



ALEX QUIGLEY TELL AND SHOW

TRUE UNDERSTANDING CAN ONLY REALLY COME AS A RESULT OF INFECTIOUS EXPLANATIONS, INSISTS ALEX QUIGLEY...

Are you searching for the next Ofsted-mandated strategy for all around genera; outstandingness? Roll up, roll up; look no further, because here I give to you... infectious explanations!

Wait – no technological gizmos? No expensive promotional material or premium training courses? Surely that can't be, well, outstanding enough?

Of course, the history of education reaches back to long before Sheriff Wilshaw rode into town. Before electronic tablets we had tablets of stone; prior to interactive whiteboards there were old fashioned blackboards and chalk. Our brains haven't really changed and in real terms the core fundamentals of teaching are unchanged too. Despite a fancy relabeling here and there along the way, the cycle is timeless: explain, question, model and practise. And repeat.

Recently, even our inspectorate, in the guise of Mike Claddingbowl, Ofsted's director of schools, declared some common sense great teaching was in order:

"What about teachers' subject knowledge, the children's sense of routine, the ability to turn direction mid-sentence, a common sense approach to differentiation, the sense of humour, the infectiousness of the explanation? I see too little of this kind of comment about teaching."

Consider your favourite teachers from when you were a student. I bet they could have you teetering on the brink of your school chair with their 'infectious' explanations – a beguiling concoction of delivery, story and wisdom.

You may think such explanations are irreducible down to a formula for success; however, with insights from research evidence and cognitive science we can distil some useful truths about great explanations. Here are some core principles:

■ **Use gestures for learning.** Non-verbal communication is taken for granted too often by teachers when giving verbal explanations. Research by the likes of Susan Goldin-Meadow has shown that hand gestures can help students better remember explanations (in mathematics – not just in practical subjects like PE). We therefore need to be more conscious of this implicit learning opportunity.

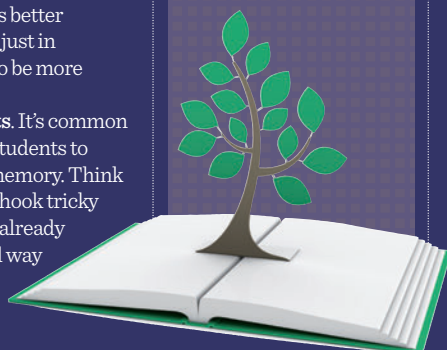
■ **Link to their prior knowledge and interests.** It's common sense, but prior knowledge is essential for our students to learn new ideas and to embed them into their memory. Think of it as a kind of mental Velcro, letting students hook tricky new ideas into patterns of knowledge that they already possess. Well placed questioning is often a good way to elicit learners' prior knowledge and to get them explaining how new ideas connect to what they already know.



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■ **Don't overload students with information.** Our working memory can only manage up to seven items of information (sometimes less) at any one time. If you are introducing tricky, subject specific language, be conscious of not overloading learners with too many new terms. Convey a core message that compresses language right down to the essentials.

■ **Use intriguing images.** Using visual representations is a great mental short-hand to help students remember. Condensing entire explanations down to one single image is an effective way to convey your core message.

■ **'Paint the picture'** – use analogies and metaphors. We use metaphors to make our world understandable and our explanations interesting. Potentially tough concepts, like parabola equations in mathematics, can be made comprehensible, and memorable, by using analogies like taking basketball shots. When our forbears wanted to make complex morals clear they used proverbs. Think how enduring such sayings as 'people in glass houses shouldn't throw stones' are for us all. The language of our explanations should aspire to the effectiveness of these gnomic expressions.

■ **Tell great stories.** Perhaps the most potent of all strategies for a great explanation is the telling of a good tale – complete with characters and conflict. I remember little of my chemistry GCSE, but I recall the heart-searing story of Marie Curie with utter clarity. The cognitive scientist Daniel Willingham has described stories as "psychologically privileged in the human mind". We can create an explanation about most concepts in education with all the suspense and intrigue of a rollicking great story.

■ **Check understanding with targeted questions.** Keeping students alert and focused during an explanation is half the battle, no matter how compelling you consider your words to be. If students have the expectation that they may need to answer questions during an explanation then they are more likely to focus on what is being said.

■ **...and repeat.** Brain science, and common sense, dictate that repetition matters. Researchers, like Graham Nuthall, have proven that new concepts need to be repeated an estimated three times in relatively quick succession for new knowledge to take root. It is useful knowledge for our lesson planning and our construction of infectious explanations – three is the magic number.

Many of these insights are indeed common sense, but sometimes (as David Didau observes) expertise is about making the implicit explicit.

It comes down to making the best use of our time – spending less on finite resources and instead investing enough to really craft our explanations so that they are inspiring and infectious.