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next generation
learning

**Messages from
the evidence:**
Assessment
using technology



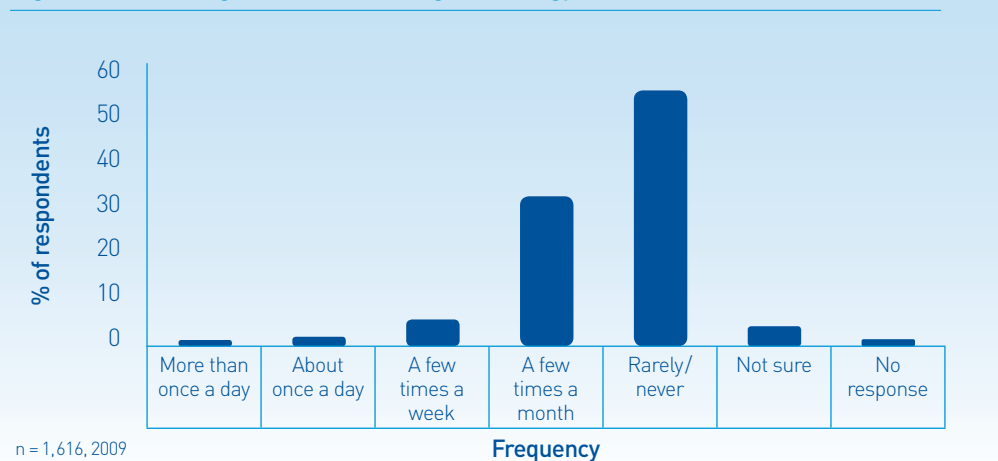
Assessment for learning (AfL) and formative assessment are becoming an increasingly important feature of learning and teaching. Regular assessments help teachers to support individual needs and enable young people and those that support them to monitor their own progress. Technology has an important role to play in facilitating assessment for learning.

The challenge

Technology can be used to administer a test and then link each learner to a suitable learning task, based on test results. Using technology can help learners assess each other's work and it can provide teachers with regular reports on the progress of all learners.

But there are challenges. Many teachers don't tap into the potential of technology to improve assessment. For example, as Figure 1 demonstrates, only four in ten teachers use technology to create or administer assessment.

Figure 1: Percentage of teachers using technology to create or administer tests



This is, in part, because some teachers aren't aware of the role technology can play in increasing the impact of their work with learners. Some teachers are not sure about what they should do with technology-enabled assessment information once they have it.

There are four key challenges for schools:**1**

Using technology to integrate assessment into everyday learning.

2

Getting hold of high quality assessment tools.

3

Making assessment information available online, for example for parents.

4

Passing assessment information between institutions, for example at transition to secondary school; or during shared delivery, for example diploma partnerships.



Strategies and tools for managing assessment using technology

The first, and essential, step is to identify what type of assessment is needed, then to find the right type of technology. Developing strategies often follow three levels of activity:



Strategies	Type of product	Potential impacts on assessment	Management issues
Use collaborative technologies and learning platforms to support 21st century learning.	Collaborative working. Integration of assessment and learning resources. Web 2.0 tools including collaborative quiz communities.	Supports most aspects of assessment for learning, including: learner-ownership of assessment process and assessment information. Supports a wide range of assessment techniques, including peer-to-peer assessment and multimedia formats. Can be fully integrated into everyday learning. Can include social and collaborative 'web2' approaches.	Schools need to ensure that staff have enough time to select, build and manage the assessment functionality within these systems. Some schools have looked into the use of handheld and mobile technologies. These projects can be an excellent starting point.
Use technology to create new learning and assessment networks. For example, by enabling teachers to share students' work.	Assessment 'networking' tools like e-portfolio software.	Teachers can view and comment on students' work – and offers real-time assessment and guidance. Learners can support each other. The system can integrate with a wide range of technologies.	These tools can be specific to particular institutions, groups of schools or subjects. Make sure you pilot the tool in your particular context as it is sometimes difficult to migrate to other settings.
Use technology to support routine assessment tasks. For example, by providing teachers with databases of assessment tasks and analysis tools.	Document storage. Databases of past papers. Provision of short (often multi-choice) item banks. Storage of results. Analysis of results.	Provides teachers with access to high quality, calibrated tests throughout the school year. Saves teacher time in compiling and marking assessments. Provides instant/rapid access to results, feeding into learning. Provides analyses of strengths and weaknesses.	This tends to be focused on subject specific summative assessment and tests. There is a limited range of assessment techniques. There is less emphasis on 'assessment for learning'. Some products are based on hard-copy printing of tests. With other products, learners complete tests on screen and have access from home.

The context

Evidence tells us that you can improve the quality of assessment activities by using technology. Successful strategies include the following.



Case Studies

Using technology in the design of assessment systems

At Coopers Technology College learners have access to their own 'My learning' area, where pages are developed for every subject at each key stage. Learners have been more independent and productive since having ownership of these spaces. Teachers use surveys to allow learners to undertake peer evaluation. They also use discussion boards to pose questions to which learners respond. Maths teachers can book small groups of learners into the 'Cyberlab' for live discussions. Learners can post questions electronically; the teacher will give immediate help or direct them to where they can receive peer support. Customising assignments and resources for specific groups of learners is much easier in electronic format; versions can be assigned anonymously to groups of learners. Learners get immediate feedback from electronically-marked tests to direct their further learning. Staff can readily add comments to open-ended assignments. Response levels are higher because the system reminds learners to hand in their work.

Reporting to parents

Evidence shows that parents want more information about their children's progress including perhaps homework marks and their engagement with the learning process. Reporting assessment data to parents provides new communications challenges. Becta has published a framework to support schools who want to develop better parental dialogue and involvement in learning. Becta's framework covers the following aspects:

- supporting partnership by empowering parents
- improving parents' understanding of assessment information
- expanding the scope of information provided.



Case Studies

Sharing achievements using technology

Ranvilles Infant School has started along this journey. Reports are completed throughout the year and shared with the parents, culminating in end-of-year reports. These include photographs of achievement and attainment. The school has an 'open door' policy that is complemented by the online chat rooms for parents, learners and staff. The governors also use an online forum to talk to parents and, in particular, the children.

Technology supporting a new curriculum

Walton le Dale School have been running a pilot project tracking the development of personal learning and thinking skills with their Year 7 learners as part of Becta's Evidence and Practice projects (see references). They report that "...the project is not about the technology, it is about the way in which students and staff use it. [the e-portofolio and learning platform] are excellent tools, but the key is to embed reflective self-assessment, peer and teacher assessment of the PLTS/competences into teaching and learning. Teachers need to develop the skills needed to use the information that this system generates to inform their medium and short-term planning... periodic assessment is a time consuming process, as is the gathering of appropriate assessment evidence. It needs to be integral to the day-to-day process of learning and teaching and school assessment systems need to be modified to take account of these new approaches."

The enduring challenge

Testing systems have great influence on assessment practice and the taught curriculum. Developing assessments to include technology-based and competency-based approaches alongside traditional testing could have profound implications for learning. Cisco, Intel and Microsoft have launched an international 'call to action', seeking development of assessment systems:



New assessments are needed that measure these skills and provide information that is needed by learners, teachers, parents, administrators, and policymakers to catalyse and support systemic education reform. These assessments should engage learners in the use of technology and digital resources and the application of a deep understanding of subject knowledge to solve complex, real world tasks and create new ideas, content, and knowledge.

About this document

Acknowledgements

This leaflet is based upon work prepared for Becta's Research Conference November 2009 by Martin Ripley.

Martin is a leading international adviser on 21st century education and technology. He is co-founder of the 21st Century Learning Alliance, owner of World Class Arena Limited and a Fellow of the RSA.

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