One-to-one Tablets in Secondary Schools: An Evaluation Study

Stage 2: January – April 2013

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Abstract

The 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 September 2012 and April 2013. The research included an evaluation of four secondary schools that had chosen to give pupils one-to-one Tablets in September 2011, two schools that had introduced Tablets in autumn 2012, and three schools that were given Tablets by Tablets for Schools for Year 7s between 2012 and 2013. Methodology included qualitative and quantitative research. Results suggest that long-term use of the Tablet has a profound effect on pedagogy, and that pupils benefit from having access to content both at school and at home. Pupils appear to have greater engagement with learning, collaboration with peers increases, and teachers can monitor individual progress effectively. There are some concerns about pupil distraction and managing time effectively. It is clear that schools need time to adjust to the introduction of one-to-one devices, and that the functions of the Tablet need to be understood by teachers, together with the changes to pedagogy that are brought about by an increase in independent learning. Strong leadership helps this process. Infrastructure, insurance or self-insuring, and protection for the devices need to be considered before introduction takes place, and access to appropriate content is key to using the devices effectively. For schools considering the introduction of one-to-one Tablets, learning from schools that have undergone this journey is highly beneficial.

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.

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¹See http://www.tabletsforschools.co.uk/
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Introduction

Tablets 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

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and maintenance, and lack of teacher training appear to have been restrictive factors in their 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 were identified in the research that had introduced one-to-one Tablet learning (with iPads) in September 2011: 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 ‘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 18 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: September – April 2013**

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

1. **Four schools – the ‘longitudinal’ 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, Lancashire which had introduced 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

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5 Now Alec Hunter Academy.
the summer term. The handout of the devices at Alec Hunter Academy, Braintree was delayed to the summer term, and findings from research of the actual use of the devices at the school will be included in Stage 3 of the research programme (see Appendix 1 page 77).

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.

A full description of the research sample and methodology is in Appendix 1, page 74.

A full description of our current research, Stage 3, April – September 2013, is in Appendix 1, page 77.

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 2, page 78.

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 code 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 4, page 81.
Tablets for Schools Research Stage 2

Management Summary

The Introduction of Tablets

- Schools need to be very clear about why they are introducing Tablets, and what the effects on pedagogy are likely to be. They need to convince their staff, governors, parents and pupils that implementation is worthwhile, and explain what the steps are in achieving this.
- Research in longitudinal⁶ and new Tablet schools has shown that a clear pedagogical philosophy and the support and engagement from leadership, teachers and parents are essential to ensure the successful deployment of Tablets.
- In schools that have successfully introduced Tablets, leadership has delegated responsibilities and tasks to other members of the staff. The ideal combination is a knowledgeable IT department or representative, a senior leader who can make decisions on pedagogical change, and a knowledgeable administrator who can negotiate with suppliers.
- Appointing ‘device champions’ amongst both teachers and pupils appears to help to communicate the benefits of the device, and helps to assuage any anxiety that governors, teachers, parents and pupils might have. This needs to be done at an early stage.
- An essential part of engaging parents is to hold a series of parental consultation evenings beginning early on in the implementation process to the point of handout and beyond. The school can explain its philosophy of Tablets and pedagogy, highlight the benefits of one-to-one Tablets, demonstrate how the device works with the help of ‘device champions’ and answer any questions or concerns that parents might have.
- Many schools lack the internal resources to implement one-to-one Tablets, and require technical support with issues such as wifi and network management. Schools may also feel that they need assistance in managing a project of this scale.
- Schools that were given Tablets by Tablets for Schools⁷ inevitably required backup and training, and it is clear that the device cannot stand alone without this expert help and support.

The Transition Process

- Schools benefit from understanding the transition process that will occur once Tablets have been introduced, and much can be learnt from the early adopter schools that have undergone this process.
- Stage 1 of Tablets for Schools’ research indicated an increased level of parental engagement in schools that had introduced Tablets. Stage 2 shows that this engagement has been sustained in the longitudinal schools. Parental engagement in these schools was linked to pedagogy and the school’s approach to learning, which the Tablets enabled.

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⁶ Longitudinal schools are those that introduced Tablets in 2011: Honywood, Essex; Longfield Academy, Kent.

⁷ Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree.
Due to the limited number of Tablets in the new schools, and the short time the schools had had to prepare for this, the devices had not been fully integrated into teaching and learning, which inevitably had an impact on pupil and teacher engagement.

Schools seeking to implement one-to-one Tablets need to allow time for parents and teachers to familiarise themselves with the device and the inevitable pedagogical change that follows.

Teachers should be given the opportunity to experiment, share ideas and build confidence in using the device. The experience of early adopter schools is invaluable in this process.

**Practical Steps Schools are Taking to Ensure the Continued Success of One-to-One Tablets in Schools**

- There are considerable cost savings schools can make through the implementation of one-to-one Tablets, and longitudinal schools are beginning to see the benefits of this.
- Schools face some challenges once one-to-one Tablets have been introduced. These relate to infrastructure, breakages, publicity and internal management of the project.
- Recognising the need for sufficient wifi at the planning stage is essential, but some of the early adopter schools are finding that this needs to be revisited as Tablets are used more within the school, and the school’s network begins to reach its maximum capacity.
- Several schools have received quotes for wifi that have seemed excessively expensive, but not all schools have the internal expertise to negotiate and find the best option to suit their needs. Schools cannot be expected to be expert at procurement.
- Breakages can be a problem, leading many schools to adopt tough Griffin covers, and to ensure that pupils are fully informed about protecting their device. There have, however, been virtually no incidences of theft.
- Insurance is expensive and schools are receiving high quotations. This has led some schools to ‘self-insure’.
- Some schools have experienced negative publicity as a result of the introduction of one-to-one Tablets, with accusations of wasting taxpayers’ money. At the same time the early adopter schools have been inundated with requests for visits from global, national and local schools. This is time-consuming and needs to be managed.
- The integration of Tablets is a process of evolution. The schools that introduced Tablets in September 2011 continue to explore how best to integrate the Tablet into teaching and learning, keep parents abreast of changes to pedagogy, and instigate ongoing professional development to ensure that the best use of the Tablet is maintained.
- Collaboration within schools and between schools will help to share Tablet knowledge and learning and is essential for schools that are embarking on the journey of introducing one-to-one Tablets.

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8 Cramlington Learning Village, Northumberland; Honywood Community Science School, Essex; Longfield Academy, Kent; Wallace High School, Belfast. Each school had introduced one-to-one Tablets in September 2011.
Changes to Pedagogy through Tablet Use

- Having a personal device enables pupils to work independently or to collaborate in pairs or small groups, which enables teachers to structure their lessons in a more flexible way, and rely less on whole-class teaching.
- Multitasking is the norm for many students, but some students were observed to struggle to concentrate with the many distractions available to them through their Tablet.
- Teachers believe that this process relies on good classroom management skills to control inappropriate use of the Tablets in lessons.
- Ongoing communication appears to enable co-creation between pupils and between pupils and teachers, leading to a more creative learning process. Teachers are able to monitor pupil progress more closely, and pupils receive feedback as they move forward.
- In the longitudinal research schools the Tablets can be described as a portable pedagogical toolbox, offering within one device a record of learning and research, and a means to communicate with teachers and peers to enable collaborative learning.
- The Tablet allows teachers to differentiate between different styles of learning and different learning abilities, which is of benefit to children with special educational needs as well as to gifted and talented children.

The Longer-Term Effects of Tablet Learning

- The impact on teaching and learning will differ depending on the individual school’s approach to pedagogy, and the philosophy of learning that Tablets support.
- Independent learning is one of the first visible effects of Tablet use, which has been observed to lead to increased pupil motivation and engagement.
- There were significant differences between longitudinal schools and new schools in terms of the impact on learning. While Tablets were embedded into learning in longitudinal schools, the device was viewed as a novelty in new schools, with time set aside for its use.
- Unlike the longitudinal schools, the new schools had not gone through the lengthy process of introducing Tablets to the whole school. Not surprisingly perhaps, teachers were less comfortable and confident about using the device, which led to inconsistency in the degree to which the Tablets were used.
- The pedagogical impact of Tablets develops over time, as teachers grow in confidence and develop their approach to teaching. This process of change is dependent on strong leadership that is willing to take risks and lead this evolution of change.

The Importance of Content

- The most common use of Tablets in schools is carrying out research on the internet and accessing websites that relate to the topic and subject area being taught. Teachers were observed helping pupils develop sophisticated source discrimination skills by alerting and coaching them to be critical of online sources.
- In addition to carrying out research online and visiting specific websites, apps are used to explore and produce information. This is mostly done using multi-purpose apps, by which is meant apps that can be used across a variety of topics and subjects in order to organise work, and to explore, present and document pupils’ learning. These include mind mapping,
presentations and word processing apps, as well as video, photo and audio recording facilities.

- Many teachers have begun to create their own resources tailored to fit the pedagogical approach of the specific school. Customisable content allows teachers to differentiate between learners.
- Examples of this include iBooks, ‘screencasts’, using apps such as Explain Everything and Show Me, accessing content through QR codes and creating resources through iTunes U and web-based services such as Google Apps.
- School libraries have recognised the potential of digital devices in terms of giving children access to books, but are frustrated by challenges they face from the publishing industry when acquiring digital books, especially in terms of licences and fees.
Chapter 1  The Introduction of Tablets

Many schools are becoming interested in the notion of adopting one-to-one Tablets but have little sense of how they can effectively go about it. The cost can seem extreme, although with more devices being introduced to the market and existing devices becoming cheaper, this is becoming easier to contemplate. The research has indicated that there are several factors that need to be considered at different stages of implementation to ensure its success. Schools need to be very clear about why they are introducing Tablets, and what the effects on pedagogy are likely to be. They need to convince their staff, governors, parents and pupils that implementation is worthwhile, and explain what the steps are in achieving this.

1.1  The decision-making process

Schools in our research had a clear idea about why they were introducing one-to-one Tablets. This centred on inclusion, equality, and enabling pupils to be prepared for a world in which decision making, self-led research, problem solving and presentation are by-products of the digital age in which children have been brought up. While not all leadership or teachers necessarily felt comfortable with digital media, there was a recognition that education needs to keep abreast of the continuing digital revolution that is occurring through social media and handheld devices. The fact that Tablets are portable, give instant access to content, are used in home and at school, and give all learners equal opportunities are the main reasons that leadership gives for contemplating Tablets. While some schools in our research had trialled one-to-one devices previously (mostly netbooks) this had not always been successful because of high incidences of breakages, the size and weight of the device, and the time taken to log on and get online.

Leaders spoke of the introduction of the iPad in 2010 as appearing to answer many of the issues raised in terms of access to the internet for all pupils. The disadvantages at that time were cost and the unknown functionality of the devices. The early adopters, however, shared the same traits in the way they continued to explore the potential of the Tablet device, and in the process became more convinced of its worth. They were further encouraged by the introduction of the iPad 2 (with camera and film capability) in early 2011, and the introduction of other devices, giving an alternative to Apple and iOS for schools that preferred to stay with Android devices. This led our ‘longitudinal’ schools (Wallace High, Belfast; Honywood, Essex; Longfield, Kent) to adopt the iPad 2 in September 2011, and for Cramlington Learning Village, Northumberland to adopt the Samsung Galaxy Tab 2 at the same time.

For those schools that were not early adopters of Tablet schemes, there were many reasons for not embracing one-to-one devices, and some had been discouraged by the lack of success of earlier schemes. It seems that in some of the early one-to-one device trials there was a disconnection between the capability of the device and the pedagogical stance. Often it appeared that the device

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9 Cramlington Learning Village, Northumberland; Honywood Community Science School, Essex; Longfield Academy, Kent; Wallace High School, Belfast. Each school had introduced one-to-one Tablets in September 2011.
had been used as an extension of textbooks, or a means to access the internet, without a sense of changing pedagogy to a climate of self-led learning and collaboration. Such trials had sometimes deterred leaders from contemplating other schemes. This, coupled with the earlier difficulties encountered by schools when interactive whiteboards had been introduced, means that there remains a climate of caution in many schools when contemplating technology. One leader in our research confessed to having a plethora of technology sitting in boxes in the past because time, thought and training had not been applied to its introduction. For widespread adoption of Tablet schemes to take place it is clear that schools need information, support, professional development, and ongoing collaboration with colleagues in other schools that have adopted Tablets. For early adopter schools the experience has been a steep learning curve, one that prompts excitement but with the potential for failure. What is clear is that just giving a school Tablets will not work. Infrastructure, IT support and knowledge, a clear pedagogical philosophy, and the support and engagement from parents, teachers and leadership are essential.

1.2 Engaging governors, colleagues, parents and pupils

The first task for any school contemplating the introduction of one-to-one Tablets is to establish the support and engagement of the whole school. There are various ways of achieving this, but our early adopter schools, as well as the new schools that introduced Tablets more recently, have established successful strategies to inform and engage colleagues, parents and pupils.

1.2.1 Leadership

Strong leadership has been shown to be a common factor in the schools that have successfully adopted Tablets. In some schools the Head Teacher may not be the person leading the Tablet deployment, but will have identified colleagues best suited for this and, importantly, will show continued support for the project. In schools where deployment has been delegated to the IT department alone, and where leadership is not perceived to be fully behind the project, implementation is less successful. The ideal combination is a knowledgeable IT department or representative, a senior leader (frequently a Deputy Head) who can make decisions on pedagogical change, and a knowledgeable administrator who can negotiate with suppliers who, at times, appear to attempt to charge inflated prices for items such as wifi, insurance and Tablet cases.

1.2.2 Appointing device champions

Appointing ‘device champions’ amongst both teachers and pupils appears to help to communicate the benefits of the device, and helps to assuage any anxiety that governors, teachers, parents and pupils might have. This needs to be done at an early stage. Device champions ideally will receive training in how best to use the device, either internally, or through the manufacturer or manufacturer’s representative. It is important that they are then given a period of time to try the device out in their own time. Acting as ‘device ambassadors’, teachers and pupils can show their colleagues and peers, and parents, how the device works and what can be done with it.10 As the

10 In one of our newest Tablet schools in our current Stage 3 research, Writhlington, near Bath, device champion pupils had given a presentation to governors about the benefits of Tablet learning.
widespread adoption of the device develops, device champions can act as trainers and mentors, helping to ease the period of transition.

1.2.3 Parents’ evenings

An essential part of engaging parents is to hold a series of parental consultation evenings beginning early on in the implementation process to the point of handout and beyond. This enables schools to explain their philosophy for Tablets and pedagogy, to highlight the benefits of one-to-one Tablets, to demonstrate how the device works with the help of device champions, and to answer any questions or concerns that parents might have. Generally schools have found that with plenty of information and warning, parents understand the reason for one-to-one adoption and endorse the school’s decision. Information about safety, security, in-home firewalls, pedagogical changes and the way in which the Tablet can enhance learning by increasing collaboration between pupil and teacher can be discussed and explored. Such sessions also enable the school to explain the chosen means of financing the device (see Stage 1 research), which can vary from parental contributions of between £10 and £16 a month, to giving the Tablet to children at no cost to parents (e.g. Honywood). When the handout is about to take place, it is good practice to give a contract to parents, emphasising the need to encourage safe use of the device, to ensure that the device is looked after, and to emphasise the three-way collaboration that will exist between pupil, teacher and parent. Examples of such contracts from Greenford High School can be found in Appendix 3 page 79.

1.3 Choosing the device

While our longitudinal schools were early adopters, and in 2011 had limited choice as to which Tablet they would use, there is now a far greater range of Tablet devices to choose from, and costs have inevitably come down. A review in the US by the education blog Education Dive reviewed 10 devices, platforms and marketplaces that offer Tablets that can be used in education. It is interesting to note, however, that of the 21 schools currently taking part in our research (Stage 3, see Appendix 1 page 77), 17 are using the iPad at this point. For many the iPad is seen as the pioneer of the device, and those teachers within schools who are enthusiastic adopters of Tablet technology tended to favour Apple. It is also the case that Apple has put a great deal of effort and resource into helping and supporting schools that are contemplating the introduction of Tablets. This includes the provision of advice and training, the assistance of Apple Distinguished Educators to advise and support schools on an ongoing basis, and the running of informative conferences to share experiences and best practice. In many ways Apple has led the way in introducing Tablet technology to education.

11 Cramlington Learning Village, Northumberland; Honywood Community Science School, Essex; Longfield Academy, Kent; Wallace High School, Belfast. Each school had introduced one-to-one Tablets in September 2011.

One school in our research, Cramlington Learning Village, chose Samsung Galaxy Tab devices in 2011, after also trialling smartphones without SIMs, iPod Touches, iPads and Archos Tablets. The school chose an Android device over iOS because of the lower cost, the ability to use Flash and, most importantly, because the operating system on iPads was not compatible with the school’s VLE,\(^\text{13}\) which was used extensively for emails and distributing resources. The school has had a focus on creating its own learning material, and wanted teachers and students to be able to create their own apps which it believed would be easier and cheaper on an Android operating system than on an iOS operating system. It also benefited from a knowledgeable IT department that was able to offer the internal support that other schools might lack. Another long-term user of one-to-one devices, Essa Academy, had introduced the iPod Touch to pupils in 2009. It had benefited, therefore, from the experience of having several years of handheld one-to-one devices that the children took home, and it was an easy decision for the school to switch to the iPad 3 when it replaced the devices in the autumn of 2012.

Schools are likely to choose a device that is easily understood and integrated into their pedagogy, which will include the ease of accessing content and apps, safety and security, and the ability to learn quickly how to use it, with support when necessary. Schools that were given Tablets by Tablets for Schools\(^\text{14}\) inevitably required backup and training, and it is clear that the device will not stand alone without this expert help and support. Tablets distributed included Samsung, Sony and Acer, and at Alec Hunter Academy included Microsoft’s Windows 8 operating system. These schools were supported by manufacturers and the Tablets for Schools team. With such support, it seems, the Tablet can be successfully implemented into the school.

1.4 Outside support and advice

Many schools lack the internal resources to implement one-to-one Tablets, and require external advice. For most schools this is a case of needing technical support with issues such as wifi and network management. Schools may also feel that they need assistance in managing a project of this scale. This will depend on both the internal resources of the individual school, and also the nature and scale of the project. At Longfield Academy, for example, the introduction of Tablets coincided with the opening of a new state-of-the-art school building, and leadership used this opportunity to create a new IT strategy for the school. To help build and lead this strategy the school employed consultants from 9ine for a year and a half. At Wallace High School, on the other hand, the Tablets were introduced as an addition and upgrade to an already sophisticated IT strategy, and the school had the technical expertise and managerial structure in place to implement the devices independently.

The following chapters will discuss the challenges that are associated with installing wifi, network infrastructure and insurance, which may mean that a school requires external advice and technical

\(^{13}\) Virtual Learning Environment.

\(^{14}\) Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree.
expertise. It is clear from our research, however, that schools can benefit from help and collaboration with other schools that have been through or are going through a similar process.
Chapter 2 The Transition Process: Introducing One-to-One Tablets to New Schools

When we began our study in September 2011 we were carrying out our research in schools (‘longitudinal’ schools) that had already been through the process of consideration, planning and implementation of the Tablets. We felt that there was a gap in our understanding of the transition process: how would schools set about introducing the notion of one-to-one Tablets in school? For this reason Tablets for Schools’ partners, Samsung, Sony, Acer and Microsoft, offered Tablets and software to three schools: Alec Hunter Academy in Essex, which had previously acted as our ‘control’ school with no Tablets at Stage 1; Greenford High School in Ealing; and Dixons City Academy in Bradford. We refer to these schools as our ‘new’ schools. This chapter considers the process of transition, and what the research has identified as important considerations that schools should be aware of before implementing one-to-one Tablets.

2.1 Parental attitude and engagement

There were noticeable differences in parental attitudes and engagement in the longitudinal schools and new schools. This was partly because parents in longitudinal schools had more experience of their children using Tablets in school and at home, but also because the introduction processes in the two cohorts were very different.

2.1.1 Parental engagement in longitudinal schools

Tablets for Schools Stage 1 research showed increased levels of parental engagement in the schools that had introduced Tablets. Parents who had previously been disengaged with their child’s education appeared to have reconnected with the school thanks to the introduction of the Tablets. Stage 2 research shows that this engagement has been sustained.

The longitudinal schools have found it necessary to maintain a strong level of communication with parents, however. Several of these schools have integrated the Tablets to help implement wider pedagogical changes, and this is explored more fully in Chapter 4. The schools can be described as being on a continuing journey. This in turn prompts increased levels of parental engagement because some aspects of the pedagogical change may be difficult for parents to understand, and schools have found it necessary to engage with sceptical parents and explain what they are trying to achieve.

For example, at the time of the Stage 1 research, 12 months ago, parents at Honywood Community Science School were largely positive about the introduction of Tablets, although concerns about loss of traditional skills and overuse of the devices at home were raised. While some parents were sceptical about the reliance on technology, most were impressed by the school’s enlightened approach, recognising and reporting increased engagement from their children. A year later, while the novelty factor of the Tablets may have worn off, parents perceive the Tablet as an important and integral part of their child’s life.
In this day and age where technology is moving so quickly and in all jobs they come across they will have to deal with technology, I just feel that they just know what to do ... it’s unbelievable ... some of the bits of homework that my 11 and 12-year-old have turned out, I look at it and think 'Did you do that?' because it is amazing.

Parent, Honywood Community Science School

I did have reservations and concerns [about the iPad], don’t get me wrong ... but I also thought, what a great idea – because in today’s society where technology is just moving on so significantly and we need to prepare these kids for a world that we haven’t had an experience with, [it’s] preparation for their future ...

Parent, Honywood Community Science School

2.1.2 Parental attitude in new schools

In the new schools, parents in Year 7 were similarly impressed by the introduction of the Tablets, and felt their children were lucky to be given the opportunity to have these as part of their learning. Tablets were acknowledged as an exciting and innovative change. These parents recognised their child’s appreciation of technology, and therefore felt it would encourage them with their schoolwork. The interactivity and speed and range of access to information were felt to motivate children, especially boys.

I have not had one complaint when my son has to do homework on his Tablet, he likes it so much.

Parent, Greenford High School

The long-term benefits for their children’s attainment were more difficult for parents to define, and it was felt to be too early to make a judgement. It should be noted that this research is ongoing, and research will continue in the autumn term 2013, when a clearer picture might emerge.

Teachers had not yet been able to adapt their teaching to fully accommodate the Tablets. It would seem that the excitement and engagement expressed by parents in the new schools was over the introduction of the technology. The long-term parental engagement in the longitudinal schools, on the other hand, was more closely related to changes in pedagogy and the school’s approach to learning, and the Tablets were seen as only part of this process.

There was a sense from the new schools and from parents that the introduction of Tablets had been somewhat rushed, and that teachers and parents had had too little time to prepare. Parents were aware that the use of the Tablets in teaching varied greatly, and retrospectively it was felt that teachers would have benefited by having more time to familiarise themselves with the devices.

There really should have been some preparation for them; how they were going to incorporate them in their lesson structures.

Parent, Dixons City Academy

Some departments are using it far better than others.

Parent, Dixons City Academy

It isn’t realistic to expect teachers to rewrite their lesson plans completely, just to slot in the Tablets which are an experiment. It’s a major intrusion into your teaching plan.

Parent, Dixons City Academy
I think the teaching is similar, because the teachers are teaching a cross-section of the school, not all of them have Tablets.

Parent, Greenford High School

I think the teaching probably has not changed that much because they already had interactive whiteboards and email in the school.

Parent, Greenford High School

There was no preparation for the parents. At the presentation they fired a lot of information at us. There were a lot of assumptions made that day; 1: that we all had internet access; 2: that we all knew how to work these things, and 3: that we were all going to control our children.

Parent, Dixons City Academy

At the parent information evenings in the new schools, where parents were informed about the Tablet trial and the research, several parents voiced concerns about their child’s use of the device, especially exposure to indecent material and gaming, and the cost to them if the device was broken or damaged. The schools dealt with these concerns by engaging with parents individually, and recommending ways of monitoring their child’s use of the device at home.

Sometimes the gaming aspect does take over a bit, but I think it is the parent’s responsibility to limit that and tell them when it is time for homework.

Parent, Greenford High School

I walked away and I thought, ‘If it breaks, am I paying for it on my insurance, or are they claiming it on their insurance? What if it gets lost on the way home, or someone takes it from them?’

Parent, Dixons City Academy

2.2 Teacher attitude and engagement

An important difference between the longitudinal and new schools is whether the Tablets were introduced as part of an organic process driven by the leadership team, or whether they were given to the school by an external source. This inevitably has an impact on the degree to which the leadership has been able to give teachers a sense of ownership of the project, and indeed whether the leadership in the schools has felt committed to it. The lessons learnt from schools\(^{15}\) that were given Tablets by Tablets for Schools have been invaluable in helping to understand the cultural process that needs to happen in order for the implementation of one-to-one Tablets within a school to be successful.

The difference in scale of the Tablet projects between the longitudinal and the new schools has, not surprisingly, had an impact on the attitudes of leadership and teachers to the devices. In the new schools there was a sense that many teachers had chosen not to engage fully with the project, as the device was being used by a small number of pupils (half of Year 7) at one time, and would not necessarily affect their teaching. If it did, some chose to not adapt their lessons to it, while others

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\(^{15}\) Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree.
did but to varying degrees. While it was recognised that using technology was important to engage students, and it was acknowledged that the devices would have a significant impact on teaching and learning, there was a belief that it was too early to see any significant outcome.

Although positive about the potential of the Tablets, teachers in the new schools acknowledged that they were currently only ‘scratching the surface’ of what they could do with the devices. Several also felt that they had not had enough time and support to prepare. The teachers had many ideas about how they could use the Tablets, but felt they had not had the time to prepare, and felt unsure of how to do so. One group of teachers argued that their lack of knowledge about how to do very simple tasks, such as annotating directly on to a document, caused delays and disruptions in the classrooms, and this had led them to lose confidence in the Tablets. These teachers therefore argued that if the Tablets were to be implemented and used across the school they would need time and internal training that would teach them the basics of how to use the Tablets, and, importantly, give them some ideas and facilitate their sharing of best practice.

There’s so many things in terms of collaborative learning ... the apps that they would be able to use ... it’s early days.

Teacher, Dixons City Academy

Time to play with it, then time to think about how I can use it in my lessons, then time to share that with subject colleagues, and say ‘Did you realise you can do this?’

Teacher, Dixons City Academy

We must find out what we CAN use it for, and use it accordingly. With Art, it’s very interactive and practical and hands-on anyway, and a device like that is great in terms of taking photos and showing process and filming – to enable better reflection – but ... I haven’t found ways to really push it more.

Teacher, Greenford High School

It’s just another tool: the philosophy and the culture of learning is there already ... because it’s something that is familiar to them, and it’s new, and it’s powerful, and for some of the students that can’t always access things on certain levels – they can do it independently on there, in their own little world almost, at their own pace, without the pressures of other things going on at the same time – they can focus on what they’re doing at the time.

Teacher, Dixons City Academy

It’s life, and if school doesn’t follow this, it’ll get left behind, because kids have got access to all this stuff at home ... we will look like dinosaurs if we can’t use them.

Teacher, Dixons City Academy

[Speaking about learning composition] Somehow that engagement was much more intense with the Tablet, and they were much more motivated and engaged, and worked quicker. The task didn’t feel like it was work.

Teacher, Dixons City Academy
2.3 Pupil attitude and engagement

The way in which the Tablets were introduced in the two cohorts – the longitudinal schools and those given Tablets by Tablets for Schools – also affected pupil attitudes towards the devices. Pupils in the new schools suggested that the devices were not being used enough, and that there were large differences between teachers in their use of and attitude towards the Tablets. In one school pupils argued that while some teachers gave them penalties for forgetting to bring the devices to class, other teachers hardly used them. This sense of a lack of an overall approach to the use of devices was felt to be frustrating for pupils. In another school pupils felt disappointed that the devices were not used more, and had therefore stopped bringing the devices in. This led to teachers giving them penalties when they were intending to use them, which pupils thought was unfair. Students also expressed concern about the responsibility of looking after the devices. It should be pointed out that at the time of carrying out this research, in the spring term 2013, the new schools were only using Tablets in half of Year 7, with the other half due to have them in the summer term.

My [subject] teacher doesn’t even allow you to put it on the table.
Year 7 girl, Greenford High School

What is the point of keeping it if we aren’t going to use it?
Year 7 girl, Greenford High School

Pupils in longitudinal schools also reported variety in terms of how much and how creatively teachers used the Tablets, but there appeared to be much more consistency in terms of the pedagogical approach, in which the Tablets played a vital role. Whereas pupils in the new schools were positive about Tablets generally, but disappointed about the extent to which they had been used, pupils in longitudinal schools were largely positive about the integration of their schoolwork and their use of Tablets.

2.4 Easing the transition

An important lesson from this is that parents need plenty of time to become accustomed to the notion of the Tablet, and need reassurance about how it should be used, especially at home. Teachers also need plenty of time to familiarise themselves with the device, and to incorporate it into their teaching. This is necessarily a fairly slow process, but one that can be helped by professional development and support. Even when teachers are confident about using technology, they will still need guidance and support from leadership to take ownership of such change. In some cases in new schools there were clearly teachers within the staff who were experienced in the use of technology and expressed excitement about the introduction of Tablets in Year 7, but there was understandably some apprehension from leadership. It is apparent therefore that leadership as well as teachers will need strong support, and this should be in the form of clear guidelines:

- Appoint members of staff to act as ‘champions’ including leadership, IT and those experienced in using Tablet devices.
- Introduce professional development within the school to include pedagogy and Tablet use.
• Have regular and collaborative exchange of ideas and tips about use, regulation and appropriate content.
• Share and exchange ideas and advice with other schools that have been on a similar journey to introduce one-to-one Tablet devices in school.

There is also likely to be variety in teacher attitude, sense of ownership and engagement, depending on the type of leadership style, and whether sharing and collaboration between teachers – and also between teachers and pupils – is integrated into teaching and learning. Inevitably there is a degree of risk taking when one-to-one implementation takes place. Teachers at Honywood describe taking a leap of faith and of stepping into the unknown. There appears to be a sense of trust that was developed in the longitudinal schools; a belief that leadership, teachers and pupils would lead the project forward.

[The school is about] risks, being comfortable out of your comfort zone for yourself and everyone you’re facilitating learning for.

Teacher, Honywood Community Science School

When they were launched, a lot of staff didn’t have them at the time. There was ‘Oh, what do we do?’ One of the first things I said to people was, ‘Well, we’ll let the kids find out. They will drive an awful lot of this.’ … When looking for subject-specific apps … there was ‘Oh, that doesn’t sort of work with my curriculum’ … ‘Oh, I don’t know, I’m not sure about that one … that’s pitched too high for those kids’ … and then the kids were coming in and going ‘What are you doing, what are you using today?’ ‘I’ve just found this, Sir … ’. They were the driving force.

Teacher, Honywood Community Science School

Part of me wanted to know what apps would be good in advance … but then [the pupils] found out a lot of it for themselves and knowing that in advance might have helped me out for a short amount of time, but it was actually fun being part of that journey of discovery …

Teacher, Honywood Community Science School

The kids are always suggesting ways of using it and even if the teachers can’t think of ways to use it in the lessons the students will always think of ways to use it, so in a way the students are driving the training.

Assistant Head Teacher, Cramlington Learning Village
Chapter 3 Practical Steps Schools are Taking to Ensure the Continued Success of One-to-One Tablets in Schools

Schools face some challenges when the decision to introduce one-to-one Tablets is made. These relate to infrastructure, breakages, publicity and internal management of the project. The integration of Tablets is a process of evolution in the longitudinal schools taking part in our research. The schools that introduced Tablets in September 2011 continue to explore how best to integrate the Tablet into teaching and learning, keeping parents abreast of changes to pedagogy that inevitably accompany the use of one-to-one Tablets, and instigating continuing professional development to ensure that the best use of the Tablet is maintained. The new schools in the research have experienced challenges relating to infrastructure and breakages, but because of the scale of the project these have so far been less problematic.

3.1 Infrastructure

Installing sufficient wifi infrastructure to support the introduction of Tablets is a major investment for most schools. Eighteen months after implementing one-to-one Tablets, several schools are discovering that their network is reaching its maximum capacity and will need to be expanded in the near future. This is not only an expensive investment, but one about which many schools do not necessarily have the expertise to make an informed decision. Several schools have received quotes for wifi that have seemed excessively expensive, but not all have the internal knowledge to negotiate and find the best option to suit their needs. Schools cannot be expected to be expert at procurement.

_We’re very lucky that we’ve got a good technical team … So for me it was quite easy, but I imagine that if you haven’t got that kind of technical expertise in school it would be more challenging to set up. If you’re a small primary school then you might get a technician once every two weeks, and if you’re sharing them with another five or six schools, as many of them are, it’s going to be much more difficult. Some sort of support and advice available would be needed._

Assistant Head Teacher, Cramlington Learning Village

Wallace High School had IT expertise in the school that enabled it to choose a wifi connection that was sufficient for the introduction of one-to-one Tablets at a reasonable cost. The school, however, experienced an increase in data traffic during the first year, and found that this was beginning to slow the network down. The school therefore decided to protect its network in the second year of Tablet implementation by not using it for software downloads. When a teacher or pupil recommends an app, it is downloaded at home, as are software updates. Pupils without sufficient wifi at home are allowed to connect to the school’s network to download necessary software. The school is hoping that this will save it from having to expand its network in the near future.

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16 Cramlington Learning Village, Northumberland; Honywood Community Science School, Essex; Longfield Academy, Kent; Wallace High School, Belfast.
One of the new schools in the research realised that its outdated wifi infrastructure would provide major challenges to the successful introduction of one-to-one Tablets, although the number of devices was relatively low. The process of receiving quotes and planning the instalment of the wifi was time consuming, and resulted in a delay to the introduction of the Tablets by a full term. It was felt that some of the costs quoted to the school were beyond what they could afford to spend, and the process of finding better quotes took time. The schools given Tablets for Year 7s needed advice to solve technical difficulties related to connecting the Tablets to the school network, as well as managing the process. For schools that do not have internal technological expertise it is clearly useful to learn from other schools that have gone through this process, and to understand which device and operating system will best suit their school’s technological and pedagogical framework.

Schools that have introduced one-to-one Tablets have had to consider whether to keep their IT suite in addition to the introduction of Tablets. IT suites are expensive to keep, and replacing the hardware is a major investment for a school. Several schools that have introduced one-to-one Tablets have either abandoned the IT suite altogether, or are hoping to do so, making significant cost savings.

3.2 Long-term cost savings

It appears that there are cost savings that can be made with the introduction of one-to-one Tablet devices. Cramlington Learning Village equipped its Junior Learning Village with one computer per two students approximately six years ago, and the school is now approaching the point where these computers will need to be replaced. To purchase the same equipment would cost the school approximately £700,000. The school estimates that by discontinuing the majority of these computers, and extending the Tablet scheme to the entire school instead, it would reduce the total cost to £350,000 while equipping each pupil with a personal device.

Leadership at Essa Academy estimates that adopting one-to-one iPods in 2009 has enabled the school to save £6,350 over five years by not having hard-copy planners, and £40,000 per annum on the cost of leasing of printers. The school is further aiming to reduce its £80,000 annual photocopying bill to just £15,000 a year as all students and teachers now use iPads, and material can be recorded using the camera function.

Greenford High School, one of the new schools given Tablets, estimates that it would save £25,000 per annum on printing if every pupil had their own Tablet. The school spends £4 per pupil on hard-copy planners, and with a cohort of 1,800 students the school could potentially save £7,200 per year by accessing this material digitally.

We've got no interactive whiteboards, what we have got is eleven projectors because there were places where I couldn’t hang the screens. And they were in, like, the hall, where the

17 Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree; each school was given Tablets for Year 7s.
projectors are huge ... you can’t get a screen that big, it’s too expensive, so therefore we’ve got projectors, however, we’ve attached Apple TVs to all of them, and that’s saved us a fortune.

Director, Essa Academy

Each teacher has an iPad. The iPad gives them all the resources, so if you imagine, in the past we would have spent money in each department on resources in terms of site licences for various programs and so on. You could almost collect all that money together and give an iPad to each teacher and that is their resource.

Director, Essa Academy

We started to change our resources in terms of what we’re investing here, so students were downloading their podcasts, and things like that, so resources were beginning to change. We also use Edmodo, social networking ... so that helped to replace the VLE, Dropbox, all our sharing file stuff, we pay £5.36 a month for a 50-gig account for each department, [a] fraction of the cost of what we would pay for a VLE, even, it’s less than just the support we would pay every year.

Director, Essa Academy

If we roll this scheme up the school and we get the right device then they can do the vast majority of things that computers can do. We’ll limit the computers to probably a few different subjects having really good computer suites that can also be booked out by other subjects but then everyone will have a mobile device, so they’ll be able to do the things they were doing anyway, so you’re looking at about a £350,000 cost instead of £700,00, so it’s a massive saving really, cutting it by half and every kid’s got a device as opposed to one device between two.

Assistant Head Teacher, Cramlington Learning Village

3.3 Breakages and insurance

Breakages continue to be a challenge for schools using Tablets, although solutions are being found to counter this. Processing insurance claims is a time-consuming and costly task, and pupils being without their devices potentially disrupts the flow of teaching in class. Some schools have chosen to have spare devices available to hand out, which adds to the overall cost of introducing Tablets. Several of the longitudinal schools have had disputes with their insurance company because of the number of breakages and insurance claims.

Choosing the right protective case is an important part of reducing breakages. The longitudinal schools had previously let pupils choose their own cover, which increased pupils’ ability to personalise the device. These schools have since introduced the Griffin protective case across the school, and have subsequently seen a significant reduction in breakages. The disadvantage of these is their weight, and the cost. At Essa Academy the Griffin case is coupled with a custom-made bag in which the Tablets are transported.

One of the new schools in the research has experienced problems with breakages, mostly related to broken screens and chargers. All three of the new schools have had to consider whether they will process insurance claims or ask parents for contributions if the device is broken. Two of the schools had difficulty in persuading parents to accept the additional cost as parents felt that the prospect of having to pay insurance for a device their child would only have for a limited amount of time was
untenable. The schools, however, negotiated this with the individual parents and have decided not to charge for broken devices. These schools feel that should Tablets be introduced across the whole school as personal devices, parents and pupils would be more inclined to take responsibility for them; they would, however, have to negotiate a new insurance contract to cover the greater number of devices.

Longitudinal schools continue to coach pupils in the responsible use of their Tablets, but as the devices are personal and are taken home it is difficult for schools to police this. The cost of insurance remains an issue, and some schools are being quoted high premiums. This has led to several schools adopting a ‘self-insure’ model, setting aside a budget for repair, and investing in additional Tablets to replace those broken. The model relates to some extent on having sufficient expertise within the school’s IT department to help in this process, or arranging reasonably priced external repair facilities. Schools argue, however, that this is cheaper than expensive premiums. The issue of insurance remains one that must be considered if widespread adoption of one-to-one Tablets takes place. Currently, together with the cost of installing wifi, quotes are very high.

Since we purchased new Griffin cases the breakage rate has fallen to one device a week. Actually some of those have been damaged by somebody’s drink leaking in their bag or something like that, so it’s not a very high level, but they are fragile and it’s something that the industry’s got to continue to look at if they’re serious about schools being able to make the best use of handheld technology; they’ve got to make sure it doesn’t break when it’s in the hands of a 13-year-old.

Head Teacher, Honywood Community Science School

Breakages [are a] bit of a thorn, we’ve had quite a few of them. That’s another thing we’ve done differently this year; we’ve explained in far more detail to students how to keep them safe from damage. Students don’t always take care when they are walking around with them between blocks. It just takes them tripping over or bumping in to someone and they’ve dropped it. Even in their cases the screens can crack.

Assistant Head Teacher, Cramlington Learning Village

The breakages with the Year 8s, which are the new 170 students, is 0, because the Griffin cases are unbelievable. So, if it’s in the case there are no breakages at all. But as the breakages come through for Years 9, 10 and 11, they are replaced and fixed and then they are given a Griffin case from then on. So the breakages are coming down.

Vice-Principal, Wallace High School

3.4 Safety

Most schools involved in the research have not experienced any issues with safety or theft. The exception to this is Essa Academy, where in the first weeks after introducing Tablets (autumn term 2012) the school experienced four instances of children having their Tablets stolen. The four Tablets were later retrieved and those responsible were dealt with by the police. Similar issues had been experienced when the school pioneered the introduction of one-to-one iPod Touches in 2009. The school had therefore marked all Tablets with an Essa Academy logo, and were able to track the devices. The school responded to these issues by not allowing pupils to take their device home unless they were collected at school by their parents or carers. They have since relented on this. They continue, however, to educate children on how to behave responsibly with the devices outside
the school premises, a principle upheld by the other longitudinal schools.

Promoting online safety remains an objective with all schools. Within the school a firewall can be introduced, but this is not possible to maintain outside of school. Schools are concerned to include pupils and parents in teaching safe surfing and online safety. Encouraging parents to check on what their child is doing online, and to impose firewalls at home helps with this process. Educating children about online safety, privacy, and how to protect themselves from external factors such as cyber-bullying and unsuitable content remains a challenge for all schools, but more so when the school has given the children their own internet-enabled device. This is an important issue that requires a collective campaign from schools, parents, ISPs and hardware manufacturers.

Nobody’s reported anyone trying to take it off them. We’ve advised them to have a bag that’s big enough to carry it around and keep it out of sight. But in some ways it’s cheaper than their phone that they’re carrying around with them already, it’s no different really.

Assistant Head Teacher, Cramlington Learning Village

To date I would say, out of about 1,200 pupils we have not had a single theft, not a single ‘give me your iPad’, not a single one. I empathised with the parents at that time, because they thought, could it be that on the bus someone would say, ‘Give me your iPad, I know you’ve got one, you go to Wallace, everyone’s got them.’ But it didn’t happen.

Vice-Principal, Wallace High School

3.5 Opportunities to collaborate and learn

The schools that have relied on external guidance to help the implementation process appear to have benefited from this process. Such support has been provided by manufacturers and consultancies, including Apple’s Distinguished Educators (ADEs), or consultancies such as 9ine or Meru that have helped the schools with advice on infrastructure and running coaching sessions with teachers and parents. Issues such as the renewal of wifi infrastructure and negotiating insurance disputes are likely to require continued external support. As more schools become academies and receive increased autonomy over their own budgets, the extent to which they have the internal expertise to manage an IT project on this scale will vary greatly, and each school will have to find the solution which works best for them. This would suggest that being able to collaborate with other schools, gaining insight into the processes they have gone through, would be beneficial for all schools that are considering one-to-one Tablets. Many teachers in the research have expressed a wish to collaborate with other teachers, especially about content, apps and the pedagogical use of the Tablet.

I think it’s important to share good practice and know what is going on in other schools, so we can see how they’re being used, rather than it being just a gadget that they can use for lifestyle. To see how it can actually be used in an educational setting ... to emphasise that it is a learning platform ... I think sharing good practice, and examples of schools that use them within their learning would be effective.

Teacher, Longfield Academy
3.6 External and internal public relations

The longitudinal schools involved in the Tablets for Schools research were the first schools in the country to deploy one-to-one Tablets and as such could be described at the pioneers. Some have received national and local publicity but not all of this was positive. The investment in the devices has been described by some members of the press as a waste of public funds, and perhaps understandably these early adopter schools are now wary of attracting attention in order to protect pupils and staff from negative publicity.

In contrast to this, these same schools are receiving positive attention from other schools at an international, national and local level. Each of the longitudinal schools regularly receives visits from groups of educationalists and teachers from overseas and within the UK. Particularly interesting to note is the attention from overseas from countries including Scandinavian countries, Australia, Turkey, Russia and Israel. Because these schools have been the early adopters in the use of one-to-one Tablets they are viewed as having unique expertise and knowledge that can be shared with other schools. The schools are eager to share their experiences, but are struggling to find the time and resources to deal with the number of requests they are receiving. Several schools have therefore chosen to reduce the amount of visits from and contact with other schools. It could be argued that although this knowledge and experience is crucial to schools looking to implement similar changes, the individual school cannot take on the responsibility of this, and would be helped by an external organisation collating the collective knowledge and experience and making it publicly available.

“We host a lot of international visitors and I think that’s because Apple are pointing them in our direction. We’ve had visitors from Sweden, Germany, Spain, the UAE and Russia, and that’s just some of the ones I can think of. We ran three conferences last year, and we did have some international people coming to those as well, but we had lots of interest from all over the country. These are people who were thinking about it, coming to our conferences. Because of the amount of effort put in we decided to only do one this year.”

Principal, Longfield Academy

“[Interest from schools is] still very, very high. We don’t really, as a school policy we don’t really engage too much, because we don’t really have the time. And if you have one school, you’ve got three schools coming after it … We were getting two or three contacts a week during the first week from all over the world. We had a school from Australia visiting us to see the school. So the demand is most definitely there.”

Vice-Principal, Wallace High School

Such external visits from interested groups are an endorsement of the notion of one-to-one Tablets, but they can be a drain on a school’s resources. However, internal relations remain an important priority within these schools. Ensuring that the Tablet is used in a proactive way has been a common objective. Longfield Academy has identified some pupils as iPad champions to run an ‘IT help desk’ during break times. Similarly, at Cramlington Learning Village a group of pupils have taken on the role of ‘ICT monitors’ who help other pupils with technical problems and check that the Tablets are used responsibly. The appointment of device champions and the delegation of key tasks is therefore not only important during the time before implementation, but remains an essential factor in ensuring the continuing successful use of the devices.
The relationship between the IT department, leadership and those driving the implementation of technology from a teaching and learning perspective is significant. In schools where there may be a lack of communication and collaboration between IT departments and pedagogy coordinators, it can be unclear where leadership and ownership of the implementation lies. Our research indicates that in schools where projects such as these have been left with the IT department the project is likely to have less of an impact.

3.7 Continual professional development

Teachers continue to share ideas and develop their use of Tablets in teaching, evolving different strategies to disseminate their learning and experience. Some schools, such as Wallace High School, have specific goals related to Tablet use in their annual CDP plan. At other schools where teachers were not given their own devices, for example Honywood, sharing and training with the Tablets amongst the teachers occurs more informally but is a constant process. A common pattern in these schools is for ICT champions within each department to meet on a regular basis to collaborate on developing the use of the Tablet, and then share that learning throughout their department.

In our longitudinal schools where one-to-one Tablets have been introduced to a new Year 7 for a second year (2012–13), there was a trend to increase the amount of professional development across the school. This was less to do with training in how to use the device, and more to do with reminding teachers of the potential for use. Teachers who might be more resistant to technology in the classroom are invited to work collaboratively with the more confident Tablet-using teachers to reflect on how they could be used. Most of the longitudinal schools now prefer to keep training within the school as they want the focus to be on teaching and learning within the pedagogical framework of the school, and not just on the technology itself.

First thing that we’re doing differently this year is we’re having a lot more focus on staff training as the Tablets are being rolled out. Last year we left it for a few weeks, did some staff training and came back to it a couple of months later. This year we’re doing three or four sessions from the Tablets being given out up until Christmas, so we’ll get a lot more training ... it’s more about awareness. It’s not so much about teaching them how to use them, it’s keeping it in their mind that the kids have these devices and they need to be planning for them in their lessons.

Assistant Head Teacher, Cramlington Learning Village

All our CPD had been around teaching and learning and people have used their creativity to see who are more technologically sort of less fearful of these things ... everybody could see this and it was more a conversation about ‘Well, how can I teach that?’; ‘What’s the best way I could teach this?’; ‘What do I have to do to facilitate that?’

Director, Essa Academy

I found that using things like Twitter, having my own Twitter account where I can follow other Maths teachers, allows me to see what they’re sharing ... some also have blogs that are attached to Twitter that recommend websites and apps that they’re using. And that just opens my eyes to different possibilities of teaching something using the iPad than we would have done without it.

Teacher, Longfield Academy
Everyone’s coming along and developing it. You don’t see anyone not coming in with one or not using it, but as the confidence grows the level of usage grows. The people who were using it avidly last year for video are now doing iBooks Author, the people who were using it just for PowerPoints are now doing videos, and we’re seeing the progression. It’s good because it’s not leaving anyone behind. We did things before that were maybe slightly more complicated, you did get a sense that there were people who just didn’t get it and wouldn’t get it. They felt uncomfortable and unhappy, and as a result of coming to a unified device you now see a lot more sharing of knowledge as well, so you actually see people in the staffroom showing each other. They’re also learning from pupils.

Director, Wallace High School

3.8 Continued engagement with parents

In schools where parents are contributing financially towards the Tablets there is a sense of ownership that leads parents to feel a right to be kept updated and assured that the devices are being used appropriately. In both Wallace High School and Cramlington Learning Village parents are felt to be highly engaged and are continuing to make sure that their children are getting the most out of their investment. At Cramlington parents have voiced a concern that the devices are not being used enough, and the school has needed to demonstrate to parents the way in which it is encouraging teachers to integrate the device further into teaching and learning.

[Feedback from parents] It’s been things like ’[We] don’t think that the device is being used enough in these particular lessons’, so then being able to approach those teachers and say, look, do you need more training, can we help you plan these into your lessons. We’ve worked with the heads of departments, so gradually those things have got better and I think parents are seeing that there’s an increased use and we’ve done a little bit of a survey with Year 8 parents at the start of the year, who’ve all agreed they’ve been used a lot more this year than they were last year, so that’s definitely improved.

Assistant Head Teacher, Cramlington Learning Village

Significantly, the four longitudinal schools have chosen to increase their levels of engagement with parents through increasing the number and frequency of parent information evenings, sending out physical and digital newsletters as well as engaging with individual parents. In most cases this is about exhibiting and explaining what the pupils and teachers are doing with the devices, as well as how they can and should be monitored at home. For Wallace High School it was felt that it was important to have pupils and parents present at sessions together, and to encourage a partnership to ensure the responsible use of the Tablets at home and at school. Essa Academy has also incorporated the Tablets in their engagement with parents, especially during academic review days, where staff show parents how the devices are used in teaching and learning.

Schools report that this process of continued engagement with parents through the Tablets is enhancing parental school engagement, and parents report that they feel more connected to their child’s progress, and what is happening within the school, than they did before.

You know that conversation you have when you go home as a child, ‘What have you done at school today?’ ‘Not much’? Well, you can have a look at [iTunes U] together ... you had History today, let’s have a look at what you did in History and I see your assessment for
History wasn’t great this time, which bit? Now, it’s as simple as having a parent sit down alongside the student.

Director, Essa Academy

James had several emails ... reassurance ones ... because he gets anxious that he’ll get feedback on things – ‘That’s really good, try doing this or that next time’ – so if they’re struggling, they’re not left to their own devices ... the emails do help.

Mother, Honywood Community Science School

We still have [high levels of parental engagement]. [We] planned a series of parent evenings last year where we invited the parents ... We kind of take their lead and provide what they want rather than dictate what we think they’ll want, so it works quite well, so we’ve a few more of those planned in the next couple of months.

Vice-Principal, Wallace High School
Chapter 4 Changes to Pedagogy through Tablet Use

The impact that one-to-one Tablets has on pedagogy, by which we mean the way teachers teach and pupils learn, has been a central focus of the Tablets for Schools research. It is important to acknowledge that the effect of Tablets on pedagogy will depend on the individual school’s pedagogical approach and the extent to which the technology is integrated into this. In the longitudinal schools involved in the research\textsuperscript{18} the Tablets have been consolidated into the schools’ curriculum, and the leadership and staff have had an explicit focus on how the devices can be incorporated into the school’s pedagogical approach. Teachers, parents and pupils in these schools recognise that it is the approach to teaching that is the central factor, but value the Tablet as a tool for implementing effective changes to pedagogy.

4.1 How teaching is changing

There is a parallel between an individual teacher’s confidence in using the Tablet and his or her use of the device in lessons. Teachers with experience of using the Tablet are finding new and innovative ways of utilising it, and in this process become more comfortable with the notion of allowing pupils to use the device freely and to decide for themselves when and how it can be applied to their learning. It is noticeable, however, that in schools that are still embracing the notion of Tablet teaching with a more traditional approach to pedagogy, pupils are given greater direction on the way in which the device should be used, and the Tablet is sometimes used as an extension of textbooks. These schools are unlikely to be the early adopters of one-to-one Tablet devices.

4.1.1 Teachers learning to use the Tablet

Two schools in our longitudinal research, Honywood Community Science School and Cramlington Learning Village, chose not to provide teachers with Tablets. At Honywood, this decision was driven by a deep-rooted belief that the introduction of IT in schools had de-skilled teachers in the past and had diverted them from their areas of expertise to the detriment of learners. The school was clear with staff that designing ‘iPad lessons’ was not what was required and that the pedagogical shift they were looking for was about designing challenging learning experiences for individual learners using teachers’ subject expertise to do so. Whilst a number of teachers have chosen to purchase their own devices and the school’s long-term strategy is to provide devices for teachers, the school strongly believes that teacher ownership of devices is a small factor in the success of introducing them with learners. The three longitudinal schools that did supply teachers, Wallace High School, Essa Academy and Longfield Academy, believe that supplying Tablets to teachers is an essential part of planning effective pedagogical change.

Cramlington Learning Village did not have sufficient funds to provide teachers with Tablets, and it took the decision to direct available funds towards supplying all pupils with Tablets. There was a belief that it would be unfair to parents and pupils to expect them to contribute financially while

\textsuperscript{18} Cramlington Learning Village, Northumberland; Honywood Community Science School, Essex; Longfield Academy, Kent; Wallace High School, Belfast. Each school had introduced one-to-one Tablets in September 2011.
giving them to teachers free of charge. Teachers were, however, given the offer to opt in to the same leasing scheme as pupils, and approximately half of the teachers have chosen to do so. The school leadership acknowledges that it would have been helpful had all teachers had the device, but this option was not available at the time of introduction.

Tablets enable teachers to teach in a more individualised way. The Tablet allows teachers to structure the classroom and lessons flexibly, and supports teachers to rely less on whole-class teaching. Having a personal, individual device enables students to work more independently, or to collaborate in pairs or small groups. Being able to facilitate individual learning in the classroom allows the teacher to be freed from his or her traditional position at the front of the classroom. This mobility gives the teacher an overview of what pupils are doing with their Tablets and enables them to monitor pupils’ progress more closely. It also allows teachers immediately to engage directly with pupils who need extra guidance. This was recognised as a distinct advantage by those schools that were given Tablets for Year 7s:

The whole way you teach is different, the whole position where you are in the classroom is different, your outlook on what your role in the classroom is is different – you’re sat down, talking from here, but you’re writing on there.

Teacher, Greenford High School

I think that the teacher’s role is to guide them and help them reflect. If a student shares something they have found out with the teacher, then the teacher has the opportunity to turn that into a learning moment, or not, and move on.

Teacher, Greenford High School

Longitudinal schools were able to compare their experience before and after Tablet introduction:

What we’ve done in the past is, we’ve done some very good enquiry-based learning and we’ve done some very good project-based learning but with the IT we haven’t had the flexibility for students to move around, change groups easily or go outside of the classroom. So they’ve now got this technology that allows them to do that, and we’re seeing teachers taking more advantage of the types of things that we built those classrooms for, where we want the kids to be working in different areas and breaking out into different spaces and swapping between groups and working with different people and showing their work to other people. They can get feedback and then obviously make improvements based on that feedback, as it is much easier to share work or even the screen using these devices.

Assistant Head Teacher, Cramlington Learning Village

Box 1 below illustrates how Tablets are used in a Year 7 Maths class from a summary of the filmed ethnography carried out in one of the longitudinal schools. It is clear that this teacher has become familiar with using the Tablet in teaching.
Box 1 Longitudinal school Tablet use

Year 7 Maths

The teacher tells the class they will need their Tablets; those without (three) are told to partner with someone else or use one of the two PCs in class. One boy is allowed to use the teacher’s Tablet.

The Tablets are integrated into the lesson plan. In addition to using them to access the content (such as video tutorials, presentations, worksheets) on their VLE, pupils are encouraged to use them to document their learning, through filming and taking photographs. Pupils appear to be accessing the learning content through the VLE on their Tablets, but doing exercises in their workbooks. They are also using specific apps, such as the calculator.

All pupils access their learning plan for the lesson on the VLE. Different ‘routes to learning’ (depending on level of understanding) are marked by different colours, and have a different set of questions related to the topic included in a presentation. The teacher asks pupils to access their ‘route’ and answer the questions. Pupils are working independently in groups, and the teacher is walking between the groups, asking questions and guiding them.

Each group is given a sheet of paper that describes how to create a pie chart. The teacher explains that the learning objective for the lesson is to answer two questions: how to create pie charts, and why pie charts are not always the best way to present data. Students are asked to present this in some way on the class blog, for example through taking pictures of their work, or filming a presentation. The teacher reminds pupils to continue to create a record online of all the work they are doing.

The lesson is dynamic, highly paced and energetic. Each group member is given a number and each number is called forward and given part of the answer to the learning objective and an additional task to take back to their group. Students are clearly motivated, running from their desks to the teacher and back throughout the lesson; they are filming themselves and explaining what they are doing.

Once their sheets are completed the teacher asks for the entire class’s attention. He comments on their group work, and explaining that they have been working independently, and that he has merely been guiding them and commenting on their group work, their communication, their project planning and their accuracy. He explains that having learnt how to do the task, it is now time to demonstrate that they are able to solve the question and explain how to do it. He asks them to produce a pie chart, a written explanation and some form of documentation of the process. He makes sure one person from each group takes a photo of their learning and uploads it to the class blog, so that it is available for later revision. He encourages them to be creative with this, and to make it ‘look good’. Time is set aside for this at the end of the lesson, and most pupils use their Tablets to film themselves explaining what they’ve done, either in pairs or individually.

4.1.2 Learning from pupils

Teachers continue to learn from pupils. Many leaders and teachers in the research referred to the competence of children’s Tablet use, often showing teachers how the device can best be utilised. In all schools in the research pupils are accepted by teachers to be driving the process forward, as their technical skills are frequently superior to those of their teacher. Use of the Tablet therefore becomes more integrated and increasingly organic in the process. Teachers feel less pressure to create ‘Tablet-specific’ tasks.
The kids are still showing me stuff that I don’t know about and I’m saying we’re going to do these things today, you’ve got five things to cover in your group, you tell me what’s the best way to approach that. ... So I’m learning with them all the time as well.

Teacher, Honywood Community Science School

The iPad is integral to how they teach Maths ... they’re learning at their own pace, they’ve got video clips where they can then go and look at things and rather than a teacher saying this is how you do a graph, they will go and find out how they do one, they will create the ideas and do things.

Teacher, Honywood Community Science School

The kids are really good at actually showing us things that they’ve found out. I think we can learn a lot from the young people themselves, even I can, and I consider myself to be quite good with using technology, but the kids will come and say, ‘Look, I found this good app, and this can do that’, and I think we’ve got to learn from the kids too as well as them learning from us as teachers.

Teacher, Longfield Academy

This undoubtedly demands a degree of confidence on the part of teachers, both in their teaching skills and in allowing pupils the autonomy that such teaching demands. Where this is lacking it is noticeable that teaching remains along more traditional lines, with pupils following the teachers’ lead, and not necessarily proactively discovering or exploring things for themselves. For Tablet teaching to be effective, teachers need to be able to build a relationship of trust with pupils and become comfortable with the notion of learning about the capabilities of the Tablet in collaboration with pupils.

4.1.3 The way teaching style is changing

What is significant is the shift in the way in which teachers in the longitudinal schools are using the Tablets in class. Whereas it was noticeable at Stage 1 that early on teachers mostly left it to pupils to find information for themselves from a set of criteria, 18 months later teachers are more likely to direct pupils to specific sites or apps, helping them to make a distinction between useful and trustworthy information and untrustworthy information, and encouraging them to record information through audio recording, film or photograph, to store for revision and to remind them what went on in class. This is proving invaluable to pupils, especially if they have struggled with a particular subject.

Examples of ways in which teachers use the Tablet in lessons include using QR codes to access material prepared by the teacher, or providing a revision presentation with links to recommended apps and websites for each topic. A Year 7 Science teacher was observed teaching her pupils to be critical of online sources by deliberately leading them to a YouTube video describing a made-up asteroid collision. In another school the assistant head teacher explained that teachers in the school preferred directing pupils to sources, but giving them more freedom to choose how to present what they have learnt.

19 QR Codes (Quick Response Codes), are a type of two-dimensional barcode that can be read using smartphones and dedicated QR reading devices, linking directly to text, emails and websites.
Well, there’s a certain degree of independence and a certain degree of control in that the content is being controlled by the members of staff, but the mechanisms for presenting that content might be individual. Some teachers prefer to say that everyone has to do a Keynote, everyone has to do a presentation. Other members will be allowing you to do whatever you want – if you want to do it as a mind map, if you want to do it as a presentation, that’s fine, you can do that.

Vice-Principal, Wallace High School

4.2 The potential for distraction

A common concern expressed early on in a school’s process of considering one-to-one Tablets is the potential for pupil distraction. Schools need to be aware of this possibility and have rules in place to deal with it. Pupils are used to multitasking, and ethnographic observation sessions carried out in lessons for the research noted that pupils had a range of websites open, as well as emails and messaging applications. Some pupils clearly struggle with multitasking, however, and find it difficult to concentrate with so many distractions available. While parents in the first stage of the research expressed concerns about this, they now appear to accept it as something children are likely to do through the medium of technology. The degree to which teachers will accept and support multitasking appears to depend on how willing they are to give up control of the classroom.

In two of the longitudinal schools, pupils were observed to be listening to music on their Tablet while revising independently. The students claimed that this helped them to concentrate, and the teachers appeared to accept this and allow pupils to have this independence. Other teachers, however, were observed asking the students to keep the Tablet closed unless they were specifically told to use it.

If I need to find something out, I have Keynote open, and the internet, and then I’ll have iMessage.

Year 7 girl, Honywood Community Science School

You’re working, and then all of a sudden this thing pops up: ‘[Friend] is on iMessage’ – there will be a conversation and you’ll just want to join in.

Year 11 boy, Honywood Community Science School

Some people don’t like it because it can be a distraction. In English, we’ll be reading a book, and he’ll say, ‘Do it on your iPad.’ Some people concentrate for the first three pages and then go on a game.

Year 9 boy, Honywood Community Science School

Some people do get distracted by playing games and stuff, but the teachers do catch them, and they do tell them off or they take away the iPad, so they try and keep it as low as possible. It does happen but not that often ... Texting someone on iMessage is easier as you can pretend you’re working.

Pupil, Longfield Academy

When my daughter’s on her iPad doing homework, she’s got other things flashing up and she’s having a conversation here and a little tweet there ... and then I was thinking, ‘Is that just because it’s the iPad? ... No, because she could be doing that if she was working on the laptop as well’ – any technology. It’s just different to what we’re used to – we’re used to
writing an essay and just focusing on that essay when we were at school. We didn’t have the social networking so it is very child-specific.

Mother, Honywood Community Science School

[My son] has learnt how to juggle, he will spend those two hours socialising and revising at the same time.

Mother, Honywood Community Science School

In terms of potential distractions to pupils, teachers mostly felt that Tablets did not represent a significant change to the ways they had taught previously. It was argued that if a teacher has good classroom management skills he or she would be able to control inappropriate use of the device. One teacher remarked that when she was at school pupils passed notes in class. The Tablet is seen as a new device but one that gives the opportunity to maintain a dialogue with peers, although with the potential to distract from lessons. Schools solve this through educating pupils in the responsible use of the Tablet, and exhibiting a clear order of consequences should the Tablet be misused, treating it similarly to other factors in classroom management. Tablets used irresponsibly are confiscated, often for the length of the lesson but with the possibility of the device being withheld for longer. If problems with misuse continue parents are informed.

I mean kids are kids. If they’ve got a bit of a break in a classroom and they can write a note or something and pass it on, they’ll do it. If they’ve got a Galaxy Tablet in their classroom and they can switch it on and play a game under their desk, they’ll try and do it. It is very much about how the teacher manages their classroom, as in any situation, to ensure that these things don’t happen. To be fair, our students now understand the need to use the devices responsibly and they do so 99% of the time.

Assistant Head Teacher, Cramlington Learning Village

They can quite easily go on to something else. So it’s for me having that eagle eye at all times, making sure they’re not going on to something else. They like to communicate while working as well, which isn’t always that useful.

Teacher, Longfield Academy

The students know that if they use their iPads inappropriately they will have them confiscated for that lesson, and it possibly will not be returned to them until the end of the day.

Teacher, Longfield Academy

We’ve got a very clear system of consequences. Staff will first of all give them a warning: ‘Stop doing whatever you’re doing.’ If they don’t stop doing it, they confiscate the Tablet for the lesson. If it then happens in another lesson, confiscate it, hand it in to the main reception and the student can’t collect it until the end of the day. If it happens a fourth time, which hopefully it doesn’t, it then gets taken off them for a week. If it continues and it escalates, we’ll then have a meeting with the parents, up to the point where if we need to we’ll install child protection software on it, which basically restricts it to four or five apps that we want them to use, so it makes their life really, really difficult, so it gets to the point where they think, ‘I’ll not bother.’ Because we give them freedom during breaks, lunchtime and at home, so it’s not that you can’t do things, it’s just the expectation that it’s going to be used duly and responsibly in their lessons.

Assistant Head Teacher, Cramlington Learning Village
And of course there’s always the simple disciplinary measure that if someone can’t behave with their iPad you take it off them and you put it on your desk in front of the room, and that very rarely needs to be done. But it’s no different from when in the past mobile phones and smartphones first came in, and you had someone trying to text under the desk and you go thank you, and take their phone, ask them to turn it off, it’s not supposed to be out in class. So it’s very simply dealt with.

Teacher, Wallace High School

We’ve got some families who’ve asked us to remove games from their children’s devices, which we’ve done. There are ways of controlling the devices but our point all along has been you’ve got to learn to take responsibility for these things, so you don’t learn to take responsibility for something where you’ve got no choice. The amount of use of games in learning sessions has decreased over time.

Head Teacher, Honywood Community Science School

If we said, you can only use your device for educational revision purposes, we’d set up a barrier, we would create a negative feel around this. If we’re saying, you are responsible, ... again, one of our key things is self-regulation, we want students to be the managers of their behaviour, not us, so it is about mediating that and talking to people: ‘Oh, well, I understand why you’re on Football Manager but actually, have you looked at this, it’s not just about a revision guide. Actually, these are quite fun.’ And that conversation repeated over and over again, gradually moves people.

Director, Essa Academy

### 4.3 How learning is changing

Many pupils believe that their experience of school and learning has changed as a result of having their own Tablet device. Not only can they record information learnt in the lesson, take it home and add to their learning through homework, sharing with friends and finding out more detailed information online, but they can also communicate with their teacher in an immediate way, seeking advice and reassurance on anything they are uncertain about. The fact that teachers are responding to emails or through educational social networking sites such as Edmodo means that feedback is almost by return. Teachers appear to embrace this ongoing communication with pupils, and pupils appreciate the individual attention they are receiving. The process of co-creation with teachers and peers means that learning has become a more interactive and therefore a more memorable process. It is acceptable not to understand something but there is an assumption that through the Tablet device a solution will be sought to aid understanding and therefore learning.

My brother has struggled in the past but the iPad has helped him with homework and stuff. I know if he didn’t have the iPad he wouldn’t have taken everything down off the board.

Year 11 girl, Honywood Community Science School

If there’s a teacher just talking and writing on the board, I can’t take that in: I need to do an activity or something to learn.

Year 11 girl, Honywood Community Science School

It’s good: you can email her, because it says at the end of the homework she sent you, ‘Email me back if you have any worries’, so if you’re stuck on something, people can just email her back saying, ‘I don’t know how to do this.’

Year 7 boy, Honywood Community Science School
When we were in Years 7 and 8, they were just doss years. You’re learning, but you don’t actually know where you’re going. After the introduction of the iPads the Year 7s have an idea of where they are going, they know what’s going to happen in the future. So now, I think their grades are going to turn out well.

Year 11 girl, Honywood Community Science School

She said to me she really didn’t know what she was doing, and she got in a real state about her homework, so I said to her, ‘Just email your teacher and say please can you just clarify for me what I need to do’, and within half an hour an email was back telling her what to do.

Year 9 mother, Honywood Community Science School

Pupils are aware of the pedagogical changes happening within the school, and respond to this in different ways. At one of our longitudinal schools, Honywood, where the leadership and staff have introduced a new curriculum and a new discourse of learning to support the changes, older pupils can be wary of this development, and some were less comfortable with change. The pupils in Year 7, however, found this transition easier, perhaps because they had embraced the far greater transition of moving to secondary school. It was noticeable that Year 7s welcomed changes to the curriculum which made them feel as if they were earning respect and being treated like adults, making learning more enjoyable.

A little bit of independent learning is fine, but not the whole lesson, every lesson.

Year 11 girl, Honywood Community Science School

They are still teaching you; it’s just they don’t have to explain it – it can be emailed to you.

Year 7 boy, Honywood Community Science School

4.3.1 Research and the place of the Tablet in revision and exams

Carrying out research online is the most common and immediate use of the Tablet in schools (see 5.7\textsuperscript{20}). Independent, project-based tasks are aided by an individual research tool, potentially giving pupils greater ownership of their work. Pupils are able to look up information ‘on the go’ rather than teachers having to set aside time and organise access to computers. Teachers previously had to set independent research as part of the student’s homework, but can now integrate this activity into lessons. Many young people are used to having immediate access to information outside of school through a variety of digital devices, and they value the ability to do the same for their schoolwork.

You can look things up on your own: you don’t have to ask the teacher if you can use a computer; you can just get your iPad out and research.

Year 9 girl, Honywood Community Science School

While younger pupils appeared to enjoy the freedom of looking for information online, some older pupils were noticeably more worried about accessing reliable information. Such pupils can be preoccupied with revision and exams and they want to ensure that they have the ‘right answer’. They are sceptical of the legitimacy of what they find online versus what they will need to pass their

\textsuperscript{20} 5.7: The way Tablets are used in class – from quantitative research carried out at Honywood School.
exams. This also has an impact on the broader ways the Tablet is used; while younger years use the devices creatively and organically, some older years, from Year 9 upwards, appear to have incorporated the device in their learning to a lesser degree. Because of pressures of exams and revision, these students feel they have less time to experiment and explore and are more conservative in their approach to learning. There is thus a tension between new forms of learning and formal assessment; schools may want to prepare their pupils for problem solving and project-based tasks, but also know that they have to prepare them for sitting exams.

4.3.2 Communication

Any tension that exists about preparation for exams, and anxiety about the accuracy of information found out through self-led learning, is compensated for, however, by the increase in communication that the Tablet facilitates. Tablets for Schools’ first stage of research showed that Tablets were having a significant impact on communication within the school, as well as between the school and home. These changes are still clearly visible in our longitudinal schools. Collaboration is extended beyond the classroom and enhanced by instant communication, via email, instant messaging and video chatting. The gap between home and school is thus receding. Pupils are able to work on the school bus and in the car, and pupils who are away from school can keep up with schoolwork.

*It literally is the school in your hand, because you can revise anywhere. When I was revising Science, I went into my Safari, and I opened up every page there was in BBC Bitesize, so I could just revise on the bus.*

Year 11 boy, Honywood Community Science School

*I have to get a bus and a train to school from my mum’s – I can actually do the work on my iPad on the way in.*

Year 11 girl, Honywood Community Science School

Teachers argue that by communicating continuously with pupils, they are able to monitor pupils’ progress more closely and support their learning process continuously, rather than merely assessing their finished result. Teachers are therefore comfortable with the increased amount of communication that this process entails, and recognise that it is a matter of setting their own boundaries. It is interesting to note that all the teachers taking part in the research appreciated the opportunity to keep abreast of their work, even though this meant responding to pupils’ and colleagues’ requests outside of school hours. Leaders are aware that this is occurring and had pointed out to staff the importance of setting boundaries.

*Sometimes by answering the email on a Sunday afternoon ... it’ll save you significant amounts of time on a Monday morning.*

Teacher, Honywood Community Science School

*It says on the home screen three emails, and if I see those before I go to bed, I start thinking about what those emails are so I quickly look ... at least then when I’m driving in in the morning I can think about how I’m going to address that.*

Teacher, Honywood Community Science School.
I’ve just sent the email, it’s done, I don’t have to go home that evening and think, alright, what did the head teacher ask me to do or get my piece of paper and check and then log on. It’s done instantly and, in fact, sometimes I’ll be in a meeting and people will be emailing me to ask about something and I can just send that to them right then, which the technology allows you to do.

Assistant Head Teacher, Greenford High School

They never would go back to the teacher and say, ‘Well, I didn’t really understand that’ … But with the threads that we were looking at from email, they’d keep going back and forward, backwards and forwards, teachers were using suddenly a variety of resources, so it might be a YouTube link, watch this clip, this clip explains it really well, or have a look at this, pointing them to different areas and so on, and that was really important. I think for me what was really substantial was the fact that it was this access to me was defined by the speed at which a student could ask a question to a community, and how quickly that question went from their mind through their device, or whatever it is, out to the community.

Director, Essa Academy

Parents also welcome the increase in communication that their child has with their peers and their teachers.

It helps them, it makes them feel more relaxed about what they do because they only have to fire an email and they’ve got a response … and it clears the air and they can get on with what they’ve got to do.

Year 7 mother, Honywood Community Science School

She does share learning with friends, checking what answers they got, etc. Rather than just sitting in their room, thinking ‘I hope I got it right’ – that’s one way it’s come in handy – because they can talk to their friends, to confirm what they’ve learnt, helping each other out as well.

Year 11 mother, Honywood Community Science School

They do a lot of sharing tasks, so he can be working on a presentation and ping it to his partner that they’re doing a presentation together. So the communication angle of the iPad is great.

Mother, Honywood Community Science School

My Year 11 daughter was off sick for three weeks last term, and one of the brilliant things about the iPad was that she was able to keep up with her schoolwork and they were doing mocks at the time. It didn’t affect any of her results. It was brilliant. Classmates were able to literally photograph pages of notes that they’d written in their exercise books and send them across to [daughter] so she could write the notes up into her own books. Teachers were able to send her PowerPoint – you know their own teaching PowerPoints. She was almost able to cover as much sitting in her bed at home as she would have been if she’d been at school because she wasn’t missing out at all.

Year 11 mother, Honywood Community Science School

While increased communication is clearly a positive benefit for learning, and although the research did not identify any objections to this constant dialogue that was occurring, it could be argued that schools may need to set acceptable practices for such communication, since being available at all
times could be detrimental to teachers’ wellbeing, and reinforce the notion of always being online in children’s minds\textsuperscript{21}.

I’ve got the iPad and I couldn’t work without it now ... but I am questioning about switching off. Last night I didn’t sleep too well because I was thinking about work in a different way ... but whereas I’d go to a computer and check my email before and that was work ... could be a Saturday or Sunday still ... Whereas now it could be in front of the TV and I’ve got this on my lap and ping, oh, I’ll quickly reply to that now ... and that could be when I’m in the middle of a programme I quite enjoy. I haven’t decided yet. If I deal with it there and then, that’s actually helping me switch off because I’ve dealt with it and it’s done ... although it’s there and then. Whereas if I think I’ll deal with that on Monday, it’s in the back of your head.

Teacher, Honywood Community Science School

In the schools given Tablets in Year 7\textsuperscript{22} communication was seen as an area where the Tablets could have a major impact, but the full effect of this had not yet been realised. Teachers and leadership felt that this was due to the low numbers of students and teachers currently using the Tablets.

4.4 The Tablet as a pedagogical ‘toolbox’

The Tablet could be described as a portable pedagogical toolbox. It makes it possible to pick and choose the tools that can enhance learning and help pupils to record, organise and remember information. As illustrated earlier, it is an effective means of revision. Seen in this light, the device becomes an invaluable part of learning and communication for both teacher and pupil.

4.4.1 Using the toolbox

In our longitudinal schools the Tablet is fully integrated into learning, alongside traditional tools and methods such as pen and paper. Our observations showed that teachers and pupils had developed routines around when and how they used the Tablets, such as setting research tasks at the beginning of the lesson, or recording their progress towards the end. The degree to which pupils were using the Tablets varied, as some pupils are more comfortable with and motivated by using technology than others.

\textit{We all look at it like it’s just a normal thing, like a textbook. We’re so used to it – it’s just there.}

Year 11 boy, Honywood Community Science School

Apps are described by pupils as tools, and ‘just an easier way of doing things’. They are viewed as an easier way to express, document, organise and store their learning. The Tablet as a toolbox also allows the teacher to focus on cross-subject skills and qualities, such as confidence building, presentation skills and critical thinking. One teacher at Cramlington Learning Village explained that while a class he was teaching was very advanced when it came to Maths, the pupils tended to lack


\textsuperscript{22} Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree.
confidence and have poor presentation skills. To overcome this he used presentation apps and audio and video recording facilities on the Tablet to help build confidence and facilitate pupils’ ability to communicate what they had learnt.

4.4.2 The toolbox for different learning abilities

The Tablet allows teachers to differentiate between different styles of learning and different learning abilities. As pointed out in Stage 1 of the research, students who struggle with traditional ways of accessing and presenting knowledge, for example reading and writing, are given alternative ways of learning. This continues to have a significant impact on pupils with special educational needs (SEN), who are given options in how to work, but are able to use the same device as everyone else and are thus not set apart. The device also makes it easy to erase, manipulate, change and customise content to suit their individual needs. While there are now many applications for children with SEN there is a sense from the schools in our research that these are more appropriate for primary school children. Teachers therefore tend to recommend multi-purpose apps, such as dictionaries and mind mapping apps for these pupils.

The independence and autonomy made possible by a one-to-one Tablet are also having an impact on gifted and talented pupils, who are able to extend their learning and go beyond the task set by their teacher at a pace that suits them. One leader spoke of such children as no longer having to stay ‘in the middle’ but being able to move further forward than their peers within the same lessons.

I think that freedom has enabled me to discover more advanced things.
Year 11 boy, Honywood Community Science School

As an SEN tool it’s got to be amazing ... [a child in] Year 7 has dyspraxia as well and it enables him to find a way around that problem – it gives him another way to solve whatever task they have to do.
Year 7 mother, Honywood Community Science School

My 8-year-old is a bit slower on the uptake and struggles with reading and writing ... and I found that a very easy way to get her doing things willingly is on the iPad.
Year 7 mother, Honywood Community Science School

We use the iPad within our autistic centre as well and that just allows them to communicate their learning in a different way. They may have struggled to put things on paper. A lot of our autistic students would have that difficulty, and you should see the materials they come up with using iMovie to video what they’ve been doing, their animations, and getting over their ideas using animations rather than writing on paper and in essays and things like that, which they would struggle with. It’s an amazing resource for them to use.
Teacher, Longfield Academy

It is [a strength]: they don’t treat a class as if they are the same. They understand that there’s different levels, different goals – they’re not all going for the top, and the school appreciates that. The pupils are taught to their strengths and everyone gets individual treatment.
Year 11 mother, Honywood Community Science School
They’re not just limited to what’s on the desk; since [daughter] has had the iPad, it’s opened it out; the person next to her has got the same book but she might want to look at something else that’s not in that book.

Year 11 mother, Honywood Community Science School

It’s just another tool: the philosophy and the culture of learning is there already ... because it’s something that is familiar to them, and it’s new, and it’s powerful, and for some of the students that can’t always access things on certain levels – they can do it independently on there, in their own little world almost, at their own pace, without the pressures of other things going on at the same time – they can focus on what they’re doing at the time.

Teacher, Dixons City Academy

I think with [son] and any other child with additional needs, it makes them on a level playing field.

Year 7 mother, Honywood Community Science School

In Maths, [son] would always finish a task early and be left with nothing to do: now the teacher can set him another task, and set him off to research it, saying ‘Come back to me, you can give a mini-presentation to the class’, and he loves that.

Year 11 mother, Honywood Community Science School

Because they can all learn at their own speed – you can learn at your own speed, rather than wait for the rest of the class to catch up.

Year 11 mother, Honywood Community Science School

4.5 The changes to pedagogy

It would appear that the Tablet is having an impact on pedagogy in several ways. Used as a toolbox, a means of revision and a way to work at individual attainment, the Tablet enables pupils to organise their learning and become self-motivated. It allows teachers to have a closer pedagogical relationship with each child and monitor their progress, and to cater for pupils’ different learning abilities. Schools are recognising the possibility for distraction, and continue to monitor this, and they are teaching pupils to become skilled at discerning accurate information. The longer-term effects on pedagogy are explored in the next chapter.
Chapter 5  
The Longer-Term Effects of Tablet Learning

While our ‘longitudinal’ research is based on 18 months of one-to-one Tablet use within four schools,\(^{23}\) and it could be argued that this is not enough time to measure long-term effects, we are able to see a pattern emerging from the schools that have been using the Tablets over this period of time. There are also some significant and immediate effects that teachers note, especially from those schools that were given Tablets for Year 7s in the spring term 2013.\(^{24}\) The ability to work independently is the most obvious benefit, and this appears to enhance pupil motivation and engagement. This in turn has led to schools observing an improvement in pupil behaviour over time, and an improvement in attendance figures. Observation in class and online interviews with pupils, however, have shown that there are some drawbacks, notably the potential for distraction, which has already been discussed in Chapter 4, and the importance of teaching pupils good research skills so that discriminating between reliable and untrustworthy information becomes second nature. It is clear also that teacher knowledge and expertise on using the device in teaching, and adequate infrastructure, is essential for the Tablet to be used successfully.

5.1 A process of evolution

The longitudinal schools in our research acknowledge that the use and impact of Tablets, and the way they support teaching and learning, are continually evolving. Leadership and staff are comfortable with being ‘on a journey’, and accept that changes do not happen overnight. It is significant that a characteristic of these early adopter schools is that they have accepted that they have embarked on this journey without fully knowing what the outcome will be, and continue to develop their teaching and management in the school in terms of their pedagogical approach alongside the use of the one-to-one Tablets.

*[It was] difficult to know in advance of getting the iPad just what issues would arise. It’s a learning curve that takes place after the iPad is introduced.*

Teacher, Honywood Community Science School

Part of this process of evolution is to continue to monitor pupils’ use of the Tablet. The potential for distraction was discussed in the previous chapter, and clearly this is an issue that must be addressed in schools. While teachers are aware of the inherent possibility of pupils being online and therefore subject to diversion from appropriate or useful content, it was clear from ethnographic observation that distraction is an issue that needs to be closely monitored. Part of this is the need for better content directed at the appropriate age and learning level, which is discussed in the next chapter.

\(^{23}\) Cramlington Learning Village, Northumberland; Honywood Community Science School, Essex; Longfield Academy, Kent; Wallace High School, Belfast. Each school had introduced one-to-one Tablets in September 2011.

\(^{24}\) Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree.
Box 2, below, is an extract from ethnographic research which illustrates the way in which pupils in longitudinal schools are experiencing distraction.

Box 2 Year 8 Spanish lesson

Many of the pupils are watching videos on YouTube, as directed by the teacher. Some pupils, however, are becoming somewhat lost in their search, and not all the videos they are watching appear to be equally useful. Other pupils are clearly becoming distracted by this task and are losing their focus. Some of the educational videos they are viewing appear to be aimed at much younger children (e.g. Dora the Explorer). Not all of the pupils have headphones with them. The teacher suggests that this would be helpful, as some pupils are finding the noise disrupting.

5.2 The ability to work independently

Despite the potential for distraction, the research has indicated that there is an increase in pupils’ ability to work independently. Teachers, parents and pupils themselves claimed in the qualitative research that independent working has come about through using the Tablet, and this was witnessed in all the ethnographic observation sessions. It was also confirmed in the quantitative research (see 5.7 below). The degree to which this happens will, however, depend on the degree to which independence is embedded in the school’s teaching culture. In some schools, notably Honywood and Cramlington Learning Village, independent learning and problem solving are areas of explicit focus, and Tablets are used as a tool to enhance this. Although in other schools, for example Wallace High School, there is less focus on independent learning, with a more directive and structured teaching style, these schools also note an increase in independent learning from pupils. This correlates with pupils’ experiencing choice in their learning, with a tendency to independently search for alternative ways of solving a task or delving further into topics of interest of their own volition.

5.3 Learning to learn strategies

Having an individual ‘toolbox’ facilitates the freedom for pupils to be in charge of their own learning, and Tablet schools are recognising this. It is notable that the longitudinal schools in our research have an active focus on learning to learn strategies. This entails giving pupils the choice and responsibility to take control of their own learning, and find out how they learn best. While not causal to independent learning, the Tablet is integral to this approach as it offers a variety of ways to solve a task on one device. It also gives immediate access to information, and encourages pupils to learn to process information, which is an important aspect of learning to learn. The role of the teacher in this process is often that of facilitator, providing options and guiding pupils, especially in terms of finding information. Websites such as Wikipedia, Yahoo! Answers and YouTube are particularly important in this regard. Although pupils have been reminded repeatedly not to trust these sources indiscriminately, the information on them tends to be written in a language they can
easily understand, which makes them attractive to use. Teachers respond by encouraging students to look for alternative sources.

_We’re giving them guidance on how to learn, which is the key thing. We’re not just filling them up with information and regurgitating stuff – that’s not learning._

Teacher, Honywood Community Science School

_What the Tablet does is it facilitates that type of learning more effectively and more easily, so we’d expect that giving the kids more opportunities to be independent will lead to them being able to manage themselves more effectively. If they can use their own initiative this should translate into higher achievement because they’re able to do things for themselves rather than having to be pushed by the teacher._

Assistant Head Teacher, Cramlington Learning Village

Box 3 is a summary of filmed ethnographic observation from a Year 7 Science class which illustrates further the way in which a longitudinal school needs to continue to encourage pupils to be aware of their learning, and what it is they are researching.

**Box 3 Learning to learn**

The teacher encourages the pupils to look for apps that might help them, and to use their iPad ‘as much as they can’. The pupils get themselves organised in their groups and start reading their task and objectives out loud. They then immediately start doing research through Google. A lot of discussions take place within the groups; the dynamic of the class is quite loud. The teacher walks around and observes them, and then makes a whole-class announcement encouraging them not to go straight to Wiki Answers or simply click on the first link, which many of them clearly are doing. The teacher reminds them to look around and compare different sources.

### 5.4 Effect on pupil motivation, pupil engagement and pupil behaviour

Observation of lessons, and focus groups with teachers, pupils and parents in the Tablet schools, as well as the online questionnaire research with pupils at Honywood (see 5.7), have indicated an increased level of pupil motivation and engagement. This has been observed in lessons where the teachers are creating different ways of engaging with the subject, for example through videos or mind maps. Pupils clearly appreciate the opportunity for different learning options. This is also leading to more variety in terms of homework produced. Pupils who have previously struggled to express themselves in writing enjoy having alternative methods of articulating their learning, such as filming themselves, producing a presentation, an animation or a mind map.

_So there’s definitely more engagement and more motivation for the students, and it’s a lot more interactive and a lot more stimulating in terms of visuals, especially for visual pupils. Homework has changed. Rather than just doing questions, pupils are going away and doing a podcast, and teachers can say, ‘I want you to listen back to your podcast and drop in sound effects’ or something like that, so there’s a lot to be said for it really in terms of transformation._

Deputy Principal, Wallace High School
It’s good for differentiating, so you can put different resources on the VLE and they can download them quite easily.

Teacher, Longfield Academy.

Now, we can research subjects much more efficiently and learning is much more independent than it was before. Before we had them, learning was spoon-fed to us with hardly any versatility and was quite boring.

Year 10 girl, Honywood Community Science School

It has helped me, I’ve been more imaginative and independent.

Year 10 girl, Honywood Community Science School

My iPad makes me more motivated.

Year 9 girl, Honywood Community Science School

It’s so useful in learning sessions. If I’m not sure what something is I can just Google it and I can type up information, make presentations, check emails, talk to friends. It’s so much easier to just have my iPad in my bag rather than constantly relying on the teachers to give me the information.

Year 10 girl, Honywood Community Science School

Several of the longitudinal schools have reported improvement in behaviour over the last year and a half, particularly Essa Academy and Longfield Academy. The leadership within these schools feel that giving pupils options and freedom in their learning is part of the reason for this, and that pupils respond well to the responsibility they have been trusted with through having their own one-to-one Tablet. It was also argued that the Tablets give students more options during their break times, and that children who would previously have been bored and disruptive during breaks are now happy to spend the time using their Tablet. There is a belief amongst teachers that pupils who were previously disaffected, especially with school and with schoolwork, and who appeared to re-engage when Tablets were introduced, are still motivated some eighteen months on. It should be pointed out, however, that at both Longfield Academy and Essa Academy new state-of-the-art school buildings may also have played a part in this process of re-engagement.

It does have an impact on behaviour. If you’ve got your own device, and when you’ve got your own time, looking at something, you’re reading something, even playing a game or whatever, you’re occupied and you’re doing something … But you can see when they’ve got devices things are a lot more calm, they communicate in different ways, they can speak to one another, they’re not running around looking for somebody else. Getting on. And they can email one another and say, meet you here at lunchtime or something like that, so it’s quite interesting.

Director, Essa Academy

I never used to be bothered to look in textbooks, I just used to go by what the teacher said. Now, I think I learn more in lessons.

Year 9 girl, Honywood Community Science School

Digital is definitely a great way of pushing the grades higher. It’s good for the boys; the boys like digital … I’ve got a large male ratio in this group, and using the iPads and using more digital methods to approach art work is engaging the boys a lot more, and getting them up to the same standards as the girls.

Teacher, Longfield Academy
A Year 9 student from Poland [put some amazing things on our new blog]. We never heard from her or saw her in school, and she just started to blog, and the stuff that she was putting up, the intellectual level of the comments she was making was frightening. This was a Year 9 student who was talking about all sorts of really deep things on her blog, and she’s really flourishing.

Director, Essa Academy

5.5 Tablet use in the new schools

While schools in the longitudinal one-to-one Tablet schools had experienced a lengthy and well-planned introduction to the device with training and advice, the schools in the new school cohort that had been given Tablets for Year 7s were inevitably less prepared to receive them. On the surface, Tablets appear to be used in very similar ways in our longitudinal schools and those schools that were given Tablets by Tablets for Schools. Common uses in both cohorts include individual research, documenting work, pupil–teacher and pupil–pupil collaboration and communication, and using individual apps. However, the way in which this process occurs in the two cohorts is very different. While the use of Tablets in our longitudinal schools is embedded and evolves naturally, in our new schools the Tablet is still a novelty, and it was observed that time is specifically set aside for its use, independent of teaching. Much of this might be related to the time the schools had to prepare for the introduction of Tablets and the fact that Tablets were introduced to half of Year 7s in the new schools. It is clear, however, that in those schools that did not go through the lengthy process of introducing the Tablet to the whole school, not all teachers are as comfortable with changing their teaching style and allowing pupils to take the initiative.

It is clear that schools need time to prepare for the introduction of the Tablet, and teachers need to be confident in its use. This is likely to take several months, and some investment in professional development. In the new Tablet schools, teachers’ confidence in using the Tablets to teach affected the degree to which they were used and pupils’ appreciation of their benefits. In some cases there was a sense of frustration from some pupils that the devices were not used enough by their teachers. This led to some pupils claiming in focus groups to feeling de-motivated, which then deterred them from bringing the Tablet to school. Teachers in turn were frustrated by pupils not having the devices with them when they had planned a Tablet-based activity, which led to fewer such activities being planned, thus creating a pattern of inconsistency and disappointment.

There was variety in terms of teacher confidence in the Tablets in the new schools. Having limited time to prepare for the Tablets, and only using them with a minority of pupils, some teachers chose not to invest the time and energy to adapt their teaching. Others explained that minor technical

25 Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree.

26 In two schools in the new cohort (see previous note) half of Year 7s were given a Tablet for one term (spring) and then the other half were given a Tablet in the following term (summer). This was because of a limited number of Tablets available, and in order to be able to create a ‘control’ element into the exercise. The Year 7 cohort at Alec Hunter Academy was divided in three and the Tablet trial took place over the summer term only.
difficulties such as intermittent or slow wifi connection had deterred them from using the Tablet, and pupils had noticed this.

The new school cohort did experience some immediate changes, however, such as an increasing number of pupils preferring to read on their Tablet, and reading far more than had previously been observed. These pupils enjoy the ability to look up words and concepts instantly while reading. Especially in schools with a high proportion of pupils speaking English as a second language, this is thought to hold a significant potential for teaching and learning. However, while teachers were aware that pupils are motivated by the ability to research online on a given subject, it was clear that teachers in this cohort remained wary of allowing pupils sufficient autonomy to do this.

Box 4 below illustrates how Tablets are used in a Year 7 Science class from a summary of the filmed ethnography carried out in one of the new schools given Tablets this year. It can be seen from this that there is a degree of frustration on the part of both teacher and pupils when technical difficulties arise, illustrating the importance of ensuring sufficient broadband access, and the need for a level of technical knowledge of the Tablet on the part of the teacher.

Box 4 Tablet frustration: new school ethnography

The teacher asks pupils to log on to the VLE. Five pupils do not have their Tablet with them and the teacher is clearly frustrated, explaining that this is like not having a pen and paper in class, and that they really must have it with them. One pupil does not have a Tablet at all, another pupil is out of battery, so paper copies of the task are given to all these pupils. The teacher tells them this is not as exciting as using a Tablet, which is why they need to bring them to school.

One pupil struggles to get onto the wifi. A few struggle to get onto the VLE and to open the document.

Pupils complete a quiz and send it back to the teacher. They spend a lot of time trying to email their quizzes. They are then told to put their Tablets away and work in groups.

The teacher has a simple animation on the interactive whiteboard which shows oxygen diffusion. After the teacher has worked through the new material they are asked to go back to their Tablets and onto the VLE and complete a test and save it. They are asked to email it back if possible, so that they can peer-assess responses on the interactive whiteboard. Again, several struggle to open the quiz, and the teacher has prepared paper copies for this.

This lesson seems to be affected by minor technical difficulties which the teacher struggles to answer – a frustrating process for teacher and pupils. The teacher had sent out a diagram via emails and ‘assumed it worked like Microsoft Word, but it doesn’t’ (they can’t insert textboxes or notes). Some pupils are losing concentration and focus because of the technical difficulties.

5.6 A culture change

For Tablets to have an impact on pedagogy a culture change within the school is necessary. There is evidence to suggest, therefore, that whole-school adoption of one-to-one Tablets is more effective and will have a greater impact than single year groups or single classes. It has been observed that
teachers, parents and pupils will not fully accept the changes if only a minority within the school are using the Tablets. Parents and teachers need to be convinced that the Tablets and the changes associated with them are here to stay.

Greater pedagogical changes may take time to be understood within the school culture. It has been seen from the longitudinal schools that professional development and teacher confidence grow over time. A school that is considering the implementation of Tablets needs to allow time for information to reach parents and teachers, and to acknowledge their comments and answer their questions. Teachers in the new schools expressed a wish that they had had more time to prepare, both for the change in pedagogy that was necessary to absorb Tablet teaching, and to be fully competent with the technology. Schools that have naturally gone through this process, such as the longitudinal schools, are better equipped to embrace the change that Tablet learning and teaching brings.

*I would say that the most important thing for a lot of people is time. You don’t need to teach me how to use a Tablet, but I do need time to develop it for my subject.*

Teacher, Dixons City Academy

*Time to play with it, then time to think about how I can use it in my lessons, then time to share that with subject colleagues, and say ‘Did you realise you can do this?’*

Teacher, Dixons City Academy

*I’ve got loads of ideas of things that I could do, in specific lessons, but I don’t know how I would.*

Teacher, Greenford High School

Longer learning sessions facilitate more project-based work. Several of the longitudinal schools taking part in our research have chosen to extend the length of their learning sessions. Honywood implemented 100-minute lessons at the same time as introducing the Tablets, while Essa implemented 3-hour lessons. Longfield Academy introduced 120-minute lessons a year after introducing the iPads.

### 5.7 The way Tablets are used in class

To measure the way in which Tablets are being used in class, and to critically test some of the claims made by pupils in focus groups, daily questionnaires were sent online to 842 pupils in Years 7 to 10 over five days at Honywood School, in the week beginning 13 May 2013 (see Appendix 1 page 76). Response rates over the course of the week ranged between 24% and 38% of all pupils. 48% of respondents were male, 52% were female.

The pupils were asked what learning sessions they had each day, and whether or not they used their iPads.

It is interesting to note that Tablets were not used in every lesson. Over the week, Tablets were used in 58% of lessons, and it can be seen from the charts below that Tablets were used most in Geography, Maths, Science, History, Media Studies, English and Languages, and least in ICT, Art and Sport.
Fig 1 What learning sessions did you have (Monday to Friday)? Did you use your iPad? (‘Yes’)

Total: 1,342 respondents (Monday to Friday combined).

Observation of lessons and focus groups with pupils had indicated that there might be a greater propensity to use the Tablets in Years 7 and 8 compared to Years 9 and 10. The research, however, does not show this, and the use of Tablets was fairly consistent across all year groups.
**Fig 2 In your learning sessions, did you use your iPad?**

**Tablet usage across learning sessions, Mon-Fri**

<table>
<thead>
<tr>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>46%</td>
<td>54%</td>
<td>50%</td>
</tr>
<tr>
<td>No</td>
<td>13%</td>
<td>31%</td>
<td>15%</td>
</tr>
<tr>
<td>N/A</td>
<td>41%</td>
<td>34%</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Total: 1,342 respondents (Monday to Friday combined). N/A category includes where answers were not given by the respondents.**

It can be seen below that over the course of the week the greatest use of the Tablet was for research, followed by reading course material.

**Fig 3 In your learning sessions, which of the following did you do on your iPad?**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researching online</td>
<td>29%</td>
<td>17%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Reading course material</td>
<td>10%</td>
<td>9%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>Reading published text</td>
<td>10%</td>
<td>8%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Creating presentations</td>
<td>9%</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Group work (subject related)</td>
<td>15%</td>
<td>18%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>Group work (non-subject related)</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Mind-mapping</td>
<td>10%</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Annotation</td>
<td>10%</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Other*</td>
<td>10%</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Didn’t use my Pad</td>
<td>42%</td>
<td>42%</td>
<td>42%</td>
<td>42%</td>
</tr>
</tbody>
</table>

**Total: 1,342 respondents (Monday to Friday combined). * Other category includes: Edmodo; listening to podcasts; poster design; playing games (for fun); playing games (subject-related); podcast production; creating web content; commenting on forums/blogs; use of personal social media account; use of non-subject-related apps.**
The potential for distraction has been discussed in this chapter and in the previous chapter. We asked pupils about other ways in which they had used the Tablet in their lessons (note these are known as ‘learning sessions’ at Honywood).

**Fig 4 In your learning sessions, which of the following did you do on your iPad? (Options are given for subject-specific and non-subject-specific activities)**

Total: 1,342 respondents (Monday to Friday combined). Distractions included playing games for fun; use of non-subject-related apps; use of personal social media account/s; commenting on forums/blogs; and completing the survey in learning sessions.

At the same time, it is worth noting that the majority of those who were distracted were also using their iPads to do work in those learning sessions.

It is likely that there is a degree of under-reporting in the above responses, however. On Thursday, we asked pupils: ‘What are the worst things about having an iPad?’ This was an open-ended question, and 222 answered, 55% of whom said that iPads could distract from learning session work, because they or others were misusing them.
In another question, pupils were asked: ‘If you were designing a Tablet computer for other people your age to use at school and at home, what would it be like?’ 146 answered this, 19% of whom said they would like stronger controls in place to limit the distraction potential of the device. The following quotes show thinking that was common across the group:

\[ I \text{ would make it so that games can’t be played during lesson times.} \] 
Year 10 boy

\[ \text{It would have a safety mode which allows you to play games at home but not school.} \] 
Year 9 boy

\[ \text{It would not let you play on games or mess around but you would be able to research and get in touch with friends and teachers.} \] 
Year 7 girl

\[ \text{It wouldn’t have anything like iMessage, because people get distracted by that in class.} \] 
Year 9 girl

\[ \text{If it was on the school wifi it would lock all non-school-related apps and when you have a non-school wifi then the apps become unlocked. Then we are not tempted!} \] 
Year 7 girl

Other more minor concerns were also raised in response to the question: ‘What are the worst things about having an iPad?’ including: 5% who were concerned about Tablets/apps crashing or breaking and possibly losing their work; and fewer still who feared that social media could be used to bully pupils, or that sometimes the internet is slow or is down and that this can affect their work. A final point, however, perhaps warrants further investigation. While we have seen elsewhere in this report that most students value a shift towards more independent learning that Tablets can provide, some see a less positive outcome in this area. The following quotes help to reveal this issue:

\[ \text{Teachers don’t actually teach us as much.} \] 
Year 10 boy

\[ \text{A lot of lessons are not as teacher-led and some learning styles do not suit that. Also, sometimes we are left to get on with it and do not know if we have got it right or wrong.} \] 
Year 10 girl

These are, however, the only two quotes that raise this issue.

To further test some of the findings from the qualitative research, each day we asked pupils to answer a selection of agree/disagree statements. These were deliberately randomly mixed and different on each day so that a picture might emerge of pupils’ experience of using their Tablet.

\textbf{Monday}

On Monday pupils were asked what they would like to do with their iPad. The most popular application was designing their own apps, and this was particularly popular with Year 7 (72%) and Year 8 (76%). Playing games for fun appeared to be more popular with Year 9 (41%) and Year 10 (45%), whereas only 12% of Year 7s wanted to play games for fun. A similar picture emerged when asked whether they would like to play edugames, with 29% of Year 9s and 26% of Year 10s, compared to 15% of Year 7s and 12% of Year 8s wanting to play edugames.
Tuesday

On Tuesday we asked about learning, the potential for distraction, and improvements in attainment. The majority of pupils felt that they were more motivated to work because of their Tablet (69%), and found it easier to learn (87%). Nearly three-quarters (72%) believed that their work had improved since having a Tablet, and 88% believed that they would do better in exams. Findings were broadly the same across all years. Nearly a quarter (23%), however, claimed that they became distracted in class by unsolicited non-work-related communication from friends. This finding was higher for older years (28% of Years 9 and 10 agreed, versus 17% of Years 7 and 8).
Fig 6 Do you agree or disagree with the following statements? (Tuesday)

We have spoken to people your age about using iPads in school. Do you agree or disagree with the following statements? Please tick in the box that best fits your answer for each statement.

- I am more motivated to work because of my iPad: Agree strongly (43.5%), Agree somewhat (30.8%), Agree somewhat (21.5%), Agree somewhat (7.3%), Agree somewhat (2.8%).
- I find learning easier because of my iPad: Agree strongly (36.3%), Agree somewhat (30.8%), Agree somewhat (21.1%), Agree somewhat (9.3%), Agree somewhat (1.6%), Agree somewhat (2.0%).
- I get distracted in class because I'm often sent messages or games by my friends: Agree strongly (28.5%), Agree somewhat (22.9%), Agree somewhat (15.5%), Agree somewhat (7.8%), Agree somewhat (2.0%).
- I think my work has improved because of my iPad: Agree strongly (37.9%), Agree somewhat (34.1%), Agree somewhat (20.8%), Agree somewhat (4.8%), Agree somewhat (2.4%).
- I think I will do better in exams because of my iPad: Agree strongly (33.2%), Agree somewhat (27.5%), Agree somewhat (27.1%), Agree somewhat (6.1%), Agree somewhat (6.1%).

Total: 249 students replying to the question on Tuesday in Years 7, 8, 9 and 10

Wednesday

On Wednesday we asked whether pupils felt that Tablets in school were a good idea and 92% of pupils across all year groups agreed they were. 69% of pupils agreed that the Tablet would benefit their grades, including 67% of Year 7 and 8 pupils and 71% of Years 9 and 10. However, there were some doubts, with 42% saying they would prefer it if their teacher was leading the whole class rather than have independent learning. Year 9 and 10 pupils agreed with this sentiment more (48%), versus 35% of Years 7 and 8. In addition, 37% also said that they would prefer to write using pen and paper than use their iPad. This was roughly the same for Years 7 and 8 pupils (34% agreed) and Years 9 and 10 (40% agreed). On this day 18% of the respondents admitted that they were sometimes tempted to play games on their iPad. Year 9 and 10 pupils agreed with this more (28%), versus just 9% of Years 7 and 8.
Fig 7 Do you agree or disagree with the following statements? (Wednesday)

We have spoken to people your age about using iPads in school. Do you agree or disagree with the following statements? Please tick in the box that best fits your answer for each statement.

- I think having my own iPad in school is a very good idea
  - Agree strongly: 57.9%
  - Agree somewhat: 33.9%
  - Neither agree nor disagree: 6.0%
  - Disagree somewhat: 1.3%
  - Disagree strongly: 2.1%

- I prefer it if my teacher is leading the whole session rather than have independent learning
  - Agree strongly: 33.5%
  - Agree somewhat: 33.5%
  - Neither agree nor disagree: 15.5%
  - Disagree somewhat: 9.4%
  - Disagree strongly: 6.9%

- In my learning sessions I am sometimes tempted to play games on my iPad
  - Agree strongly: 25.8%
  - Agree somewhat: 25.8%
  - Neither agree nor disagree: 19.7%
  - Disagree somewhat: 17.3%
  - Disagree strongly: 6.9%

- I prefer to write with pen and paper rather than to type on my iPad
  - Agree strongly: 31.1%
  - Agree somewhat: 31.1%
  - Neither agree nor disagree: 19.7%
  - Disagree somewhat: 14.2%
  - Disagree strongly: 11.6%

- I think having an iPad will benefit my grades in school
  - Agree strongly: 38.5%
  - Agree somewhat: 38.5%
  - Neither agree nor disagree: 25.8%
  - Disagree somewhat: 10.0%
  - Disagree strongly: 2.6%

Total: 233 students replying to the question on Wednesday in Years 7, 8, 9 and 10

Thursday

On Thursday pupils were asked about the way in which they use their iPad. 99% agreed that they could use their iPad to do research. 90% agreed that it was easy to make presentations, and 85% agreed that they could make educational videos using their iPad. Importantly, 91% of pupils agreed that they could work at their own pace, and that it didn’t matter if others were working more slowly or faster than they were. These findings were broadly the same across all year groups, and confirm the qualitative research (see 4.4).
Fig 8 Do you agree or disagree with the following statements? (Thursday)

Total: 222 students replying to the question on Thursday in Years 7, 8, 9 and 10

Friday

On Friday pupils were asked about potential ways the Tablet could be a disadvantage. 55% of pupils agreed that if their Tablet was broken, it could take a long time to repair, but only 18% believed that their Tablet was easy to drop. Honywood had introduced tough Griffin covers to overcome breakages this year, and 47% of pupils agreed they liked the cases they have to protect the Tablet. Just under 1 in 5 (17%) of pupils said they often forget to bring their Tablet to school, and 41% agreed that having the Tablet was a good reason to want to come to school.
5.8 Strong leadership to implement pedagogical change

The importance of strong leadership has been highlighted previously in this report. Leadership of the cultural change that inevitably occurs once one-to-one Tablets are introduced is an important element that will lead to the success of the implementation, coupled with the leadership’s willingness to take risks. The schools that have successfully introduced one-to-one Tablets throughout the school are notable for their strong leadership teams, and have identified members of their staff who will be ‘device champions’, both from an IT and a pedagogical perspective. The longitudinal schools had IT expertise, and these individuals were also involved with teaching and learning, with the devices viewed as part of the school’s overall pedagogical approach. Each school had identified members of the leadership team and the staff to take charge of the pedagogical approach. In schools where implementation is left solely with the IT department there is likely to be less impact since both staff and pupils are likely to view Tablets as a ‘technology project’ rather than as a development of teaching and learning. To increase the success of implementation, therefore, ‘device champions’ should be identified within both teaching staff and pupils.

As mentioned in Chapter 1, the school leadership will need to brief staff fully about the way in which the Tablet is likely to support the changes to pedagogy that will inevitably happen, and to ensure that parents are also engaged in this process. Research on the implementation of one-to-one devices
and technology in general in education has shown that teachers must reflect on their own teaching and how technology can enhance this for a project to have a positive impact.\textsuperscript{27}

Different schools in our research have had different approaches to one-to-one technology and its relationship with pedagogy, and there is no one philosophy that appears to work better. UCL Academy,\textsuperscript{28} for example, was opened in September 2012, and is the first school in the UK to have a university as its main sponsor. The UCL prospectus explains that the pedagogical approach of the school is designed to prepare pupils for university education and a global labour market in which ideals such as independence, critical thinking, and knowledge of different cultures are central. Confidence in and familiarity with technology is integral to the school’s approach, but the school does not currently give pupils their own Tablets, even though there are enough Tablets to achieve this and one-to-one Tablets are used extensively in teaching. Wallace High School in Belfast has a history of promoting the use of technology, and staff and pupils feel comfortable with using one-to-one devices which both staff and pupils have as a personal device. The school’s pedagogical approach, however, could be described as more traditional: teachers do more whole-class teaching, and pupils tend to sit in rows and use their Tablets mainly when directed to do so by their teachers. The Tablet is still used as a tool, but as a tool to implement a more traditional approach to teaching and learning.

Changes to pedagogy and the implementation of one-to-one Tablets are inevitably linked and one will follow the other. For any school that is proposing to introduce one-to-one Tablets, a critical reflection on how Tablets can assist in helping to achieve the pedagogical aims and objectives of the school appears to be an important step in planning the implementation process.

\textit{One student didn’t know how to do something on the Tablet, so got a YouTube video up which explained it. They were glued to the screen. It’s nice that it’s instilling this independence that we’re trying to push, as a school.}

Teacher, Dixons City Academy

\textit{I thought it was going to be a complete disaster, having these kids with Tablets in my Thinking Skills lessons, where they’re not doing much writing: they’re moving around, I figured they’d be doing stuff that was inappropriate. They have actually been the absolute opposite: they’ve been a complete godsend, because of the way they’re learning, and it would be fantastic if all of these kids had them, and we could start integrating it into our long-term plans ... It has been a huge boost for kids to be able to use the camera to photograph or film things instantly, and they can do this for each other, so it’s not me doing it with my Tablet; they can take control of their learning.}

Teacher, Greenford High School\textsuperscript{29}


\textsuperscript{28} Swiss Cottage, London.

\textsuperscript{29} Dixons City Academy and Greenford High School were given Tablets by Tablets for Schools for half of Year 7 only.
Chapter 6  The Importance of Content

The increasing use of digital technology both outside and within the classroom is having a profound effect on learning, on the teaching profession, and on the educational publishing industry. Curricula are no longer delivered solely by textbook and worksheets, and teachers are not necessarily the only source of knowledge and information. The benefit of this is that pupils can have greater independence and choice in how they learn, and teachers can offer more variety in the way in which they present a topic. The challenge for many teachers is that this new form of pupil-led acquisition of information and teacher-led dissemination of knowledge requires a new set of skills. This chapter will discuss the ways in which schools using Tablets engage with content and the benefits and challenges these pose to teachers and pupils.

6.1  The way in which content is used

The most common use of Tablets in schools is carrying out research on the internet and accessing websites that relate to the topic and subject area being taught (see 5.7). Pupils are either directed by their teacher to specific websites that are related to a topic, or asked to find resources themselves. This is usually done through entering a question or keyword into Google. Pupils also access PDF documents such as articles and presentations distributed by their teachers to their Tablet. Having constant access to the internet means that teachers can direct pupils to current and relevant content, which is believed to be motivating for pupils; it is also believed that this extends pupils’ learning beyond the classroom, and can broaden their horizons.

In addition to carrying out research online and visiting specific websites, apps are used to explore and produce information. Whereas in Stage 1 of our research, carried out a year ago, there appeared to be a limited number of apps available, teachers and pupils now report that apps are readily available and easy to find, and links to the best continue to be shared across the school, either by word of mouth or through newsletters and forums. It seems that there is a new move towards multi-purpose apps, by which is meant apps that can be used across a variety of topics and subjects in order to organise work, and to explore, present and document pupils’ learning. These include mind mapping, presentations and word processing apps, as well as video, photo and audio recording facilities.

It’s not really the internet: I use the app store. You can download games, but also you can download things like Popplet for making things like spider diagrams.

Year 7 boy, Honywood Community Science School
Fig 10 Examples of multi-purpose apps that are used

- Popplet (mind-mapping)
- iMovie (film editing)
- Keynote (presentation app)
- Evernote (note taking)
- GarageBand (creating music)
- Whiteboard

Pupils are able to create a visual log of their progress and work, which gives teachers evidence on which to base their feedback. In addition, apps specific to a subject or topic are frequently recommended either by a teacher or a fellow pupil, but these are often replaced as pupils move on.
from one topic to the next. While teachers are aware of the possibilities that apps offer, parents can be more wary.

_We have a lot more evidence of student work. One of the major benefits of these is that they have a camera, a video camera, a microphone, so even with paper-based work that students are doing, teachers can ask students to keep more of a visual log of what they’re doing and how that work is progressing._

Assistant Head Teacher, Cramlington Learning Village

*I tried out for the first time last night this voicemail [app] ... I sat there with a bit of work the [pupils] had done, read through it, recorded a comment and then sent it ... so you can record a voice comment and send it straight to the kids ... by the time I’d finished I already had four [pupils] emailing back saying thanks for that ... That was good. That way in 30 seconds I can do half a side of A4s feedback and guidance without wearing out my hands. It’s a free app called ‘simple voice mail’._

Teacher, Honywood Community Science School

*Part of me wanted to know what apps would be good in advance ... but then they found out a lot of it for themselves and knowing that in advance might have helped me out for a short amount of time but it was actually fun being part of that journey of discovery._

Teacher, Honywood Community Science School

*I do think there are big gaps, which are going to be filled one day, but our children’s education is right now, and those gaps are apparent ... apparently there’s apps for everything nowadays ... but are they appropriate to their learning?*

Parent, Honywood Community Science School

In the new Tablet schools not all teachers had acquired their own Tablet, and mainly relied on pupils to recommend apps to each other. Some of these teachers expressed uncertainty about the number of relevant apps for their subject, and would have liked to become more familiar with this but had not had the time to explore the possibilities before the Tablets were introduced. The apps that pupils in these schools frequently used were mostly ones that had been suggested when Tablets were handed out, such as calculator apps, word processing software and foreign language quizzes and dictionaries.

### 6.2 Schools creating their own content

There is a belief in many schools that traditional publishers are not providing the content that schools now feel they need. Many of the schools involved in the research have therefore made efforts to create their own resources tailored to fit the pedagogical approach of the specific school. Teachers can create resources that can be customised, allowing the teacher to differentiate between learners. Content needs to be interactive and engaging, and, importantly, should allow teachers to edit and update it to keep it relevant and interesting for pupils. Currently all of these elements are felt to be missing in most of the resources offered by traditional publishers. The creation of digital content is, however, a slow process, related to the culture change that the school is undergoing through the introduction of Tablets. It is therefore usually only a small group of teachers, likely to be
identified as the ‘Tablet champions’ in the school, who are creating this content, and who are responsible for driving the development of content forward with the rest of the staff.

So I think the content is becoming considerably better, but it’s all self-generated. So some people are using free apps, some departments use some of the free apps, but on the whole teachers like to create their own content because they know the content, rather than using someone else’s content; it’s much more difficult to teach without your own notes and whatever else.

Deputy Principal, Wallace High School

Teachers have found iBooks useful, and are including videos, images, quizzes and links to make a topic more relevant for pupils. Some teachers have also moved from making podcasts for their students to making ‘screencasts’; these are tutorials that combine audio and interactive video components, using apps such as Explain Everything and Show Me. Other examples of teacher-made content include interactive presentations using apps such as Nearpod and creating quizzes using apps and websites such as Socrative.

There is a sense among teachers that pupils are motivated by the ability to access the information through their Tablets, whatever form the information comes in. As mentioned earlier (see 4.1.3 page 36), in some schools teachers have therefore created QR codes that when scanned lead to PDFs, worksheets, presentations or film relating to a certain topic. The learning material tends to be straightforward, but it is the ability to accesses it through QR codes, sometimes taking them on a ‘treasure hunt’ around the classroom or school, that motivates pupils. Pupils who may have missed a lesson can catch up on what was taught in that lesson, and it is an ideal tool for revision.

Some schools have recently begun to use iTunes U. This platform allows teachers to create courses for their students, which can also be made publicly available. This means that students and pupils can access content within iTunes U created by other schools, and integrate this into their own courses. All the necessary resources and information relating to the topic are hosted within the course. In many cases teachers are collaborating on these courses, and it is believed that such collaboration can reduce the amount of time each teacher has to spend preparing course content. The courses can easily be edited or updated, which adds flexibility for the teacher.

Other schools are choosing to use web-based services, such as Google Apps. Google Apps offer web-based email, calendars and word processing, allowing students and teachers to collaborate and share at any given time. At Cramlington Learning Village teachers and the IT department are increasingly choosing to create web-based resources, to ensure that pupils can access them on any device, and that the resources will not be obsolete should they choose to change to a different device or operating system.
Fig 11 Examples of multi-purpose apps for teachers creating learning material

iBooks

Explain Everything

Nearpod (teacher and student app)

Socrative (student app)

Socrative (teacher app)
The notion of developing web-based educational content could be said to have been prompted by Salman Khan, who in 2006 founded the not-for-profit educational website Khan Academy. The website provides video tutorials on subjects varying from arts to computer science, with a special focus on Maths, Biology, Chemistry and Physics. The tutorials are followed by a test on the subject. The website claims to have 6 million regular users a month. The growth of MOOCs, the ability to study remotely through an online learning model, is clearly an area that holds the potential for schools to develop further.

6.3 Developing critical research skills

The previous chapters have illustrated that carrying out research online is the most common use of Tablets in our research schools. Processing information on the internet requires increasingly sophisticated source discrimination skills. Teachers in our longitudinal schools and in our new schools were observed to be alerting and coaching their pupils to be critical of online content, a research skill that up to now has been reserved for university students at postgraduate level. As illustrated in the last chapter (see 5.3) teachers pointed out the drawbacks of using sources recognised as sometimes unreliable, such as Wikipedia and Yahoo! Answers. Others coached pupils to be aware of signs of credibility such as source references and recognition of sources. Digital literacy is becoming increasingly important, and some teachers argue that their role is now changing from disseminator of information to that of gatekeeper. Less confident teachers, however, feel unsure of how to teach these skills to their students, or in defence may argue that it is not within their remit to do so. This is clearly an area where teachers require support and help, as it is essential that pupils be aware of the importance of making informed judgements on the internet.

Yes we can just get facts secondhand and information, but what am I going to select from that? Why am I going to use that over that? That’s the thing they’ve got to learn and I think by giving them that choice and that platform to do that it’s really good.

Teacher, Honywood Community Science School

When you research online, you get what you want, straight away. With a textbook, you have to look for it.

Year 9 girl, Honywood Community Science School

If you didn’t have an iPad, you’d receive half the information.

Year 11 girl, Honywood Community Science School

Anyone can put garbage on there and they’ll take it as verbatim because it’s on the internet. I think they use Google, but I’ve always taught them Key Stage 2 or Key Stage 3 – I’ve always taught them to really focus on what they’re putting into that search.

Parent, Honywood Community Science School

30 http://www.khanacademy.org/
31 Massive Open Online Courses.
Research skills are considered by schools to be important not only when looking for information, but also when comparing resources. YouTube is an example of a website which some schools have embraced, while others have restricted pupils’ access to the site. While all schools acknowledge that the site holds many useful resources, it is also a source of distraction for pupils. Teachers feel that pupils do not necessarily have the skills to differentiate between useful and less useful content, and guidance is needed.

As illustrated in Chapter 5, ethnographic observation gave more insight into this process. An Art teacher in one of the new schools argued that although there was plenty of material on YouTube, he did not feel that he could let his pupils freely search for videos, as they were likely to come back with content that in his view was inferior to the curriculum he wanted to teach. In a Spanish lesson at a longitudinal school the teacher encouraged pupils to use YouTube to practise their vocabulary and pronunciation, and while pupils were clearly motivated by this, they were easily drawn to videos that were not targeted to their age or level, such as Dora the Explorer and music videos. In a Science lesson at a different longitudinal school the teacher explained that being able to circulate between groups of pupils allowed her constantly to keep an eye on what resources the pupils were accessing and using. She also repeatedly encouraged pupils to stay away from websites such as Wikipedia and Yahoo! Answers. The pupils, however, found this frustrating: although they were aware of the lack of reliability of these websites, the information there was usually easily and quickly understood.

The above examples illustrate how the internet is breaking down the boundaries between types of information. While a teacher would previously have had control over what information a pupil accessed and when, this is no longer possible. It should be pointed out that this is becoming a universal problem, and not necessarily a characteristic of one-to-one Tablet schools, as most children and young people are likely to have regular access to the internet at some point in their lives.

Schools in the research vary in the way in which they control pupils’ access to information. While some impose firewalls to ensure the quality of what pupils are accessing, others focus more on teaching critical thinking and research skills, but accept that this is a process and that many will struggle with it. The degree of freedom teachers give pupils to find resources, websites and apps has an impact on how much knowledge about digital resources the teacher needs to have. At Honywood School, for example, the teachers have a particular focus on pupils taking charge of their own learning, and this was one of the reasons why the leadership felt that teachers did not have to be supplied with Tablets for their own use and planning.

Part of the process for any school that seeks to increase pupils’ access to technology will need to include a critical reflection on how access to content is positioned, and, importantly, will need to prepare teachers for how to implement this in the classroom. Teachers will need to reflect on the degree of control they are prepared to relinquish, and the way in which they can effectively support pupils in their learning through the content they are able to access.
6.4 Developing skills in effectively presenting content

It can be argued that critically differentiating content and processing information is the first step in Tablet learning. Teachers in many of these schools are also trying to help their pupils develop the skills related to presenting and articulating their learning. Presenting learning can take several different forms. Many pupils enjoy creating presentations using text, images, videos and music, or organising their thoughts in a mind map. Filming each other presenting a topic, often in a dramatised way, is another popular option, especially for children who find it easier to express themselves orally than on paper. As an example of this, a Science teacher explained that students enjoyed filming, but had struggled to understand what presenting their learning meant; many had simply read aloud to camera from the first result they found on Google. To share learning and critically assess the work of peers was an important skill to learn. In lessons observed in the research it was clear that while many Year 7 pupils had understood this process, some still struggled, and teachers needed to support these pupils, following their progress closely.

If they want to do a film, that’s fantastic, but I don’t want them to just read something out. So I am trying to get them to do it in different ways.

Teacher, Honywood Community Science School

This acts as the learning resource ... It may well be that I, rather than produce a written piece, I might produce a presentation, I might produce a movie, you know, we’ve got to broaden what our expected outcomes are and that fits with our model.

Director, Essa Academy

Many teachers feel they have a responsibility to equip their pupils with digital citizenship skills, which includes using images and content online in a responsible way, and understanding the current copyright regulations that exist online.

Assistant Head Teacher, Honywood Community Science School

6.5 Cost and long-term implications for education

Most pupils and teachers in schools using Tablets make use of free apps. The longitudinal schools using iPads are still using a set of core iOS apps that are purchased and installed on each device at the beginning of the school year. These include Keynote, Pages, Numbers, iMovie and Annotate. Beyond these, teachers tend to recommend free apps only. Cramlington Learning Village also prescribes only free apps when the devices are handed out to pupils. Teachers can recommend paid-for apps, but rarely find it necessary to do so. In the new Tablet schools, teachers suggested free apps, but pupils were able to purchase apps themselves.

Pupils in the longitudinal schools feel that free apps are often inferior to the paid-for version of the same app, but they rarely upgraded. They are generally not willing to pay for educational apps, and when an app requires payment students have found ways around this by using the app on multiple Tablets without having to pay for this more than once.

For instance Popplet – there’s a version where you can’t really save it, which is Popplet lite, and then there’s a paid version.

Year 7 boy, Honywood Community Science School
We only go for free apps. If there’s anything that costs money, we have found a couple of apps that might be useful for students, we will put it up on a section on our Frog VLE ... where we have apps that we want students to download. We’ll have them on our mobile VLE, but we won’t plan anything that requires a paid app.

Assistant Head Teacher, Cramlington Learning Village.

School libraries have recognised the potential that digital devices hold in terms of giving children access to books. Many pupils in our research schools prefer reading educational material on a Tablet to a book, and find the add-on functions such as dictionaries and search bars helpful. The opportunity to embed interactive material, quizzes, tests, Keynote talks and videos relating to the subject within the book is enormous, and is beginning to be recognised by the digital industry, often based on gaming software. Once again, schools feel that the publishing industry is not keeping up with developments, and are frustrated by the challenges they must face when they want to acquire digital books. One concern highlighted is that digital publishers have different frameworks in place for how long a copy of an e-book will be available before it will need to be replaced. In some cases the book will be deleted after a certain number of downloads from the library; in other cases it will automatically be deleted after a fixed time. Another challenge is that digital books can only be borrowed by one pupil at a time, and cannot be shared, thereby removing the potential cost benefits to schools. Libraries must also pay for an account with a digital library, which means that digital libraries can amount to a significant additional cost for already stretched library budgets.

The previous chapter discussed the culture change that is required in order to experience the full impact of technology on teaching and learning within a school. One of the necessary steps recognised in several of our research schools is to shift content and communication onto digital devices. School planners, for example, are an important part of school life. Schools that have stopped using physical planners and moved the content online have not only saved significant amounts of money, but have also experienced an increase in the acceptance of technology in the day-to-day management of the school.

The first thing that we ever got rid of was planners. We used to buy [them], it was someone’s job in the old school … to actually get planners, put a periodic table in, put a page of English, all that sort of stuff, a small cost. But we’re beginning to look at technology as an investment.

Director, Essa Academy

[During the assembly] with the class tutor, the class tutor will have collected in all the homework diaries to check that they’re signed by the parent, that parents see what’s going on, that it’s being recorded. What we’re finding now is that with the device being digital some pupils are using the calendar, some pupils are using something called inClass, some are using iStudiez Pro, so there’s an array of different applications being used, it’s much more difficult for staff to monitor that. So we’re looking at that. We certainly don’t want to go back to having paper diaries, but it’s just about having a way that we can monitor homework consistently and record that, which would be easier.

Deputy Principal, Wallace High School

[Student planners], we should get them all on the Tablets, then they’ve got access to their calendar, they can share it with you, they can record their homework where they can also hand it in from where they make the record, it’ll come up with reminders for them and their parents will be able to see what they’ve recorded. When they make their notes they’re not
limited to this tiny little box, they can make it as big as they want and write as much they need to, all of that information that we’re spending a fortune printing in the back of planners on rules, protocols, uniforms, things like that, can be just an e-pages on the Tablet, and there are so many arguments for it.

Assistant Head Teacher, Cramlington Learning Village

6.6 The benefits of content and apps to schools and to pupils

While there are still many opportunities for the development of educational content, schools are beginning to take this task in hand by creating their own content. The process of collaboration within school and with other schools is an important one to enable the sharing of the best apps and content. The cost of apps remains an issue because schools cannot always budget precisely for this, and the publishing industry needs to be aware of this. A key skill to teach pupils is the ability to discriminate between good and untrustworthy information and content. Content that enables pupils to log their work in one place allows them to access this for revision, helps their teacher to monitor progress and assists pupils in learning good organisational skills.

With the iPad, there’s different ways to learn – you can do it on video, or iMovie, or do it in your book, or on the iPad; you have loads of different choices.

Year 7 boy, Honywood Community Science School

Because it’s a new way to learn and it gives independence to us. There are so many different resources on iPad, for example dictionary, languages, apps and games for learning. It’s also good if you struggle with handwriting and you can pick up good keyboard skills, after all most children of today will be using a keyboard in their jobs.

Year 7 boy, Honywood Community Science School

Learners at Honywood summed up the importance of content and apps on their Tablets when asked an open-ended question in the online research:32 ‘How would you feel if you did not have your iPad at home?’

I think that it would be difficult for me as I don’t have a PC or a laptop at home and for my homework I use my iPad to look up things or research things about people or if I’m set a topic.

Year 9 boy, Honywood Community Science School

I feel I would not be able to look at all the resources there are to help me ... There are lots of educational apps on the store and on a laptop or computer you can’t download these. Plus, the iPad loads much quicker than a computer so you can get the job done.

Year 8 girl, Honywood Community Science School

In our house we only have one working laptop so I would struggle if I had to do a research task. Also teachers email us our Independent Study so I would struggle to access [this]. I would prefer to have the iPad at home to make completing the Independent Study easier and quicker and I like having it at home because I sometimes FaceTime someone to complete a piece of homework for a lesson.

Year 7 girl, Honywood Community Science School

32 See 5.7 for an explanation of the online research.
# Appendix 1: Research Methodology

## 1. The sample – Stage 2

<table>
<thead>
<tr>
<th>Cohort 1</th>
<th>Table Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Tablet schools 2011–13</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Honywood Community Science School, Essex</td>
</tr>
<tr>
<td>2</td>
<td>Wallace High School, Belfast</td>
</tr>
<tr>
<td>3</td>
<td>Longfield Academy, Kent</td>
</tr>
<tr>
<td>4</td>
<td>Cramlington Learning Village, Northumberland</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cohort 2</th>
<th>Table Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non iPad T4S supplied schools Sept. 2012 – July 2013</strong></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Greenford High School, Ealing, London</td>
</tr>
<tr>
<td>6</td>
<td>Alec Hunter Academy, Braintree, Essex</td>
</tr>
<tr>
<td>7</td>
<td>Dixons City Academy, Bradford</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cohort 3</th>
<th>Table Deployment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New iPad schools Jan.–March 2013</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>UCL Academy, Swiss Cottage, London</td>
</tr>
<tr>
<td>9</td>
<td>Essa Academy, Bolton</td>
</tr>
</tbody>
</table>

Essa introduced iPods to all pupils in 2009 – switched to iPad 3 November 2012.
2. Method – qualitative research

In total, 18 focus groups were carried out with pupils, parents and teachers at Honywood Community Science School, Essex; Greenford High School, Ealing; Dixons City Academy, Bradford. Twenty-nine ethnographic research sessions, observing lessons in which Tablet teaching took place, were carried out in seven schools. In-depth interviews were carried out with leadership in seven schools. The full research schedule is listed below.

<table>
<thead>
<tr>
<th>Focus Group / Ethnography</th>
<th>Date / time</th>
<th>Moderator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honywood, 10 focus groups</td>
<td>21/22 January 2013</td>
<td>Martyn Richards</td>
</tr>
<tr>
<td>6 x pupil, 3 x parent, 1 x teacher</td>
<td></td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Greenford, 4 focus groups</td>
<td>6/7/8 March 2013</td>
<td>Martyn Richards</td>
</tr>
<tr>
<td>2 x pupil, 1 x parent, 1 x teacher</td>
<td></td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Dixons, 4 focus groups</td>
<td>11/12 March 2013</td>
<td>Martyn Richards</td>
</tr>
<tr>
<td>2 x pupil, 1 x parent, 1 x teacher</td>
<td></td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Honywood, ethnography sessions x 3 and leadership interviews</td>
<td>21/22 January 2013</td>
<td>Martyn Richards</td>
</tr>
<tr>
<td>Wallace, ethnography sessions x 3 and leadership interviews</td>
<td>6 February 2013</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Longfield, ethnography sessions x 3 and leadership interviews</td>
<td>4 February 2013</td>
<td>Abby Jones</td>
</tr>
<tr>
<td>11 March 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cramlington, ethnography sessions x 2 and leadership interviews</td>
<td>12 February 2013</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Essa, ethnography sessions x 2 and leadership interviews</td>
<td>5 March 2013</td>
<td>Laura McClarty</td>
</tr>
<tr>
<td>Greenford, ethnography sessions x 8 and leadership interviews</td>
<td>6/7/8 March 2013</td>
<td>Martyn Richards</td>
</tr>
<tr>
<td>11/12 March 2013</td>
<td></td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Dixons, Ethnography x 8</td>
<td></td>
<td>Martyn Richards</td>
</tr>
</tbody>
</table>
### Meetings

<table>
<thead>
<tr>
<th>Meetings</th>
<th>Date</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent information evening at Essa</td>
<td>4 December 2012</td>
<td>Laura McLarty</td>
</tr>
<tr>
<td>Teacher and parent information evenings at Greenford</td>
<td>11/12 December 2012</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Meeting with Principal and leadership team, Dixons Academy</td>
<td>18 December 2012</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Teacher information evening at Dixons</td>
<td>8 January 2013</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Parent information evening at Dixons</td>
<td>4 February 2013</td>
<td>Laura McLarty</td>
</tr>
<tr>
<td>Meeting with Group Manager from Microsoft and leadership team at Alec Hunter</td>
<td>27 February 2013</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Meeting with Principal and observation, Longfield Years 8 and 12</td>
<td>23 March 2013</td>
<td>Barbie Clarke</td>
</tr>
<tr>
<td>Parent information evening at Greenford</td>
<td>26 March 2013</td>
<td>Siv Svanaes</td>
</tr>
<tr>
<td>Meeting with Assistant Head, UCL</td>
<td>16 April 2013</td>
<td>Barbie Clarke</td>
</tr>
<tr>
<td>T4S event at Greenford</td>
<td>18 April 2013</td>
<td>Barbie Clarke</td>
</tr>
<tr>
<td>Parent information evening at Alec Hunter</td>
<td>23 April 2013</td>
<td>Martyn Richards</td>
</tr>
<tr>
<td>Training 32 'Honywood researchers'</td>
<td>24 April 2013</td>
<td>Barbie Clarke</td>
</tr>
</tbody>
</table>

All qualitative data including in-depth interviews, focus groups and ethnographic observation (including film) was analysed using software NVivo 10 and using the research objectives and questions as a framework. Analysis included peer review from the research team and the pedagogy group.

### 3. Method – quantitative research

Self-completion paper questionnaires were given to half of Year 7 parents, teachers and pupils at the point of Tablet handout in the three schools that were given Tablets in Year 7. This occurred in the spring term at Greenford High School, Ealing, and Dixons City Academy, Bradford for half of Year 7 pupils, and in the summer term at Alec Hunter School. In the summer term the other half of Year 7
pupils were given the Tablets at Greenford High School, Ealing, and Dixons City Academy, Bradford. Alec Hunter divided the term into three cohorts, so that each pupil in Year 7 had a period of using the Tablet in the summer term. At the end of the summer term all Year 7 parents, teachers and pupils in each of the three schools were again given a self-completion paper questionnaire to complete to assess their experience of using the Tablet. Results will be analysed and reported in the October report.

Thirty-two pupils in Years 7, 8, 9 and 10 were trained in research methodology by Dr Barbie Clarke at Honywood School in April. Each pupil held a peer-to-peer focus group with two or three other students. In addition a questionnaire was posted online to all pupils in Years 7, 8, 9 and 10 each day for one week. A total of 1,343 responses were received. Top-line results are reported from the online questionnaire in this report (see 5.7). Full results from the qualitative and the quantitative research will be reported in the October report.

4. Current research: April – September 2013 (Stage 3)

Twenty-one secondary schools are involved in our current research, Stage 3, and research results will be reported in October.

The 21 schools have each adopted one-to-one Tablet schemes. A detailed quantitative questionnaire has been sent to each school, with questions focusing on the mechanics of introducing Tablets to the school, as well as details of the school in terms of size and pupil numbers. In addition, researchers have visited 19 schools to date, and case studies are being compiled. In one school, Honywood, the results of focus groups and an online diary completed by pupils in the school over one week are being fully analysed.

Questionnaires were sent to the three ‘new schools’ taking part in research during the spring and summer terms (Greenford High School, Ealing; Dixons City Academy, Bradford; Alec Hunter Academy, Braintree). Questionnaires were completed by pupils, teachers and parents before Tablets were introduced, and questionnaires were sent out again at the end of the summer term once the Tablets had been used in class. Results of these questionnaires will be analysed and findings will be discussed in the October report.

In addition, the literature review carried out at Stage 1 will be updated to find out the current global adoption of one-to-one Tablet schools.

5. Future research: September 2013 – September 2014

Family Kids and Youth will continue to monitor secondary schools that have adopted one-to-one Tablet schemes, as well as primary schools. Seven additional schools will introduce the Nexus Tablet in the autumn of 2013, and research will take place to monitor progress. The research will continue to collect quantitative data from the longitudinal schools in our research, and to monitor the introduction of one-to-one Tablets globally.
Appendix 2: 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 2) 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 ICT)
  ▪ 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)

➢ **Content** (delivering functional curriculum content via the Tablet)
  ▪ How do teachers use, create and adapt content for their teaching?
  ▪ Gaps and best examples
  ▪ How teachers adapt content to pedagogical model

➢ **Schools currently using one-to-one Tablets** (continuing to monitor ‘longitudinal’ schools)
  ▪ An assessment of the six state-funded schools identified in the UK that are currently using one-to-one Tablets in school
  ▪ 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 regarding 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 and pupils
  ▪ Establishing best practice, challenges and need state of staff, pupils and parents
Appendix 3: Examples of Pupil/Parent Contract and Teacher Contract – Greenford High School

Student’s NAME, Tutor group

Tablet agreement

This tablet complies with The Acceptable User Policy that you will sign when your child enters the school and it can be accessed and viewed via the school website, www.greenford.ealing.sch.uk, in the “Policies” section at the bottom of the Homepage. This is a reminder of the Student Acceptable Use Agreement e-Safety Rules:

I will only use the school ICT systems, including the internet, email, VLE, tablets, digital video, mobile technologies, etc., for school purposes. I will not download or install software on school technologies [I understand that I am allowed to install my choice of appropriate apps to the tablet for the purposes of the project]. I will only log on to the school network/VLE with my own user name and password. I will follow the schools ICT security system and not reveal my passwords to anyone and change them regularly. I will not use anyone else’s username and password. I will only use my school email address. I will make sure that all ICT communications with pupils, teachers or others is responsible and sensible. I will be responsible for my behaviour when using the Internet and related technologies. This includes resources I access and the language I use. I understand that bullying is unacceptable, and will not use technology to bully, harass, threaten or upset anyone, at school or outside. I will not deliberately browse, download, upload or forward material that could be considered offensive or illegal. If I accidentally come across any such material I will report it immediately to my teacher. I will not give out any personal information such as name, phone number or address. I will not arrange to meet someone unless this is part of a school project approved by my teacher. Images of pupils and/or staff will only be taken, stored and used for school purposes in line with school policy and not be distributed outside the school network without the permission of the Headteacher. I will ensure that my online activity or use of mobile technology, both in school and outside school, will not cause my school, the staff, pupils or others distress or bring into disrepute. I will respect the privacy and ownership of others’ work online at all times. I will not attempt to bypass the internet filtering system. I understand that all my use of the Internet and other related technologies can be monitored and logged and can be made available to my teachers. I understand that these rules are designed to keep me safe and that if they are not followed, school sanctions will be applied and my parent/carer may be contacted. I understand access to the school ICT Network and services will cease on my final day of school.

I agree to take full responsibility for the tablet device issued to me for my time as a student at GHS. I understand that I may be asked to pay an amount of money to facilitate the replacement of the device in the case of loss or damage, or will have insurance for the device. I will ensure the return of the fully functioning tablet, with cover and charger when requested by the school. I understand the tablet remains the property of the school at all times.

Student Signature: ........................................................................................................

Parent/Carer Name: ...................................................................................................

Parent/Carer Signature: .................................................................................................. Date: ......................................
GREENFORD HIGH SCHOOL STAFF TABLET LOAN AGREEMENT

Year 7 Tablet project

Year 7 is currently taking part in a research project and although the research is based on how Year 7 students use the device, you have been nominated as a person to whom a tablet should be loaned for a determined period of time of the project in order for you to better partake in the project and assist delivery of the curriculum and support learning and teaching.

Please read, then sign and date the agreement in the box below to indicate your acceptance of the terms herein:

While the tablet is in your care the following items should be noted:

1. The tablet device remains the property of Greenford High School and is only for the use of the member of staff it is issued to. It must be returned to the school on request.
2. Insurance cover provides protection from the standard risks but excludes accident, damage and theft from an un-attended car. If the tablet is stolen from an un-attended car, you will be responsible for its replacement.
3. You are free to use the device as you wish including the choice and download of software and Apps, however the appropriateness must be considered (please refer to general staff AUP); it should not compromise professionalism nor cause risk to the device.
4. Should any faults occur, the school's ICT staff must be advised as soon as possible so that they may undertake any necessary repairs. Under no circumstances should staff attempt to fix suspected hardware faults.
5. Any charges incurred by staff accessing the internet out of school are not chargeable to the school nor are the purchase of Apps.
6. This tablet must be kept secure, logged off when not in use, and remain password protected at all times, whether in school, or when taken off the school premises.
7. The terms of Greenford High School's E-Safety Policy and Acceptable User Agreement extend to use of this tablet and must be adhered to – this includes appropriate use, password and data protection, technology misuse, recording and storing of images/videos, communicating via social networks and health and safety. Violation of these terms is likely to result in loss of access and disciplinary action in accordance with Greenford High School's Disciplinary Procedures.

Tablet Make: 
Device name:
Serial Number: 001
Authorised by:
(signature)................................................. Date ........................................

Name of Member of Staff:
I agree to follow this agreement and to support the safe use of ICT throughout the school.
Signature ................................................................. Date ........................................
Department .................................................................

Agreement return received by: (signature)........................................ Date ........................................
Appendix 4: 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\(^{33}\) 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 supervises 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. 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.

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\(^{33}\) 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 Richards, Qualitative Researcher

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. Martyn 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 centred on the challenging experiences of asylum seekers and refugees. Before joining Family Kids and Youth, Susan had a career in social research, producing robust, 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.

Abby Jones, Qualitative Researcher

Abby has been a qualitative researcher for over 15 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.
Beth Hitchenor, Research Analyst

Beth is an expert in children and adolescents and joined Family Kids and Youth having worked at Kids Connections as an account director for five years, where she worked on major brands including the BBC, Unilever and Merlin. Beth formerly worked at the NSPCC as a marketing manager and is a qualified ChildLine counsellor. She achieved a First Class Honours degree in Advertising and Marketing, for which she received ‘Best Overall Performance Award’. Beth had her first baby last year, and has done much of the qualitative analysis on the Stage 2 research.

Debby Konigsberg, Qualitative Researcher

Debby has been a researcher for over 20 years, has worked in both the commercial and social research sector, and has carried out several studies for government. Her experience spans work with children, young people and their parents and carers. Debby trained originally as a primary school teacher and to keep her practice up still works as a supply teacher in schools. Debbie carried out focus groups in schools.

Laura McLarty, Qualitative Researcher

Laura has over 12 years’ experience in social and commercial research, has a Masters in Psychology and is currently undertaking a PhD at the University of Leeds. She previously worked at Dubit Limited, where as head of research she worked on projects with young people for government and commercial sectors. Laura carried out leadership interviews and ethnographic observations.

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.