

Teaching sequence for developing independence Stage 2: Model : June 30, 2013

Over the past few years I've thought a lot about how and what we should teach. My journey has been long and painful. I used to evangelically promote the teaching of transferable '21st century skills' like creativity and problem solving. Now I reckon that actually these skills might be subject specific, and that solving a maths problem might be very different to solving a problem in English. And perhaps being creative in science may possibly be fundamentally different to creativity in history. I used to be firmly convinced that everything students needed to know could be outsourced to Google. Why bother learning facts that we could instead 'just look up'? I've since read some cognitive science and understand a little bit about the fragility of our working memory and the need to transfer information to long-term memory if we want space to be creative and solve problems. And I've also come to realise that our thinking is qualitatively improved by knowing things: we can't think about what we don't know.

Having said all that, it's important to acknowledge that just explaining the 'grammar' of our subjects is inadequate. Just because I no longer think it's possible to teach transferable skills instead of knowledge doesn't mean I don't want students to be creative and solve problems. So, once we've explained the information, they need to know what to do with it. And the best way to see what students need to do is find out what experts do. If stage 1 of the cycle has been mainly concerned with transmitting propositional knowledge, the emphasis of stage 2 is on building procedural knowledge. Whatever our subject, there will be giants on whose shoulders our students can stand. The first step of the modelling process is to have a bloody good look at what these experts have done.

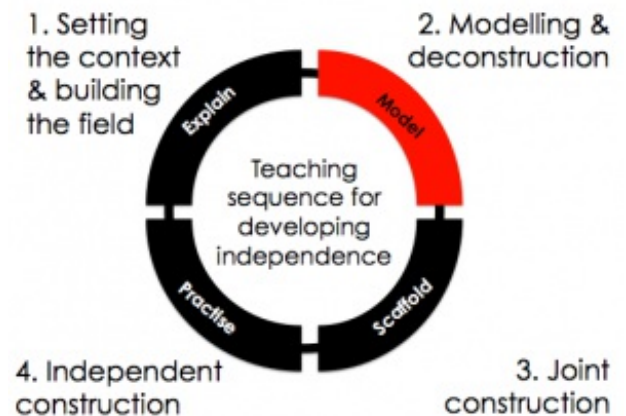
Deconstruction

'Having a bloody good look', or deconstruction as it's more affectionately known, involves seeing how things work. Everyone remembers the science lesson in which they dissected a frog, or a bull's eye or whatever it was; the purpose was to see how the ultimate 'expert' had put living organisms together. Sadly, most of the lesson I remember was spent fainting, or giggling maniacally whilst waving mangled corpses in faces of anyone who hadn't fainted yet.

But, if better managed, this process of induction will help students understand the principles of a device, object, or system through analysis of its structure, function and operation. Sound frighteningly technical? Fortunately, it's actually very simple.

Inductive learning—that is, learning a new concept or category by observing exemplars—happens constantly, for example, when a baby learns a new word or a doctor classifies x-rays.

Nate Kornell and Robert A. Bjork (2008)



In English, an essential part of the teaching sequence for writing has always been to deconstruct texts to work out how they were constructed. It ought to go without saying that students will be better writers if

they've had the opportunity of seeing what good looks like.

Here are some examples I've used in the past:

This was used to show students the techniques a writer might use to build a sense of menace or tension.

Here's an extract from *Centurion* by Simon Scarrow I deconstructed to examine the techniques we could use to create action in a piece of writing:

The mercenaries began to back away from the rebels, stabbing their spears frantically to try to create a gap between them and their enemies. As soon as some were clear they turned and ran towards Cato's men, immediately endangering their slower comrades as the rebels swarmed into the gaps in the rapidly fragmenting line. A handful were cut off and overwhelmed, attacked from all sides as they desperately swirled around, trying to block the rebels' blows. Inevitably, a blade darted in, and as a man staggered back from the wound he was hacked to the ground in a flurry of sword blows and spear thrusts.

Longer sentences to build up to the discovery

The manipulated pace to increase the tension

stages of revelation

The longer sentence before the climax

Then it blinked

An awful self-destructive curiosity pulled Peter closer. Unable to stop himself, he got down on his hands and knees and crawled the final few inches towards the grave. As he approached, something else caught his attention. There was a hole in the soil, at the head of the grave, near the cross. The hole was about the size of a small fist, and perfectly circular, like a rat hole in a river bank. Peter leant over it. He looked in. There was just enough light to see inside the hole. At the bottom he saw an eye. It was open, seemingly lifeless, though looking straight at him. Then it blinked. Peter screamed and ran as if the devil himself were chasing him.

Complex sentence using commas to reflect his crawl to the grave

The simplicity of this climax and the impact it has on the reader

Very short sentences - that stand as paragraphs

Moving the reader away with Peter, leaving the horror as it is - still with us.

Extract from *My Swordhand is Singing* by Marcus Sedgwick

From this, students worked out (with help) the following success criteria for writing effective action sequences:

- Use longer & varied, complex sentences to help speed the reader up
- Use powerful, exciting verbs
- Use adverbs to describe action
- Avoid using adjectives: they slow the reader down

And one of my favourite pieces of bad-tempered polemic from Bryan Reade on dog insurance:

Mis-targeted dog insurance law is another insult to the law-abiders The first person I thought of when I heard dog-owners were going to be forced to take out insurance was Peter Andre. What a tragedy it would be if this extra burden meant he couldn't afford to take Jordan back.

Then I thought of my father-in-law, who I drove to A&E a fortnight ago after a cross-bred snarler bit so deep into his hand he could see the bone. If only this insurance law had been in place then, I thought. How easy it would have been for the shaken 72-year-old to stagger around the streets, blood gushing from an open wound, trying to locate the owner, who was probably sitting in his 4x4 smoking weed while Tyson was given his daily unleashing. And if he had found him and asked for his insurance details, how lucky would he have been to escape without an even deeper wound to his skull?

Like most knee-jerk attempts at appearing tough on crime, this Tyson Tax is simply another insult to the law-abiders. The Government knows the people who would take out insurance are the owners who see their dogs as pets. Whereas the ones who see them as weapons are more likely to take out tattoo protection than insurance to benefit an injured party. At roughly £25 a

month, once again, this law would impact most on the law-abiding poor, especially pensioners.

It's the kind of deliberate mis-targeting we see all the time when hard questions are asked about the cliché that is Broken Britain. Take teenage binge-drinking. Instead of getting to the bottom of why so many 16-year-old girls want to spend Saturday night paralytic on a pavement, we were given a Know Your Limits campaign which merely frightened middle-aged couples into thinking that two glasses of Piat D'Or a night will pickle them into an early grave.

Imagine trying to enforce this Tyson Tax with no national register of our 10.5 million dog owners? It's like trying to catch an uninsured driver on a speed camera. Would dogs be forced to wear number plates, like REX 1, so victims can jot down the details if they've got a hand left? Even if they did have insurance, knowing the type of ball-scratching, knuckle-scraping meatheads who own these weapon dogs, are they likely to admit to a crime, and lose their No-Maim Bonus, when they can run away from a bleeding, shaking wreck in fits of laughter?

How would this law have benefited my father-in-law? How would it benefit the baby who's had her face taken off by the family rotti? How would it benefit anyone apart from the two biggest sets of legalised crooks outside of investment bankers: insurance firms and lawyers? Churchill must be salivating at the prospect of its friendly nodding dog becoming the reassuring pooch who rakes in millions. And I'll bet somewhere in Canary Wharf, London, a pair of wide boys have already formed a company called WeSueAnyMutt.com with the slogan "Where there's a Hound, there's a Pound."

They say every dog has his day. With this Tyson Tax the only dogs whose day it will make will be tattooed knuckle-scrappers and besuited ambulance-chasers.

11th March 2010 Daily Mirror

But while this may be perfect for seeing how a writer uses language to argue, persuade and take the mick, it doesn't demand much in the way of content knowledge. I was, I now see, so concerned with teaching procedural knowledge (skills) that I 'forgot' to teach new propositional knowledge (facts), relying instead on what students already knew about the world. Well, maybe I'm exaggerating slightly here, but it's all too easy to do this when insufficient time has been spent laying the ground work and building the field that students will need to study. How much more effort would it have taken to give students examples from Dickens or Hardy? How much more benefit might have been accrued if I'd used an article from the Times or the Guardian instead of the Mail? The reason for not doing this in the past was that I believed it was sufficient to focus on the skill of writing and neglected many opportunities for enriching my students with some of the more challenging texts out there. As Matthew Arnold said, teaching should be about sharing the best of what has been thought and said over our rich history. Not just what the entertaining Mr Reade came up with last night.

But we don't just want to deconstruct written texts. In other subjects there will be other products you will want to deconstruct and, while many of them will be written, many won't. The trick is to be clear about what it is you want your students to produce, find good quality real-world examples and reverse engineer them.

Modelling

And then, once we've seen how a product works, we should guide students through the process of making models. Science and mathematics have long traditions of making models. Such modelling involves abstraction and simplification, in order to better understand a particular feature of the world. In practical subjects the model, be it a pencil case, drawing, cup cake, dance will be created Blue Peter style by the teacher as an example of what success looks like. This is of course very useful. But of much more use is allowing students to observe the process of creation.

For years now I've made it a maxim that whenever I set students a task I complete it too. Of the many

benefits this has, one of the best is that I've built up a huge store of exemplar writing. Sadly, much of it was scribbled on paper and has been consigned to the great recycling centre in the sky, but much of it lives on in digital form. Not only is this useful to deconstruct, it has also provided lots of options for discussing my choices and reasoning. Sometimes it's enough for students just to see a model but an essential part of the teaching sequence for writing is the process of modelling: talking through the decisions a writer makes at the point of writing. And the only way I know to do this effectively is to talk. I've written before about [thinking like a writer](#), and the techniques of [Slow Writing](#) lend themselves very well to effective modelling.

[Lee Donaghy's account](#) of improving a pre-prepared model is particularly instructive:

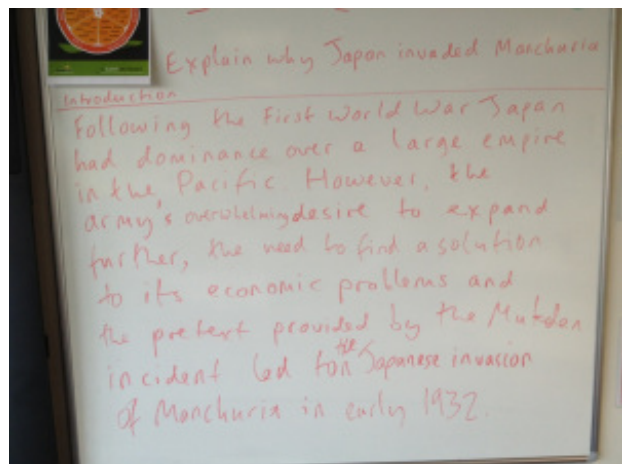
Next I showed the class an introduction I had written:

"After the First World War Japan was a very important, powerful country in Asia. It already had control of lots of other parts of the Pacific. But the army wanted to make Japan even bigger no matter what. Japan also needed to do something about the economic problems of the 1920s, which were made worse by the depression. So, the army made it look like China had blown up one of their railway lines at Mukden, so that it would have an excuse to invade Manchuria. Japan invaded Manchuria in 1932."

I explained that this was written in very 'everyday' language and we needed to improve it by making it sound more like what a historian would write. Pupils discussed how they would do this in small groups and we then jointly re-drafted the paragraph, with me prompting, probing and clarifying the pupils' suggestions until we came up with this:

The main shift here, as I'm sure you can see, was that we nominalised the factors that led to the invasion: '...the army wanted to make Japan bigger no matter what' became 'the army's overwhelming desire to expand further'; 'Japan also needed to do something about the economic problems of the 1920s, which were made worse by the depression' became 'the need to find a solution to its economic problems' and 'the army made it look like China had blown up one of their railway lines at Mukden, so that it would have

an excuse to invade Manchuria' became 'the pretext provided by the Mukden Incident...'. The class are quite well versed in nominalisation (turning verbs or adjectives into nouns or 'things') as I bang on and on about it being a key feature of abstract historical writing. Also, you will notice that the nominalised paragraph is shorter; this is because nominalisations pack a lot of meaning into one word, which is why they're features of abstract, technical writing.



This focus on shifting student's 'everyday' to academic language is particularly useful. Nominalisation (turning a verb (actions or events) to a concept) is a great way to demonstrate confidence and authority in writing. Explicitly teaching my Year 13 English Literature students to do this improved their essay writing ability overnight; they could so clearly see and hear the difference. If you're interested in introducing nominalisation to your students (and you should be) [Kerry Pulleyn has written a jolly useful lesson plan](#).

And for those 'verbally able' students who never seem able to capture on paper their beautiful fleeting thoughts, this insistence on 'speaking like an essay' can create a little bit of magic. I used to get so frustrated when a student capable of uttering profound thoughts seemed unable to commit them to paper. I

know now that it's not that they can't be bothered, it's that, literally, they don't have the words. I am able to switch seamlessly between everyday and academic register with nary a pause, but not so these kids. But modelling the process, and making them reframe their ideas using academic language, gives them the words. And, just like that, they can write it. I kid you not.

Deconstruction helps us to glimpse how success works, but modelling allows students access to the thoughts of an expert. These processes are absolutely vital if we want to promote students' independence. Without expert, explicit modelling students have to rely on their innate ability. The 'able' will pick it up without ever being properly able to articulate how or why, and the 'less able' will be bugged. And in order for this to work, I'm afraid everyone just has to shut up and listen to sir.

Coming next: Stage 3: [Scaffold](#)

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