Research-Based Pedagogy Quiz

Robert Coe, September 2015

Class size

1. Reductions in class size (eg 30→24) generate
    a) Substantial increases in students' learning
    b) Small increases in students' learning
    c) No change in students' learning
2. The greatest benefits of smaller classes are
    a) Less stress for teachers enhances their quality of life
    b) Better feedback for learners promotes more learning
    c) More individual attention for students boosts motivation and confidence

Technology

3. ICT enhances learning if it
    a) motivates and engages students
    b) reduces teacher workload
    c) promotes activities that are aligned with subject content
    d) provides new ways of thinking about problems
4. Which of these approaches is best supported by evidence of promoting learning
    a) Giving all students iPads
    b) Using an interactive whiteboard
    c) Using technology for short bursts of focused activity

Testing

5. The best time to test students' understanding of a topic is
    a) Before you teach it
    b) Immediately after teaching it
    c) After teaching it, but with a delay to allow forgetting
    d) All of the above
6. After studying a topic, students remember most if they then
    a) Study it again
    b) Take a test on it
    c) Take repeated tests on it, without further study

Learning styles (from Cerbin 2010)

7. A person's learning style determines
    a) which part of the brain the individual uses during a learning task
    b) how well they can learn information presented in different modalities (visual, auditory, kinesthetic)
    c) nothing about their performance on learning tasks
8. Research shows that
    a) People learn best when instruction matches their individual learning style, e.g., auditory learners are taught using an auditory mode of instruction
    b) People learn best when instruction forces learners to use learning styles different from their preferred style, e.g., auditory learners are taught using a visual mode of instruction
    c) There is no connection between learning style and how well people learn

Praise

9. Reassuring students who lack confidence that they are clever is most likely to
    a) Make them think they are capable
    b) Make them think being clever matters
    c) Help them to learn more
10. The best response to a poor piece of work is
    a) Sympathy, support and encouragement
    b) Frustration/irritation, suggesting the student needs to do better
    c) Acknowledgement that it is not good, while attributing their failure to lack of effort or poor strategy

Further Reading

Class size

My blog for education media centre: http://educationmediacentre.org/researchnews/whats-the-evidence-on-class-size/

The best summary of all the international research evidence and its implications is a 2005 paper by John Hattie in the International Journal of Educational Research (http://dx.doi.org/10.1016/j.ijer.2006.07.002.

The Sutton Trust-EEF Toolkit provides an accessible summary http://educationendowmentfoundation.org.uk/toolkit/reducing-class-size/)

Technology

Steve Higgins et al's summary for EEF: The Impact of Digital Technology on Learning http://educationendowmentfoundation.org.uk/uploads/pdf/The_Impact_of_Digital_Technologies_on_Learning_FULL_REPORT_(2012).pdf

See also Dan Willingham "Have technology and multitasking rewired how students learn?" http://www.aft.org/pdfs/americaneducator/summer2010/Willingham.pdf

Testing

Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: taking memory tests improves long-term retention. Psychological science, 17(3), 249-255. http://learninglab.psych.purdue.edu/downloads/2006_Roediger_Karpicke_PsychSci.pdf

Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. Psychological Science in the Public Interest, 14(1), 4-58.

http://www.millersville.edu/millersville/academics/gened/files/PDFs%20Faculty%20Handbook/3_Improving%20Students%20Learning%20with%20Effective%20Learning%20Techniques%20%20Promising%20Directions%20from%20Cognitive%20Educational%20Psychology.pdf

Learning style

Questions taken from Bill Cerbin (2010), Five Ill-Conceived Ideas about Student Learning http://www.uwlax.edu/catl/studentlearning/Presentations/5_Ill_Conceived_Ideas_about_Learning.pdf

FAQs (+ video & links) on learning styles from Dan Willingham: http://www.danielwillingham.com/learning-styles-faq.html

See also: Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: concepts and evidence. Psychological Science in the Public Interest, 9(3), 105-119. http://www.psychologicalscience.org/journals/pspi/PSPI_9_3.pdf

Praise

For more on what kinds of praise can be harmful and why, see:

Richard Bailey @DrDickB 1Nov2014 'The Problem With Praise'
https://www.psychologytoday.com/blog/smart-moves/201411/the-problem-praise

Nick Rose @Turnfordblog 1Jun2014 Growth mindset: It's not magic
https://evidenceintopractice.wordpress.com/2014/06/01/growth-mindset-its-not-magic/

Deborah Stipek on praise: How Do Teachers' Expectations Affect Student Learning
http://www.education.com/reference/article/teachers-expectations-affect-learning/

Dweck, C.S. (1999) 'Caution – Praise Can Be Dangerous' American Educator, Spring 1999, p4-9.
https://www.aft.org/pdfs/americaneducator/spring1999/PraiseSpring99.pdf

Brophy, J. (1981) Teacher praise: a functional analysis. Review of Educational Research 51 (1) 5-32.

Wiliam D. (1999) 'Formative Assessment in Mathematics. Part 2: Feedback'. Equals: Mathematics and Special Educational Needs, vol 5, no 3, 8-11.
http://eprints.ioe.ac.uk/1148/1/Wiliam1999Formativepart2_8.pdf