growth in the use of mobile technology has been observed in Africa over recent years, and this is now also transforming education in many areas of the continent.\(^{60}\) Companies such as Intel have been collaborating with African governments, helping them invest in basic computers, in the hope that education will lead the growth of mobile technology in coming years. The increase in the child population in many African countries has put pressure on already underfunded and poorly managed education systems, and many are calling for large-scale changes. Some governments are hoping that Tablets can offer access to educational content and communication technologies, especially in more rural areas. eLimu is one of many start-up companies in Africa delivering digital learning, and it has recently introduced one-to-one Tablets in several schools across Kenya.

In South Africa Tablets have been introduced to 50 primary schools in the Limpopo Province by the Molteno Institute for Language and Literacy.\(^{61}\) The institute expects to roll out Tablets to 30,000 students across 250 schools across the country in an attempt to improve literacy.

The Ministry of Education in Mauritius has announced that over 23,000 Orange Tablets will be supplied to Form 4 students (Year 10, 14 to 15-year-olds) in both private and public secondary schools over the course of the 2013/14 academic year.\(^{62}\) Before introducing the Tablets the ministry has equipped 170 schools with improved wifi connection to support the devices. The overall cost of the project is estimated at Rs150 million, almost £1.5 million. The devices will come pre-loaded with digital textbooks, but will block the use of social networking sites.

2.5 India

With a rapidly growing population, a highly pressurised education system and low internet access figures, India had shown interest in adopting one-to-one Tablets as a means of democratising education, encouraging long-distance learning and bringing connectivity to rural parts of the country.\(^{63}\) The Aakash device, produced by the British company Datawind, has been chosen as a means to transform learning in India. The Aakash is reported to be the cheapest Tablet device available, and its second generation, the Aakash 2, was launched last year.\(^{64}\) The Indian

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\(^{63}\) [http://www.thedailybeast.com/articles/2013/01/30/datawind-prepared-20-tablet-computer-for-indian-market.html](http://www.thedailybeast.com/articles/2013/01/30/datawind-prepared-20-tablet-computer-for-indian-market.html)

\(^{64}\) [http://www.bbc.co.uk/news/technology-20297872](http://www.bbc.co.uk/news/technology-20297872)
government’s ambition to introduce Tablets in schools is seen as one of the driving forces of the development of IT and connectivity in the country.\(^\text{65}\) By March 2013, 100,000 devices were being used in schools, and the order for the third generation of Aakash Tablets is expected to be for around 5 million devices.\(^\text{66}\)

### 2.6 Asia

The Japanese government in 2010 launched its Future Schools project, among the objectives of which is the introduction of Tablet PCs to all schoolchildren.\(^\text{67}\) The scheme was introduced to primary schools between 2010 and 2012, and in special support schools and junior high schools between 2011 and 2013. The devices support independent learning and collaboration in the classroom and have been shown to improve communication between students and teachers, and between the school and home. The evaluation of the programme was positive overall but underlined the importance of teacher training. Fujitsu is the main provider of both software and hardware for the Future Schools project, supplying the wifi infrastructure, interactive whiteboards and Tablet PCs.\(^\text{68}\)

The Thai government announced plans to supply 1.8 million schoolchildren with Tablets in 2012, making it the largest Tablet contract in the world.\(^\text{69}\) The Tablets were supplied by Shenzhen Scope Scientific Development, a Chinese company which had recently won similar contracts in the region. In its first year Tablets were provided to all first graders in the country. A year later the government carried out an evaluation of the project which shows that despite pupils and teachers being very positive about the devices there were still improvements to be made.\(^\text{70}\) In this survey 97% of students and 92% of teachers said they found the Tablets useful, and 92% of teachers said they now prefered using Tablets in their lessons. Teachers, however, have expressed concern about a reduction in physical exercise and social interaction among children. The project has also suffered from a breakage rate of nearly 9%, mainly relating to broken screens, programming errors and charging flaws. Tablets have been distributed to new first grade students in autumn 2013.

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\(^\text{66}\) [http://www.thedailybeast.com/articles/2013/01/30/datawind-prepared-20-tablet-computer-for-indian-market.html](http://www.thedailybeast.com/articles/2013/01/30/datawind-prepared-20-tablet-computer-for-indian-market.html)


Under a different project, run by the One Tablet per Child organisation, 1.22 million Tablets will be supplied to students across three Thai regions. Two regions will be supplied by the Chinese firm Yitoa Shenzhen, while the third region will be supplied by the Thai firm Supreme Distribution.

In China the Sunshine Library Rural Digital Education Initiative, an organisation hoping to bridge the gap between rural and urban education, is introducing Tablets and wifi connectivity to rural schools. The initiative was recently named a finalist in this year’s Global Social Venture Competition, which is run by the University of Berkeley in the US. Apart from this initiative the use of Tablets in Chinese schools is very much in its early phase, but recent developments suggest a substantial increase over the coming three years. In November 2012 the Chinese government launched the Digital Education Full Coverage Project in order to fund the introduction of digital devices in schools. Multiple city governments, including Shanghai, Beijing, Nanjing and Guangzhou, have announced plans to purchase Tablets for use in schools. Digital China will be distributing Tablets for many of these projects, and iPads and Windows 8 devices are expected to be the main contenders. Apple has already trialled devices in several schools, but currently lacks educational content partners in China in order to supply devices on a larger scale. Windows is in use in many parts of the education sector, and since Google Apps is not currently available in China this may benefit Microsoft.

2.7 Australia

The education sector in Australia is increasingly investing in Tablets and cloud technology as the demand for PCs drops rapidly. The government’s investment in broadband through the National Broadband Network is argued to be driving the digital delivery of education and making it easier for schools to make the investment in hardware.

iPads have until recently been the most common device in schools in Australia, but a recent drop in price from Microsoft has led many schools to invest in Surface and other Windows Tablets. In April 2013 Lenovo won a contract to supply 257,000 netbooks to secondary schools in New South Wales, and in June Acer won a bid to supply secondary schools in Queensland with 14,000 Tablets, which is so far one of the largest deployments of Windows 8 Tablets globally. Windows 8 Tablets have also been deployed at other schools around the country, including Western Australia, Southern Australia and Victoria.

71 http://www.bangkokpost.com/breakingnews/357382/contracts-let-for-1-22-million-tablet-computers-for-schools
73 http://blogs.forrester.com/bryan_wang/13-07-17-microsofts_surface_promotion_signals_the_growing_importance_of_tablets_in_chinese_schools
Section 3:

Response and Attitude to the Introduction of Tablets in Year 7 in Three Schools Pre- and Post-Use
Section 3: Response and Attitude to the Introduction of Tablets in Year 7 in Three Schools Pre- and Post-Use

3.1 Introduction

Three schools were identified by Tablets for Schools to trial one-to-one Tablets in Year 7 in the autumn term 2012. The purpose was twofold:

1. To learn more about how the process of adopting Tablets in a school would have an impact on pedagogical practice, and on relationships with pupils, teacher and pupils. The schools included in the Tablets for Schools research up to that point had already adopted Tablets, and monitoring the actual process of introducing Tablets into a school would add an extra dimension to the understanding of this process.

2. To explore devices other than iPad Tablets. More devices were coming onto the market, but at that point few schools had adopted them.

Tablets were provided by Tablets for Schools stakeholders and introduced to three schools: Alec Hunter Academy, Braintree, Essex received Acer and Samsung Tablets running on Microsoft Windows 8; Dixons City Academy, Bradford received Samsung Tablets; Greenford High School, Ealing, London received Sony Tablets. Alec Hunter had previously taken part in Tablets for Schools Stage 1 research as its control school; Dixons had a connection with its namesake stakeholder; Greenford High School was close to stakeholder the Carphone Warehouse. Tablets were given to four or five Year 7 classes in each school in the spring term, and devices were then switched to the remaining classes in the summer term, thus ensuring that all pupils in Year 7 had access to a Tablet. The hand-out of the devices at Alec Hunter Academy, Braintree was delayed to the summer term, and this stage continued in the autumn term 2013.

This section outlines the findings from a self-completion pre-use and post-use survey that was undertaken with Year 7 pupils, parents and staff from the three schools:

- Dixons City Academy, Bradford
- Greenford High School, Ealing, London
- Alec Hunter Academy, Braintree, Essex

The pre-use survey was completed in the spring term 2013 prior to introducing one-to-one Tablets to the Year 7 pupils. At Alec Hunter this was completed at the beginning of the summer term. The post-use survey was completed at the three schools at the end of the summer term and up to the end of September 2013, when pupils had been using the Tablets for approximately one term.

The sample numbers for the pre- and post-use survey across the respondent groups is outlined in Table 3 below:


Table 3: Pre- and post-survey responses by school

<table>
<thead>
<tr>
<th></th>
<th>Total number of survey responses (pre-stage)</th>
<th>Total number of survey responses (post-stage)</th>
<th>Dixons Academy</th>
<th>Greenford High School</th>
<th>Alec Hunter Academy</th>
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<tr>
<td></td>
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<tr>
<td>Total</td>
<td>1085</td>
<td>812</td>
<td>291</td>
<td>206</td>
<td>480</td>
</tr>
</tbody>
</table>

3.2 Pre-use survey – baseline position
The pre-use survey aimed to establish a baseline of pupils’, parents’ and school staff’s existing use of the internet and Tablets and their views about the use of these within the classroom.

3.2.1 Accessibility and use of the internet and Tablets
Pupils, parents and school staff already had good access to the internet at the pre-use stage. Laptops, smartphones and PCs were the most commonly used devices across groups for accessing the internet at home (see Fig 16). School staff were higher users of laptops (86%) and smartphones (65%) at home. Pupils were the most likely to report using games consoles to access the internet (63%).

Tablet use at home at the pre-use stage was fairly common across all respondent groups; over a third of pupils, parents and school staff reported using Tablets to access the internet.
**Fig 16: Use of devices at home to access the internet**

![Bar chart showing the use of devices by teachers, parents, and pupils.](attachment:image)

**Base: Pre-use survey – teachers Q5a (Base=255), parents Q5a (Base=426), pupils Q5a (Base=404)**

At the pre-use stage pupils were frequently using the internet at home to help with their school work, with around a third (32%) using the internet every day for this purpose. Pupils at Greenford High School and Alec Hunter Academy were more likely to use using the internet every day (38% and 33% respectively) compared to pupils from Dixons City Academy (16%). However, the frequency of internet use at home overall for school work purposes did not differ significantly across schools (see Fig 17).

**Fig 17: Pupils’ use of internet at home to help with school work (%)**

![Bar chart showing the frequency of internet use for school work.](attachment:image)

**Base: Pre-use survey – pupils Q6 (Base=404)**
At the pre-use stage there were mixed views across respondents as to whether there were sufficient computers available at school to access the internet. The majority of pupils (65%) and around half of parents (49%) felt that there were sufficient computers available at school, although 39% of parents were unsure. School staff were less sure, with over two-fifths (44%) stating that they did not feel there were enough computers available.

Greenford High School pupils (70% agreed) and Alec Hunter Academy pupils (67% agreed) were most positive about the availability of computers at school. In contrast, nearly three-quarters (74%) of school staff at Alec Hunter Academy did not feel this was the case.

Internet use at school at the pre-use stage by pupils was common, although not necessarily used every day (see Fig 18). 86% of pupils reported using the internet at least once a week, with 36% reporting using it several times a week. Dixons City Academy pupils appeared to be the most frequent users of the internet at school, with around two-thirds (67%) using it several times a week or more.

**Fig 18: Pupils’ use of internet at school (%)**

Base: Pre-use survey – pupils Q8 (Base=404)

### 3.2.2 Pre-use stage internet and Tablet use in teaching

School staff were already using the internet regularly in their teaching at the pre-use stage. Around half (49%) were using it every day and 31% were using the internet several times a week.

Use of email to communicate with pupils was less common across staff. Around two-fifths (41%) were using email several times a week or more; 27% were using email once a month or less.

School staff were predominately using laptops (58%) and PCs (47%) to help with their teaching or lesson plans at the pre-use stage. Only a minimal number of teachers were using Tablets in their lessons at this stage. Nearly three-quarters (74%) of staff surveyed were not using Tablets (see Fig 19). Staff at Alec Hunter Academy were the most likely to use Tablets in their lessons at the pre-use stage, although this was not very common (42% used rarely). Before the introduction of Tablets in Year 7, Alec Hunter Academy had a number of iPad Tablets that could be booked for use in individual lessons.
Fig 19: Staff use of Tablets in lessons at the pre-use stage

![Staff use of Tablets in lessons at the pre-use stage](image)

**Base: Pre-use survey – staff Q7 (Base=255)**

Pupils were less clear at the pre-use stage as to whether they used Tablet computers in their lessons. Although 45% stated that they never did, 22% reported not knowing. This may be due to some pupils being unclear at the pre-use stage what was meant by Tablets.

### 3.2.3 Pre-use stage attitudes towards the internet

Pupils recognised the benefits of the internet to their learning at the pre-use stage. Nine-tenths (90%) agreed that using the internet will be more important as they get older and 86% agreed that using the internet in school encourages them to learn. Parents’ views reflected this, with 93% agreeing that technology will be increasingly important to their child’s future.

School staff also recognised these benefits, with over four-fifths (81%) at the pre-use stage agreeing that using the internet at school motivates the children they teach and helps them with their school work. Nearly all (95%) staff at the pre-use stage felt that technology would be increasingly important in the future to the children they teach.

### 3.3 Impact of Tablets for school: post-use stage – use of Tablets within lessons

#### 3.3.1 Pupils

At the post-use stage Tablets were most commonly used in Science according to pupils (88%). Use in History (83%), Maths (82%), Geography (81%), English (80%) and RE (79%) was also common. Tablets were used the least in sport lessons.
Fig 20: Use of Tablets within lessons – pupils

Base: Pupil survey Q5 – all pupils (N=433)

The use of the Tablets across different subjects varied across the three schools (see Fig 21). Dixons City Academy pupils were much more prevalent users of Tablets in language lessons, with 90% of pupils from this school who had responded to the survey reporting that they had used Tablets in these lessons. In comparison, 66% of Alec Hunter Academy pupils and 62% of Greenford High School pupils claimed that they used Tablets in language lessons.

Dixons City Academy was also a significant user of Tablets in sport lessons (78%), compared to the other two schools.

Fig 21: Use of Tablets within lessons – breakdown by school

Base: Post-use pupil survey Q5 – all pupils (N=433)

Tablets were most likely to have been used frequently (i.e. several times a week, or once a week), rather than every day, according to pupils (see Fig 22). Tablets were most commonly used every day
in IT (17%) and Science (17%) lessons. Over three-fifths of pupils indicated that Tablets were used frequently in their Maths, Geography, Science, History, Languages and English lessons. Tablets were used rarely in Sport (47%), Drama (45%) and Technology (41%).

Fig 22: Frequency of Tablet use within lessons – pupils

![Frequency of Tablet use within lessons – pupils](image)

**Base: Post-use pupil survey Q5 – pupils who specified that Tablets had been used in these lessons**

### 3.3.2 Tasks for which Tablets were used in lessons

Staff, pupils and parents were in agreement that the Tablets were used predominately in class for doing research (86% staff; 85% pupils; 80% parents).

Pupils and parents reported a much greater use of Tablets within lessons than school staff. Using the Tablets for tasks such as writing notes/essays, making presentations (65%) and using the calculator (63%) and dictionary were much more commonly reported by pupils. Pupils gave examples of 6.9 tasks/activities on average that they used their Tablet for within the classroom, compared to staff, who on average identified 4.1 tasks/activities.

Parents’ views on Tablet use within the classroom were fairly consistent with those of pupils. They identified 5.8 tasks/activities on average that the Tablets were used for.
Carrying out independent research appeared to be the most common use of the Tablets and was the positive aspect of the Tablets trial that was most mentioned. Being able to carry out their own research was linked to a sense of independence and appeared to be a motivational factor for many pupils:

*The best thing was being able to have research and the internet at your fingertips any time.*

Pupil, Greenford High School

*Because we could easily get into the internet without wifi hassle and we could easily research and find out facts for work.*

Pupil, Dixons City Academy

*The best things were that we were able to do our own research and in class we can learn more independently.*

Pupil, Alec Hunter Academy

*The best thing about using the Tablet at home/school was that I found it easier to access the research I needed for my independent learning.*

Pupil, Greenford High School

*The best thing about having my own Tablet at school is that I could work independently as well as gain knowledge from the websites recommended by my teacher and my friends.*

Pupil, Greenford High School
Tablets were mainly used outside class and at home for playing games for fun, doing research and sending emails to teachers, according to pupils, parents and staff. As before, parents and pupils reported a much higher usage of the Tablets outside of the classroom and at home compared to staff.

**Fig 24: Tablet use outside class and at home – teachers’, pupils’ and parents’ views**

![Diagram showing tablet use outside class and at home](image)

*Base: Post-use pupil survey Q6a (Base=433), post-use staff survey Q9a (Base=69), post-use parent survey Q5a (Base=310)*

### 3.3.3 Increased communication helping with school work

Increased or improved ability to communicate were also listed as benefits of having used one-to-one Tablets by many pupils. Although most of these pupils would have been able to email teachers before the Tablets trial, the ease with which they could do this appeared to be a positive aspect of having a one-to-one Tablet.

*I found it easier to complete homework tasks on the Tablet and easier to communicate with my teachers via email.*

Pupil, Greenford High School

*The best thing about having a Tablet was that I felt more confident to email teachers and others.*

Pupil, Greenford High School

*You could easily get in touch with friends so they could help you on your homework.*

Pupil, Dixons City Academy

*The best thing about having the Tablet was communicating with the teachers via email as they gave me tasks and feedback.*

Pupil, Greenford High School
I found it a good chance to try and let my teachers find out what I found hard.

Pupil, Alec Hunter Academy

One pupil also commented on the ease with which they could share work at school, thanks to the size and portable nature of the device:

Instead of books we should use the Tablet as it is easy to read if we swap work.

Pupil, Alec Hunter Academy

3.4 Impact on attitudes towards school – pupils’ and parents’ views

The surveys aimed to measure the impact of the introduction of the Tablets on attitudes towards the school generally.

Pupils were very positive about their enjoyment of learning at school at both stages of the research, with use of the Tablets appearing to consolidate this. Nine-tenths (90%) of pupils at the pre-use stage agreed that they enjoyed learning at their school. At the post-use stage 87% of pupils agreed that using the Tablet had helped them to enjoy learning at the school.

Pupil engagement in learning also appeared high at both stages. Nearly all (96%) pupils agreed at the pre-use stage that what they learned at school would be relevant to their future. At the post-use stage nearly three-quarters (73%) of pupils agreed that using a Tablet at school will be relevant to their future.

At both stages, the majority of pupils and parents valued the benefits of introducing Tablets for their school’s reputation and their future:

- 88% of pupils (92% of parents) at the pre-use stage and 83% at the post-use survey (86% of parents) agreed that having one-to-one Tablets in class meant that the school was thinking about their future.

- 82% of pupils (93% of parents) at the pre-use stage and 79% at the post-use stage (73% of parents) agreed that having one-to-one Tablets in class will help the reputation of the school.

3.5 Impact on attitudes towards school – staff views

Staff were enthusiastic and optimistic about their school and the potential contribution that introducing Tablets could have. At the pre-use stage 87% reported enjoying teaching at the school and believed it was forward-thinking in its attitude to learning. A similar proportion (88%) felt that the children at the school enjoyed learning. There were limited differences in opinion across schools.

Introducing the Tablets meant that the school was thinking about the children’s future, according to 81% of staff at both the pre-use and post-use stage.

The majority of staff at both stages agreed that the Tablets would help the reputation of the school. Around two-thirds of staff (67%) felt that this was the case at the pre-use stage. This had dropped slightly to 59% of staff at the post-use stage. There were a number of staff who had no opinion on
this (27% at the pre-use stage and 39% at the post-use stage), perhaps suggesting that for successful implementation time was required before establishing an opinion on the impact on a school’s reputation.

Similarly, although the majority of staff were positive at the post-use stage about one-to-one Tablets ensuring that children have an equal opportunity for learning, 19% were unsure whether this was the case.

3.6 Impact on teaching and learning – pupils’ and parents’ views

Pupils were positive about the use of Tablets in making their lessons more engaging and interactive and in helping to motivate and engage them with their school work (see Table 4). Although there was a slight decrease in agreement at the post-use stage, the majority of pupils were positive about the ability of Tablet use in the classroom to achieve this.

This was reinforced by parents, with over three-quarters at both stages (79% and 77%) agreeing that Tablet use helped motivate and engage their children with their school work. Similarly, 83% of parents at the post-use stage felt that the Tablets had made their child’s lessons much more interesting and engaging (92% at the pre-use stage felt that this could be the case).

Pupils from Greenford High School were the most positive about the impact of the introduction of Tablets on their motivation and engagement with school work, and lessons being more interactive and engaging when they are used.

Table 4: Impact on engagement in lessons – pupils’ views

<table>
<thead>
<tr>
<th></th>
<th>Pupil pre-survey</th>
<th>Pupil post-survey</th>
<th>Dixons City Academy Post-stage</th>
<th>Greenford High School Post-stage</th>
<th>Alec Hunter Academy Post-stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablets can/do make lessons more interactive and engaging</td>
<td>95</td>
<td>89</td>
<td>88 (52)</td>
<td>94 (82)</td>
<td>84 (56)</td>
</tr>
<tr>
<td>Tablets can/do help motivate and engage with schoolwork</td>
<td>91</td>
<td>77</td>
<td>72 (44)</td>
<td>85 (63)</td>
<td>68 (39)</td>
</tr>
</tbody>
</table>

*Base: Post-use pupil survey Q6a (Base=433), Pre-use survey – pupils Q8 (Base=404)*
Pupils felt that teachers had planned exciting and interesting ways to use the Tablets (73% agreed with this statement, 45% strongly agreed). Furthermore, over two-thirds (69%) agreed that the Tablets had been useful for teachers being able to help them with the subjects they found hard.

Nearly nine-tenths (87%) of pupils agreed that using the Tablet had helped them to enjoy learning at school.

Analysis across the three schools found that the Greenford High School pupils were particularly positive. 78% agreed (52% strongly) that their teachers had planned exciting and interesting ways to use the Tablets. Over three-quarters (78%) felt that Tablet use had assisted in getting help with difficult subjects. At Dixons City Academy 58% felt this to be the case and at Alec Hunter Academy 63% of pupils felt this was the case.

Pupils across all schools felt that they were able to find relevant Tablet applications for their school work (77% agreed this was the case).

A roll-out of Tablets to all secondary pupils was a well-supported notion: 84% of pupils and parents agreed that this should happen. Greenford High School pupils were particularly keen on this happening (92%).

3.6.1 Perceived benefits of Tablet use – parents

Open-end questions revealed that parents were generally very positive about the Tablets trial. Many expressed gratitude for the opportunity to try a device, as their child’s access to technology had previously been limited. For some it was seen as an equaliser between children from different socio-economic backgrounds:

*It is helping my child to do the homework on time and it is good for my child to handle the technology. We do not have the access to internet and computer at home, so if school did not give the Tablet to my child it means she cannot have any experience.*

Parent, Dixons City Academy

*I think that it was a good experience for my child as they do not have a Tablet, not all children in the school do. This made all the children equal in experience, learning and developing.*

Parent, Dixons City Academy

*Because I cannot afford to buy him a Tablet, I was very happy the school helped.*

Parent, Greenford High School

*It was good that technology was there and available to maximise my son’s learning experience.*

Parent, Dixons City Academy

*I think it was a very good idea for the children to have a Tablet at school; it is the only way forward.*

Parent, Alec Hunter Academy
It has made her have more confidence on using a computer and gave her responsibility and she enjoyed having it. Thank you.

Parent, Alec Hunter Academy

Brilliant idea; equipping children to be ready for world of work and technology.

Parent, Greenford High School

Many families had limited access to technology at home, and especially parents with more than one child at home appreciated the Tablets as an additional tool:

This helped when you have two children and both had homework, so one used Tablet and the other computer, and managed to do their learning, homework and research on time.

Parent, Greenford High School

She was able to complete her assignments in good time and without interruption due to the fact she had independent access to the device.

Parent, Greenford High School

Having personalised access to a Tablet at home was felt by many parents to improve the quality of their child’s homework or to make homework easier to complete. The Tablet offered several tools useful for homework, the most important of these being access to research, as mentioned above. Access to apps was also highlighted as a benefit. The device was described by one parent as an ‘all-in-one item’.

It was an all-in-one item ideal for research on homework or any class work.

Parent, Dixons City Academy

She had all her work in one place. When she had an idea she just opened her Tablet and got onto it straight away. It made it easier doing group work as they could communicate.

Parent, Alec Hunter Academy

Exploring a lot of good apps; it does help with [my son’s] learning.

Parent, Greenford High School

He was able to gain knowledge faster from the internet and spending time on it allowed him to learn from reliable sources.

Parent, Greenford High School

My son learned better with the Tablet. Homework did not seem to be an issue and he would rather do it on the Tablet than handwriting.

Parent, Alec Hunter Academy

At school my child was able to access information online and interact in class a different way. This has helped as there is a wider knowledge bank we can access. We were able to do the same at home, and could research a lot more in his free time.

Parent, Greenford High School

Where we were not able to help her she got on the Tablet and found out how to work it out.
Knowing that their child was able to receive help and guidance from teachers as well as other pupils after school hours was also reassuring for several parents:

[The best thing about my child having a Tablet was] comparing work with friends, exchanging ideas and receiving advice from teachers.

[The best thing about my child having a Tablet was that] help from teachers and other students was available instantly.

Parents also felt that enabling their child to have access to their own Tablet had a motivational effect, and that homework was completed more easily:

I had no problems with him doing his homework, he found homework easier.

My son had help with his homework and it made it easier for him. He reads more often on it and does revise.

Being able to continue school work at home, or even ‘on the go’, appeared to make the gap between school and home less wide. Several parents reported that the Tablet was being shared at home with the whole family, used both to share the child’s learning and also for parents to familiarise themselves with the device:

[The best thing about my child having a Tablet was] being able to start something in school and then continue at home.

[The best thing about my child having a Tablet was] that the whole family played and shared the device.

The best thing was when they would come home and start working on their Tablet and also tell me what they were doing.

For some parents having a Tablet which could be used to record lessons and then taken home meant greater transparency:

Filming a science experiment – it meant we as her parents could experience what happened in the classroom.

I found the Tablet useful as I was able to see what my child was doing and also managed to learn about it through my child.
Several parents felt that having their own school Tablet made pupils more responsible, which was thought to have had a motivational effect. Pupils were described as feeling trusted and more grown-up as a result of being given what they knew was an expensive device.

[The best thing about my child having a Tablet was that] responsibility skills increased. Other benefits were improvement in IT skills, communication skills and team work.

Parent, Dixons City Academy

My child felt very grown-up and independent.

Parent, Dixons City Academy

My child became more responsible and has taken more pride in her learning/school work. My child has been more focused because she does not have to look at the whiteboard, which is sometimes difficult to see, but has it at her fingertips.

Parent, Dixons City Academy

Parents also commented on their children feeling motivated and engaged with their school work.

My child loved the idea of Tablets. She is more confident in using one now than before and she has learned a lot of useful and good information (educational) from the Tablet.

Parent, Alec Hunter Academy

The Tablet helped my children with their learning and I noticed that they were finding any subject easier to learn with the help of all the different apps that were available.

Parent, Dixons City Academy

It made my child engage more in school work and homework.

Parent, Dixons City Academy

My child finds it easier to communicate and share ideas and be creative. It is motivating him to learn more.

Parent, Greenford High School

Some parents also described how children with special educational needs were benefiting from using the Tablet.

My son suffers from dyslexia and I think this helped him with his work greatly. It was better at keeping him more interested and focused.

Parent, Alec Hunter Academy

My son does have spelling and writing issues and he enjoyed using the Tablet for any essays he had rather than writing them by hand.

Parent, Alec Hunter Academy

It was very good for my son as he struggles with his English.

Parent, Greenford High School
3.6.2 Perceived benefits of Tablet use – pupils

Open-ended questions at the post-use stage confirmed that pupils were mostly very positive about using a Tablet at school. It was described as making homework and lessons easier and more fun. Pupils appeared to be motivated by the opportunity to use a Tablet at school and at home:

- **My experience on my Tablet has been brilliant, I have enjoyed it.**
  Pupil, Dixons City Academy

- **It was really fun and we are so lucky to be getting Tablets.**
  Pupil, Greenford High School

- **It makes going to school a more fun thing to do! It is amazing.**
  Pupil, Greenford High School

- **I would just like to say that my Tablet was motivating me to learn more and helped me learn.**
  Pupil, Greenford High School

- **It was educational but fun and I could focus better. Also could do everything I wanted to at home.**
  Pupil, Alec Hunter Academy

For many pupils this sense of motivation seemed to be associated with a sense of responsibility, of being trusted with an expensive piece of technology, as well as being allowed to work independently:

- **The best thing was having my own responsibility and knowing that the school trusts us to keep a £400 Tablet.**
  Pupil, Greenford High School

- **The best thing about the Tablets was that we were able to take them home; it was actually like they were ours.**
  Pupil, Greenford High School

- **[The best thing about having a Tablet was] that you had your own independence.**
  Pupil, Alec Hunter Academy

Pupils also felt that having options to work and learn in different ways was motivational:

- **The best thing about having my own Tablet was learning in a more interesting way.**
  Pupil, Alec Hunter Academy

- **[The best thing about having a Tablet was] that you could make the lesson amazingly more interesting.**
  Pupil, Dixons City Academy

- **The best thing was that the Tablet made school more fun and interactive.**
  Pupil, Greenford High School
Pupils felt the Tablet benefited them in a variety of ways. They appreciated having access to many tools, such as research, communication, dictionaries, and presentation and note-taking software in one device. For some pupils the Tablet was felt to have helped with specific areas such as writing:

>[The best thing about having a Tablet was that] they helped me with spelling.

Pupil, Alec Hunter Academy

### 3.6.3 Personal access to technology

For many of the pupils involved in the Tablets trial, having personal access to a device and to the internet at home was the most positive aspect of the experience. Although most children in the UK today are considered to have access to the internet at home\(^\text{77}\) having access to a personal device is an entirely different experience.

>[The best thing about having the Tablet is that we do not have to share with anyone and at home I do not need to ask my brother to check something on his phone.]

Pupil, Greenford High School

>[The best thing about having a Tablet was that] I never had to wait in queue to use the computer at home.

Pupil, Greenford High School

Because it is a personal device, and one that is always on, the Tablets appeared to remove some barriers to learning for pupils. The Tablets were described as helpful tools for homework, and many pupils mentioned homework specifically as having become easier to finish. This appeared to be mainly due to its being a personal device. Many of these pupils and their parents described having to share home devices before the introduction of Tablets, which often meant that homework took longer to complete.

>[It was much easier as it was my very own personal device.]

Pupil, Alec Hunter Academy

>[It was easy to get my work done and I could finish my work early. It helps to get my homework done.]

Pupil, Alec Hunter Academy

>[The best thing about having a Tablet to use at school and at home is that you can be more enthusiastic when you go to school and can enjoy lessons and education a lot more. At home it is easier to do your homework.]

Pupil, Greenford High School

Some pupils also described being able to finish school work ‘on the go’, as the Tablet provided constant internet access as well as note-taking, presentation and writing tools.

\(^{77}\) Nine in ten children (91%) live in a household with access to the internet through a PC, laptop or netbook (Ofcom 2013).
The best thing about having a Tablet was I did not have to go on a computer; I could use it wherever and whenever.

Pupil, Dixons City Academy

[The best thing about having a Tablet was that I] could find information quickly and make presentations miles away from a computer.

Pupil, Alec Hunter Academy

The best thing about having my Tablet at school was that if we did not understand something we could look it up at school. At home I could do my own research whenever I wanted plus I could type up homework on the Tablet and email it to my teacher.

Pupil, Greenford High School

[The best thing about having a Tablet was that] you could do your homework anywhere.

Pupil, Dixons City Academy

3.7 The impact on teaching and learning – staff views

Staff had been confident at the pre-use stage about the potential impact of Tablets on their ability to engage pupils and make lessons more interactive and engaging (see Table 5). After having practical experience of using Tablets, although there was a slight decrease in the number of teachers who reported seeing the impact in practice, at the post-use stage teachers’ views on the benefits in relation to the impact on teaching and learning are positive overall.

Differences in views across schools are also detailed in Table 5; however, these should be interpreted with caution due to the small sample numbers. Staff at Greenford High School were the least positive of the three schools about the potential impact on pupil engagement and lessons.
### Table 5: Impact of Tablet use on engagement in lessons – staff views

<table>
<thead>
<tr>
<th>Tablets can/do make lessons more interesting and interactive</th>
<th>Staff presurvey % Agree (strongly)</th>
<th>Staff postsurvey % Agree (strongly)</th>
<th>Dixons Academy Post-stage* % agree (strongly)</th>
<th>Greenford High School Post-stage* % agree (strongly)</th>
<th>Alex Hunter Academy Post-stage* % agree (strongly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablets can/do help motivate and engage children with their schoolwork</td>
<td>75 (32)</td>
<td>65 (29)</td>
<td>75 (40)</td>
<td>54 (29)</td>
<td>68 (16)</td>
</tr>
<tr>
<td>Tablets can/do help motivate and engage children with their schoolwork</td>
<td>80 (37)</td>
<td>75 (29)</td>
<td>74 (35)</td>
<td>56 (22)</td>
<td>79 (21)</td>
</tr>
</tbody>
</table>

*Small base numbers.*

Open-ended questions revealed that teachers were in general very positive about the introduction of Tablets. It was said that pupils appeared to be more engaged in their lessons, which teachers associated with pupils having more options in their learning as well as enjoying working with the device.

*In my experience I think they enjoyed Spanish lessons more. There are some apps they could use to improve pronunciation and vocals, but also research was something they enjoyed a lot.*

Teacher, Dixons City Academy

*[The best thing about using Tablets was the] ease of access to active resources. [The pupils’] confidence with using the devices was great to see and they led the way in getting teachers to use them in lessons.*

Teacher, Greenford High School

*Pupils seemed more motivated and were very proud to show their work. They liked doing research and showing what they had found.*

Teacher, Dixons City Academy

*[The best thing about using Tablets was increased] independence and equal opportunity for use in research, [as well as] student engagement, [and] the almost endless possibilities they present in education.*

Teacher, Dixons City Academy
It was felt that the Tablets offered teachers flexibility in their teaching, and teachers were able to facilitate more independent work and allow pupils to work at their own pace.

*The students used it as a research tool in my lesson and watched videos on how to make things for their presentations, so wholly active and independent learning.*
  
  Teacher, Dixons City Academy

*[The best thing about using Tablets was] taking lessons into the present. Students become more independent with their research.*

  Teacher, Greenford High School

*[It gave us] a more versatile tool for the classroom.*

  Teacher, Alec Hunter Academy

*[The best thing about using Tablets was] more independence in lessons for students to research/complete work. Students were able to work on different tasks more easily. Students were engaged when using them.*

  Teacher, Dixons City Academy

*[The best thing about using Tablets was] independent learning, students worked at their own pace.*

  Teacher, Alec Hunter Academy

One teacher felt that this flexibility was particularly beneficial for pupils with special educational needs:

*Using OneNote has allowed for more detailed notes and supported SEN students as they could quickly and easily add in images to support content. It helped develop presentation and communication skills.*

  Teacher, Alec Hunter Academy

Another felt that the Tablets helped pupils organise their work:

*[The best thing about using Tablets was] that the Tablet allows all written work – notes, plans, answers – to be stored and organised securely.*

  Teacher, Greenford High School

For teachers there were also significant practical benefits, such as not having to book computer rooms and not having to print off work material. It also ensured access for all pupils, which meant that teachers could set research-based tasks knowing that all had a device available:

*[The best thing about using Tablets was that we] did not have to print worksheets as pupils could go online instead.*

  Teacher, Alec Hunter Academy

*[The Tablets were] excellent for research activities rather than waiting for a computer room to be available.*

  Teacher, Alec Hunter Academy
[The best things about using Tablets was that] all students have had access to the internet whilst in school, the ownership, and the equal opportunity for them.

Teacher, Greenford High School

It allowed equal opportunities for ALL students and made setting research targets possible for homework. Students also liked using the Tablets in class.

Teacher, Greenford High School

You could set a task on research or using an app which you could be confident they could do/access at home.

Teacher, Dixons City Academy

The Tablets were used as a tool for communication, collaboration and feedback. Teachers described how visual feedback was very valuable for many pupils:

In PE having the ability to record themselves performing and then being able to watch and analyse and review their performance [was positive]. The standard of learning, understanding and progress was much improved over the learning without the aid of a Tablet.

Teacher, Dixons City Academy

[The best thing about using Tablets was that] they could video each other in peer assessment tasks to give more specific and effective feedback.

Teacher, Dixons City Academy

3.8 The impact of Tablet use on communication with teachers – parents’ and pupils’ views

Pupils at the pre-use stage found it easy to talk to their teachers and get feedback from them (86% agreed this was the case). Introducing Tablets seems to have assisted in this process. Nearly three-fifths (59%) of pupils who completed the post-use survey agreed that using the Tablet had made it easy to talk to their teachers and get feedback from them. A quarter of pupils were still undecided.

Introducing the Tablets within lessons had also assisted pupils in being able to communicate with their teachers more easily using email. Around three-quarters (74%) agreed that this was the case at the post-use stage.

Parents also felt that Tablets had improved communication between their child and their teachers. Nearly seven-tenths (69%) at the post-use stage agreed that having Tablets made it easier for their child to communicate with their teachers.

3.9 The impact of Tablet use on communication with teachers – staff views

Communication between teachers and pupils and parents was clearly important. Over nine-tenths (92%) of school staff at the pre-use stage were able to give continual feedback to pupils to provide updates on progress. Staff views at the pre-use stage regarding communication between parents
and school staff were more variable. Although 63% felt that they were able to communicate with their pupils’ parents to update on progress, 13% did not agree and a further 24% appeared unsure.

The post-use stage did not directly measure the impact on teachers’ communication with parents and pupils. However, the post-use stage did show that nearly 46% of staff felt that it had assisted pupils in being able to email them more easily. Around half (48%) of staff were unsure whether this was the case.

3.10 The impact of implementation on concerns about use

The survey explored potential concerns that pupils, staff and parents might have had about introducing Tablets into the classroom.

3.10.1 Pupils and parents

Concerns about Tablet security and the practicalities of use had slightly increased at the post-use stage. Pupils at both stages were most concerned that they would break or damage the Tablet, with just over half (51%) reporting this as a concern at the post-use stage (an increase from 36% at the pre-use stage). Concerns about their Tablet being stolen were also an issue for some pupils, with 38% highlighting this as a concern at the post-use stage (32% did at the pre-use stage).

Pupils were less concerned about the Tablets causing distractions from school work or not being able to use them. Three-fifths (60%) of pupils at the post-use stage did not feel that it distracted them from their school work (64% at the pre-use stage) and just over a tenth (13%) at both stages were concerned about not being able to use the Tablet.

Alec Hunter Academy pupils appeared to have the most concerns about the Tablets at the post-use stage, compared to pupils in the other schools. A higher proportion of pupils at this school were concerned about damage (60%) and had experienced the most difficulties with using the Tablet at the post-use stage (20%).
### Table 6: Pupil concerns about Tablet use at the post-use stage by school

<table>
<thead>
<tr>
<th>Concern</th>
<th>Dixons Academy Post-use survey</th>
<th>Greenford High School Post-use survey</th>
<th>Alex Hunter Academy Post-use survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>I always felt concerned that I would damage my Tablet</td>
<td>47 (20)</td>
<td>46 (19)</td>
<td>60 (27)</td>
</tr>
<tr>
<td>I always felt concerned that my Tablet would be stolen</td>
<td>38 (9)</td>
<td>37 (14)</td>
<td>41 (18)</td>
</tr>
<tr>
<td>I found it difficult to concentrate on my school work because the Tablet distracted me</td>
<td>27 (7)</td>
<td>14 (6)</td>
<td>34 (12)</td>
</tr>
<tr>
<td>I found it difficult to know how to use the Tablet</td>
<td>9 (3)</td>
<td>10 (6)</td>
<td>20 (7)</td>
</tr>
</tbody>
</table>

*Base: Post-use pupil survey Q8a (Base=433)*

Parents also had concerns about Tablet security and the potential impact on their child’s school work (see Fig 25), although there was limited evidence that these concerns had been realised at the post-use stage. Around half of parents at the pre-use stage highlighted concerns about damage occurring (48%) and about the Tablet being stolen (53%). However, only 5% of parents at the post-use stage reported that they had experienced issues with Tablet damage (57%, n=8 of these were from Alex Hunter Academy), and only 3% said that they had experienced issues with safety or theft (70%, n=7 of these were from Greenford High School).

At the post-use stage parents still had concerns about the impact of the Tablet’s use on their child’s engagement in lessons. Over two-fifths of parents stated that they thought their children had used the Tablets for things other than school work during lessons (43%) and that they worried that the Tablets have encouraged children to be online all the time when they should be doing other things (42%).

These concerns may be due to a lack of parental understanding generally about Tablet use in school, and particularly about how they are being implemented in their children’s learning. Nearly 80% of parents at the post-use stage (78%) maintained that their children knew more about the Tablets than they did.
3.10.2 Parental concerns

Although parents were generally very positive about the use of Tablets, the open-ended questions revealed that parents of pupils in the three trial schools had a number of concerns about their child’s use of a personal Tablet, such as making sure it was charged and looked after, as well as the potential for loss or damage. Some parents felt that these were additional responsibilities placed on them by the school.

*It is expensive equipment, my child was always scared of it breaking or getting lost or stolen.*

Parent, Dixons City Academy

*The worst thing is when other people realise Dixons students carry a Tablet in their bag, which will affect their safety.*

Parent, Dixons City Academy

*[The worst thing about using Tablets was] reminding them to charge it and not to lose/break it.*

Parent, Alec Hunter Academy

*It was heavy to carry around all day and walking to and from school. It was also a major responsibility should it get broken, stolen or damaged.*

Parent, Alec Hunter Academy

*The biggest worry is my child carrying an expensive device in his bag while walking home alone from school.*

Parent, Greenford High School
3.11 Limitations of the Tablets trial

3.11.1 Perception of limitations – pupils

Pupils expressed some disappointment in the degree to which the Tablets had been utilised by their teachers, and would have wanted to use them more.

*If we get them again can we please use them a little more, thank you.*

Pupil, Dixons City Academy

*The worst thing was probably teachers not knowing how to use the Tablets creatively and mainly just using them as whiteboards and for small amounts of research. When this happened it felt as if they were just in the way.*

Pupil, Dixons City Academy

*[The worst thing was] that we hardly actually used them so I did not bring it to school that much.*

Pupil, Alec Hunter Academy

*When I learnt how to use the Tablets to my full ability I had to give them back.*

Pupil, Alec Hunter Academy

*The worst thing was that it was rarely used in school and the teachers did not do many lessons using it, which made me feel as if the Tablet was going to waste.*

Pupil, Greenford High School

One pupil expressed a need for more training in how to use the device:

*I found it hard when I was asked to do homework on my Tablet because I did not understand how to do it.*

Pupil, Dixons City Academy

Several pupils felt that their device was large and heavy, and that this added weight to an already heavy schoolbag. This was linked to a sense of the Tablets not being fully utilised, and therefore carrying them around felt unnecessary.

*I think the worst thing was having to carry them everywhere and all day we do not use them.*

Pupil, Dixons City Academy

Some pupils also experienced technical difficulties and breakages with their Tablet, which disrupted their use of the device. At Alec Hunter Academy technical issues with the keyboards connected to the Tablets was a particular problem. In two of the schools, problems with wifi and broadband connection appeared to limit these pupils’ use of the Tablets both at school and at home.

*The keyboard did not work and the internet had broken so I could not connect to the internet.*

Pupil, Alec Hunter Academy

*There were a lot of internet problems. I had to go five times to sort out my internet connection.*

Pupil, Greenford High School
3.11.2 Perception of limitations – parents

Open-ended questions revealed that some parents felt that the use of Tablets had not yet reached its full potential. This was partly thought to be due to a lack of teacher training and preparation, as well as a lack of time for pupils and teachers to become accustomed to using the Tablets.

*With more support for the teachers to develop innovative and interesting lessons including the Tablet, this programme would be even better – not all teachers used them and this disappointed my child.*

Parent, Dixons City Academy

*Some teachers hardly integrated them into lessons. They were not used to their full potential at all.*

Parent, Dixons City Academy

*Not convinced that Tablet was fully used. Teachers only encouraged their use sometimes. Teachers need to focus more on setting specific tasks for Tablet use.*

Parent, Dixons City Academy

*I do feel more in-depth understanding of how the [Tablets are] used in lessons and even more outside school (home learning) would be necessary.*

Parent, Greenford High School

For some parents, technical difficulties and what was felt to be limited use within lessons created a negative image of the trial overall.

*It was larger and heavier than expected, making my son's schoolbag heavy to carry to and from school.*

Parent, Alec Hunter Academy

*The Tablet is very heavy to carry with all the other equipment [my daughter] needs to take to school. Also I was concerned that it may get damaged going to and from lessons and lost or stolen.*

Parent, Alec Hunter Academy

*It is too heavy! My daughter has a back pack full of books, lunch and her drink, this added to the weight on her back. She walks to and from school too.*

Parent, Alec Hunter Academy

Technical difficulties also limited the use of Tablets, according to parents:

*Initially we had problems connecting to the internet at home and then reconnecting to the school's.*

Parent, Alec Hunter Academy

*The Tablet sometimes was very slow and it used to crash all the time. This was annoying when she was doing her homework and had to redo it. This took a long time.*

Parent, Greenford High School
3.11.3 Distractions – parents

For some parents, the child’s use of the Tablet at home, particularly the use of non-educational games, was a concern. Some were concerned that this was affecting their child’s school work and felt that this was an additional responsibility for parents to have to police at home. The feedback from parents highlights the need for schools and parents to communicate in order to agree on how personal educational devices should be used and policed within and outside of school.

He could play games, this is always going to distract him from school work.
Parent, Alec Hunter Academy

[The worst thing about using Tablets was that] sometimes it becomes distracting, due to the ease of access to other things such as Facebook etc.
Parent, Greenford High School

Due to immaturity and lack of self-discipline our child wasted enormous amounts of time playing games; surfing the web on unrelated topics and generally messing about on the Tablet. She also got up ridiculously early (5.30 a.m.) to go on the internet without supervision.
Parent, Dixons City Academy

I felt my child spent too long on Tablet. As it was a school-given device I did not feel I was able to restrict use of Tablet as I would do with PC or phone.
Parent, Dixons City Academy

[The worst thing about using Tablets was] for a parent not knowing if they have used the Tablet sensibly or not.
Parent, Dixons City Academy

At home it was difficult for them to put it down at first, but after a few weeks they became more sensible.
Parent, Dixons City Academy

[My son] became more anti-social at home.
Parent, Alec Hunter Academy

Sneaking it to go on Facebook and YouTube, it was a continuous battle.
Parent, Alec Hunter Academy

[Schools must] strongly insist to the children that any report from parents/carer about too much time on the Tablet at home will have repercussions.
Parent, Greenford High School

[The worst thing about using Tablets was] having the responsibility. No restrictions on Tablet meant parents had to monitor them constantly.
Parent, Greenford High School
Some parents were somewhat ambivalent; while they felt that Tablets had educational benefits for their children, they found it difficult to limit the use of the device for games at home:

My son found this to be a very positive experience, I was impressed by how easily he worked with the Tablet, he seemed to pick up the functions very quickly; however, I was concerned with how much time he wanted to spend on it rather than doing other things.

Parent, Alec Hunter Academy

The worst thing was that he was using that all the time and till late, but yes for education like searching, reading etc. think it was a good idea.

Parent, Greenford High School

3.11.4 Pupils’ concerns

Open-ended questions revealed that pupils also had some concerns. Many pupils appreciated the responsibility of a Tablet, and felt independent and trusted by the school for having one. For others, however, the possibility of the device being lost, damaged or stolen was a concern:

The worst thing about the Tablet was that I always thought that I was going to drop it and smash [it].

Pupil, Dixons City Academy

[The worst thing about Tablets was that] if it broke or got stolen I would be held responsible.

Pupil, Dixons City Academy

[The worst thing about Tablets was] more responsibility, [I was] scared about getting it damaged.

Pupil, Greenford High School

I thought that the people who did not have Tablets would end up stealing it or accidentally breaking it.

Pupil, Greenford High School

[The worst thing about Tablets was] worrying that I would break it and that it would be stolen.

Pupil, Alec Hunter Academy

3.11.5 Distractions – pupils

The open-ended questions revealed that pupils appreciated the Tablets not only for their educational use, but also for entertainment purposes at school and at home. In particular, playing games appeared to be a popular use of the Tablets. This was a concern to several parents (see section 3.11.3), but some pupils also admitted to struggling to focus on their school work, and found this difficult. Others felt that other pupils using their device for games or social networking was impacting on the use of Tablets in school as a whole:

The worst thing about having a Tablet is people spent time playing games [rather] than studying because that is the whole reason why the school gave us Tablets.

Pupil, Greenford High School
The worst thing about having my own Tablet to use at school and at home was that I got distracted easily from school work.

Pupil, Dixons City Academy

The worst thing was that sometimes I got a little bit addicted to it, which stopped me from doing work at home.

Pupil, Greenford High School

[The worst thing about Tablets is that I] get distracted in lessons.

Pupil, Alec Hunter Academy

At Dixons City Academy, pupils were not allowed to download non-educational games, and so distraction during lessons was less of a problem. Some of the children, however, felt that this was unfair and wanted to use their device for entertainment as well as school work.

I think the worst thing was not being able to play non-educational games like Temple Run, Candy Crush etc.

Pupil, Dixons City Academy

3.12 Limitations of the Tablets trial – teachers

Teachers had greater concerns about the practicalities of using the Tablets within the classroom than their pupils. Pupils forgetting to charge their Tablets (50% post-use), forgetting to bring to class (50%) and breakages affecting their use (29%) were the most pertinent issues for teachers at the post-use stage. However, these concerns seemed to have lessened since the pre-use stage overall, suggesting that implementing the Tablets within their teaching had assisted in reducing concerns about these issues.

Teachers were much more positive at the post-use stage about:

- **The Tablets’ effect on classroom management** – 64% of teachers identified this as a concern in the pre-use survey; but only 16% at the post-use stage stated that the effect of the Tablets on classroom management had been challenging.

- **The ability of pupils to get around the firewalls and use it for things other than school work** – 61% of teachers were worried about this at the pre-use stage; only 20% of teachers who responded to the post-use survey felt that this had been an issue in practice.

The majority of teachers had had concerns at the pre-use stage about having the confidence to use the device to enhance their teaching. 85% of teachers at the pre-use stage reported that this was the case and 8% were unsure. These concerns were fairly consistent across schools – 80% of Alec Hunter Academy, 84% of Greenford High School and 89% of Dixons City Academy teachers had concerns.

Concerns remained at the post-use stage among some staff regarding not feeling sufficiently prepared to use the Tablets in their teaching. In some instances, Tablet use actually appeared to increase these concerns:
• 56% of teachers at the post-use stage agreed that they did not know enough about how to use the Tablets in their teaching (an increase from 38% at the pre-use stage).

• 71% of teachers at the post-use stage felt that their pupils knew more about the devices than they did (an increase from 32% at the pre-use stage).

• 32% of staff at the post-use stage felt that they were able to find good and relevant applications for the Tablets (23% agreed strongly).

Significantly, improved access to training on Tablet use and having more time to prepare for teaching with Tablets was important for the majority of teachers who responded to the post-use survey (see Fig 26). 84% agreed that they should have been given better training in how to use the Tablets and 85% wished they had had more time to prepare for teaching with Tablets and to familiarise themselves with the device.

**Fig 26: Post-use stage staff concerns about Tablet use – % agree with statements**

![Bar chart showing staff concerns about Tablet use](chart.png)

*Base: Post-use staff survey Q11 (Base=69)*

### 3.12.1 Perception of limitations – teachers

The open-ended questions revealed that despite teachers generally being positive about the trial of Tablets at their school, it was felt that the use of Tablets so far had been limited, and that additional training would be necessary for the successful integration of a larger number of one-to-one Tablets into teaching. Several teachers felt that more time would be necessary for the technology to become fully integrated and therefore for the full impact of this to become apparent:

> I felt underprepared and felt my students did not get as much out of the Tablets as I would have liked.

Teacher, Dixons City Academy
[The Tablets are] a very useful tool to have in the classroom. With further training, additional apps and integrated IT systems, I think there are massive future learning/teaching opportunities.

Teacher, Dixons City Academy

It takes some time to create routines within the classroom of when to use the Tablet, but I do not think it could be considered as something bad.

Teacher, Dixons City Academy

Teachers MUST have the same device as students for this to work.

Teacher, Greenford High School

In my department we have thought more about how we can make technology more useful to our subject (Art). We still need to use paper books – but we are going to incorporate QR codes where possible so students can get to the correct info/page when needed.

Teacher, Greenford High School

Brilliant idea! We need to tweak a few things to make it more efficient. Maybe do staff training?

Teacher, Greenford High School

Some teachers felt that technical difficulties and breakages had disrupted the pupils’ use of Tablets in school, and that this had made it difficult to fully integrate them into teaching and learning. It was felt that both the device and the infrastructure would need to be reliable in order to ensure the full impact of Tablets in education. In Alec Hunter Academy, problems with the Tablets’ keyboards appeared to limit the use of the Tablets. It is important to highlight that because of the limited scope and timeframe of the initial Tablets trial, not all of the three schools had made significant improvements to their infrastructure to prepare for the use of Tablets.

[The worst thing about using Tablets was] not having access to their work on the school website through the Tablets.

Teacher, Alec Hunter Academy

Lack of internet access stopped us from having well-paced lessons – unfortunately some lessons were too slow because Tablets were too slow to load.

Teacher, Greenford High School

Inability to connect to the internet meant always using in lessons can be difficult.

Teacher, Greenford High School

A few teachers also said that pupils forgetting to bring the devices to lessons or not having charged them disrupted the pace of the lesson and made it more difficult to use the Tablets:

Not all students brought them to every lesson, which made it hard to plan for using them.

Teacher, Greenford High School
3.12.2 Distractions – teachers
Some teachers felt that distractions, particularly games, were a challenge to their management of the classroom. While some teachers specifically mentioned pupils attempting to play games during lessons, others described pupils generally finding it difficult to focus with a Tablet next to them. Other teachers mentioned the challenge of limiting and controlling the use of Tablets and a few felt that pupils’ excitement at using the Tablets was having an impact on their will to socialise with other pupils:

[The worst thing about using Tablets was] students trying to play games they had downloaded onto their Tablets.
Teacher, Greenford High School

[The worst thing about using Tablets was] getting them to all pay attention at the same time.
Teacher, Alec Hunter Academy

[The worst thing about using Tablets was that] they wanted to use them all the time – even when they actually did not need a computer.
Teacher, Alec Hunter Academy

[The worst thing about using Tablets was that] they stayed inside at break and lunch times playing games instead of going out to play.
Teacher, Greenford High School

[The worst thing about using Tablets was] less interaction socially, at breaks and lunches a lot of students seemed to be more involved playing on their Tablets than socialising with their peers.
Teacher, Dixons City Academy

3.13 Pre- and post-Tablet use research – key findings
- Frequent and widespread use of the Tablets in lessons at the post-use stage.
- Tablets predominantly used in class for research. Pupils and parents report much greater use of the Tablets in class than staff.
- Tablet use appeared to consolidate pupils’ enjoyment and engagement in learning.
- Some views from parents, pupils and staff that introducing Tablets could assist in helping the school’s reputation and the children’s future, but also some uncertainty about whether this impact had yet been realised.
- Positive views from pupils and parents on the impact of introducing Tablets on teaching and learning, for example on providing more engaging and interactive lessons. Staff were positive overall about this, but with more evidence of hesitation about impact.
- Concerns remained at the post-use stage about Tablet security and practicalities of use, particularly among parents. However, there was limited evidence that concerns about breakages and theft had been realised in practice.
- Although the use of Tablets had helped alleviate some of the concerns teachers had identified at the pre-use stage, significant concerns remained among teachers about feeling
sufficiently prepared to use the Tablets in their teaching. Improved access to training was a key request.
Appendices
## Appendix 1: Tablets for Schools Stage 3 Research Programme

<table>
<thead>
<tr>
<th>Name of school</th>
<th>Tablet deployment</th>
<th>Outline of research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alec Hunter Academy Braintree, Essex CM7 3NR</td>
<td>Tablet trial, using Samsung and Acer Windows 8 Tablets running on Microsoft Windows 8, with Year 7 pupils in summer and autumn term 2013.</td>
<td>Observations, interviews with leadership and pre- and post-Tablets trial questionnaires with pupils, parents and teachers. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Carter Community School Poole BH15 4BQ</td>
<td>Provided pupils in Years 9, 10 and 11 with iPad 2 Tablets during summer term 2012. Years 7 and 8 were provided with iPad 2s in autumn term 2013.</td>
<td>Case study interview and observation carried out by Katie Simpkins 23 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Cedars School of Excellence Greenock PA16 8NJ Scotland</td>
<td>Private junior, middle and senior school in Greenock, Scotland. Introduced one-to-one iPad 1 Tablets to all pupils in 2010.</td>
<td>Case study interview and observation carried out by Siv Svanaes 20 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Chiswick School London W4 3UN</td>
<td>Supplied iPad Tablets to Year 7 and Sixth Form pupils during autumn term 2013.</td>
<td>Case study interview and observation carried out by Siv Svanaes 13 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Cramlington Learning Village Cramlington NE23 6BN</td>
<td>Introducing one-to-one Galaxy Tab 2 Tablets to one year group (Year 7) at a time since 2011.</td>
<td>Case study based on previous visits and continual correspondence with the school. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Dixons City Academy Bradford BD5 7RR</td>
<td>Tablets trial using Samsung Tablets with Year 7 pupils in spring and summer term 2013.</td>
<td>Observations, interviews with leadership and pre- and post-Tablets trial questionnaires with pupils, parents and teachers. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Essa Academy Bolton, BL3 3HH</td>
<td>Introduced one-to-one iPod Touches to all pupils in 2009. Upgraded to iPad 3s in November 2012.</td>
<td>Case study based on previous visits and continual correspondence with the school. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Greenford High School Ealing, London UB1 2GU</td>
<td>Tablets trial using Sony with Year 7 pupils in spring and summer term 2013.</td>
<td>Observations, interviews with leadership and pre- and post-Tablets trial questionnaires with pupils, parents and teachers. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Harrogate Grammar School Harrogate HG2 0DZ</td>
<td>Provided pupils in Year 7 with iPads in spring term 2012, followed by pupils in Years 8–11 in autumn term 2012.</td>
<td>Case study interview and observation carried out by Martyn Richards 6 June 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Homewood School and Sixth Form Centre</td>
<td>Introduced the iPad 2 to the Year 7 cohort in September 2012.</td>
<td>Case study interview and observation carried out by Abby Jones 10 May 2013. Teacher leader questionnaire</td>
</tr>
<tr>
<td>School Name</td>
<td>Tablets Description</td>
<td>Study Details</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tenterden, Kent TN30 6LT</td>
<td>Completed.</td>
<td>Case study based on previous visits and continual correspondence with the school. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Honywood Community Science School Essex CO6 1PZ</td>
<td>Introduced one-to-one iPad 2 Tablets to all pupils in Years 7–11 in 2011.</td>
<td>Case study based on previous visits and continual correspondence with the school. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Hove Park School Hove BN3 8AA</td>
<td>Introduced iPads to all pupils in Years 7–13 during summer term 2012. Pupils have been offered the choice of an iPad 2, iPad 4 or iPad Mini.</td>
<td>Case study interview and observation carried out by Abby Jones 20 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>King Richard School Portsmouth PO6 4QP</td>
<td>Introduced one-to-one Toshiba AT100 and Excite Tablets to Year 7 pupils in autumn term 2012.</td>
<td>Case study interview and observation carried out by Abby Jones 9 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Longfield Academy Kent DA3 7PH</td>
<td>Introduced one-to-one iPad 2 Tablets to all pupils in Years 7–11 in 2011.</td>
<td>Case study based on previous visits and continual correspondence with the school. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Mounts Bay Academy Penzance TR18 3JT</td>
<td>Introduced one-to-one iPad 2 Tablets to all pupils in Years 7–11 in 2011.</td>
<td>Case study interview and observation carried out by Katie Simpkins 14 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Penwortham Priory Academy Preston PR1 0JE</td>
<td>Introduced one-to-one iPad 3 Tablets to all pupils in Years 7–9 in autumn term 2012.</td>
<td>Case study interview and observation carried out by Martyn Richards 10 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Thomas Ferens Academy Kingston upon Hull HU6 9BP</td>
<td>Introduced one-to-one iPad 3 Tablets to all pupils in Years 7–11 in autumn term 2012.</td>
<td>No case study. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Trentham High School Stoke-on-Trent ST4 8PQ</td>
<td>Introduced iPads across the school during autumn term 2012.</td>
<td>Case study interview and observation carried out by Martyn Richards 9 May 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>UCL Academy London NW3 4AQ</td>
<td>Opened in September 2012 and moved into new school buildings in Swiss Cottage, London in March 2013. Equipped with enough iPad Tablets to supply every pupil but these have not been distributed on a one-to-one basis.</td>
<td>Case study interview and observation carried out by Siv Svanaes 10 October 2013. Teacher leader questionnaire completed.</td>
</tr>
<tr>
<td>Wallace High School Lisburn BT28 3AD</td>
<td>Introduced one-to-one iPad 2 Tablets to all pupils in Years 8–12 (England 7–11) in 2011.</td>
<td>Case study based on previous visits and continual correspondence with the school. Teacher leader questionnaire completed.</td>
</tr>
</tbody>
</table>
| Writhlington School  
Bath BA3 3NQ | iPad 2 Tablets introduced to Years 7–10 in autumn term to spring term 2012–13, and to Years 12 and 13 in spring term 2013. Tablets not introduced to the Year 11 group, as they continued with the existing three-year netbook scheme. | Case study interview and observation carried out by Dr Barbie Clarke 30 April 2013. Teacher leader questionnaire completed. |
Appendix 2: Tablets for Schools Stage 4 Research Programme

The research objectives:

- To produce an objective and independent assessment of the benefits and drawbacks of introducing one-to-one Tablets to schools in the UK
- To explore the pedagogical change that is brought about by every pupil in school having access to their own device at school and at home, which to ensure equality and inclusion remains the same device across the school
- To assess content and apps that schools use or produce themselves and to find out ways in which these can best be developed to fit with the learning objectives of the individual school
- To find out ways in which improvements in attendance, motivation, engagement and attainment may be achieved through the introduction of one-to-one devices
- To continue to monitor the practical steps that schools need to take to introduce the Tablet, including cost, insurance and training
- To explore the philosophical mind shift that needs to take place amongst Teacher Leaders, staff, governors, parents and pupils to ensure that the Tablet is used in the best possible way
- To ensure that the research is robust by maintaining high quality control, rigorous research techniques that comply with industry and academic research standards and through maintaining academic peer review of research output

The sample

Building longitudinal data

The existing twenty one-to-one Tablet case study schools will remain in the research. No longitudinal data currently exists in any other research that is available globally.

School given Tablets by Tablets for Schools’ partners

This academic year a total of 6 secondary schools and 7 Primary schools will be using Tablets that have been donated by Google as part of the Tablets for Schools programme. Primary schools have not yet been included in the Tablets for Schools research and this will be a useful addition in terms of assessing pedagogical changes.

New schools

New schools continue to adopt one-to-one Tablet devices, and the research will include those schools which are willing to be part of the research programme. To date we have a further seven schools that will be part of the research programme.

The Research Method

To ensure that robust data is collected we will use an online quantitative research methodology to monitor use of the Tablets and to meet the research objectives. Through the year we will make at least one visit to each of the longitudinal schools, and to those new schools that will add substance to our research. Face to face meetings with school leadership has proved to be an enlightening experience that adds to the research findings and helps to create a close rapport with the schools.
We also believe that we have learnt much from the ethnographic observation of lessons which has added to our understanding of the pedagogical change that is occurring in the Tablet schools.

We will expand the pupil peer research carried out at Stage 2 to include more schools through the distribution of an online diary (diary keeping) and through pupil-led focus groups.
Appendix 3: Tablets for Schools Research Questions and Objectives

The research questions for Tablets for Schools’ independent research seek to find out whether the feasibility of providing Tablets to secondary school pupils in the UK can be justified in terms of pupil benefit, teacher benefit, pupil learning, potential risks including safety and security, cost, and acceptance by pupils, teachers and parents.

The research objectives for this stage of the research (Stage 3) are as follows:

- **Teacher, pupil and parent engagement and Pedagogy**
  - Changes to pedagogy (i.e. the way children learn and teachers teach)
  - Changes in pupil attainment
  - Changes to pupil inclusion (i.e. ensuring all children are given the same access to IT)
  - Teacher participation, engagement and training
  - Changes in pupil engagement in education
  - Parental engagement in school and education

- **Hardware**
  - Safety
  - Security
  - Functions
  - Robustness
  - Insurance
  - Training (teachers, pupils, parents)

- **Schools currently using one-to-one Tablets**
  - An assessment of schools identified in the UK that are currently using one-to-one Tablets in school; monitoring development and identifying key characteristics
  - A measurement of any improvement to pupil wellbeing and learning based on the effects of having access to the internet at all times for all pupils, the effects of learning in an autonomous way, and the way in which pupils can be creative in their learning and understanding of subjects
  - A measurement of teachers, pupils and parents and their perception of the benefits of Tablets for pupils plus any perceived drawbacks

- **Schools introducing one-to-one Tablets**
  - Monitoring the journey of introducing Tablets to parents, teachers, pupils
  - Establishing best practice, challenges and need state of staff, pupils and parents
Appendix 4: Teacher Leader Questionnaire

The following summarises the research questions which were sent online to teacher leaders.

Introduction

1. Name and address of school
2. Your job title
3. Number of pupils at your school
4. % of pupils eligible for FSM
5. Number of pupils with SEN
6. Is your school (please tick all that apply): State school, Academy, Free school, Independent School, Faith School, Selective School, Other (please specify)
7. Does your school include a 6th form?

Introducing the Tablet

8. Which one-to-one Tablet model(s) is your school using (please state)? (If more than 1 model please list all and indicate which are used the most)
9. When were the Tablets introduced? For each school year, please indicate whether during Autumn, Spring, or Summer terms.
10. How long did it take from the time you first considered using one-to-one Tablets to deployment? (Months and years)
11. Did you require any external guidance/help during this process in any of the areas listed below? Please tick all that apply(Financial Issues, Insurance, Protective cases/covers, Wi-Fi, Other (please specify)
12. If you answered YES to any of the options in question 11, how difficult was it to access the external guidance/help that you needed? (Very Difficult, Slightly Difficult, Neither nor, Slightly Easy, Very Easy)
13. If you answered yes to any of the options in question 11, please state in each case what guidance/help you received and from where.
14. Did you need any external guidance/help in communicating your intention to introduce one-to-one tablets to any of the groups listed below? Please tick all that apply (Communication to Governors, Communication to Teachers, Communication to Pupils, Communication to Parents, No external guidance/help needed, Other (please specify)
15. If you answered yes to any of the options in Q14, how difficult was it to access the external guidance/help that you needed? (Very Difficult, Slightly Difficult, Neither nor, Slightly Easy, Very Easy)
16. If you answered yes to any of the options in Q14, please state the nature of the guidance/help you needed, and, if you received it, where you received guidance/help from.

**Financing the Introduction of one-to-one Tablets**

17. How are the tablets financed? (School-funded, Parental Contributions, Blended Approach, Other (Please Specify))

18. If the Tablets are partly/wholly financed by parental contributions, how much do they pay per month?

19. Did you have to introduce additional broadband capacity in your school to cope with one-to-one Tablet use? (Yes/No)

20. If yes, you had to introduce additional broadband capacity, what was the cost of this?

21. Have there been any other I.T. costs associated with the introduction of Tablets (for example, storage capacity, but not including the costs of Tablets themselves)? (Yes/No)

22. If you answered yes to Q21, please state in what respects this occurred, and what was the cost? (please indicate if this was a one off cost or per annum)

23. Have you provided teaching staff with Tablets free of charge? (Yes/No)

24. If you answered No to Q23, approximately what percentage of teachers have decided to purchase/lease a Tablet for themselves?

**Using the Tablets**

25. How many pupils are currently using one-to-one Tablets in your school? (Year 7, Year 8, Year 9, Year 10, Year 11, Year 12, Year 13, Other)

26. What made you decide to introduce Tablets at your school? Please tick all that apply (To ensure equality of access to the Internet, To prepare pupils for working/living in a digital age, To support self-led research and problem-solving, Potential cost savings, Other (please specify))

27. What was the computer-to-pupil ratio at your school before the introduction of one-to-one Tablets? (e.g. 2:1)

28. Did your school have a computer suite before the introduction of Tablets? (Yes/No)

29. Does your school still have a computer suite? (Yes/No)

30. In your view, what are the main benefits of using one-to-one Tablets in education?

31. In your view, what are the main disadvantages/pitfalls of using one-to-one Tablets in education?

32. Some teachers and pupils in our research have voiced a concern about one-to-one tablets being a distraction or being used inappropriately in lessons. To what extent do Tablets present a distraction to pupils in lessons? How much of a problem is this and why?

33. What for you was the biggest surprise about the use of one-to-one Tablets after they were introduced?

34. What do you wish you had known before introducing the Tablets?
35. What is the average damage/breakage rate per term (%) of Tablets in your school?

36. Do you insist on a particular Tablet case/cover? (Yes/No)

37. If you insist on a particular Tablet cover, what is the make?

38. What is the annual cost of insurance for the one-to-one Tablets, or has the school decided to self-insure? (please write in)

**Professional Development**

39. Has your school offered any professional development for teaching staff associated with the use of Tablets? (please answer all options)(Before tablets were Introduced, During the period of Transition, During the time since)

40. If you answered yes to Q39, was this professional development for staff internal or external or both, and what was its nature? (Internal/External, Technical advice/ training on how to use the device, Supporting teaching staff to use the Tablet in lessons, Other, please specify if internal/external and its nature)

41. Any other comments you would like to make about Professional Development for staff connected with the use of Tablets in their teaching? (please write in).

**A few final questions**

42. Is your school a designated Teaching School? (Yes/No)

43. % of pupils achieving grades A*-C at GCSE, including in English and Maths

44. What is your overall Ofsted rating? (Grade 1, Grade 2, Grade 3, Grade 4, Any other comments)

45. Which local authority is your school a part of?
Appendix 5: Pre- and Post-Tablets Trial Questionnaires

The following summarises the research questionnaires which were given to pupils, parents and teachers in the three Tablets for Schools Year 7 Tablet trial schools.

Pre-Trial Questionnaire

Do you have access to the Internet at home? [Pupils, Parents and Teachers]

Do you have access to wifi at home? [Pupils, Parents and Teachers]

If yes: What speed is it [Pupils, Parents and Teachers]

What devices, if any, do you use to access the Internet at home? [Pupils, Parents and Teachers]

Of these, which devices are you share with other family members? [Pupils and Parents Only]

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<thead>
<tr>
<th></th>
<th>Use at home [Pupils, Parents and Teachers]</th>
<th>Share with other family members [Pupils and Parents only]</th>
<th>I use to help with my teaching or lesson plans [Teachers Only]</th>
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</thead>
<tbody>
<tr>
<td>PC</td>
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<td>Laptop</td>
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<td>Tablet (eg iPad)</td>
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<tr>
<td>Smart phone/iphone</td>
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<td>Games console that allows multiplayer games online eg Xbox Live, Wii, PS3</td>
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<td>iTouch</td>
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<tr>
<td>Smart Connect TV</td>
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<td></td>
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<tr>
<td>None of these</td>
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<td></td>
<td></td>
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<tr>
<td>Don’t know</td>
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</tbody>
</table>

How often do you/does your child use the Internet at home to help with your/their schoolwork? [Pupils and Parents Only]

Do you think there are enough computers at your school on which to access the Internet? [Pupils, Parents and Teachers]

How often do you/does your child use the Internet at school? [Pupils and Parents Only]

How often do you/does your child use a tablet computer in your lessons? [Pupils, Parents and Teachers]

How much do you agree or disagree with the following statements:

Using the Internet/Technology will be more and more important as I/my child/the children I teach get older [Pupils, Parents and Teachers]

My/my child’s teachers often use the Internet in their teaching [Pupils and Parents Only]

Using the Internet in school encourages me to learn/motivates my child/motivates the children I teach and helps them with their schoolwork [Pupils, Parents and Teachers]
I feel confident about using devices to access the Internet myself/to enhance my teaching I feel confident about using devices to access the Internet myself. [Parents and Teachers Only]

How often, if at all, do you email your teachers/do teachers use e-mail to communicate with your child in Year 7? [Pupils and Parents Only]

And how often, if at all, do teachers or the school use e-mails to communicate with you? [Parents Only]

How often do you use email to communicate with your pupils? [Teachers Only]

How often do you use the Internet in your teaching? [Teachers Only]

How much do you agree or disagree with the following statements:

I/my child/the children I teach enjoy learning at my/this school. [Pupils, Parents and Teachers]

I really enjoy teaching at my school and believe it is forward looking in its attitude to learning. [Teachers Only]

What I learn/what my child learns at school will be relevant to my/his/her future. [Pupils and Parents Only]

My teachers/my child’s teachers generally help me/my child if I/he/she find a subject particularly hard. [Pupils and Parents Only]

It is easy to talk to my/the teachers at the school and get feedback from them. [Pupils and Parents Only]

I am able to give continual feedback to my pupils to let them know how they are progressing in their work. [Teachers Only]

It is easy to communicate with my pupils’ parents to let them know how their child is progressing. [Teachers Only]

How much do you agree or disagree with the following statements:

I think that having one-to-one tablets in class means that the school is thinking about my/my child’s/children’s future. [Pupils, Parents and Teachers]

Having one-to-one tablets in class will help the reputation of the school. [Pupils, Parents and Teachers]

I think that the Tablet can motivate and engage me/my child/children with my schoolwork. [Pupils, Parents and Teachers]

I think Tablets can make my/my child’s lessons much more interactive and engaging. [Pupils, Parents and Teachers]

I believe that my child will have no problem using a Tablet at school. [Parents Only]

Having one-to-one Tablets at school will mean that pupils have an equal opportunity for learning. [Teachers Only]

And how much do you agree or disagree with the following statements:
I am concerned that I/my child/the children might damage or break the Tablet [Pupils, Parents and Teachers]

I am concerned that the Tablet will be stolen [Pupils, Parents and Teachers]

I am concerned that the Tablet will distract me from my schoolwork [Pupils Only]

I worry that I will not know how to use the Tablet/how to use the Tablet in my teaching. [Pupils and Teachers Only]

I am concerned that my child/the children will know more about the device than me. [Parents and Teachers Only]

I worry that children will get around the firewalls and use it for things other than schoolwork. [Parents and Teachers Only]

I worry that it will encourage children to be online all the time when they should be doing other things. [Parents and Teachers Only]

I am concerned about the effect of one-to-one tablets on classroom management. [Teachers Only]

Post-trial Questionnaire

Which school do you/does your child attend: [Pupils, Parents and Teachers]

Are you/Is your child male or female [Pupils and Parents Only]

Are you a teacher / other staff member? [Teachers Only]

You have/your child has/Year 7 pupils at your school recently been given a Tablet to use. Were you/was your child/were the pupils you teach part of the 1st, 2nd or 3rd (Alec Hunter only) group to use the Tablet in your school? [Pupils, Parents and Teachers]

If both or all groups, did you notice any difference between the groups? [Teachers Only]

Which Tablet did you/your child use? [Pupils, Parents and Teachers]

Did you personally use a Tablet provided by the school? [Teachers Only]

Did you use your own Tablet? [Teachers Only]

How often did you use the Tablets in class for each subject? (Maths, English, Science, Geography, History, ICT, Languages, Technology, Music, RE, Sport, Drama, Other) [Pupils and Teachers Only]

What did you/your child/pupils usually use their Tablet for (a) In class (b) Outside class or at home? (Reading, Writing notes/essays, Making presentations, Doing research, Calculator, Dictionary, Sending emails to teachers, Playing games (for fun,not subject related), Playing games (subject related), Doing quizzes, Making podcasts, Mind Map, Using my personal social media account (e.g. Facebook / Twitter etc), Other (please specify), None of these, Don’t know [Pupils, Parents and Teachers]

How much do you agree or disagree with the following statements:
I think that having one-to-one tablets in class means that the school is thinking about my/my child’s/children’s future [Pupils, Parents and Teachers]

Having one-to-one tablets in class has helped the reputation of the school [Pupils, Parents and Teachers]

The Tablets have motivated and engaged me/my child/the children with my/his/her/their schoolwork [Pupils, Parents and Teachers]

Having Tablets in class has made lessons much more interesting and interactive [Pupils, Parents and Teachers]

I/my child/the children found it easier to communicate via email with my/his/her/their teacher when I had a Tablet [Pupils, Parents and Teachers]

My/my child’s teachers had planned interesting and exciting ways to use the Tablets [Pupils and Parents Only]

It was/my child found it easy to find good and relevant apps for the Tablets [Pupils, Parents and Teachers]

Having one-to-one Tablets at school has meant that pupils have an equal opportunity for learning [Teachers Only]

After using Tablets in school and at home this year I think it would be a great idea to give Tablets to all children in secondary school [Pupils, Parents and Teachers]

And how much do you agree or disagree with the following statements:

I always felt concerned that I would damage my Tablet [Pupils Only]

I always felt concerned that my Tablet would be stolen [Pupils Only]

I found it difficult to concentrate on my schoolwork because the Tablet distracted me [Pupils Only]

I found it difficult to know how to use the Tablet [Pupils Only]

I would have liked to use the Tablet more in class [Pupils Only]

Using the Tablet helped me to enjoy learning at school [Pupils Only]

Using a Tablet at school will be relevant to my future [Pupils Only]

The Tablet let my teachers help me with the subjects I find hard [Pupils Only]

Using the Tablet made it easy to talk to my teachers and get feedback from them [Pupils Only]

I worry that this has encouraged children to be online all the time when they should be doing other things [Parents Only]

Breakages meant that pupils often did not have their Tablets in class [Teachers Only]
Pupils often forgot to bring their Tablet to class [Teachers Only]

Pupils often forgot to charge their Tablet [Teachers Only]

The school has experienced problems with safety and theft [Teachers Only]

The effect of Tablets on classroom management has been challenging [Teachers Only]

Children were able to get around the firewalls and use it for things other than schoolwork [Parents and Teachers Only]

Pupils/my child knew more about the devices than teachers [Parents and Teachers Only]

I felt that I did not know enough about how to use the Tablets in my teaching [Teachers Only]

I wish I had more time to prepare for teaching with Tablets and to familiarise myself with the device [Teachers Only]

I think teachers should have been given better training in how to use the Tablets [Teachers Only]

Did your child experience any issues with breakages? [Parents Only]

Did your child experience any issues with safety or theft? [Parents Only]

What was the best thing about having your own/your child having their own/Year 7 pupils having their own Tablet to use at school and at home? [Pupils, Parents and Teachers]

What was the worst thing about having your own/your child having their own/Year 7 pupils having their own Tablet to use at school and at home? [Pupils, Parents and Teachers]

Anything else that you want to tell us about your experience of using your own/your child using their own/Year 7 pupils using their own one-to-one Tablet? [Pupils, Parents and Teachers]
Appendix 6: Family Kids and Youth – The Research Team

Family Kids and Youth is one of the UK’s leading agencies specialising entirely in research with families, children and young people, and teachers and carers, providing both research and consultancy. The team are members of the MRS, BERA, AQR and ESOMAR. Family Kids and Youth is working regularly in partnership with and as consultant to several companies and organisations, including the Advertising Association, the BACP, the BBC, Clarks, IKEA, Sport England, the London Olympics 2012, Unilever and the University of Cambridge. Family Kids and Youth is on the Government Procurement roster, and is a Company Partner of the Market Research Society. For further details visit our website www.kidsandyouth.com.

Dr Barbie Clarke, Managing Director, Family Kids and Youth

Barbie has been a researcher for over 30 years and was formerly Director of Family Research at GfK NOP where she launched kids.net\(^\text{78}\) in 1999. She founded Family Kids and Youth in 2002 with fellow NOP Director, Joe Michael. Her PhD at the University of Cambridge was in child and adolescent psychosocial development and her research at Cambridge has centred on early adolescents and the way they communicate using digital media. She has taught child development and research methodology at the Faculty of Education, University of Cambridge where she has supervised MEd students, and she is co-author of the book *The Supportive School: Wellbeing and the Young Adolescent*. Her recent paper on Ethics and Research with Children written with Professor Agnes Nairn won the IJMR Best Paper Award and has been nominated for the 2013 MRS Silver Medal. She is a Fellow of the Market Research Society, sits on the BBC’s Children’s Editorial Board, and is spokesperson on children’s research for the MRS. Barbie is lead researcher on the project.

Siv Svanaes, MSc, Research Project Manager

Siv joined Family Kids and Youth in 2011 as research assistant from the London School of Economics and Political Science (LSE) where she gained a Distinction for her MSc, which she studied under the guidance of Professor Sonia Livingstone, author of the report *EU Kids Online* (2011). Siv has a BA from the University of Oslo in musicology and media studies. Her MSc at the LSE focused on the use of digital media, broadcasting and audience research with children and young people. Siv has been working on the Tablets for Schools project since October 2011 and carried out ethnography and interviews with pupils and teachers in the Tablet schools.

Martyn Richards, Qualitative Researcher

\(^\text{78}\) Kids.net was a 6-monthly syndicated research study measuring children’s access to and use of the internet at home and at school.
Martyn has specialised in quantitative and qualitative research for over 25 years with a focus on child and youth research. Martyn was a Director at ChildWise for nine years and began his career at Taylor Nelson. He is a Fellow of the Market Research Society and is currently Chair of the Awards Board for the MRS Accredited Masters Award. Martyn has worked extensively on the Tablets research 2011–13, carrying out focus groups with teachers, parents and pupils and interviewing leadership.

Dr Susan Zimmermann, Research Analyst

Susan has a PhD in Sociology from the London School of Economics and Political Science (LSE), where her research centered on the plight of asylum seekers. Before joining Family Kids and Youth, Susan had a career in social research, producing high-quality Labour Market Intelligence reports for the UK’s hospitality, leisure, travel and tourism industry, and before that worked as a social scientist at the University of Oxford. Susan assists in producing academic and industry information for Family Kids and Youth on child, adolescent and family global markets and is responsible for our quantitative research.

Kathryn Crowther, Research Analyst

Kathryn has been conducting research across the children, families and education policy areas for over ten years on behalf of clients including the Department for Education, National Strategies and Action for Children. She has led high profile projects including national research exploring allegations of abuse against teachers and research into the use of parental responsibility measures for school attendance and behaviour, both for the Department for Education. Kathryn has experience of conducting qualitative and quantitative research with schools, regularly consulting with senior leaders, teachers, pupils and parents, and shares analysis of the quantitative research with Susan.

Abby Jones, Qualitative Researcher
Abby has been a qualitative researcher for over fifteen years and has specialised in children’s research for most of her career, which began at Saatchi & Saatchi where she gained a good grounding in advertising, brand research and marketing. She went on to work at RDSI, where she began to consolidate her experience and specialise in children and teens research, and in 2004 she joined children’s qualitative research agency Sherbert Research. Abby, who had her first baby Amelie last year, works with Barbie on qualitative research projects with children, young people and parents and carried out ethnography in schools.

Katie Simpkins, Qualitative Researcher

Katie joined the Family Kids and Youth team in January, and has been a qualitative researcher for eighteen years, reaching director level at Conway Rose Smith. During 2010 Katie was managing an online (closed) community of expectant and new mums of behalf of Mothercare, and before that was Associate Director at Leapfrog In Situ, running special projects for Tesco. Katie has worked with Family Kids and Youth on many projects with families this year, including the NHS Change4Life, Clarks Shoes and Credos. Katie carried out interviews and ethnography in schools.

Julia Macpherson, Research Assistant

Julia has worked as administrator/researcher at Family Kids and Youth for ten years, and has contributed to many studies involving large panels, schools, and hard-to-reach young people. She has been involved in many workshops using the Panel plus other groups of children and young people for the London Olympics 2012, Trouble TV, the BBC and the Department of Health. Julia has been responsible for assisting the team and setting up research focus groups with parents, teachers and pupils in the schools, and ethnographic sessions.