



Managing ICT costs
in schools



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Managing ICT costs in schools

This report summarises work undertaken with 43 schools between 2002 and 2005 in a series of projects which focused on the total cost of ownership (TCO) of ICT. The data gathered using the Becta Total Cost of Ownership model are shown in tables and charts.

The projects highlighted how knowledge of the full costs of ICT can support management investment decisions. The key messages in this report will enable headteachers, ICT decision-makers, local authority officers and governors to develop a strategy for sustainable ICT provision appropriate to their schools. The summary sheet which accompanies this report also contains all the key messages and may be useful for wider distribution.

Executive summary

Publication of the e-strategy (DfES 2005) marked a step change in government thinking about the importance of educational technology. ICT is now regarded as a basic educational utility rather than as an additional service.

This report is concerned with how, in this changing context, school leaders can get the best value from the existing technology and staff skills, while also identifying sustainable arrangements for the future.

The first step towards sustainability is to establish the total cost of ownership (TCO) of ICT within the school and then implement a strategy which monitors this over time. Becta worked with schools and Local Education Authorities (LEAs) on a series of projects to identify the best method for schools to measure their own TCO of ICT.

It was found that:

- The annual TCO of ICT (including hidden costs) averaged around £50,000 for project primary schools and around £270,000 for project secondary schools.
- The average annual TCO per PC was around £1,200 in the primary schools and around £1,000 in the secondary schools.
- The annual average TCO per pupil was around £195 in the primary schools and £246 in the secondary schools.
- The total costs per PC and the cost of individual elements such as hardware varied greatly between schools.
- Support was by far the largest cost element in ICT budgets, making up an average 58% of the cost of ICT in primary schools and 62% of the cost in secondary schools.
- Hidden staffing costs for user self-support (from teachers, headteachers, administrative staff and classroom assistants) were a significant factor in overall support costs.
- Staff not employed in technical support roles in both primary and secondary schools spent around 30 minutes per week on installing IT, fixing problems and carrying out related administrative tasks (for example, loading paper in printers, backing up data or clearing disk space).
- Schools used various types (often a combination) of in-house and external technical support.



- No single method of providing technical support (for example in-house assistance or external provision) was clearly more cost-effective than others in every situation.
- Schools valued the opportunity to compare their costs with those of other schools.
- Schools found many ways of using the TCO results (for example to improve decision making and raise governor awareness), but no school identified all the possible uses picked out by the schools as a whole.
- There were organisational obstacles to carrying out a TCO analysis in some schools.
- The TCO tool was welcomed, but needed simplification.
- External support was generally seen as an important factor in helping the schools assess their TCO.

The project schools used their results in a variety of ways, including to:

- improve forward planning
- identify unexpected costs
- carry out 'what if' analyses
- raise awareness of costs and investment levels
- justify existing policies (for example to governors)
- contribute to the public presentation of the school.

To achieve a robust, reliable and sustainable ICT infrastructure it is essential that school leaders are able to accurately and strategically plan their finances. Conducting a TCO analysis provides leaders with that valuable information and allows them to plan and develop a sustainable ICT strategy appropriate to their school.

Before a school can implement a sustainable strategy, it must first carry out a systematic review of existing and planned provision. More specifically, school leaders need to:

- 1 Assess the quality of facilities and services needed to support the ICT development plan.
- 2 Audit existing infrastructure provision, equipment age and costs.
- 3 Identify the impact of existing provision and practices on staff (and possibly pupil) satisfaction, confidence and competence.
- 4 Review staff training needs.
- 5 Compare current costs against relevant internal and external benchmarks.
- 6 Review current procurement practice and value-for-money processes.
- 7 Challenge assumptions about the quality and value of current technical support services and practices.
- 8 Reassess the quality of facilities and services needed to support the ICT development plan in the light of these reviews (points 2–7).
- 9 Plan and introduce a rolling three-year whole-school budget, which includes a realistic proportion allocated to ICT-related costs, based upon the development plan.

All of these elements must be set within and complement the wider context of self-review to achieve school improvement through ICT. The TCO planning process will involve working through and revisiting these interconnected elements as the overall picture becomes clearer.

'We'd like to introduce a three-year ICT replacement programme, but in order to do this we'll have to look very carefully at planning a funding strategy which will suit us and allow it to happen.'

Business manager – small secondary school

Responding to a changing context

'In our development plan we were going to use funding to buy a new set of laptops to support literacy. But when we saw the results of the TCO calculation, we realised that it was more important that we upgraded our network before it fell over.'

ICT co-ordinator – large inner-city primary

In the last few years, school leaders have faced many significant challenges, including keeping pace with rapid technological change and accommodating reforms in the way schools and their finances need to be managed.

Publication of the e-strategy (DfES 2005) marked a step change in government thinking about the importance of educational technology. ICT is now regarded as a basic educational utility rather than as an additional service. The National Digital Infrastructure (Becta 2005a) outlines the systems and services which will enable schools to establish ICT which is appropriate, reliable, affordable and sustainable.

Schools are now being given greater responsibility for their own budgets, requiring a three-year budget-planning cycle, and the roles of school teachers and ancillary staff are changing as a result of workforce reform.

In addition, the way leaders manage schools and the development of ICT use within them is being reshaped. A range of national agencies support this work, including the National College for School Leadership (NCSL) and Becta, which deliver the Strategic Leadership of ICT (SLICT) programme. Early indications from the ICT Test Bed project are that for schools to embed e-learning, they will have to successfully manage change.

The process of school self-review is recognised as important in enabling schools to mature in their use of ICT. Developments that help schools progress are underpinned by a framework with eight key elements (Becta 2005b):

- Leadership and management
- Curriculum
- Learning and teaching
- Assessment
- Professional development
- Extending learning
- Resources
- Impact on pupil outcomes

Improved educational outcomes are central to Becta's self-review framework, and the focus on improving current practices will enable pupils to learn better and to learn more. School leaders need to ensure that all elements are closely linked with ICT development and implementation to achieve whole-school improvement through ICT.

School leaders are responsible for managing the recurrent costs of maintaining, replacing and updating existing equipment, in addition to the capital outlay for essential ICT tools such as interactive whiteboards and laptop computers. The requirements for delivering personalised and 'any time, any place' learning affect decisions about future ICT provision.

It is essential to review ICT support and training, because many existing arrangements were made when schools had less equipment and a smaller range of technologies. Becta currently provides assistance for improving technical support services through its Framework for ICT Technical Support (FITS): <http://becta.org.uk/technicalsupport>



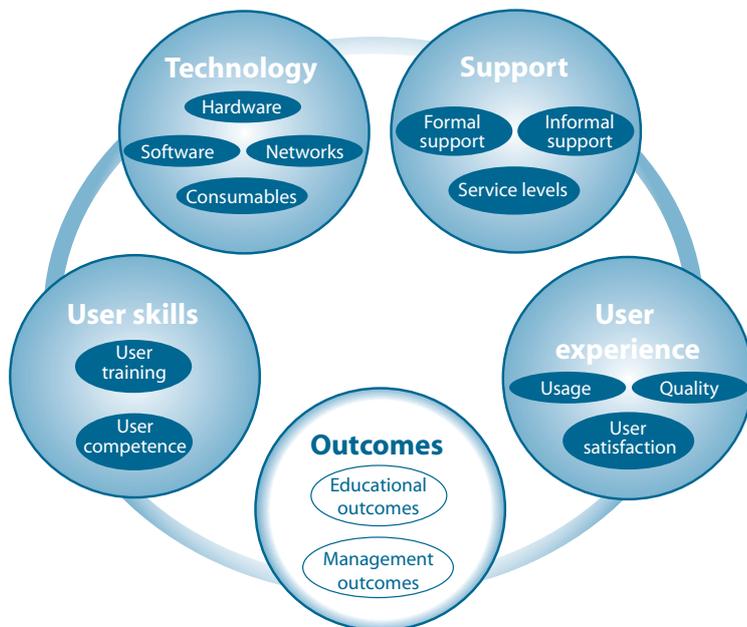
This report is concerned with one important aspect of school improvement, namely how to get the best value from the technology and staff skills the school already has, while also identifying sustainable arrangements for the future.

The first step towards sustainability is to establish the total cost ownership (TCO) of ICT within the school – both visible and hidden costs associated with using and supporting ICT – and then implement a strategy that continues to monitor this.

Becta has developed a model (Figure 1) for establishing the TCO, which includes both visible and hidden costs. Visible costs include the total school spend on hardware, software, consumables, networks, ICT-specific building work and furniture, formal support and training. The hidden or invisible cost of ICT is a measure of the user self-support carried out by non-technical-support members of staff, such as teachers, headteachers, administrative staff and classroom assistants, trying to fix problems and carry out systems administration tasks. These hidden costs of ICT can be significant, and must be considered when calculating the TCO.

The model required information from both cost data questions and a survey of all ICT users in each school. The survey collected information on the user skills, user experience and self-support elements of the model. Measures of the educational and management outcomes were not defined and therefore could not be collected.

Figure 1: The Becta TCO model for schools



As the Becta TCO model illustrates, the value of reviewing technology, support arrangements, user skills and experience is that it creates new opportunities for more successful learning and/or improved school management. The money and time saved through more efficient purchasing and support of ICT may be redirected elsewhere, leading to improvements in other areas of the school. Alternatively, the resources saved could be reinvested to enhance the learning impact of ICT through additional staff training or new technologies.



Insights from the Becta TCO projects

The projects in context

Between 2002 and 2005, Becta worked with schools and LEAs on a series of projects to identify the best method for schools to measure their own TCO of ICT. The projects involved schools in both England and Wales, work with the latter being funded by the Welsh Assembly Government. Becta worked with 22 primary and 11 secondary schools in England, and with seven primary and three secondary schools in Wales. One Welsh and two English LEAs provided support for their project schools, and other English LEAs shared feedback with schools and with Becta.

The aim of the projects was to find a method for identifying and presenting TCO information which would be suitable in a range of schools and environments. It was not necessary to choose a statistically representative set of schools, but it was important to get a wide range of school types. The project schools included primary, secondary and special schools in a variety of settings from rural to inner city. They also included both large and small schools, and varied in their level of ICT provision.

The project schools therefore gave a broad range of school situations in which to test the measurement of TCO, but the study made no attempt to infer the frequency of these situations nationally.

The project schools were given a TCO tool developed using commercial best practice. The data required included three years of recorded costs for hardware, software, network, consumables, user training and formal support. The TCO tool also included a staff survey to record the views of teaching and non-teaching staff on such issues as their ICT confidence, training, available software and ICT support arrangements. Both sets of information were designed to produce results which gave school leaders a clear overview of how their school performed, for example in terms of staff ICT skills, relative age of equipment, and so on.

The TCO tool enabled school leaders to:

- audit current infrastructure
- identify staff ICT skills, confidence and satisfaction
- value current assets
- track ICT running costs.

With these results, school leaders could benchmark financial performance against the school's own previous figures and use the information gathered to inform budget-allocation decisions for ICT support, training and infrastructure.

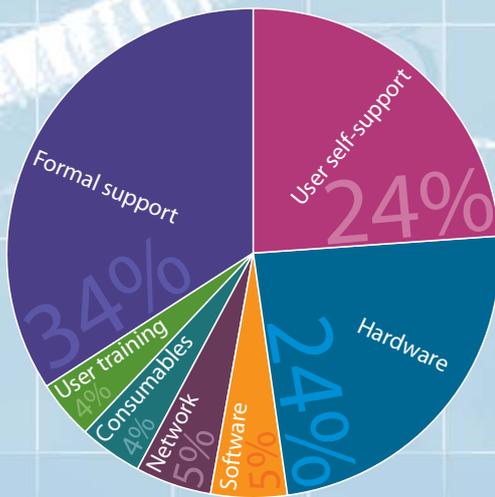


Figure 2: Average percentage expenditure on ICT in project primary schools

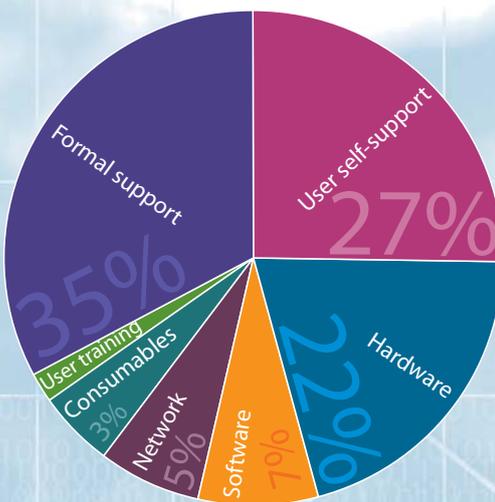


Figure 3: Average percentage expenditure on ICT in project secondary schools



Findings

The combined findings from the projects fell into three main areas: general TCO costs, support and management issues.

General TCO Costs

A number of important facts emerged concerning school TCO figures in general (Table 1) :

- The annual TCO of ICT (including hidden costs) averaged around £50,000 for project primary schools and around £270,000 for project secondary schools.
- The average annual TCO per PC was around £1,200 in the primary schools and around £1,000 in the secondary schools.
- The annual average TCO per pupil was around £195 in the primary schools and £246 in the secondary schools
- The total costs per PC and the cost of individual elements varied greatly between schools.

The TCO of ICT in the project schools was substantial (Tables 2 and 3, page 8), with both the TCO and the numbers of PCs reflecting the growing importance of ICT in recent years.

The way the TCO was shared out across different kinds of costs was similar for the primary and secondary groups of schools (Figures 2 and 3).

The average proportional costs shown conceal differences between schools, as schools with similar numbers of pupils could have widely different TCO totals (Figures 4 and 5, page 9). This was true for both the primary and secondary groups.

The difference in TCO between apparently similar schools was partly due to different levels of ICT provision, but differences remained even when this was accommodated by measuring the TCO per PC. For example, project primary schools in a single LEA had TCOs per PC ranging from £850 to £1,700. Such differences may be caused by variations in the levels of supplementary equipment purchased, in how much previous experience there was in managing ICT resources and support, or in the level of technical expertise available to the school. Examples of ICT development, support and comparative costs in schools using open source software has already been documented (Becta 2005c).

Variations also appeared in other areas of the schools' responses. For example, within a single LEA, the percentage of staff within each primary school rating their educational software as good or very good ranged from around 20% in one school to over 80% in another. This variation may indicate differences in staff training and expectations of software, and/or variability in the educational quality, range and general suitability of the software available.

Cost category	Average ICT costs per year (£)		Annual average TCO per PC (£)		Annual Average TCO per pupil (£)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
User self-support	112,116	74,183	304	264	53	58
Formal support	16,784	95,159	406	386	66	102
Training	2,113	2,769	53	12	7	2
Consumables	2,197	6,867	53	28	8	6
Network	2,668	14,168	67	57	10	13
Software	2,652	18,310	64	67	9	15
Hardware	12,415	59,828	281	222	42	50
Total	50,945	271,284	1,228	1,036	195	246

Table 1: Average annual ICT costs in project schools shown in full, per PC and per pupil



Insights from the Becta TCO projects

Number of pupils	306
Number of staff (all categories, in full-time equivalents)	27
Number of dedicated technical staff	0.27
Number of PCs	31
Annual TCO of ICT	£50,945

Table 2: Average numbers of pupils, staff and PCs, and annual TCO of ICT in project primary schools

Number of pupils	1,232
Number of staff (all categories, in full-time equivalents)	144
Number of dedicated technical staff	2.42
Number of PCs	224
Annual TCO of ICT	£271,284

Table 3: Average numbers of pupils, staff and PCs, and annual TCO for ICT in project secondary schools

Support

This formed a major topic in the analysis. It was found that:

- Support was by far the largest cost element in ICT budgets.
- Hidden staffing costs for user self-support (from teachers, headteachers, administrative staff and classroom assistants) were a significant factor.
- Staff not employed in technical support roles in both primary and secondary schools spent around 30 minutes per week on installing IT, fixing problems and carrying out related administrative tasks (for example, loading paper in printers, backing up data or clearing disk space).
- Schools used various types (often a combination) of in-house and external technical support.
- No single method of providing technical support (for example in-house assistance or external provision) was clearly more cost-effective than others in every situation.

The most striking feature of the findings from the projects was that formal and user self-support made up an average 58% of the cost of ICT in primary schools, and nearly 62% of the cost in secondary schools. Hardware was the next highest ICT cost, followed by training, consumables, network and internet, and software, which made up much smaller proportions of the TCO (Figures 2 and 3, page 6).

There were big differences in how technical support was provided and by whom. The results from one Becta project showed that it was difficult to draw conclusions about the effectiveness of different approaches, because cost and user satisfaction varied so widely.

This does not mean that any model of support will work well in any school, as a particular approach to support might be cost-effective in one school but not in another due to its circumstances. In other words, a school's approach to technical support needs to be part of a coherent and considered strategy, which also takes a wide range of factors into account – for example the success of earlier training, staff confidence, whether new kinds of technology are being introduced – before making decisions.

Management issues

A number of management issues emerged in the project schools:

- Schools valued the opportunity to compare their costs with those of other schools.
- Schools found many ways of using the TCO results (for example to improve decision making and raise awareness), but no school identified all the possible uses picked out by the schools as a whole.



- There were organisational obstacles to carrying out a TCO analysis in some schools.
- The TCO tool was welcomed but needed simplification.
- External support was generally seen as an important factor in helping the schools assess their TCO.

School leaders were eager to compare their TCO findings with those from other schools, while recognising that differences between schools made exact comparisons unhelpful.

The diversity of situations in project schools also led school leaders to exploit the TCO findings in different ways. They used their TCO results to:

- improve forward planning
- identify unexpected costs
- carry out 'what if' analyses
- raise awareness of costs and investment levels
- justify existing policies (for example to governors)
- contribute to the public presentation of the school.

However, no school identified all of these possibilities. For all schools there were more possible benefits to be gained from the analysis than they had initially identified.

The TCO tool developed during the trials was clearly usable in schools differing in terms of age, ICT use, equipment provision, software, hardware and technical infrastructure. Importantly, the tool was also sufficiently flexible to fit into a number of different approaches to planning and management, and every school saw at least one use for the results it generated.

Many schools found it hard to bring together the information required for the TCO analysis. In some cases this stimulated the reorganisation of how existing information was collected and stored. This in turn created the possibility of wider management benefits by revealing gaps in the information schools required to complete their TCO models.

One project report noted that the actual process of finding the data revealed to schools where that data was kept, in what form, and who had access to it. This was vital information (both for the TCO analysis and for wider school planning), which had not been available previously.

Schools found it challenging to input three years of reliable ICT cost information into the tool, and appreciated external support. So although both the tool and the staff questionnaire were welcomed, the former clearly needed simplification.

The support and input from Becta and LEA advisers was important in helping the project schools understand and exploit the results of the TCO analysis. Some project schools found input from the LEA particularly valuable where the LEA provided transparent cost figures for central services, such as technical support.

Using lessons learned during the projects, a tool to support ICT investment planning decisions was developed in 2005 through collaboration with the London Learning through ICT project. Becta continues to provide schools with support and tools to plan and measure their ICT investments effectively.

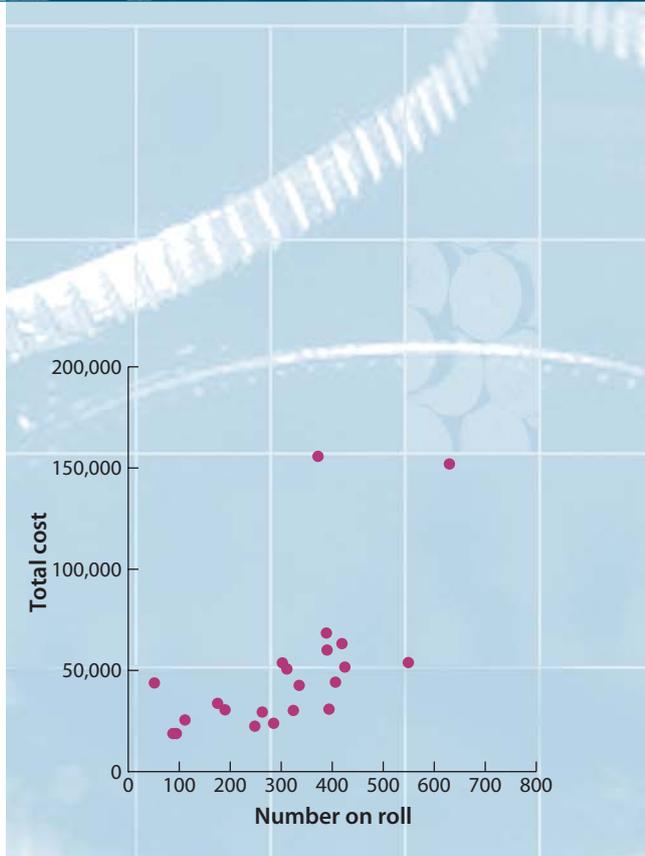


Figure 4: Annual TCOs and school pupil numbers, by school, for primary schools in one project.

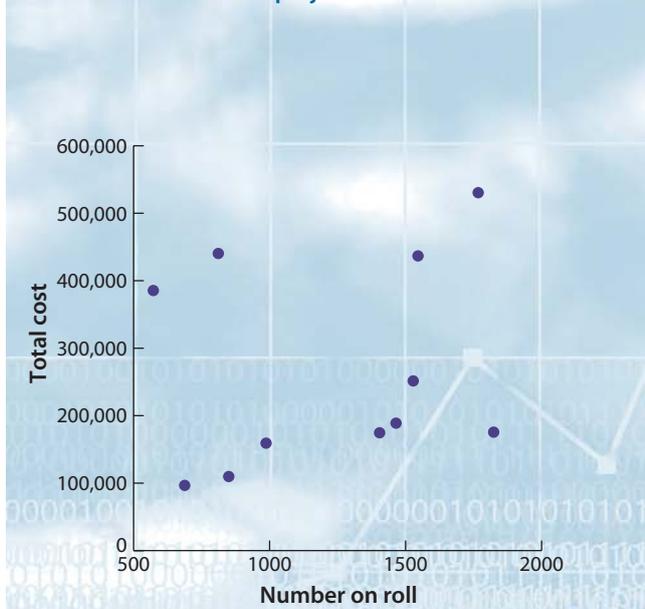


Figure 5: Annual TCOs and school pupil numbers, by school, for secondary schools in one project.

Implementing a school ICT sustainability strategy

'We weren't surprised to see how much our consumables cost because we've already put a lot of work into improving our purchasing processes. We used functional and technical specifications to make sure that the printers we bought were fit for the quality and quantity of printing we needed.'

Network manager – large inner-city secondary

Implementing the strategy – what is involved?

To implement a sustainable ICT strategy, a school must first carry out a systematic review of existing and planned provision. For learners to fully benefit from ICT-enhanced learning and teaching, this systematic review must cover all aspects of the Becta model. More specifically, school leaders need to:

- 1 Assess the quality of facilities and services needed to support the ICT development plan.
- 2 Audit existing infrastructure provision, equipment age and costs.
- 3 Identify the impact of existing provision and practices on staff (and possibly pupil) satisfaction, confidence and competence.
- 4 Review staff training needs.
- 5 Compare current costs against relevant internal and external benchmarks.
- 6 Review current procurement practice and value-for-money processes.
- 7 Challenge assumptions about the quality and value of current technical support services and practices.
- 8 Reassess the quality of facilities and services needed to support the ICT development plan in the light of these reviews (points 2–7).
- 9 Plan and introduce a rolling three-year whole-school budget, which includes a realistic proportion allocated to ICT-related costs, based upon the development plan.

All of the elements must be set within and complement the wider context of plans for school improvement. While each of the above elements can be reviewed individually, it is important that schools consider their current overall position – the success of their ICT developments and the factors that required to achieve success, as they will be able to do through Becta's self-review framework. The TCO planning process will involve working through and revisiting these interconnected elements as the overall picture becomes clearer.

1 Assess the quality of facilities and services needed to support the ICT development plan.

A school's existing ICT development plan is one useful starting point for orienting the TCO analysis. The existing plan will very probably need to be reviewed at the end of the process, as the measurement of TCO is likely to identify possible improvements.

2 Audit existing infrastructure provision, equipment age and costs.

This forms a major part of the analysis, covering hardware, networks, software provision and costs. The TCO analysis, and this audit in particular, will take time. Experience in the project schools suggests that this could total between three and five staff days, depending upon whether the school's existing financial records (or the service provider's) contain the information required.



3 Identify the impact of existing provision and practices on staff (and possibly pupil) satisfaction, confidence and competence.

As the projects illustrate, designing and carrying out a staff survey is an invaluable way of measuring satisfaction, confidence and competence with existing ICT provision and practices. High completion rates are obviously important to the reliability of the results, and in some project primary schools this was ensured by getting all the staff to complete the forms together.

A valuable addition would be to find out pupils' views on the quality and nature of the school's ICT provision. It would also benefit the clarity of the results to ask both staff and (perhaps especially) pupils about what they see as the impact of ICT on learning. An alternative to a survey would be to ask some pupils to interview others and report their findings, or for pupils to provide personal accounts of their experiences of learning with ICT in school and beyond.

4 Review staff training needs.

Reviewing the results gives leaders a context for discussing the importance of effective communication about ICT policy. It also provides an opportunity to discuss ways of improving support and training at little extra cost in time and money to both schools and teachers.

5 Compare current costs against relevant internal and external benchmarks.

To interpret the significance of TCO findings, a school can compare its results with:

- its own previous assumptions about ICT costs
- the average costs provided by other schools in the sector
- the equivalent costs for other similar schools
- its own school's previous TCO costs.

The first comparison is suitable for correcting misperceptions about absolute and relative costs of existing ICT, and making school leaders aware of the true situation.

The comparison of average costs could be helpful to schools over a longer period, enabling them to see where they stand relative to other schools. Given anonymity, the project schools welcomed the opportunity to make such comparisons.

The comparison of the school's costs with those of similar schools would be much more informative, but requires information from a significant number of schools to be meaningful. This could be a particular problem for special schools.

While the numbers of schools in the projects were too small to get either nationally representative averages or closely comparable subgroups, the information collected and the way that it was presented enabled quality discussions in each school about their own ICT expenditure compared with other schools.

Figure 6 shows how the secondary school information on the school-by-school distribution of TCO in one project was presented to allow both cross-school comparisons and comparison with the average figures.

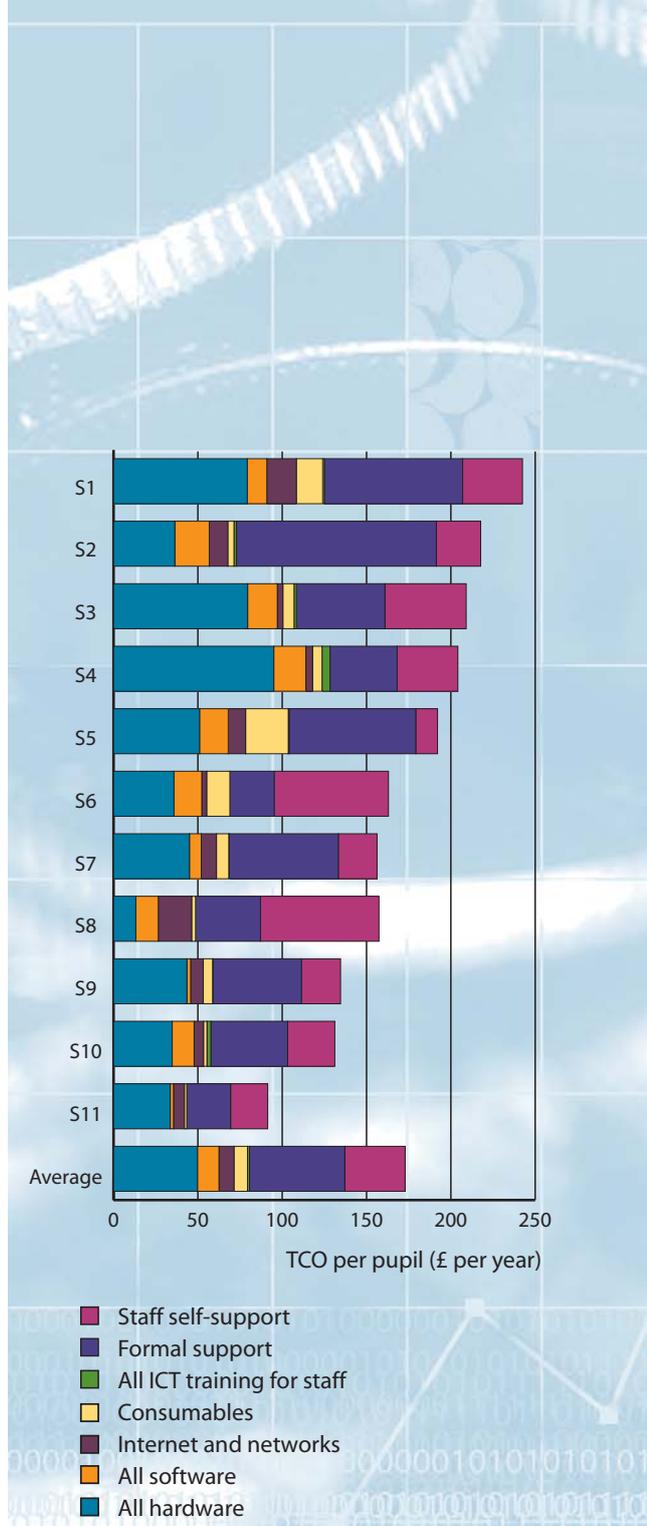


Figure 6: Individual elements comprising the TCO per pupil (£ per year) in the 11 secondary schools in one project



Implementing a school ICT sustainability strategy

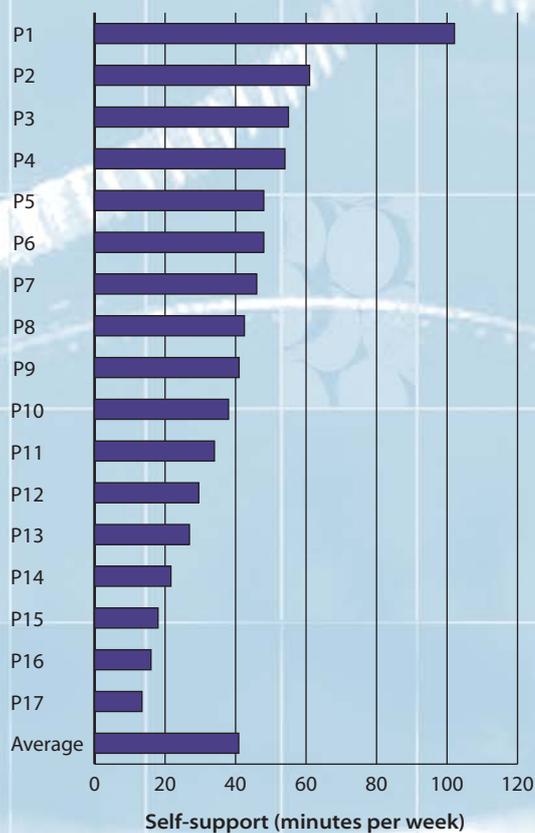


Figure 7: Time spent per week on user self-support among non-technical staff in the 17 primary schools in one project

The fourth and final comparison, of schools monitoring their progress by benchmarking against their own previous performance, would be of considerable value. As the number of annual TCO records available increases, so too does the value of the benchmarking. This kind of benchmarking is especially important for annual and revenue costs, rather than the more cyclical capital costs. Monitoring the relationship between training, formal and user self-support costs, for instance, could be particularly useful.

6 Review current procurement practice and value-for-money processes.

Introducing the calculation of TCO helps schools review their procurement practice, but it may also lead them to consider how a similar approach could help in non-ICT-related areas. The review may also highlight gaps in financial information and processes, and illustrate the benefits of aggregated purchasing schemes to achieve both quality and savings.

7 Challenge assumptions about the quality and value of current technical support services and practices.

Time spent on user self-support among primary school staff in one project (see Figure 7) varied from 10 to 100 minutes a week. While there may be good reasons for these differences, the results suggest that further consideration should be given to why this variation occurs. To illustrate the importance of this finding, the average 40 minutes' user self-support each week per person in a primary school with 15 staff represents 10 working hours.

Some level of user self-support will always be needed as staff deal with minor ICT tasks, but significant periods of time spent fixing equipment is a cost to the school. Changing support arrangements to release teaching time is therefore one obvious area to investigate. The results of a TCO analysis can help a school to understand how the provision of effective formal support, either in house or external, can reduce the hidden cost of teachers' time spent supporting ICT.

A TCO analysis can enable schools to compare the value of economies of scale gained through a collaborative approach to formal technical support either within a local authority or with other schools. The results may also give schools the opportunity to discuss the relative costs and merits of different forms of managed service. To assist with these decisions, Becta has provided self-assessment tools and guidance for implementing best practice technical support processes.

Attention will need to be given to establishing clear roles and responsibilities within the school in terms of reporting, recording and dealing with technical problems as they arise. The need for formal support does not necessarily increase expenditure if procedures compliant with Becta's Framework for ICT Technical Support (FITS) are introduced. These will reduce the number of technical problems arising and ensure they are dealt with more effectively.



8 Reassess the quality of facilities and services needed to support the ICT development plan in the light of these reviews (points 2–7).

This type of reassessment can help to identify strategic investments that will form part of a wider school improvement programme. The outcomes from the reassessment can lead to more specific actions, for example, the need for a strategy to upgrade, decommission or dispose of ICT as the existing infrastructure develops.

9 Plan and introduce a rolling three-year whole-school budget which includes a realistic proportion allocated to ICT-related costs, based upon the development plan.

This budget needs to be translated into budget allocations viewed across the lifetime of current and planned ICT equipment. It must also include annual reviews to adapt the budget plan according to the changing situation within the school and the technologies that become available.

Becta's self-review framework identifies five levels of maturity through which schools need to move to improve their ICT arrangements:

- The school does not budget in a planned way for ICT, and makes no attempt to link expenditure to improvements. It sees ICT costs only in terms of hardware and software.
- The school has begun to plan its ICT budgeting more actively and is aware of the wider cost implications for ICT, but does not take this into account when setting budgets. The school is not yet able to link its expenditure on ICT to improvements in outcomes.
- The school budgets carefully for ICT across the whole school and has begun to cost more fully the implications of its ICT developments. It has started to identify links between expenditure and outcomes.
- The school evaluates and reviews its ICT budget and is aware of the full cost of its ICT strategy. It is able to link its ICT expenditure to improvements in planned outcomes.
- The school always evaluates its expenditure on ICT and budgets for the total cost of ownership for ICT. It can provide evidence that clearly links expenditure to improvements in pupils' achievements, and these outcomes are used in planning for ICT.

Conclusions

using the TCO results for school improvement

'We believe in supporting our staff to make good use of ICT in their teaching, but when the TCO results showed how much user self-support by our teaching staff was costing, we had to do something. We now employ our own technician and share costs with another local primary school. This means the teaching staff and ICT co-ordinators can concentrate on embedding ICT rather than fixing it.'

Headteacher – large inner-city primary

The project schools found that the TCO analysis provided important information that had not previously been available. They used their results in a variety of ways, including to:

- improve forward planning
- identify unexpected costs
- carry out 'what if' analyses
- raise awareness of costs and investment levels
- justify existing policies (for example to governors)
- contribute to the public presentation of the school.

The main use for the results of a TCO analysis is to improve forward planning. By establishing the TCO, a school is better able to allocate an appropriate budget to sustain and develop ICT in the long term. This could involve not only the senior management team, but the whole staff where matters of overall policy are concerned. There are also likely to be specific messages that require the attention of the ICT co-ordinator, formal support provider and the school's finance officer. The TCO results can be used by staff for a range of purposes, which together may contribute to the school development plan, a needs analysis, the annual planning cycle, and equipment replacement plans.

However there are other, more specific, benefits that arise from having the results of such an analysis available. One benefit is that it gives the headteacher an opportunity to identify the real costs. The graphics generated by a TCO analysis can show that a cost (for example for consumables or internet access) was much lower or higher than expected. Revealing the true costs prompts further investigation into ways of achieving better value for products and services.

The tool also allows school leaders to carry out a series of 'what if' analyses, to test the financial implications of potential future strategies. The value of using TCO analysis results is that they can provide leaders with an accurate projection of likely cost implications for a particular course of action (such as purchasing technical services). Leaders can then make more informed decisions when planning possible investment in services or products.

The results of an analysis can also be used to inform the senior management team, school technicians, staff in general, and the governors in order to raise awareness of the cost issues of ICT provision. Some findings could also be brought to the attention of local authority advisers or parents. Such results might have a place in the annual report to parents, in the school prospectus, or could contribute to the school's self-evaluation in preparation for an Ofsted inspection.

An understanding of TCO is essential in enabling school leaders to plan for sustainable development. The project findings were instrumental in changing investment planning decisions in several schools.

Getting value for money what changes are needed?

Becta's self-review framework provides a summary of the characteristics present in a school that had achieved sustainability in ICT. Such a school would ideally have:

- an innovative and inclusive vision, anticipating future developments in practice and technology
- a proactive attitude towards emerging technologies, new practices and use of evaluations to review and update the ICT vision
- a strategy to ensure continuity of ICT to support school improvement
- regular, effective and evidence-based evaluation of progress, which is used to prioritise future planning and to demonstrate accountability
- comprehensive audits of staff ICT skills as part of the annual performance management process, including the use of ICT in learning and teaching and personal competencies
- professional development activities for all staff, linked to existing and planned ICT resources and practices
- technical support managed by expert staff, which supports teachers and learners and minimises disruption; also systems in place to manage and monitor the performance of technical support
- a systematic monitoring of the availability and use of ICT resources, both within and beyond the school, which influences procurement strategy to such an extent that the school can link purchases to specific learning gains for pupils.

Reaching and maintaining sustainability represents a significant aspect of what is involved in developing ICT to promote school improvement and pupil learning. Achieving sustainability is clearly a substantial task for school leaders, but the work of the project schools indicates that the use of TCO analysis can make a significant contribution.



Sources

Becta (2004) *FITS Pocket Guide*. Coventry, Becta

Becta (2005a) *Delivering the National Digital Infrastructure: Enabling improvement through ICT*. Coventry, Becta.

Becta (2005b) *School and college improvement through ICT*. Coventry, Becta.

Becta (2005c) *Open Source Software in Schools: A study of the spectrum of use and related ICT infrastructure costs*. Coventry, Becta.

DfES (2005) *Harnessing Technology: Transforming learning and children's services*. London, HMSO.

Becta (2006) *Evaluation of the Framework for ICT Technical Support (FITS)*. Coventry, Becta

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