Using online quizzes to check and build understanding

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What's the idea?

Quizzes and low-stakes assessments are not just good for providing teachers with information about how much a student knows and what they still need to learn to inform future planning – they can also help students take advantage of the benefits of 'retrieval practice', where recalling things from memory actually helps to strengthen retention of that knowledge. Online quizzing tools will be particularly useful for this while pupils are learning remotely.

What does the research say?

Research into the 'testing effect' and 'retrieval practice' shows that one of the most effective ways to secure material in students' long-term memory is dedicating time to retrieving the information from memory frequently (for example, see Brown, Roediger and McDaniel, 2014). Given that frequent retrieval practice boosts retention, incorporating frequent, low-stakes or no-stakes testing and quizzing into teaching and learning activities can be really valuable.

In this way, testing and quizzing become part of the learning process, not just assessment. Of course, information collected from low-stakes quizzing can also be used to identify misconceptions and inform future teaching, acting as a form of formative assessment too.

How does this work in practice?

Online quizzing could be a really flexible approach for you to use with your pupils while they are learning at home. There are many online tools that can help you to create quizzes for your pupils to complete. Quizlet and Socrative are useful off-the-shelf quiz makers, with Quizlet having lots of pre-built quizzes too. They can both be used for pupils to complete in their own time or for 'in class' use (including in a virtual classroom). The flexibility of quizzes pupils can complete in their own time is particularly helpful in the current environment.

Your school's virtual learning environment may also have a quizzing function, and Google for Education and Microsoft also offer quizzing options that you can set for pupils to complete in their own time. An advantage of something built into your school system is that it'll be easy for you to track who is completing what, and they will give you access to your pupils' results quickly, effectively and almost effortlessly, allowing you to check for understanding, while also taking advantage of the power of retrieval practice. You can often do this through third party tools too, but it can involve creating accounts (be sure to follow appropriate guidelines around esafety and data use, and check how any platform will use your data) – another option is just for pupils to share a screenshot of their results to show what they've done, but this is less seamless.

It's worth noting that all of these tools can be set to automatically mark pupils' submissions (including multiple choice questions and short-answer questions), and in many cases provide tailored feedback – reducing the time taken for you to provide the same feedback to every pupil.

Even if your pupils' home-learning resources are primarily paper-based, you could consider linking to dedicated web pages where learners can self-test. QR codes and URL shortening services are a great way to blend hard copy materials with online resources.

Top tips

• Remember that the point of low-stakes tests is not so much to assess, as to help pupils learn. Explain this clearly to your pupils so they understand the purpose of the quizzes.

• Recognise (and explain to your pupils) the value of learning key facts off by heart (vocabulary, dates, key events and their dates) in enabling critical thinking.

• Retrieval practice isn't just about quizzes! You could also ask pupils to create mind-maps (on paper or using an online tool like Popplet) or simply write down everything they know on a piece of paper or Padlet board. Younger pupils, for example those in primary school, will benefit from more structure, such as partially-completed templates or prompts - in fact these may be helpful for all pupils!

WANT TO KNOW MORE?

• Brown P, Roediger H and McDaniel M (2014) *Make It Stick: The Science of Successful Learning*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.
• Rosenshine B (2012) Principles of instruction: Research-based strategies that all teachers should know. *American Educator* 36(1): 12–19.
• Sumeracki M and Weinstein Y (2018) Optimising Learning Using Retrieval Practice. *Impact* 2.

You can see Socrative in use in a video case study in the Chartered College's FutureLearn course on using technology in evidence-based teaching.

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