



## **Emergent Career Opportunities in STEM**

Anne Bowden, *University of the Sunshine Coast*

### **PURPOSE**

We are currently in the midst of a Fourth Industrial Revolution, with rapid change driven by developments in the fields of artificial intelligence, robotics, nanotechnology, genetics and biotechnology. As career development practitioners, we need to provide our future workforce with the skills required for this age of global digital disruption.

### **APPROACH**

This presentation identifies new trends and developments in science, technology, engineering and mathematics (STEM) education in Australia to position current students for a changing labour market. It will discuss the top five jobs in each STEM category, and discuss the education requirements for these careers.

### **FINDINGS**

Creating a workforce with STEM skills is critical to 'future-proof' Australia's economic prospects. These skills include social intelligence, adaptive thinking, design mindset and virtual collaboration. The January 2016 Global Challenge Insight Report from the World Economic Forum - *The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution* - estimates that 65% of children entering primary school today will ultimately be working in jobs that don't yet exist or will be significantly different. The Australian Workforce and Productivity Agency (2013) projects that, while there will be approximately six million new job openings created in Australia in the next decade; nearly 40% of current occupations are at risk from automation and computerisation. Additionally women's participation in STEM must increase to ensure Australia's future competitiveness. If current gender gap ratios persist there will be nearly one new STEM job per four jobs lost for men, but only one new STEM job per 20 jobs lost for women.

### **VALUE**

This discussion will enhance understandings of how Australia's career development practitioners can contribute to sustainable and equitable career pathways through education. Participants will be invited to consider how to apply these findings to their own practice.