Delivering the future for learners: harnessing technology

Report of the harnessing technology event

7 November 2006

Co-ordinated by

Becta

'Delivering the future for learners: harnessing technology' on 7 November 2006 brought together leaders from all sectors of education.

The objectives were to:

- give an opportunity to contribute to national thinking and discuss how to make better use of technology to support education
- explore how to use technology better to narrow the achievement gap, improve opportunity and choice, and connect with hard-to-reach learners
- debate the barriers to success and identify additional support needed from the Government and its agencies
- promote the national system-wide e-strategy.

The aim was to galvanise experienced leaders with the capacity to deliver change to bring about more effective application of technology to learning across the education system.

the speakers

David Bell, Permanent Secretary, Department for Education and Skills

- The DfES aims to work with partners to develop and deliver its policies. The department needs to be clear about its outcomes, to clarify roles and to establish more effective working relationships.
- We need to:
  - understand how to reach the digitally excluded and those in work
  - make learning relevant by understanding what learners do when away from their places of learning
  - use technology so that those who are sick – in hospital or at home – can continue with their learning supported by their teachers
  - enable those that who are isolated from education, through movement, geography, culture or other factors, to access learning
  - ensure that employers and providers collaborate to offer flexible training that focuses on business needs.
- There is compelling evidence that learners benefit from effective use of technology. There is a moral argument that all providers should make full use of technology. We hope to establish full use of technology across all sectors of education, integrated within teaching, learning assessment and management practice, to improve the quality of learning and raise standards.
- Becta is taking the lead responsibility for delivering the outcomes set out in Harnessing technology. The organisation will work with partners, co-ordinating activity, to create a coherent national strategy that will support all sectors in their drive to use technology to support learning and teaching. Additionally, Becta will challenge and support DfES policy to keep technology at the heart of the reform agenda.

Stephen Crowne, Chief Executive, Becta

- There is a growing, increasingly persuasive body of evidence that the right investment delivers substantial benefits for learners and greater efficiency and effectiveness across the education system.
- Technology accounts for a significant proportion of the system efficiency gains seen during the current government spending review period, and there are more to come.
- We are not realising the full benefits of technology for all learners across the system.
- Becta's role is to establish and sustain a shared vision for technology in learning. Becta leads the delivery of the Government's e-strategy for the education sector, and is an increasingly powerful voice in policy development.
- Becta wants to find the most effective ways of working with and supporting the partners whose contribution is critical to delivering the vision.

Tony Richardson, Executive Director – E-strategy, Becta

- The use of technology within education has come a long way in the last 25 years. It is now time to develop a coherent system to fully exploit its potential.
- The e-strategy's vision is for each individual to maximise their potential through the personalisation of their learning and development.
- Becta has developed a model for delivering the e-strategy that strengthens supply and demand and applies challenge and support to effect change. Along with increasing participation in the use of ICT, this will enable the realisation of the overall improvement outcomes for the learner and the system.
- The strategic outcomes of the e-strategy are described in a high level scorecard.

Professor Stephen Heppell, Director, Heppell.NET Limited

- People are trying to make learning more seductive, delightful and engaging. This is a learning age, and we are experimenting with an extraordinary number of things.
- In this global world we are not building a national curriculum that is world class, but a world curriculum that is world class, and we are doing it with others.
- This generation can end the cycle of deprivation for ever – we know exactly what to do.
- We've got a chance here sitting round the table for our generation for this century, for children now in schools for the teachers now in schools for the policy makers for us to be properly, properly ambitious and I tell you what I'm really going for it, on every single table here the people that could make a difference.

Mick Waters, Director of Curriculum, Qualifications and Curriculum Authority

- The challenge for the curriculum is to keep up with the pace of change and make assessment relevant.
- A better attitude to ICT is needed; it is necessary to understand how the curriculum can drive its use and how learners can exploit it.
- Current use of ICT is structured around a traditional model, but personalisation will mean relinquishing the existing formal structures.
- Web technology allows learners to relate to others in a community, to create their own taxonomies, to share knowledge and to collaborate.
- It is time to ask serious questions about how we deliver and assess learning.

delegate contributions

This section summarises observations made during the conference by delegates addressing a number of key questions.

1. Experience of harnessing technology

a. Changes within organisations

Logistics and access

Logistical changes include improved access to ICT facilities and improved internet access. Some senior schools have provided technical support for primary schools. There are also instances of organisations taking ICT to where the learners are learning.

Some logistical barriers have been identified. Some are as basic as the number of power sockets in classrooms. Others focus on school organisation – ICT facilities are not always available to students as they move from one classroom to another, for example.

Team-based working

Professional development is a core issue, for teaching staff especially. There is evidence of team-based working and mentoring and also improved communication between colleagues using technology. However there is a need to be sensitive to individuals' feelings of vulnerability in the face of these changes.

Curriculum planning and delivery

Many organisations have incorporated technology across curriculum areas and plan to do more. A number have developed flexible approaches to the curriculum and to where learning takes place.

Some students have become more involved in the development of learning materials. Several people noted that students have higher expectations of staff skills with respect to ICT provision.

b. Examples of best practice

Best practice is categorised under 'groundwork', 'access' and 'learning formats'. Each category has three sub themes, shown below:

Groundwork
Preparation
Institutional ethos
Professional development for teachers

Access
Personal and portable technology
Community approaches to learning
Involving marginalised learners

Learning formats
Project work
Game formats
E-portfolios

Groundwork

Preparation:
Many respondents identified as best practice the employment of learning technologists and/or other ICT experts to work in multi-professional teams alongside educators. Appropriate induction for learners in the use of ICT was also identified as good practice.

Institutional ethos:
Best practice with respect to institutional ethos includes implementing common technologies and resources so that learners can access the system at any time and from anywhere.

Well-trained teachers could collaborate with other teachers and involve learners to develop materials.

Underpinning all this should be a budget that takes account of technology renewal.

Professional development for teachers:
Adequate development for teaching staff is a central component of best practice. Delegates suggested deploying experts, elite teachers and children to train teachers to use technologies. Several suggested social and technical forums and virtual communities to support staff and aid collaboration. E-mentoring and other technology solutions were also mentioned.

Access

Personal and portable technology:
Interactive whiteboards were seen as a positive institutional change, although some delegates questioned their dominance.

Many delegates suggested using technology designed for individuals as the basis for shared work. Delegates also suggested using personal technologies that students already owned and were competent using.

Community approaches to learning:
A 'community' approach to teaching and learning experiences, both within and between institutions and sectors, could improve access to new technology for different users.

Involving marginalised learners:
Technology has an important part to play in addressing issues related to access for learners marginalised by traditional teaching and learning. These learners include people with dyslexia, hearing impairments, special physical needs and language issues, and gifted and talented pupils.

Learning formats

Project work
Increased use of project work to engage students to use new technology was a strong element across the sectors. Technology can be used to produce high quality student work or as a research tool.

Game formats
Game formats were identified as effective at engaging hard-to-reach students. For example, students not in education, employment or training have been encouraged to engage in literacy through hip-hop-based activities and computer games. Similarly, video game formats can be used to teach algebra.

E-portfolios
The need to move towards more individualised learning environments was acknowledged. To move towards a more personalised approach to learning, the use of e-portfolios across sectors was cited – these enable students to collect resources and reflect on their learning experiences in a structured way.

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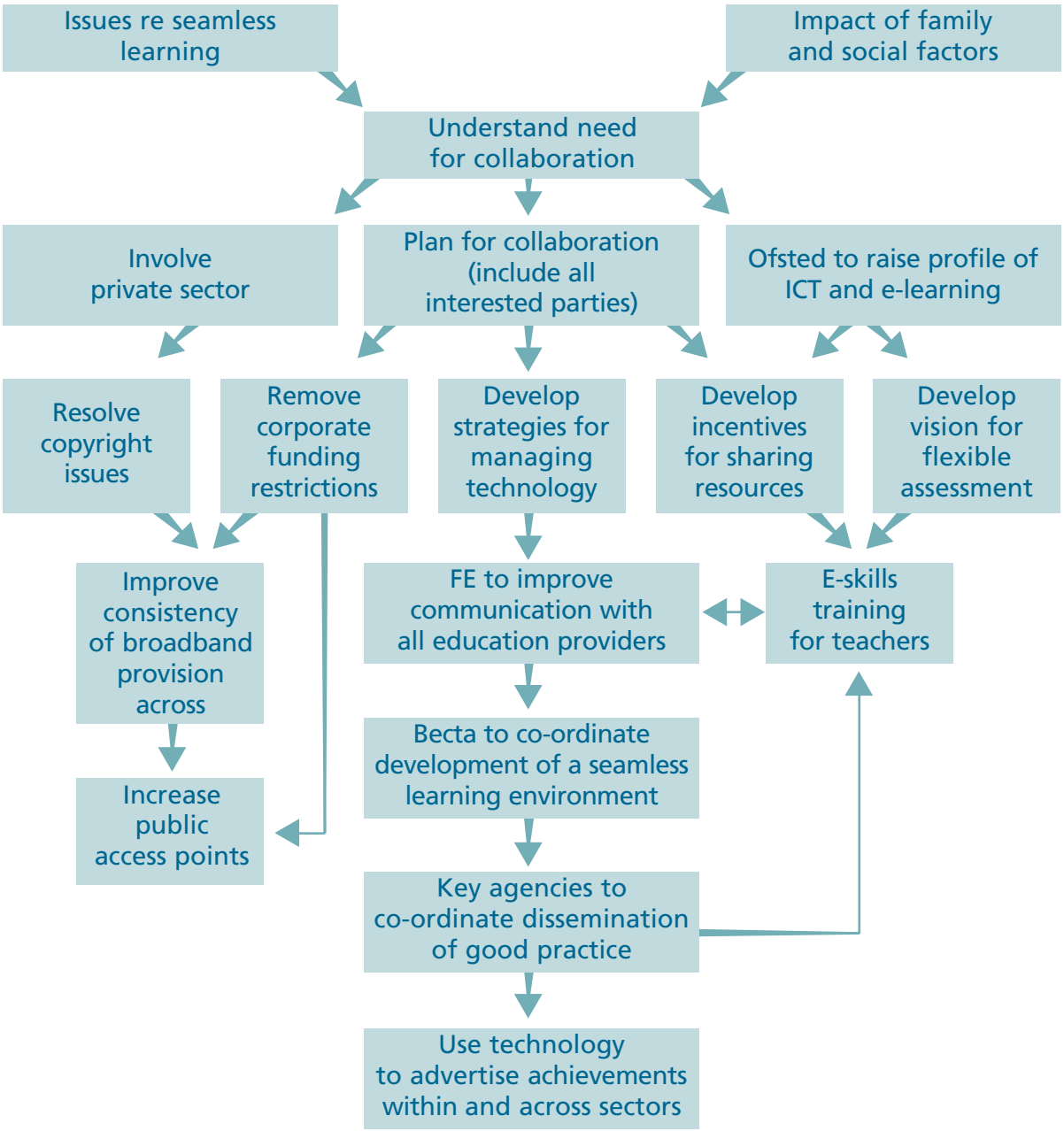
2. Partnerships for delivery

a. What needs to be done?

The answers to this question were diverse, but formed different parts to an overall picture of harnessing the potential of learning technologies. The following diagram summarises responses and begins to model the way forwards:



b. Examples of working together

Three key issues are at the heart of developing effective partnerships for delivery: managing students' transition between educational establishments, developing e-learning strategies and sharing learning resources.

Managing transition

The use of a single joint learning platform was noted as one approach to overcoming some transition issues, as was e-portfolios. However, the most radical attempt to eliminate transition problems was found in Northamptonshire:

"[It] doesn't look like a school – based on an integrated approach without any breaks in learning. Every room is networked with whiteboards etc. Results are higher than for surrounding schools. Learning discovery centre – links all sectors through to adult education."

Developing e-strategies

E-strategy development is being undertaken in a variety of ways. Regional forums are a relatively common approach, with broadband consortia and learning communities within an area sharing expertise.

Further education (FE) colleges adopt a more independent approach to e-strategy development than schools, but have made successful joint bids (within FE) for research funding to inform strategy development.

There is evidence that local-government-level practice is being shared and hardware and software purchasing standardised to achieve economies.

Sharing learning resources

Sharing took a variety of forms, from sharing virtual learning environments and even physical space and technological resources, through to more ambitious initiatives in which schools in an area share teaching via an institution that acts as a hub for resources.

Community-based projects involve collaboration of learning institutions with local libraries and staff to open up technological resources to the public.

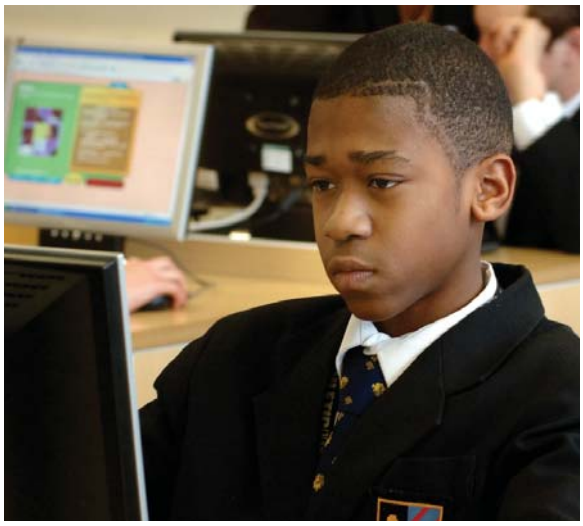
Anxiety was expressed about sharing learning resources in a competitive market and competitive educational culture (eg league tables), along with a lack of confidence about the quality of resources that some institutions might provide.

3. What must we do to make learning seamless for the learner?

Not everyone agreed that continuity of learning between sectors was something to aspire to.

However, many delegates thought that resources should be more personalised, with more varied teaching materials and assessment methods.

"Early years focuses and promotes independent and autonomous learning. So does higher education. We need to address the pressures that move away from this to the didactic teacher-led assessment focus during much of the years in between."



4. Personalisation within the sectors and commitments to action

a. What can we do to increase personalisation?

Overarching issues

Key questions were how to provide resources and how to share best practice.

Some delegates thought resources should be developed as a first step. Others advocated organisations such as Becta having a role developing a 'neutral' repository of learning materials.

Teachers' confidence was an issue, especially in light of the call for teachers to take risks when developing e-learning approaches. Some delegates suggested mechanisms for rewarding innovation and risk-taking.

Many thought there was a need to adopt a single learning platform and develop a sustainable infrastructure. This could be used to share best practice. However, others expressed concern about ICT policy being managed from the centre and passed down, which could restrict innovation. Instead, these delegates suggested small-scale, local pilot work in the first instance.

Curriculum review

Many suggested that the curriculum needs to be broadened if we are to personalise teaching and learning. Subject areas could be seen as contexts for learning, in which learners would study topics that interested them. Learners could be credited for those study units, without having to complete a larger course or qualification.

However, to successfully broaden the curriculum in this way, teachers need e-learning materials designed to make everyday interests suitable for teaching.

Empowering and enabling learners

To enable and empower learners, delegates called for increased flexibility so that students can choose when and how they learn. Provision could give all learners access to ICT outside of school or college or work. The potential of personal technology for formal learning could also be explored.

"Give access to resources that allow learning beyond what is being taught to the group. So that they can start developing / enjoying what it is that they are finding out about."

b. What is your experience?

Many delegates observed that learners are often ahead of teachers with respect to technology, underscoring earlier requests for greater e-skills development for teachers.

Assessment formats

Delegates noted that assessment criteria have not kept pace with the move towards personalised learning. Many good examples of assessment can be found outside the formal assessment process because of its focus on assessing the outcomes of learning rather than the learning process itself.

The adoption of project-based learning was thought to overcome this issue.

Open learning formats

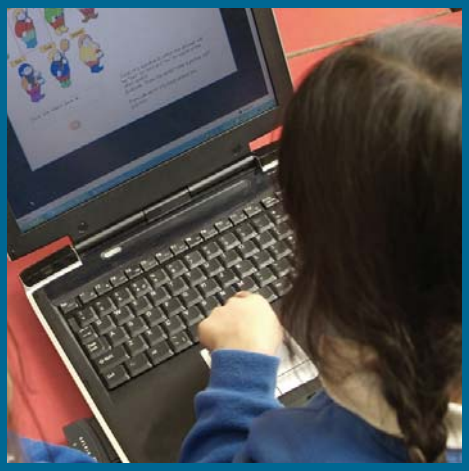
Delegates cited examples of movement towards 'open learning', for example, breaking down age barriers in primary schools so that children learn when they are ready, and allowing children to learn independently.

Pedagogical issues

Delegates identified ways in which ICT could help personalisation. These included: using diagnostic activities to identify the learner's 'starting point'; using digital video and blogs to encourage peer – and self-assessment; and learners using their own personal technology and generating content.

Some delegates noted that parts of the education system personalise learning within their current practice. Examples include special schools and adult learning:

"Adult learning is example of good personalised learning. Agreed learning outcomes: workplace based; progress at own pace; recognition of prior learning."



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commitment to action

All conference delegates were asked to record the actions they planned to take following the event.

The table below shows the most frequently cited commitments from each sector (cited by over 15% of delegates from each sector with the exception of HE, in which the range of longer-term commitments meant that no action was cited by more than 12%, so this lower figure was used).

Organisation type	Immediate plans	6-week plan	12-month plan
Schools	■ Review ICT provision ■ Feed back to colleagues	■ Review ICT provision	■ Introduce personalisation initiative ■ Set clear agenda for ICT use
FE colleges	■ Review ICT strategy ■ Evaluate personal practice ■ Feed back to colleagues ■ Set up CPD for staff	■ Review ICT strategy	■ Introduce personalisation initiative ■ Set clear agenda for ICT use
HE institutions	■ Feed back to colleagues	■ Review ICT strategy	■ Review ICT strategy ■ Share good practice ■ Contribute to benchmarking project
ACL and WBL providers	■ Feed back to colleagues	■ Improve collaboration ■ Review ICT use	■ Set up CPD for staff ■ Improve collaboration
Suppliers	■ Improve collaboration ■ Explore implementation frameworks	■ Improve collaboration	■ Improve collaboration ■ Develop resources ■ Develop methods for sharing best practice ■ Raise profile of e-learning
System leadership and management	■ Feed back to colleagues	■ Review ICT strategy ■ Improve collaboration	■ Improve collaboration ■ Promote personalisation

where next?

This event helped to highlight current practice in the education system. We will be able to begin to identify movement towards making the best use of technology for learners.

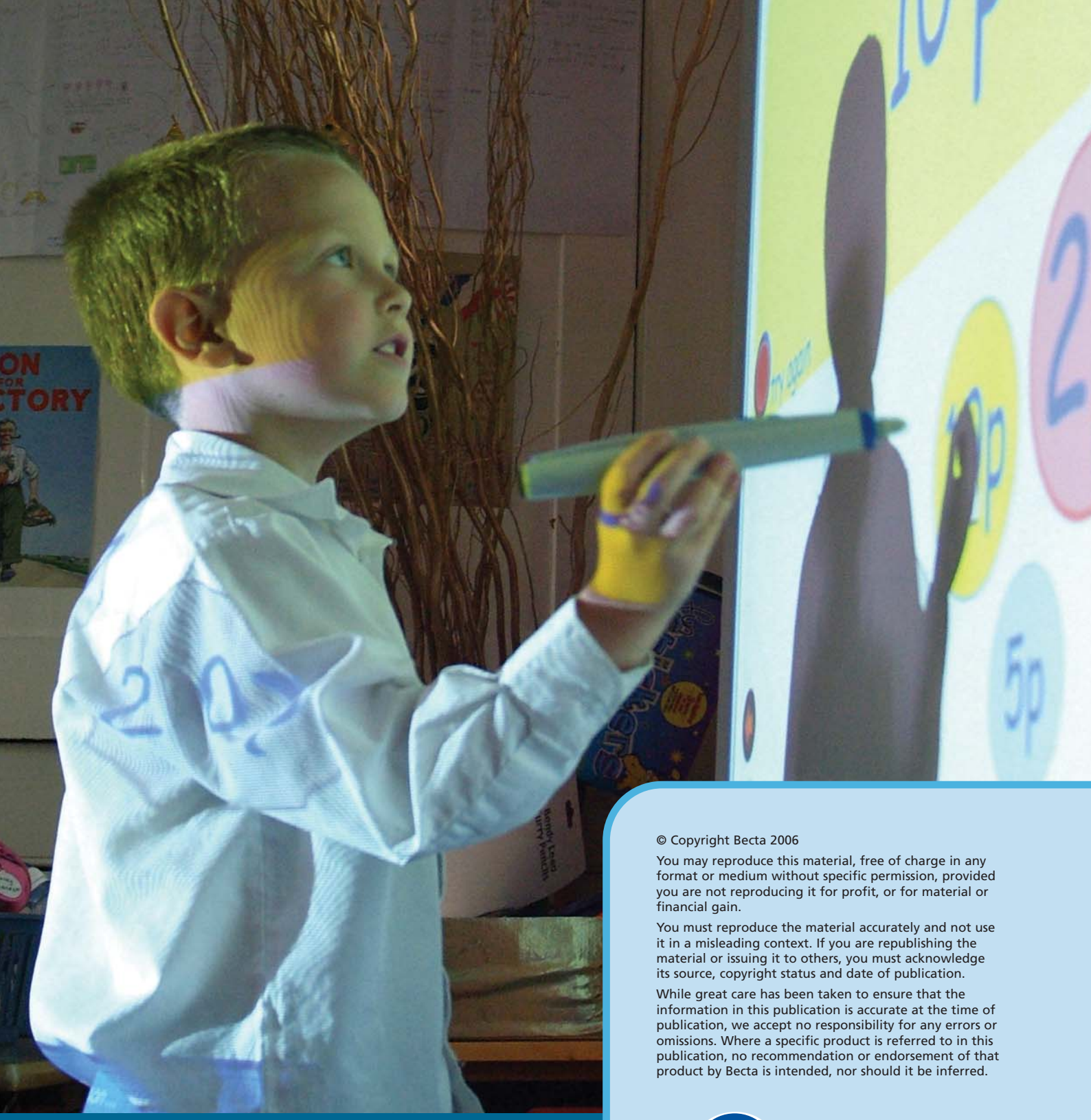
Becta is working with its partners to deliver the e-strategy. A delivery plan co-ordinates actions and gives an overview of what all sectors are doing.

Some actions Becta is taking to support and co-ordinate the work of partners are:

- secondment of key sector leaders as a resource to champion system reform in the context of harnessing technology
- activities and events to support sharing practice and building networks for effective harnessing of technology for learners
- a phased evaluation to gauge the impact of this and other events
- Becta key contacts working directly with partner organisations to support their strategic and operational delivery of the e-strategy.

Delegates made commitments to action, which form part of this report. We all need to take account of the wider objectives of harnessing technology while engaging technology for the benefit of our learners.

We will be able to begin to identify movement towards making the best use of technology for learners.



Acknowledgments

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