Exploring alternate models for WIL in Science: Linking Work with Learning

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Thank you UQ FoS and ACDS

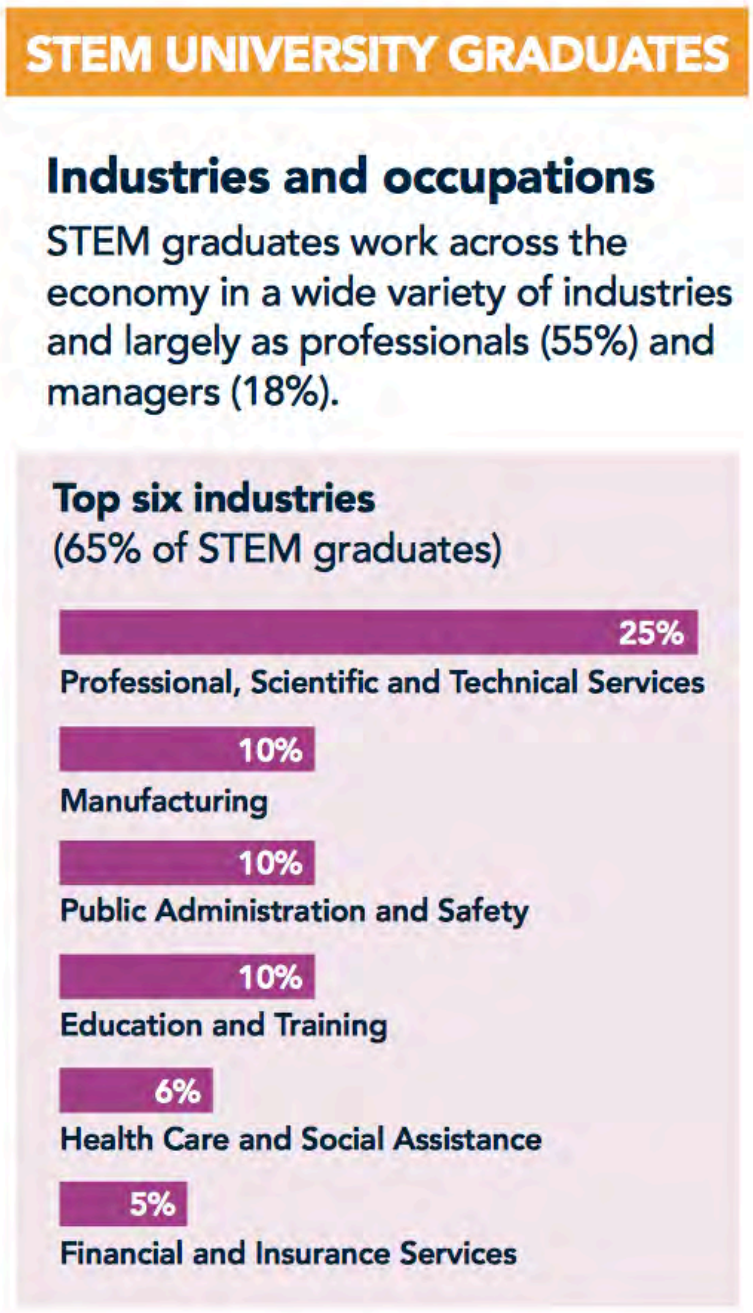
Problem

Science graduates work in diverse settings.

Providing work placements for large numbers of students is administratively difficult.

Students need a structured way to appreciate the learning and skills they obtain from a workplace.

Students are time poor.



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Approach

This is an experiment.

We aim to develop a program that provides course credit for work that students are already doing in diverse settings.

Curriculum develops student understanding of the transformational role of work.

We will use sections of UQ MOOC Employ101x

You can access it here - https://www.edx.org/course?school=UQx

Where are we so far?

Learning Outcomes

Upon completion of the proposed course a student will be able to

1. Critically reflect on experiences in the workplace and explicitly link those experiences to potential employment opportunities as a science-based professional.

2. Have awareness of strengths and capabilities cultivated in a BSc and be able to articulate how those attributes can be applied in a workplace

3. Critically read the literature related to science employability and apply this knowledge to a reflection on current work experience

4. Present a learning portfolio that charts their development through the course, reflects their skills and interests, and provides a plan for their career development.

What will we do during the course?

Workshops (~10 x 2 h workshops)

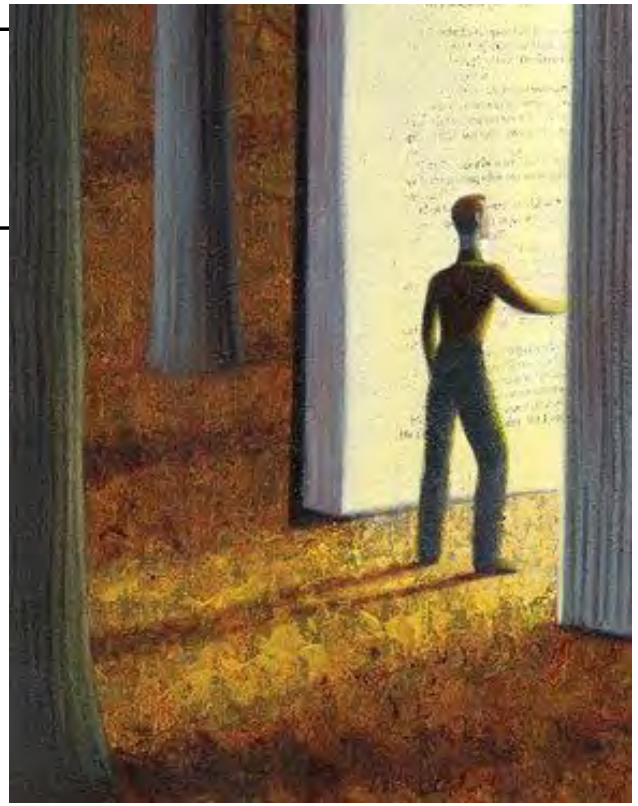
Each workshop involves students reflecting on readings, sharing experiences from their workplace and their university training, and creating action plans for assignments and later workshops.

Peer mentoring

All students are required to mentor peers (6 h total) and be mentored (6 h total).

This supported process helps students understand the strengths and weaknesses they have. They will be guided in how to learn from others, how to ask for help, and how to offer help in a professional and gracious way.

Readings



During the program students will complete readings and question sets around a number of key areas.

Here are some example papers.

Office of the Chief Scientist (2016) *Australia's STEM Workforce*. Canberra: Office of the Chief Scientist.

This article lets students see the career pathways of science graduates in particular areas.

Krause, K-L (2012) *A Background in Science – What science means for Australian Society.* University of Melbourne: Centre for the Study of Higher Education.

This article has first hand descriptions of the kinds of attributes and habits of mind that are developed in science.

Hobin, JA, Fuhrmann, CN, Lindstaedt, B, and Clifford, PS (2012) *You need a game plan*. Sciencemag.org.

Students will complete a number of self-assessments

http://sciencecouncil.org/about-us/10-types-of-scientist/

Students will create and IDP using this link: http://myidp.sciencecareers.org

Interviewing graduates

Students must find a science graduate, interview them about their career pathway, and present this interview to the other students in the class.

We will co-construct the substance and structure of this interview with the students in the course.

Students must use their network for find this graduate and reflect on:

a) the size and scope of their network and
b) the ways they build and use this network.

Considerations re approach

We may have problems getting enough students to participate in the trial

- we are offering money

- ethics is already giving us trouble

We may have problems marrying the planned course activities to a wide variety of work experiences – mixed response from science colleagues.

We may find we need to restrict the types of “work” we include or use the idea of “developing science professionals” vs “working as a scientist”.