

“Exploiting ICT to improve Parental Engagement”

Value driven improvement and efficiency

By Simon Shaw, Edable, February 2011

Summary

Investment in new technology is expensive and “technology led” change does not always lead to more effective practice. In fact it is difficult to show measurable gain in performance or a quantifiable return on the investment. However, once key technology enablers are in place - such as sufficient levels of school and home access and familiarity with the internet and devices - then significant benefit and efficiencies can be gained by schools utilising technology to improve educational outcomes.

The rapid adoption of ICT to improve communication between parents and schools in England is used as an illustrative example of a “value proposition”. The example shows how the availability of technology and a campaign to communicate a set of expectations and educational benefits have led to step changes to both parental engagement and efficiency measures.

More needs to be done to research and disseminate the “value drivers” – such as parental engagement – that can lead to better exploitation of technology when “tipping points” in the availability and use of ICT are reached. Clearly communicated expectations and exemplar practice can provide a “nudge” that enables schools to overcome perceived barriers and lead to improved practice, changed behaviours, greater efficiency and ultimately enhanced children’s learning.

Background of investment into ICT in schools

ICT is an expensive resource for schools to invest in and maintain. Where ICT has been embedded across learning, teaching and management then capital costs and the recurring costs to sustain the infrastructure are likely to be the second biggest area of school spending after staffing.

Although a number of studies have been made internationally that can provide an insight into the nature of this investment, this paper draws on data representing a cross section of schools in England:

A secondary analysis of the *Harnessing Technology Schools Survey (HTSS) 2010* (Becta; Infogroup; ORC International, 2010) indicates that the proportion of overall school spending on ICT is, on average around, 6% . However, around a third of headteachers do not know what percentage of their budget is spent on ICT.

Studies of total cost of ownership (TCO) “*Managing ICT costs in schools*” report (Becta, 2005) showed that a striking feature of ICT spend in the English educational system is the great diversity in spending priorities between schools (figure 1). A lack of common approaches to vision, priorities, investment and procurement, inevitably results in different implementations and platforms in use in each school.

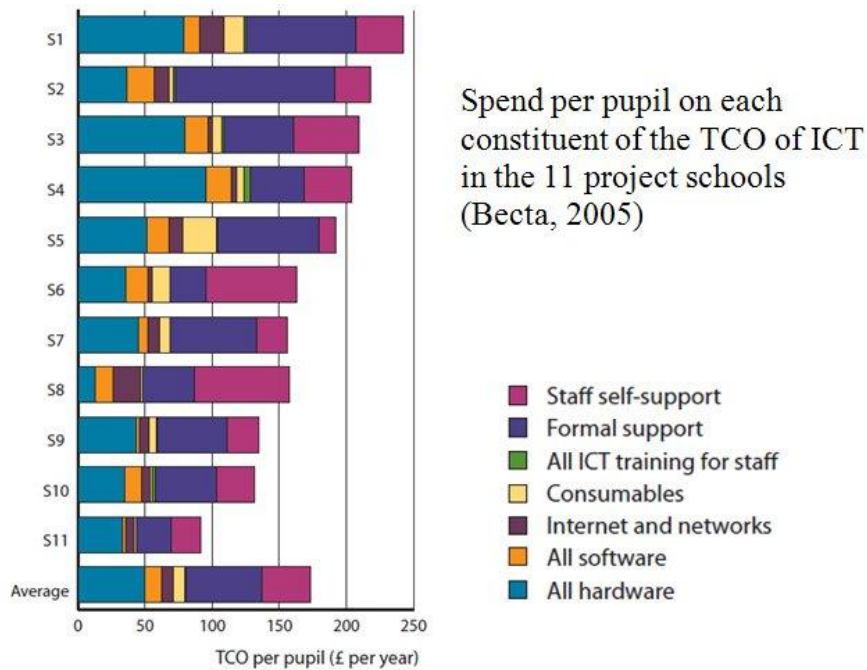


Figure 1

The HTSS 2010 report gives an insight into the range of educational objectives and benefits that schools are trying to achieve through their investment in ICT (figure 2). It is clear that there is no common “high priority” for schools over the next 3 years – reinforcing the conclusion that schools are at different stages of development and capability for different applications of ICT across learning, teaching and management.

High priority over the next 3 years

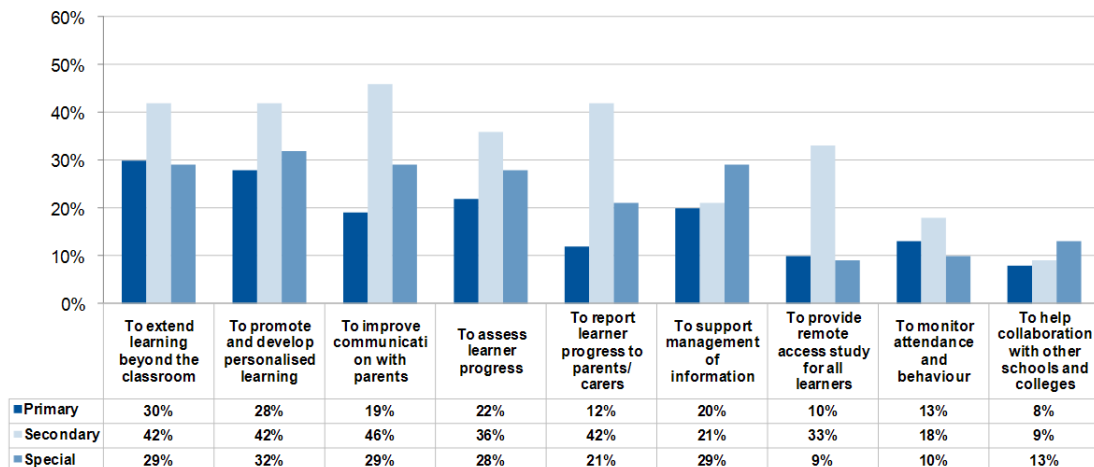


Figure 2

The diversity of school ICT capability and adoption presents challenges to coordinating and implementing new national policies, strategies and expectations. These challenges are heightened because 21st century improvement initiatives increasingly depend on information flow and technology capability to achieve improved outcomes and efficiencies.

Initiatives which depend on technology can be characterised in two ways:

- a) “technology led” - requiring significant investment and implementation of new technology and functionality, and
- b) “value driven” - exploiting existing technology and usability to add value through working in new ways.

Obviously, these characterisations are extremes and well planned initiatives will consist of strands of both technology led implementation and value driven embedding of effective use.

a) Technology led initiatives in education

While the costs of implementing technology can be established through knowledge of the funding used or from TCO studies, return on investment (ROI) is much harder to measure and quantify in terms of either monetary value or educational benefit.

The ICT Test Bed project (2002-06) was initiated by the Department for Education and Skills (DfES) to explore how ICT could be used to support the Government’s wider agenda for education reform. The £34 million pound project resulted in changes such as increased interaction between teachers and learners and improved sharing of information with parents. However, only in one area – KS2 English and Mathematics – was there any measurable increase in performance (Manchester Metropolitan University, Nottingham Trent University, 2007).

Examples such as this may explain why educational projects that depend on high levels of technology implementation and funding are often perceived as too costly or even a failure.

b) Value driven initiatives in education

Technology enabled initiatives that are led by “value drivers” are harder to identify. Value led transformation is possible where the enabling technology is already in place with established levels of familiarity and usability (e.g. receiving text messages on mobile devices). The people involved have to believe in the values and benefits proposed and must have the will and purpose to make step changes to their professional practice and behaviours. Therefore, transformation of educational practice, process and systems are not always easy to achieve if there are real or perceived barriers to the proposed changes.

In England the move by all schools towards “online reporting” to parents provides an example of where an ambitious programme to utilise and transform the use of technology has been driven by values rather than led by technology itself. The online reporting programme was driven by a set of principles agreed by government ministers, Becta and (most significantly) teachers’ and headteachers’ unions. A simple expression of expectation was used that “All secondary schools should report online to parents by September 2010 and all primary schools by September 2012”. A cohort of “online reporting advocate” schools was used to exemplify and share practice nationally.

There was no centralised spend on IT systems to achieve “online reporting” or improved information sharing capability with parents in education. However, despite the lack of funding or new technology systems, schools embraced the “value drivers” and principles of online reporting, made use of appropriate technologies available to them and managed at a professional level issues regarding safeguarding children and data protection.

[For comparisons sake an estimated £12.7 billion was spent on reforming how information is used by the National Health Service (Public Accounts Committee, 2009). The NHS approach was “technology led” through centralisation, standardisation and implementation of IT systems. The programme is widely regarded as a costly failure and was held back due to lack of support from medical professionals and insufficient consultation about the processes being supported and the implications of confidentiality and data protection on system use.]

The parental engagement “value proposition”

Arguably, any change to existing processes and practices, to achieve a realisation of benefits, requires “selling” a “value proposition” to adopters. At a human level people will try and balance the additional time, effort and money required to achieve a change against their own perceived value of the outcomes within the proposition.

In the case of online reporting the “value proposition” was a very clear set of educational truths about the impact of parental engagement on learning outcomes. The international evidence is overwhelming, showing that improved parental engagement in their children’s learning is a critical factor in achieving educational outcomes – a few examples are given below:

“The most important finding from the point of view of this review is that parental involvement in the form of ‘at-home good parenting’ has a significant positive effect on children’s achievement and adjustment even after all other factors shaping attainment have been taken out of the equation. In the primary age range the impact caused by different levels of parental involvement is much bigger than differences associated with variations in the quality of schools. The scale of the impact is evident across all social classes and all ethnic groups.”

(Desforges & Abouchar, 2003)

“... there is a consistent relationship between increasing parental engagement (particularly of hard to reach parents) and improved attendance, behaviour and student achievement.”

“Parents’ influence on student learning outcomes is greater than the school influence. This is particularly true of ‘hard to reach parents’

(Harris & Goodall, 2007)

Robust academic research on the impact that improved parental engagement can have upon children’s learning is backed up by countless anecdotal evidence and stories. Research by Becta into the views and attitudes of parents, children and teachers also reveals some interesting views:

- 82% of parents admit they don’t know as much about their child’s day at school as they want to.
- Just 16% of children proactively share any information with their parents about their school day,.
- 37% of children say they find it quite or very difficult to speak to their parents about their education.
- 43% of parents find it either difficult or very difficult to extract information from their child about their day at school.

“‘Oh nothing much’ report. The value of the after-school conversation” (Byron, 2009)

- 83% of parents struggle to support their child with homework.

- Over half of children are confused by their parents when they try to help with school work.
- 81% of parents welcome guidance on how to support their child's learning better.

"I'm stuck - can you help me?" (Becta, 2010)

Longitudinal studies carried out by the Department for Education in England have revealed dramatic trends in the attitudes of parents to parents evenings (figure 3) that mirrors changes in the availability of technology and trends in other sectors - such as the usage email against postal services by business.

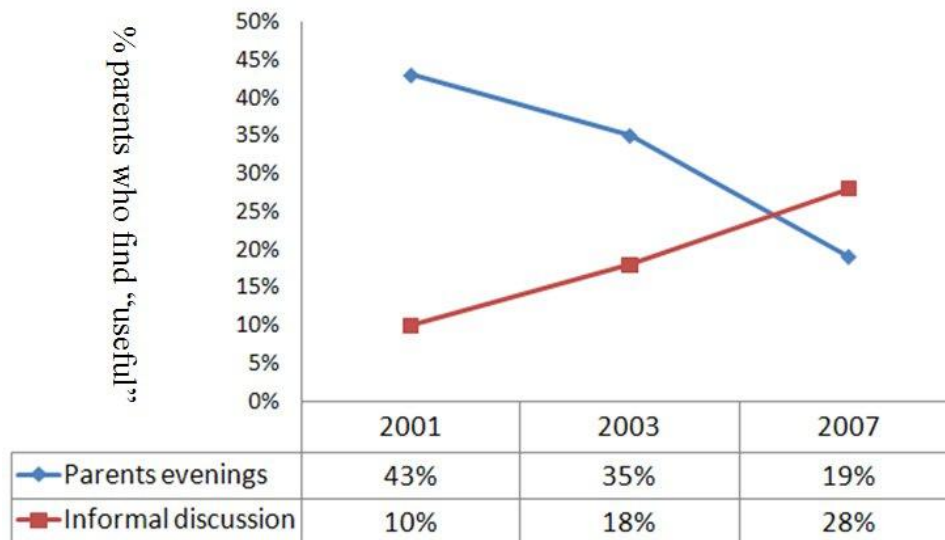


Figure 3

"In terms of future communication strategies, informal discussions are now seen as the most useful method of communication. Methods other than face-to-face contact (e.g. e-mail) were more popular with parents who are currently less involved, so these methods could be focused on such parents."

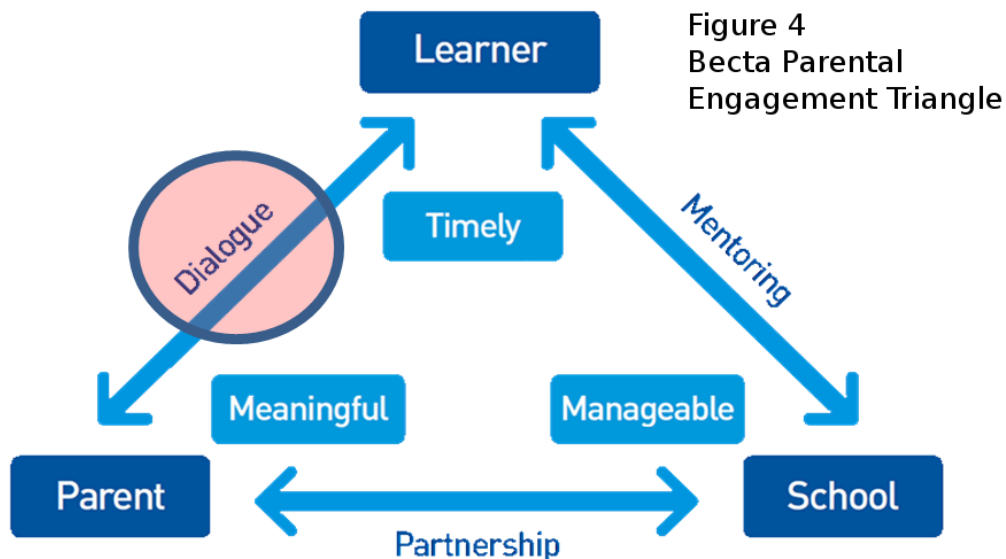
(Peters, Seeds, Goldstein, & Coleman, 2007)

This highlights, and backs up the claims made by many schools, that technology has allowed them to build a partnership with those "harder to engage" parents who may otherwise be disaffected or too busy to have attended or gained from parents evenings.

The fact that parents are increasingly aware that information supplied by schools can help them show an interest, get involved and directly support their children's development, is creating parental demand for better communication and partnership.

The availability of technology means that schools should be able to inform parents with “timely” information, for example, recognising progress and achievement when it happens rather than at the end of a reporting period. Having a range of communication channels available (web/portal, learning platform, telephone, email and text messaging) means that schools can manage the communication more effectively and efficiently to provide meaningful and useful information (e.g. what is being learnt and how can parents support this best at home).

A simple triangle (figure 4) was used by Becta to represent the relationship between parents, learners and schools.



This diagram can be used to emphasise some important points that emerge from the evidence base.

1. **Dialogue** - Irrespective of context and deprivation indexes the single thing that can makes the greatest difference to children’s learning is dialogue between parents and child – typically showing an interest or role modelling learning.
2. **Partnership** - Communications between home and school, such those afforded by online reporting, are vital in supporting a positive partnership between parents and educators – but should be considered as the means to the end of better dialogue.
3. **Mentoring** - Parents are not teachers, it is schools’ professional role to mentor learners and provide education in a structured and guided context –uninformed parental support for learning can have a negative impact.

The evidence and argument provides a compelling “value driver” for the proposition to schools that they should invest in innovation and change to make more effective use of their existing technology capability. Schools should “capitalise” on their existing investment by enhancing **timely** and **meaningful** communication between home and school using a range of technology to make this **manageable** e.g. telephone, mobiles, email, SMS texting, online access to websites, learning platforms and MIS portals.

Communicating parental engagement expectations to schools

In June 2008 a joint letter entitled “Exploiting ICT to improve parental engagement, including online reporting” was sent to all schools in England from the Schools Minister, the CEO of Becta, all union groups represented on the governments Workforce Agreement Monitoring Group (WAMG) and the Implementation Review Unit (a body of school head teachers which advises the government of unnecessary bureaucracy). This letter clarified the expectation already made by government that secondary schools should be reporting online to parents by September 2010 and primary schools by September 2012. The letter was based upon the rationale and principles that had been jointly discussed and agreed:

“The online reporting rationale

Is to improve the quality of dialogue between schools, learners and parents to support the immediate, emerging and developing needs of learners.

The online reporting principles:

- *Extending what is already good practice*
- *Making best use of what is already in place and available*
- *Efficient and effective practice (enter once, use many times)*
- *Not a duplication or replacement of the annual report*
- *Developing sustainable approaches and processes for reporting:
Pupil progress, behaviour, attainment, SEN and attendance”*

Although no additional money was given to schools to invest in infrastructure, guidance was provided as part of existing Harnessing Technology Grant funding to make parental engagement one of the six described priorities for school capital investment into ICT:

“Parental reporting: online access to reporting systems and information. Schools should provide timely, meaningful and manageable information to parents through appropriate and secure use of management information systems, learning platforms, managed learning environments, messaging services and other suitable online reporting systems.” (Becta, 2009)

Funding, support and tools for “value driven” change

It should be noted that while strong government expectations existed about online reporting there was no centralised definition of what data should be reported to parents or what technologies should be deployed. In particular there was no suggestion of centralised system to replace local school systems. The strategy for information sharing with parents by schools was to make more effective use of the local systems, building on existing professional good practice and local decision making to look after security and confidentiality issues.

(This makes a stark contrast to the vision for information sharing in the National Health Service - *“The vision is for patients' records to be electronically available to any GP or hospital in England, thereby replacing local NHS computer systems”*.)

However, the move towards improved parental engagement through online reporting for many schools requires radical transformation to the practices in place and re-prioritising of how development time and investment in technology is used to support these changes.

Becta worked with a core group of 30 advocate schools, who had themselves overcome challenges in order to make progress, to produce a self-review maturity model to support schools nationally in identifying their strengths and prioritising areas of development.

A wide range of issues were identified and grouped into four strands for considering school improvement:

- A) Recording and reporting** – many schools have not reviewed their approach to what is assessed, recorded and reported with parental engagement in mind, the information that might be of most meaning and value to parents is often not recorded electronically or available to communication systems.
- B) Parental dialogue and expectations** – many parents are not aware of the difference they make, schools can regard parents as hard to reach and don't make provision to keep parents informed, parents need to be consulted to find their technology and communication preferences.
- C) Workforce involvement** – teachers can find parents challenging, threatening or simply indifferent to learning outcomes, without using ICT effectively parental communications can be burdensome, training is required to make sure sensitive information is recorded appropriately.
- D) Exploiting Technology** – schools may not be aware of the extent to which families have access to the internet at home, how technology such as text messaging can be automated, or how advances in interoperability can provide better data where it is needed and create innovative ways of improving communication with parents.

The resulting tool kit containing the maturity model, advice and guidance and video exemplars of practice and impact was sent to every school in England. A national programme of conferences and workshops for school leaders was also put in place to support schools in understanding the value proposition for online reporting. These activities were led by school advocates speaking as practitioners. This programme of activities and the involvement of these practicing school leaders was the only element of the initiative that was funded centrally.

The impact of the “value driven” approach to parental engagement

As with many educational initiatives there were no specific measurable, quantifiable educational performance outcomes to the online reporting initiative. However, parental engagement with their children's learning is proven to have a positive impact on educational outcomes, therefore improvements in parental engagement can act as a proxy measures for impact. Likewise where a school can demonstrate that ICT is being used to improve the manageability, timeliness and quality of communication with parents then this can be correlated to improved outcomes. The intention of the approach was therefore to make a significant impact on educational outcomes by winning hearts and minds to ensure that all schools were prioritising the use ICT to improve parental engagement.

The HTSS 2009 and 2010 surveys identified a dramatic shift in prioritisation for schools (figure 5). Dramatic because there was no change to government legislation or statutory targets that required schools to make online reporting a priority, just an expectation that they should be reporting online to parents and a campaign to promote the expectation and exemplify good practice.

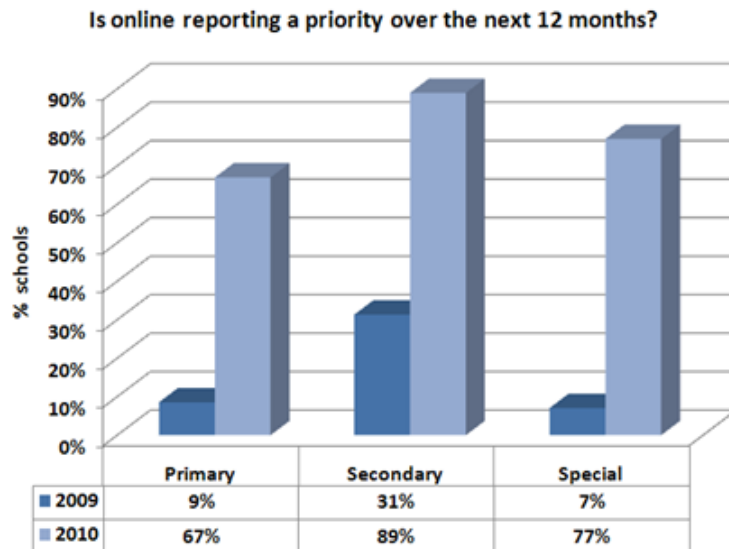


Figure 4

We can conclude from this that not only do schools “buy into” the value proposition of making more effective use of ICT to improve parental engagement, but also that this is increasingly becoming a reality (figure 6). This is borne out by a wealth of anecdotal and media reported stories such as:

- parents receiving text messages informing them that their child has won an achievement certificate.
- videos of the school nativity play being available on a learning platform for parents to securely log on and view.
- emails and text messaging used not only to inform parents of a school being closed due to snow but to organise parent volunteers at weekends to clear the snow from playgrounds.
- parents being able to see their children’s work and achievements online, read the feedback from teachers and comment on progress themselves
- teachers recording videos for the school learning platform to explain to parents what their children will be learning and how this learning can be supported.

Q16C. Technology used for: Communicating with parents day-to-day

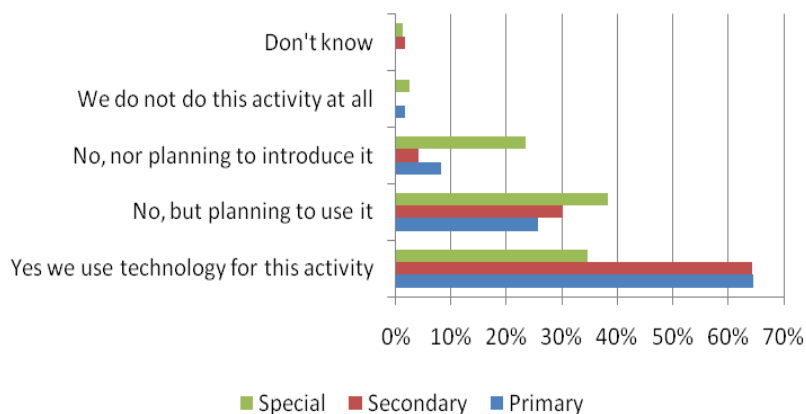


Figure 5

Online reporting efficiency gains

In order for online reporting to be a reality in schools information has to be available electronically and the systems need to be in place that automate how the information is shared and reported both within school and externally. For many schools moving to electronic systems still presents big challenges and there is natural scepticism about whether introducing such systems will lead to greater administrative burden.

The intention of the online reporting initiative (as agreed with teaching unions) was that it should lead to time and efficiency savings. The evidence indicates that the move towards online reporting is achieving this goal. A secondary analysis of the data in the 2009 and 2010 Harnessing Technology Schools Survey data shows that teachers are attributing significant time savings to the use of ICT for gathering assessment data, sharing the data with staff and parents and in particular with reporting (figure 7). The trends in time savings are particularly pronounced in the primary phase where, of those teachers surveyed an average value of over 2 hours a week is reported. (It should be noted that this is an average value and that a teacher with just classroom responsibilities may be reporting little or no difference compared to say a schools' assessment manager.)

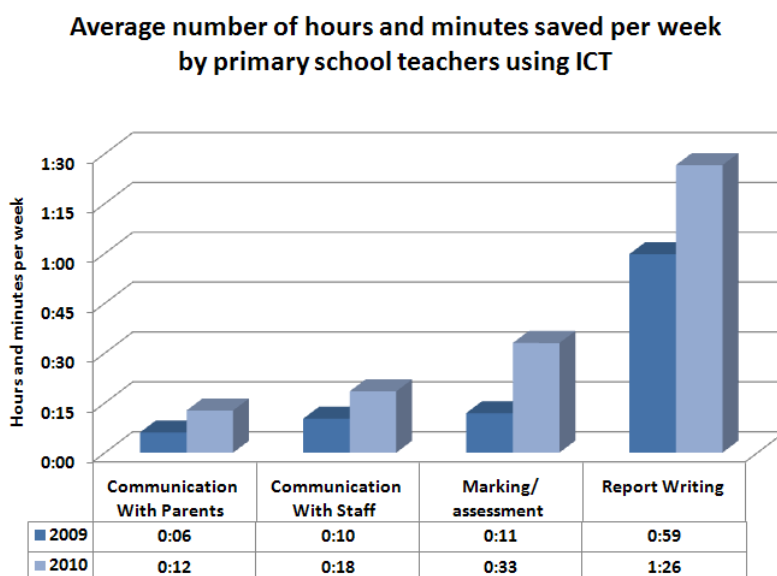


Figure 6

While these efficiency gains may be difficult to turn into “cashable” savings, schools should be in a position to manage staff time so that, overall, more time is being spent with children delivering high quality targeted teaching.

Conclusions

“Technology led” change can be expensive to implement nationally and unreliable in delivering transformational outcomes at a local level.

But progress can happen in a very short period of time if lessons can be learnt from the sort of “value driven” approach used with the online reporting initiative:

- a) Establish a “**value proposition**” that will incentivise staff, parents and learners to make effective use of the ICT already available at home and school.
- b) Adopt, exploit and develop the **functionality** and **usability** of existing technology to deliver educational values and benefits.
- c) Provide schools with **self-review tools** that encourage reflection, support progress and inspire further innovation.
- d) Further research, identify, celebrate, advocate and collaboratively **share the benefits** – so they don’t get ignored, lost or forgotten.....

(Not many people can remember learning to read and write. It will probably soon come to pass that schools won’t remember how they communicated with parents before they used technology –just as individuals many of us will quickly forget how we survived without online banking, online shopping and social networks. However, there are many schools that still have a long way to go before they are able to fully exploit technology to improve parental engagement.)

The impact and improvements afforded by making effective use of technology, as parents of school age children are now starting to experience, are significant. But more importantly they can be quickly realised by providing an appropriate “nudge” at the right time. The role of Becta in coordinating the communication of parental engagement expectations was to lead a timely intervention to provide this nudge. However, the benefits and efficiencies that schools are starting to gain through making effective use of ICT cannot be attributed directly to Becta. Rather, they are a product of increased ICT and data maturity, the will of educationalists to do “the right thing” and the availability of technology at school and home. As such the increased prioritisation by schools for using ICT to improve parental engagement can be better modelled by the idea of a “tipping point” having been reached (Gladwell, 2000). For online reporting to parents the tipping point is reached when schools have;

- electronically held information about children and their learning
- integrated systems that can manage emails, text messaging and content on websites and learning platforms
- when the vast majority of parents have access to one or more electronic forms of communication

Once this tipping point is reached then the “value proposition” of improved parental engagement is able to overcome the barriers to change that may exist, such as;

- entrenched culture, behaviours and relationships with parents
- fear of increased exposure to parental demands
- misconceptions about increased workload and bureaucracy

Of course, the tipping point for parental engagement may also create the right environment for other changes in practice and disruptive innovations, areas for further consideration include:

- 1) Engaging parents with their children’s learning
- 2) Motivating connecting and learners with learning
- 3) Broadening access to curricula and qualifications
- 4) Increasing choice and personalisation of learning
- 5) Responding to special and individual educational needs

- 6) Enabling learning supported through peer and social networks
- 7) Exploiting online assessment capabilities
- 8) Improving the quality and consistency of teacher assessments
- 9) Enhancing classroom practice and management
- 10) Supporting pedagogical and professional development
- 11) Developing the quality of electronic content and curriculum resources
- 12) Deploying resources, including open-source software and volunteers, more effectively
- 13) Incentivising collaboration between teachers and schools
- 14) Managing learning across multiple institutions and environments
- 15) Involving and supporting families and the community

The challenge for the education sector is to research and identify the value propositions from the emerging and innovative practice taking place in schools. As technology becomes increasingly ubiquitous schools are finding innovative and affordable solutions that add real educational value and efficiency. In each of the 15 areas identified above it should be possible to identify a “value proposition” and set of principles that will act as the value driver for benefit realisation, educational improvement and efficiency gains.

Industry and solution providers also have a critical role to ensure that the functionality and usability factors for the design and configuration of the technology and interfaces have been considered to deliver these value propositions. An ineffective end user experience is probably the greatest barrier to adoption of technology enabled practice and progress. User centred and cooperative design must play an important role in developing the systems and applications of technology required to achieve expected value and efficiency gains.

Value drivers will only work if built on a real understanding of how learning and schools work in terms of the processes involved and incorporating an empathy with what people expect and value from ICT interactions. Teachers are often best placed to recognise the value in particular uses of technology but need to be given the freedom to innovate, the time to reflect and the channels to advocate. Action research and practice based research therefore have a key role to play in developing sufficient knowledge to both create and validate these “value propositions”.

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