

Evidence-based teaching: The top ten methods

An introduction

This document supports the material on the DVD and we would strongly recommend that you print this off before starting your session.

Introductions

What is “Evidence Based Teaching”?

Teaching is in a process of change, and like medicine 100 years ago, is abandoning fashions and fads and become **evidence-based**.

Half a million experiments in real classrooms have revealed the teaching methods that work best. These can improve students' attainment by up to two grades compared to conventional practice.

The evidence shows that teachers can make a huge difference to their pupils learning, so, developing the skills of delivering these 10 effective classroom methods will have direct impact on grades.

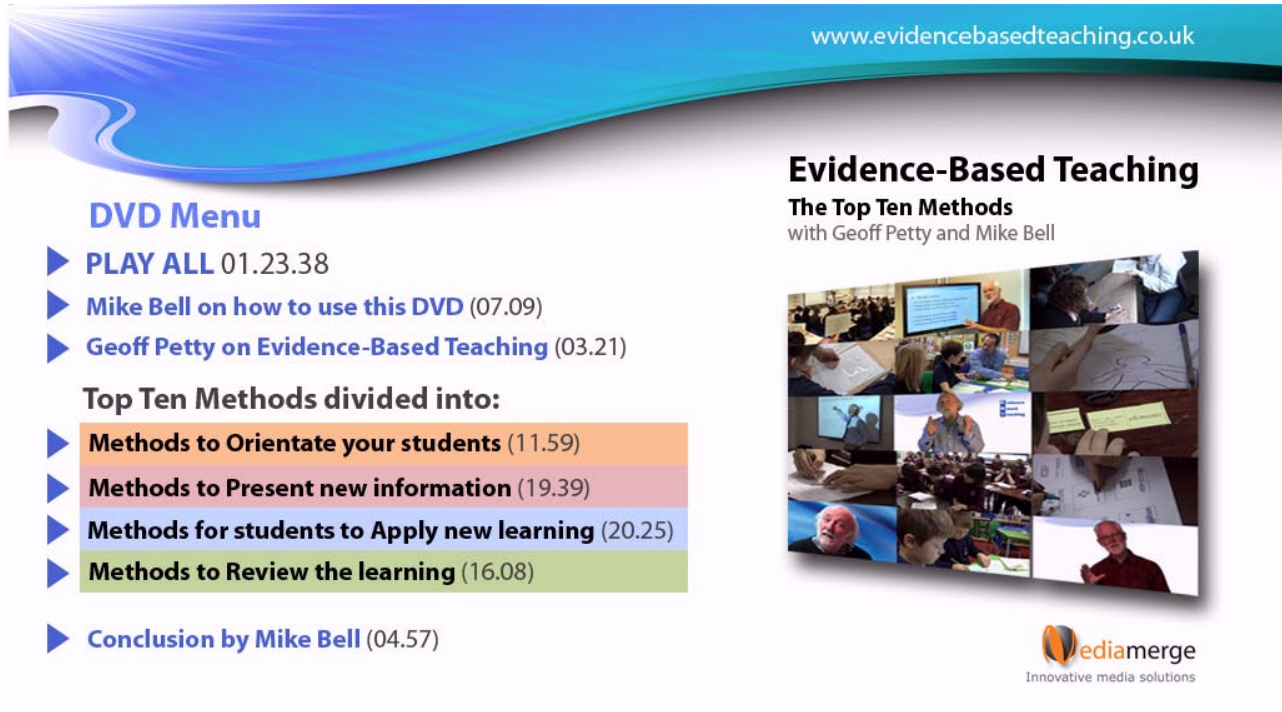
This DVD can be used alongside resources such as Geoff Petty's book “Evidence based Teaching” or Robert Marzano's “Classroom Instruction that Works”. It provides an overview of the methods and short clips of some of the methods being used in the classroom.

This DVD can support the process of skills development.

Teachers have as much to gain as students in meeting this professional challenge. The methods make teaching less draining, and more interesting, as well as more effective.

How to use this resource

The various video clips available on this DVD resource are accessed using the menu below. This allows you to play either the whole video or to select the sections you wish to view.



www.evidencebasedteaching.co.uk

DVD Menu

- ▶ **PLAY ALL** 01.23.38
- ▶ **Mike Bell on how to use this DVD** (07.09)
- ▶ **Geoff Petty on Evidence-Based Teaching** (03.21)


Top Ten Methods divided into:

- ▶ **Methods to Orientate your students** (11.59)
- ▶ **Methods to Present new information** (19.39)
- ▶ **Methods for students to Apply new learning** (20.25)
- ▶ **Methods to Review the learning** (16.08)

- ▶ **Conclusion by Mike Bell** (04.57)

Evidence-Based Teaching

The Top Ten Methods
with Geoff Petty and Mike Bell



ediamerge
Innovative media solutions

The top ten methods in order of their effectiveness.

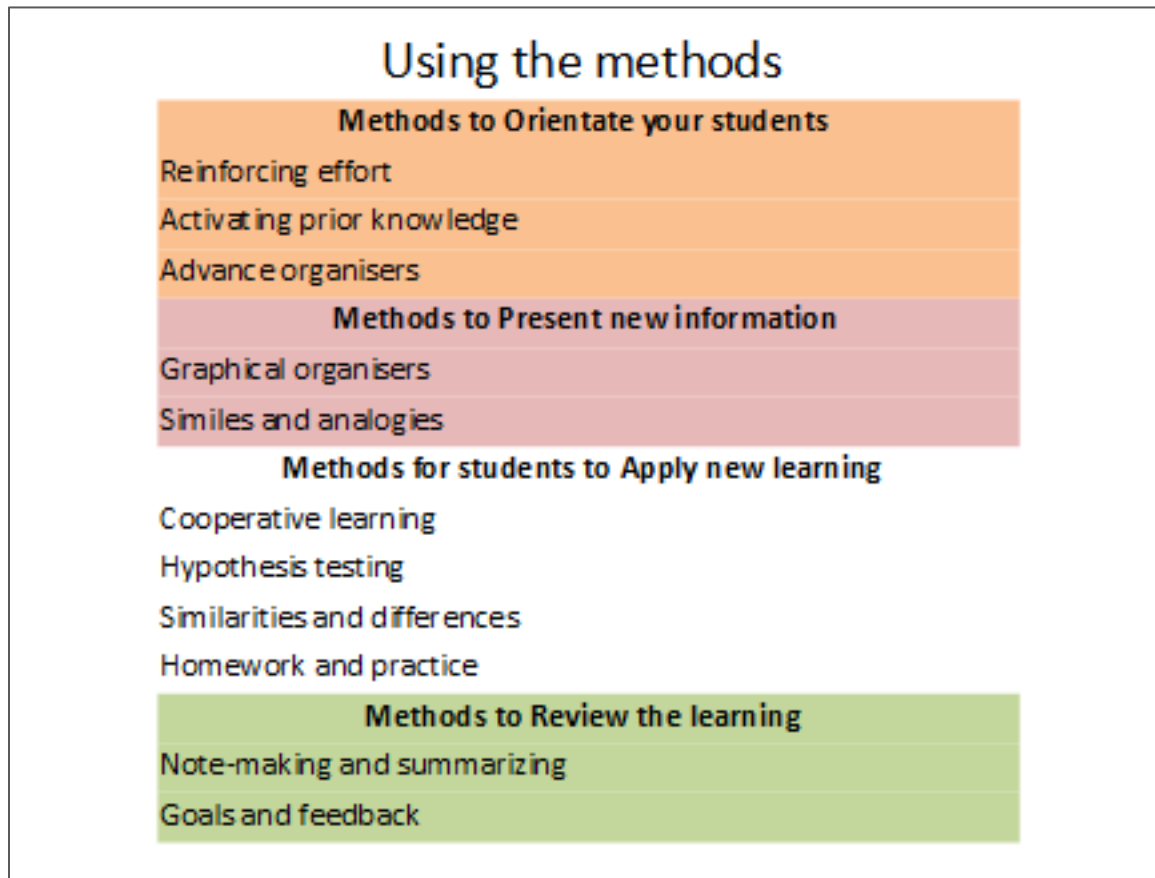
This list is based on the one identified in Robert Marzano's "Classroom Instruction that Works".

Top ten methods

- 1 Similes and analogies
- 2 Note-making and summarizing
- 3 Reinforcing effort
- 4 Homework and practice
- 5 Graphical organisers
- 6 Cooperative learning
- 7 Goals and feedback
- 8 Hypothesis testing
- 9 Activating prior knowledge
- 10 Advance organisers

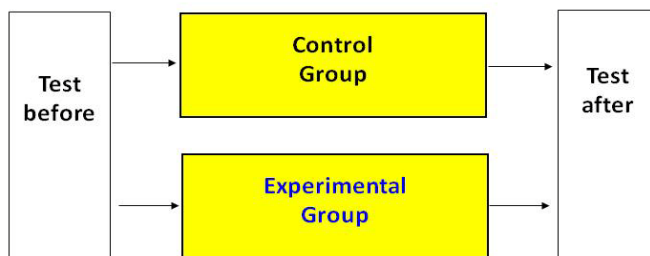


This list is a re-arrangement of the 10 methods in the order that you might use them in teaching a new topic.

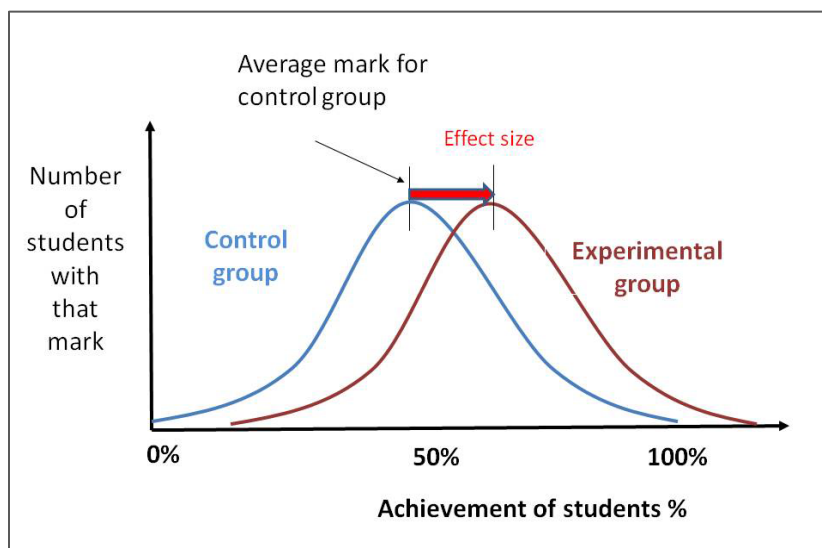


How is evidence collected?

Two similar groups are identified (perhaps classes in different schools) and both given a pre-test. One group is taught in the “normal” way, while the other is taught using the test method.



When the two groups are tested again, the difference is known as the “effect size”. The methods shown in the DVD all have an effect size above 0.5: giving an improvement of at least 1 GCSE or A-level grade.



List of methods

The left hand column gives the method name used in the DVD. The right hand column shows alternative names or similar methods.

Methods to Orientate your students

Methods to Orientate your students		
Reinforcing effort	<i>Attribution Training</i> <i>Dweck's theory of motivation</i> <i>"Learned Intelligence"</i>	See Carol Dweck's book "Mindset"
Activating prior knowledge	<i>Linking to prior knowledge</i> <i>Constructivism</i>	"Constructivism" (see wikipedia entry) is included here as it has similarities to the "Linking to prior knowledge" concept. However, it could equally be seen as an overarching theme which explains many of the effective methods.
Advance organisers	<i>Overview</i>	

Methods to Present new information

Methods to Present new information		
Graphical organisers	<i>Non-linguistic representations</i> <i>Visual learning</i> <i>Mind-mapping</i>	The important idea here is that we should communicate other than in words. Many of the ideas are graphical.
Similes and analogies	<i>Models</i> <i>Metaphors</i>	Analogies and similes compare something new with something we already know. Once we start to look, we find that language is full of analogies.

Methods to Apply new learning

Methods for students to Apply new learning		
Cooperative learning	<i>Groupwork</i> <i>Peer-explaining</i>	This section might just as well have been titled "Groupwork". Some writers use the term "Cooperative learning" to mean a specific method.
Hypothesis testing		
Similarities and differences	<i>Similes</i>	This is the "Apply" version of the "analogies and similes" section in "Present". Learners identify similarities and differences between two similar ideas. This clarifies the distinction in their minds.
Homework and practice	<i>Decisions-decisions</i> <i>Manipulatives</i>	The brain needs at least three, spaced repetitions to form a memory. These methods aim to help with that process.

Methods to Review learning

Methods to Review the learning		
Goals and feedback	<i>Assessment for learning (AfL)</i> <i>Formative assessment</i> <i>Medals and missions</i> <i>Assertive questioning</i>	Goals are set at the beginning of the topic and feedback is given as the learning goes ahead so that the learner has a clearer idea of what they are aiming for and how well they are doing.
Note-making and summarizing	<i>Extracting meaning from text</i>	Learners need the skill both to find the main points from a text (e.g. textbook or article) and also to be able to make notes from a lesson or discussion. Most learners do not develop these skills naturally, but, those who do, become much more independent and successful learners.

Developing the skills: Supported experimentation

Research by Joyce and Showers shows that individual INSET days have little long term effect on the learning of students.

Staff need to develop these skills by practice.

The role of senior staff is not to tell the teachers what to do, but simply to provide the opportunity for staff to develop their skills and, perhaps, to monitor the process to ensure that it happens.

Individual groups of teachers (perhaps 3) should identify 2 or 3 methods from the list and discuss how they will try them out.

They should then try them, unobserved, in their own lessons. The first time they try it, it may not go well, however, after discussion with group members they try them again. After about 10 repeats the skill becomes embedded in the teachers skill-set.

Like doctors and engineers, teachers must trust the evidence. All the methods on the DVD have been shown to be effective. If they are used, the students' results will improve.