

Brighter than me

My career started with a dislocation. Post-university, I forgot about education completely for a while to pursue other dreams. Being a sensible kind of chap, I chose to become a mathematics teacher first, or at least to pick up the necessary bits of paper to make me look like one. When those pesky dreams didn't work out (and maybe I always knew that they wouldn't) I was able to sigh, dust off my DES teacher number slip and go straight out to buy a Times Educational Supplement.

Returning to the classroom after several years away wasn't easy. I recall my first lesson, and the first pupil I tried to help. We were using the Smile system of workcards, and someone had his hand up.

"Hello, so you are?" I asked politely, moving over to his table.

"I'm Alex." A face that was older than its years looked me up and down. I was the latest in a string of teachers for this group: would I be any good? He sniffed and decided to give me a chance.

"So what's the problem?" I asked.

"I don't know how to make this bigger," he said.

The card involved picking a centre of enlargement for a shape and drawing lines through the corners to create the enlarged figure. I was battling with a sense of vertigo. The classroom felt strange, there were odd noises coming from all corners of it, and on top of this, I couldn't make head or tail of the question. My own school mathematics education had been traditional fare, all Euclid and no transformation geometry, a situation that my degree had done nothing to rectify.

"Er..." I floundered.

"Maybe if I did this?" offered Alex.

"Yes, good idea," I muttered hopefully. "And I think that if you draw this line..."

"No, look, it's this one," said Alex. "It's all right, I've got it now."

"Good. Just... give a shout, Alex, if you've got any more problems," I said weakly.

"Yeah, whatever," he said.

I moved on to my next pupil, and as I turned, I heard Alex say wearily to his neighbour, "That's all we need – a thick teacher."

Twenty years on, I hope my mind is a little less befuddled than it was on that day. I hope if I tried to help Alex again, I would actually help. But he raises the question: what happens if the student is brighter than the teacher? Must the relationship break down, or can that situation be turned around with a little skill into one that works rather well?

I teach at a sixth form college with a generous admissions policy. We might have one or two students across the College who try for Oxbridge in a good year. Our A Level maths groups are a mixed bunch. Yet I always find myself teaching two or three students who I consider to be seriously bright, whose questions are excitingly perceptive, and who if they so wish, will probably become more effective mathematicians than I am.

There are, in my experience, two types of brighter-than-the-teacher students. One looks at your equation on the board, and says, looking round at his colleagues, "Don't you mean one over x CUBED, Jonny?" He (and it is usually a he) doesn't mean to be irritating, but that slight element of triumph in the voice leaves you muttering under your breath, "Thank you, smart-arse." But the second kind of bright student will instead say kindly, "Jonny, I like your equation -" (pause for me to preen) - "But I just wonder, could it be improved slightly?" The brighter-than-me but humble student is a joy to teach, the brighter-than-me but competitive student is harder work. Maybe there is a message for the teacher there: don't try to outdo those who would overtake you, but rather rejoice in your students' brighter-than-you-ness, and put your insecurities about your own brightness to one side in a spirit of thankfulness and good humour. I guess if you consider yourself really bright, then all this will be a rare scenario for you. For myself, I always ask, if my students aren't being bright, then whose fault is that? Maybe I am teaching the lesson in a way that does not allow them to be bright. And of course, there are lots of people in the world who are mighty clever without, unfortunately, being particularly bright. In fact, I wonder sometimes if this is one of the more pressing problems the world faces. Let us aim to create clever mathematicians, for sure, if possible ones who are cleverer than we are, but hopefully also ones who are bright enough to have their feet on the ground too.

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