Understanding this practice

These examples demonstrate what teaching chunks of new information explicitly with explanation, demonstration and modelling might look like in the classroom, and potential misapplications in practice.

What it is

- Teaching new information explicitly and at an appropriate pace.
- Moving on to the next chunk of new information once students have mastered component tasks.
- Demonstrating and modelling how to complete a task for students, and providing appropriate scaffolding.
- Providing regular opportunities for students to practise what they're learning during a lesson.

What it isn't

- Teaching new information too slowly or too quickly for the needs of students in the class, and the nature of the task.
- Moving on to new information without students having mastered the prior task.
- Setting tasks that require application of new or developing knowledge and skills without explicit

The importance of teaching explicitly for effective teaching and learning

Key points from the research

- Working memory can quickly become overloaded if too much information is presented too quickly. During cognitive overload, there's a risk new information won't be transferred to long-term memory, and won't be connected to current knowledge, and so won't contribute to students' understanding.[2]
- Chunking information helps manage cognitive load. 'Chunking' is the practice of breaking complex concepts, strategies or skills into smaller, more manageable components.[3] When chunks are taught in a logical sequence of small steps, it helps students build on what they already know, understand and can do, and retain what they're learning for future use.[4]
- Learning new information happens most effectively and efficiently when teachers provide explicit guidance so students aren't left to construct meaning or discover new knowledge themselves.[5]

Key strategies and techniques

There are a range of strategies and techniques you can use to teach chunks of new information explicitly with explanation, demonstration and modelling. This section describes those key strategies and techniques (see summary in Figure 1), including what they might look like in the classroom.

Figure 1: Key strategies and techniques to teach explicitlyx ter EMCs≥2.812covEMCs<r11 0 0b046EMeW nB[

Demonstrate and model what students need to learn

Demonstrate and think aloud

Guide students through content using step-by-step demonstrations, narrating the thinking or decision-making process needed to complete relevant tasks or procedures.

Model using worked examples

A worked example shows or models all the steps required to complete a task or solve a problem. It can be used to clearly and concisely demonstrate how to complete a task. Worked examples can gradually introduce different elements of the task or show alternative ways of completing it. As students become more expert, remove steps from worked examples and replace worked examples with independent problem-solving or decision-making. Students can be asked to identify and explain what steps are missing from examples during checks for understanding.

Provide examples and non-examples

CC 4 ng chd conciatesng it26 (xamples and ren-e)34 (xamples aniandsinefutheechniqueo idpre-empt li22 (ed inssincisepo

Further reading

Martin, A. J., & Evans, P. (2018). Load reduction instruction: Exploring a framework that assesses explicit instruction through to independent learning. *Teaching and Teacher Education: An International Journal of Research and Studies*, *73*(1), 203–214. https://doi.org/10.1016/j.tate.2018.03.018

This paper explains how teachers can help students manage their cognitive load during the initial stages of learning, and then, as fluency and automaticity develop, how students can be encouraged to engage in guided independent learning.

Sweller, J., van Merrienboer, J., & Paas, F. (1998). Cognitive architecture and instructional design. *Educational Psychology Review*, *10*, 251–296.

This seminal literature review provides an overview of cognitive load theory – what it is, how it relates to the human brain, and the implications of cognitive load theory for instructional design.

Endnotes

1 Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching*. Guilford Press.

2 Centre for Education Statistics and Evaluation. (2017). *Cognitive load theory: Research that teachers really need to understand*. NSW Department of Education. https://education.nsw.gov.au/about-us/educational-data/cese/publications/literature-reviews/cognitive-load-theory.html

3 Hughes, C. A., Morris, J. R., Therrien, W. J., & Benson, S. K. (2017). Explicit instruction: Historical and contemporary contexts. *Learning Disabilities Research & Practice*, *32*(3), 140–148. https://doi.org/10.1111/ldrp.12142

4 Rosenshine, B. (2012). Principles of instruction: Research-based strategies that all teachers should know. *American Educator*, *36*(1), 12–19. https://www.aft.org/ae/spring2012/rosenshine

5 Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching*. Guilford Press.