Enter the dragon

Humour, music and an atmosphere of playful adventure are all crucial to fostering creativity, argues Paul Howard-Jones

Like communication and information technology, creativity is becoming a "must have" skill for future generations. The Qualifications and Curriculum Authority advises teachers to "build creativity objectives into your planning" and to "look for opportunities to promote creativity in your existing schemes of work and lesson plans".

But how on earth do you do it? One can imagine a step-by-step guide for using software, solving a maths problem and researching the Romans, but how can you give someone instructions for having a good idea?

Thinking and talking about creativity is not straightforward and some think we shouldn’t try. As I was once warned, before meeting a group of art teachers, "There’s a concern about naming dragons". Naming dragons, apparently, can weaken their power. Maybe creativity should be left veiled in romantic mystery?

However, some part of this veil has already been lifted and no, it doesn’t look just like another key skill. Insights from neuroscience and psychology are suggesting new and hopefully improved ways in which we can think and talk about creativity.

Creativity appears to use generative thinking processes that are different from the analytical ones usually emphasised in schools. That’s not to underestimate the importance of analysis, because that ability is also a crucial component of creative thinking. For example, when producing a creative story, a pupil will analyse their topic, their material and their ideas. This requires focused attention, something that can be helped by mild stressors such as evaluation or schedule.

But a pupil working creatively has also to generate original ideas by connecting with concepts not obviously linked to their topic. This requires a broadening of attention and appears to benefit from a more relaxed and uncritical environment. This can be fostered by a variety of apparently disparate ingredients, including humour, music, unexpected changes in context, the removal of clear end targets and an ambience of playful adventure.

Taken as a whole process, creativity seems to require movement between two very different mind states, both of which are influenced by classroom environment and teacher strategy.

Two years ago, trainee drama teachers at the University of Wales Institute, Cardiff took part in one of our experiments at the Graduate School of Education (University of Bristol) to find out what happened in their brains when generating creative stories from sets of three words. Sometimes the three words were related but sometimes they were not. This strategy of having to incorporate unrelated material in an outcome has often been used by teachers to provoke creative thinking. It has also been a favourite of many artists, including Kurt Schwitters, who created a collage from the contents of

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his wife's bathroom bin (exhibited in Tate Modern in 2003).

In our study, producing stories with unrelated words did indeed increase the creativity of the stories, as rated by a panel of independent judges. However, we needed to find out if this strategy was a bit of a cheat – maybe having three unrelated words in the stories caused the judges to rate them higher. But no, results showed that the brain activity associated with creativity in this task did increase when the strategy was used, strongly suggesting that it does increase the intensity of creative thought.

Such findings are produced by averaging data over many participants. At the level of an individual, this type of neuroimaging study neither supports nor dismisses a particular teaching strategy because no one individual is the same as another.

If creativity is to flourish, it seems clear that some variety in teaching styles and atmosphere is essential. For some of the time, you should loosen up the classroom environment and have fun.

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