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**Rote and elaborate learning**

Rote learning is a memorisation technique based on repetition. The idea is that an individual will be able to quickly recall the meaning of material the more they repeat it. Recent Irish research has found that exposing the brain to repeated and extended exercises in rote learning has a positive effect on the ability to recall more information overall. The hippocampal foundation, a key structure for the brain in episodic and spatial memory, is found to provide the greatest benefit to this type of learning, and it can promote neuronal plasticity in the ageing brain. Rote learning in early years is also argued to be a beneficial tool, not only for the reciting of information learned, but in the development of an awareness of rhyme, syllables and symmetry. Neurobiologists believe that exercising the brain can increase alertness and agility, having a positive effect on both mental and physical wellbeing. The concern associated with rote learning is that simply repeating something does not provide understanding.

According to elaboration theory, instruction should be ordered in an increasing order of complexity to facilitate optimal learning. This means that challenges to knowledge learned must be exercised and explored, to promote a deeper understanding and allow subsequent ideas and skills to be developed. There are claims that the elaboration approach to learning helps to root the formation of more stable cognitive structures, resulting in better retention and transfer of learning. The main reason for this is the correlation between increasing complexity and the engagement, with the learner having a sense of ownership of new learning. This type of learning allows connections to be made to prior learning. The concern associated with elaborate learning is that pupils are not provided with enough time to learn in this way, as many continue to regard learning as a race, with the assessment, test or exam as the finishing line.

Within a growth mindset culture, both types of learning are entirely valid and able to be developed using skills, questions and techniques to support and challenge those on their learning journey. A mixture of both is important, but an over-emphasis on any one to the detriment of the other increases barriers for pupils to achieve mastery. One main requirement within both of these structures is the ability to build relationships and develop trust. The ethos of the learning environment, the groupings of learners (preferably using cooperative principles to build heterogeneous groups), the structures set up to support and challenge groups and individuals and the questions and language used all play a vital role in ensuring that learning is fostered and encouraged.

We are all aware of the saying practice makes perfect but for some reason perfection is not one of the major goals in learning in our schools. We all encourage pupils to develop and practice but can stop short of supporting them through the mastering of a skill or concept.