# **Teaching and Learning – 5 minutes** ...over a hot brew!

Research, Resilience, and Reflection

#### Issue 28:

#### 1. In Pictures:



Rosenshine proposes that marks of 80% in quizzes and tests promotes motivation. How we as teachers and learners react to the wrong answers (the gaps) is, of course, crucial.

#### 2. Education Research: Motivation and Engagement

How much does student motivation and engagement change over the course of a day, a week, and a month at school? How much does motivation and engagement vary from student to student and how might that impact on us, the teachers?

Research (Martin, 2011, 2014) demonstrates that there are far more variations in motivation and engagement throughout the school day than between school days and weeks. This, it is believed, depends on what the students are doing (for example, the class they are in, the teacher they have, the nature of the task). This suggests that students respond to and interact with their environment, and it is this interaction that contributes to their real-time motivation and engagement. An 'unmotivated student' will have more motivated moments, the 'disengaged student' will have more engaged moments; fixed degrees of motivation are unlikely occurrences. If motivation and engagement varies substantially from student to student, then clearly each classroom contains substantial diversity. This once more suggests the importance of differentiated approaches to instruction. As for the individual student, we should be extremely cautious against classifying students as simply 'motivated' or 'unmotivated' types.



#### 4. Teaching Strategy: Stress Free Learning

A little neuroscience: If students do not feel comfortable in a classroom setting, they will learn less effectively than when less stressed. Physiologically speaking, stressed brains are not able to form the necessary neural connections. Some of the strongest findings in neuroscience, findings that were suspected decades ago but only recently well-represented through imaging (FMRI), tell us why that is. There are specific parts of the brain responsible for emotions. The **amygdala**, for instance, processes emotions, stores the memories of emotional reactions, and reacts so 'aggressively' to stress that it will physically prevent information from reaching the centers of the brain necessary for absorbing new knowledge.

In short, if students do not feel comfortable in a classroom setting, they will not learn; physiologically speaking, stressed brains are not able to form the necessary neural connections. Therefore, reducing stress and establishing a positive emotional climate in the classroom is essential if learning is to be maximised.

- Make the classroom stress free: create a welcoming and consistent environment through daily rituals (e.g. meet and greet); lighten the mood make jokes; give students frequent opportunities to ask questions and engage in discussions without judgment.
- Encourage participation, not perfection. A classroom in which mistakes are encouraged is a positive learning environment, both neurologically and socially speaking. "Students will allow themselves to experience failure only if they can do so within an atmosphere of trust and respect." [Immordino-Yang]
- **Practice active listening.** Focus on what students are *trying* to say. This kind of positive reinforcement allows students to let their guard down (known in neuro-speak as calming their "**affective filters**"). Listening to students in general, and listening to their intentions in particular, can help relax anxious brains.

### 3. To ponder...

"Children must be taught how to think, not what to think." [Margaret Mead]



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