



HIGH IMPACT TEACHING / OVERVIEW

Five myths that limit your teaching potential



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Summary *Teaching can seem daunting – so many considerations need to be incorporated into your planning! But are you investing your time in worthwhile strategies? Find out here what pedagogical mantras are myths, so that you can dismiss them and focus on what research tells us actually works for students' learning.*

The five myths as a glance

1. *Myth: Direct instruction is bad for learning.*

FACT: Direct instruction has a better impact on learning than ‘discovery’ and constructivist approaches.

DO: Instruct, demonstrate, explain, illustrate, question and consolidate for a systematic and engaging approach to teaching content.

2. *Myth: It is more important to teach skills than to teach knowledge.*

FACT: Skills cannot be separated from the knowledge required to implement them. Learners need knowledge to support skill use.

DO: Teach rich knowledge content alongside skills, to ensure that students are both knowledge-rich and skill/strategy-proficient.

3. *Myth: Students learn when you set independent work.*

FACT: Without skills for deciding how to approach a given task, and to continually evaluate how well they are doing against expectations and adjust their approach, students are likely to struggle with independent work.

DO: Set clear expectations and develop metacognitive skills in students to help them decide how to approach a task, and monitor their progress.

4. *Myth: Students have different learning styles.*

FACT: There is no evidence that supporting students with a preferred learning style has any effect on learning.

DO: Present information in multiple ways to provide repetition to aid learning, but don’t worry about meeting students’ particular learning styles.

5. *Myth: Students need non-cognitive skills before they can learn.*

FACT: Non-cognitive skills can’t be taught in isolation from cognitive content.

DO: Use clear and achievable goals and regular feedback so that students experience success in learning, which will enhance non-cognitive aspects of learning such as confidence and motivation.

MYTH 1: Direct instruction is bad for learning. Instead students should construct concepts for themselves.

Research shows that direct instruction has a larger impact on learning than 'discovery' or inquiry learning and constructivist approaches (Hattie, 2009; Ko, Sammons & Bakkum, 2013). Students with the highest outcomes experience teacher-directed instruction in most or all of their classes. If inquiry-based teaching is used, it is only in a few classes. In fact, when inquiry-based teaching is more frequent, and takes place without a sufficient base of direct instruction, students' achievement scores are lower.

What is direct instruction

Contrary to common belief, direct instruction does not mean that learning is passive, or that teaching is reduced to drill-and-practice. Direct instruction is a systematic approach to teaching in which the teacher is very explicit about what students are to learn. When implemented effectively it is both cognitively demanding and highly engaging.

Direct instruction involves teachers instructing, demonstrating, explaining and illustrating a particular concept and then getting students to actively engage in learning through questioning and discussion. Students then undertake activities to facilitate the consolidation and review of learning.

Direct instruction to prepare for discovery learning

Direct instruction doesn't rule out constructivist approaches of discovery by learning. Instead it helps students to require a base level of knowledge and skills needed before they are able to successfully undertake their own inquiry-style or discovery learning.

Open-ended, student-directed activities and discovery learning provide an opportunity for students to apply and extend the knowledge and skills they have developed through direct instruction.

What this means for your practice

Consider direct instruction and discovery learning as a continuum. Sometimes it might be appropriate to withhold explicit instruction and to allow students to discover particular concepts and knowledge on their own. Overall, though, clear and direct teaching of what students need to know is a more effective teaching approach.

MYTH 2: It is more important to teach skills than to teach knowledge

When skills are emphasised, the assumption is usually that skills will be transferred to learning in new content areas (Hirsch, 2009). However, skills are notoriously non-transferable. Research shows that in learning scientific procedures, for example, students do not automatically absorb understanding about the nature of science (Hirsch, 2009). Knowledge must be taught alongside, or as the context for, skill development.

Knowledge makes putting a skill into practice much easier. Knowledge of words and their meanings in English makes the skill of reading possible. Higher-

order skills also require the possession of relevant prior knowledge and its associated vocabulary. Knowledge and skills work together in effective learning practices, so it is important that teachers teach both skills and knowledge to their students.

Students need skills to gain knowledge

Although skills are important, students shouldn't need to discover knowledge through applying skills. Similar to direct instruction, teachers need to provide students with the information needed for them to gain knowledge (Hattie, 2009).

Some critical and higher-order thinking skills are of great benefit to learners and should be taught. However, teaching the skills of a discipline does not mean that students then must use those skills to uncover knowledge for themselves.

What this means for your practice

Don't assume that because you have taught skills, students can now create knowledge for themselves. Skills are usually not transferable to new content situations. Teach skills alongside rich knowledge content, to ensure that students are both knowledge-rich and proficient at developing skills/strategies.

MYTH 3: Students learn when you set independent work.

Students require skills for independent work. Simply setting independent work will not work.

Students require a range of higher-order cognitive processes in order to engage in independent learning, including how to approach a given task, how to evaluate their progress and monitor their comprehension (Hattie, 2012). To monitor their own progress, students first need an understanding of the aims of their work and what successful work looks like.

Students also require guidance on how to minimise distraction and what to do when they get stuck. These skills are best taught in context: by interspersing metacognitive questions and procedures that encourage students to reflect on how and how well they are learning into lesson content.

The benefits of developing students' learning skills

Time spent on supporting students' skills in managing their own learning is time well spent and will pay off in the long term. Students who can manage their own learning can also support each other's learning, so that peer learning ([link](#)) can become very effective in your class.

What this means for your practice

Teach your students how to assess their learning progress and select strategies to improve progress. Make these an explicit expectation in independent work. Embed prompts and questions for assessing their learning into the structure of independent work.

MYTH 4: Students have different learning styles.

The research indicates very clearly there are no benefits to student achievement and learning from teachers presenting information to learners in their preferred learning style, e.g. auditory, visual, tactile or kinaesthetic (Hattie, 2012).

Attributing particular learning styles to different students might even be detrimental to students' progress. This is because even if accurate, the label will not reflect the possibilities that the student can change and learn new ways of thinking and benefit from a variety of experiences of knowledge (Hattie, 2012).

However, it is useful to present learning content through a variety of different methods.

What this means for your practice

Try presenting information in multiple ways over several lessons to provide repetition of knowledge and skills which is critical to sustained long-term learning.

More important than providing students with differentiated modes of presentation is the **repetition** of key concepts and understandings, taught **over several days** (which is called '**spaced practice**'). Students often need 3–4 exposures to the learning (Nuthall, 2002), so repetition of skills and information can take different forms.

Mixing up tasks for students rather than focusing on single concepts, and **breaking up practice sessions** and **spreading learning over a longer time** have been found to improve long-term learning.

Research has found that **combining relevant visual images with spoken words** greatly enhances learning outcomes. However, presenting students with a lot of text and spoken words at the same time leads to poor learning outcomes.

MYTH 5: Students need non-cognitive skills before they can learn.

It is sometimes assumed that teachers need to address poor motivation and low confidence associated with students' low achievement before beginning to teach content. However, the evidence shows that teaching non-cognitive skills in isolation is rarely effective. Instead getting students to succeed in learning content and skills will most likely improve their motivation and confidence (Coe et al., 2014).

How to improve motivation and confidence

Sharing goals at the beginning of the lesson is linked to students' higher confidence levels, as they perceive they can achieve these goals (Hattie, 2012). Also, formative feedback given during the task or activity can help students to appreciate their progress and boost their confidence (Hattie, 2012).

What this means for your practice

Address issues of motivation and confidence through effective teaching of content and strategies, ensuring your students experience success and regularly reflect upon their progress towards meaningful goals.

SUMMARY

Studies point to a clear direction for effective teaching. Put discovery learning, constructivist approaches and learning styles aside. Instead **focus your teaching on instruction for knowledge and strategy use** and **instruct students on how to self-regulate their learning** (by giving direct instruction on the aims of the work, what achievement and progress looks like, and how they can self-assess) within the lesson content.