



## Abstract: 129E

### **Abstract: Enriching a WIL experience by fostering habits of the head, heart and hand**

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A higher education system that cultivates a sufficient number of employable graduates in science, technology, engineering and maths (STEM) subjects seems hard to achieve. However, it has been demonstrated through qualitative research with educators at the Centre for Real World Learning (CRL) (Winchester, UK), that education focusing on developing habits of mind has a great potential for enhancing individual success and visible employability skills (Lucas & Hanson, 2016). The CRL has drawn together earlier thinking to create an extended model of practical learning which blends habits and frames of mind. The 4-6-1 model draws support from work in the learning sciences – principally neuroscience, cognitive science and sociocultural theory, but to be useful to educators, that knowledge needs to be ‘displayed’ in a way that maximises utility.

The 4-6-1 model of practical learning is an ideal WIL framework blending habits of head, heart and hand. It aims to draw distinction between more general frames of mind such as curiosity, wisdom, reflection, sociability, resourcefulness and determination and what they see as four main ‘compartments’ of the learner’s tool kit – investigation, experimentation, imagination and reasoning. The framework provides a useful basis for thinking about the design of optimal learning environments from both a pedagogical and contextual stance.

It is imperative that WIL curriculum design validates the process of learning affording experiences that develop conceptual and analytical abilities, whilst increasing student control and enabling strategies for application in response to workplace issues. For educators this means affording these opportunities in the curriculum along, with building in students an ability to critically reflect on mindset, skills, knowledge, behaviours and goals. WIL is a highly personalised and immersive experience and requires space for intelligent choice, for students to examine their pre-existing values, and ethical positions in shaping interpretations and situations regarding goals, fears and aspirations. Such experiences may support habits of mind, heart and hand, facilitating wisdom: an outcome of presence of mind – the heart of the 4-6-1 model of practical learning.

The schedule of developmental WIL activities is conceptual, based on the 4-6-1 model, and shifts the focus very deliberately from discipline-inspired learning to WIL as a repeated opportunity for student development. Here, the WIL experience is designed to support students to travel along an experiential continuum, reflecting and deconstructing past experiences, and shaping their future as they develop their habits of mind, heart and hand. Through this process, it is posited there is a likelihood that students will develop knowledge of self and the world, build the repertoire of habits of mind, heart and hand and/or learning dispositions that help conceptualise their existing knowledge over time into everyday practices.

Claxton, G., Costa, A., & Kallick, B. (2016). Hard thinking about soft skills. *Educational leadership*, 73(6).

Lucas, B., & Hanson, J. (2016). Thinking like an engineer: Using engineering habits of mind and signature pedagogies to redesign engineering education.