

ARE WE DEVELOPING CAREER-READINESS SKILLS IN SCIENCE GRADUATES?

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BACKGROUND

As students transition from university education to employment, they require a range of skills and competencies to ensure future career readiness, including technical expertise, problem-solving abilities, effective communication, social network building, cultural awareness, resilience, and adaptability (Jackson, 2018; Roberts, 2016; Tomlinson, 2017). A number of these attributes are captured within the Threshold Learning Outcomes for Science graduates (Jones et al., 2011). The fluidity of careers also requires a greater emphasis on the development of metacognitive and reflective abilities so that graduates will have the capability, capacity, and confidence to use their personal resources appropriately and flexibly, regardless of environment. However, recent research has suggested that generic skill development is lacking in undergraduate science curricula (Sarkar et al., 2020). The work presented here aimed to understand more about the employability skills viewed as important by academics, students, graduates, and industry whilst also gauging perceived levels of attainment and confidence in those skills.

DESIGN AND METHODS

The confidence and capability of academics to prepare Science students to be career ready was explored by conducting surveys and community-of-practice style workshops. The perspectives of industry employers, students, and graduates was sought via surveys and focus groups. This information was then used in a co-creation workshop to identify effective ways of providing career pathways and industry connections to students as well as to develop employability skills.

RESULTS AND CONCLUSIONS

Survey results identified four key employability skills that were deemed important by all groups, but which industry felt were underdeveloped in graduates, and in which students were not confident. These were: working in a team and acknowledging other viewpoints, effective time management, communication to various audiences and making confident decisions. Discussions held in the academic-specific workshop identified key roadblocks to the effective implementation of employability skill development. These were: lack of opportunity/time to integrate skills into existing curricula, engaging students to participate, and assessment of the skills. The co-creation workshop then captured industry and academic insights facilitating the development of potential methodologies to overcome these roadblocks to help in teaching the key skills identified. Outcomes will be used to develop national best-practice guidelines for the integration of employability skill development. This may facilitate changes to the Science curriculum to ensure graduates are career ready.

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