A highly regarded meta-analysis of 109 educational research studies has found that university students’ achievement is most closely related to: high school achievement, performance on university entrance exams, current motivation, and current self-regulated learning knowledge and skills (Richardson, Abraham, & Bond, 2012).

This research indicates that student success in their university studies depends not only on their past experiences and successes, it also depends on their current self-regulation and motivation whilst studying with us at the University of Sydney. And the good news for teachers is that we can create learning environments that support both of these.

First of all, let’s consider self-regulated learning (SRL). According to Pintrich (2000), SRL “is an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features in the environment” (p. 453). Some practical teaching and curriculum design ideas for improving student SRL (Bartimote-Aufflick, Brew, & Ainley, 2010) include:

- Explicit instruction and discussion of both learning strategies and regulation skills as part of the regular curriculum;
- Modeling your strategies and skills with students;
- Providing opportunities for students to reflect on their strengths and weaknesses, and learn from recent experiences;
- Providing students with opportunities to interact with someone else that can help scaffold or model learning – this may be a teacher or a fellow student, and could involve pedagogical strategies like reciprocal peer teaching, computer-mediated learning environments, collaborative learning, etc;
- Engaging students in inquiry work, including project work; and
- Providing students opportunities to engage in self and peer critique, as a way of monitoring their own learning and standards.

Now, let’s consider motivation. In the Richardson et al. meta-analysis the strongest correlate amongst all 50 psychosocial factors considered was self-efficacy, which is a motivation factor. Self-efficacy beliefs and expectations (Bandura, 1977, 1997) refer to a person’s perception that he or she has the skill and capability to undertake a particular action or task.

Recently a few of us from various disciplines across the University worked together to review the self-efficacy literature (Bartimote-Aufflick, Bridgeman, Walker, Sharma, & Smith, in press) with the aim of
identifying some evidence-based strategies university teachers could use to improve their students’ self-efficacy. These include:

1. Using multimedia (e.g. a video) to support students’ learning, but guide students’ use of it via classroom interaction rather than leaving students to view resources independently (see Govaere, de Kruif, & Valcke, 2012);
2. Designing and presenting e-learning materials in a knowledge/concept map format, rather than typical browsing structures (see Shaw, 2010);
3. Modelling solving problems to students (and/or get students engaged in peer teaching), but realize it is more effective if coping strategies are modelled, i.e. making errors and correcting them, rather than completing problems flawlessly (see Zimmerman & Kitsantas, 2002); and
4. Employing pedagogical strategies that support students’ psychological needs e.g. sharing personal stories, assignment topic choice, facilitating application of content and highlighting relevance by making connections between study and professional work, proving feedback on submissions, setting challenging but achievable tasks, being available to provide guidance, providing early low-risk opportunities for successful task completions, providing opportunities to work with peers (see Papastergiou, 2010).

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References