

**Naomi Birdthistle,
Carla Riverola, Lenka
Boorer, Sara Ekberg &
Julienne Senyard**

Griffith University
n.birdthistle@griffith.edu.au

Keywords:

21st Century Skills,
Entrepreneurship,
Platform,
Lesson Plan,
Activity

Learning areas:

Mathematics,
Science,
Design & Technology,
Digit Tech,
Integrated STEM,
Entrepreneurship &
Education

Empowering STEM Teachers to Embed the 21st Century Skills & Enterprising Skills into their Curriculum

The skills of the 20th century emphasised compliance and conformity over creativity. During that time, these skills were necessary within a professional or corporate environment and to hold down a good job for decades. However, these skills are now a relic of the past! Building on the digital technologies of the third industrial revolution (also known as digital revolution) and foreseeing the 4th industrial revolution (and the convergence of digital, biological, and physical), 21st century school leavers need to be able to manage this social transformation at a global scale.

This means that they need to be prepared for dynamic, fast changing workplaces in a context of continuous innovation and economic development. More precisely, the Australian curriculum segments those skills as problem solving, communication, presenting and pitching, digital literacy, teamwork, critical thinking, creativity, and financial literacy, which can be called enterprising skills. Thus, 21st century education requires a shift to help students grow in confidence to practice these skills. Enterprising skills are essential for navigating the working landscape of the future (Foundation for Young Australians, 2018). Australia lags globally in equipping its youth with these skills. The Australian Government calls for enhanced enterprise skills due to their ubiquitous application and benefit across life and work domains. Enterprise skills affords students with short-term (i.e., immediate) and long-term benefit both in and out of the classroom.

Engaging with programs of study and/or courses that have enterprise skills embedded in its learning outcomes can positively influence students' motivation, attendance, retention, and connectedness. In the long term, having enterprise skills is found to be an effective means of shaping enterprise-related abilities in later life. Furthermore, enterprise skills are generic skills that are transferable across different jobs.

This workshop introduces teachers to an online platform that has been developed to assist STEM teachers teach year 7 to year 9 students 21st century skills and enterprise skills. Each skill has its own page where there is an introduction that explains why the skill is important and how to use the skill once learnt; videos explain the skill to teachers, case studies highlight where and how the skill was used by the STEM entrepreneur, plus many activities that provide opportunities for students to practice the skill in a safe, fun way. The workshop will enable teachers to engage with the online platform at the STEM Education Conference 2021.

Preparation:

1. Delegates are asked to consider 8-10 things that really bug them and to consider why that item/thing bugs them. They will then consider how they might improve each item. When they have considered how they might improve the items on their list they are to be prepared to present to the group that one 'bug' they have and what innovation/improvement they would like to propose.
2. Delegates are asked to watch this video (<https://www.youtube.com/watch?v=IEQiZQi-aGY>) prior to the workshop and also sign up for a free account with www.powtoon.com.