Self-efficacy, a person's belief in their ability to do a certain thing, is important to us as university teachers as it influences students’ cognitive (thinking), motivational, affective (emotional), and selection processes (Bandura, 1993). Self-efficacy also proves to be an important predictor of student achievement in a wide range of studies throughout a variety of educational levels, including here at the University of Sydney (Bartimote-Aufflick et al., 2009).

Self-efficacy may be influenced by four factors (Bandura, 1977; Zimmerman, 2000). In order of importance, these are:

1. Enactive experiences – the outcomes of an individual student’s personal experience.
2. Vicarious experiences – by observing the outcomes attained by a model (e.g. a teacher, a student peer).
3. Verbal persuasion – potential outcomes are described to the student, but they haven’t (yet) experienced or observed them personally.
4. Physiological reactions – emotions and physiological states such as fatigue, stress, etc.

Two teaching and learning strategies that have proven to be successful in improving student self-efficacy are described below and might be usefully adapted to your own setting.

McGuiggan, Rowe, Lee, & Lester (2008) describe how an interactive narrative-centred program was developed to supplement a microbiology curriculum. In the program, students played the role of protagonist, trying to discover the cause and source of an unidentified disease which had broken out on a recently discovered island. When students were given a more in-depth narrative, including character back-stories and personalities, and a poisoning story-line, their sense of presence increased, i.e. their feeling they were actually there on the island solving the mystery, as did their self-efficacy.

Within a creativity subject for students from a variety of disciplines, a series of activities were designed specifically to increase participants’ creative self-efficacy in problem solving (Mathisen & Bronnick, 2009). Included were: direct instruction of techniques with modelled examples; verbal persuasion through introductory lecture(s) and feedback on attempts; guided use of techniques on well-defined problems; and, supervised use of techniques on self-generated problems.