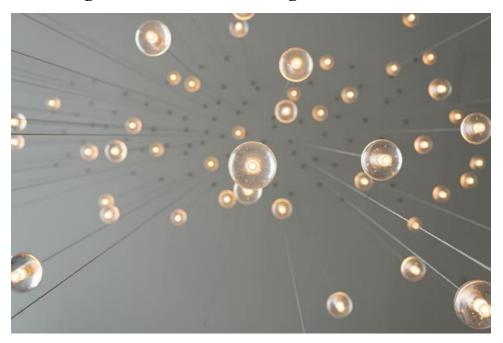**Knowledge-Rich Creative Thinking**

Scaffolding the Project

We mentioned before in a previous blog post – Developing our Creative Thinking Certificate – that one of the risks of focusing on the teaching of a skill is that the knowledge students gain is less directed and can therefore become less rigorous, complex and deep. It's understandable that there is worry in educational circles around project-based learning that focuses on process and skill at the cost of students missing out on learning the richest and most fascinating aspects of the topics they are engaging in.

We also began to mention previously that one way around this problem is to 'scaffold the structure' of a creative thinking project. Here is the simple structure that we were referring to:

Section 1: Exposition of Relevant Background Information

Section 2: Creative Thinking Section

Section 3: Self-Critique

Section 4: Summary

In preparation for producing Section 1 we asked students to spend several lessons conducting research into their chosen topics, including relevant facts and statistics, existing opinions, and existing creative ideas relating to their topic. To support this process, we spent a short amount of time teaching students how to judge the information that was most pertinent and relevant, though often this was fairly self-

explanatory. We also taught students a basic form of source evaluation before they conducted their research, and a non-laborious form of referencing.

This focus on background research took place over the course of several full lessons that preceded any focus at all on creative thinking. Students therefore had a choice about their topic content, but there were also structures in place to ensure that their knowledge about it was secure and reflected their ability. We were also able to assess the richness of their knowledge when we read through and marked Section 1 of their project.

We wonder whether this is a simple, effective way to get around the apparent dichotomy between knowledge and skills.

Application of Knowledge

Scaffolding the structure seems to us to offer an exciting way of thinking about the knowledge we want our students to gain during their time at school. When students, parents and teachers alike complain that exams are one big memory test, perhaps the root of the complaint isn't about memorisation *per se*, but about how dry it can be to remember large amounts of information that don't have a clear use beyond being written down in an examination.

For most of us, school examination preparation is the only time in life when a large proportion of our lives is taken up with memorising information that we won't necessarily use at any other time. And it's clearly not enough to respond to this claim by saying that the memorisation of information teaches transferable skills such as discipline. Why can't we learn those transferable skills by learning about information that we know we will use?

There are overwhelming advantages to projects where students know that their knowledge will be put to further use. It gives a clear purpose to the process of gaining knowledge. It generates motivation. And it corresponds to the theory that memory is not something static and frozen in the mind, but inherently structured according to link-making connections between ideas.