EXPLORING THE NEXUS BETWEEN STUDENTS' SCIENCE BELONGINGNESS AND EMPLOYABILITY: A PILOT

Dilusha Munasinghea, Angela Ziebella

Presenting Author: Dilusha Munasinghe (h.munasinghe@deakin.edu.au)

aSchool of Life and Environment Sciences, Deakin University, Melbourne, VIC 3125, Australia

KEYWORDS: Belongingness, Employability, Authentic assessment, Context-based learning

SUBTHEME: Belongingness

PROBLEM

While generic skills in numeracy, literacy, and communication are important, the foundation of self-perceived employability must always be a sense of belonging that enables increased self-awareness, confidence, and connection throughout all stages of the student lifecycle (Rothwell et al., 2009). Crawford et al. (2023) highlighted that the most significant factor influencing student belongingness is the self-reported overall quality of their educational experience based on a longitudinal national survey, yet this work uses an unvalidated instrument. There is a gap in data with regard to understanding students' belongingness, therefore, to address this gap, we aim to investigate how enhanced educational experiences, specifically those linked to industry practices, can improve students' sense of belonging. By incorporating industry-linked learning, we hypothesise that students will gain a more practical understanding of their field, fostering a deeper connection to the scientific community and increasing their confidence in their employability. This will create an inclusive and engaging learning environment that supports diverse student needs and prepares them for future career opportunities.

METHODOLOGY

We will conduct a mixed-method study utilizing a paper-based Self-determination, Purpose, Identity, and Engagement in Science instrument (SPIRES) (Skinner et al., 2017)., short answer questions and focus group discussions/interviews. As per the initial stage, responses were gained from N=253 second- and third-year students in Chemistry in mid-May. These preliminary results were analysed using IBM SPSS Statistics, version 28.

RESULTS

The collected data will provide insights into how different cohorts perceive belongingness and its significance in their career decision-making and academic success. Demographic data will be used to identify any variations in feedback based on demographic factors, such as gender, and socioeconomic status. This helps us to understand the diverse experiences and needs within the student population in a clearer aspect. Ultimately, this study will fill the knowledge gap by determining if and how industry-linked learning experiences contribute to students' sense of belonging and, consequently, their self-perceived employability. With these dynamics, we can also develop strategies to enhance different learning experiences that directly address the needs of students and align with industry expectations.

REFERENCES:

Crawford, J., Allen, K. A., Sanders, T., Baumeister, R., Parker, P., Saunders, C., & Tice, D. (2023). Sense of belonging in higher education students: an Australian longitudinal study from 2013 to 2019. *Studies in Higher Education*. https://doi.org/10.1080/03075079.2023.2238006

Rothwell, A., Jewell, S., & Hardie, M. (2009). Self-perceived employability: Investigating the responses of post-graduate students. *Journal of Vocational Behavior*, 75(2), 152–161.

Skinner, E., Saxton, E., Currie, C., & Shusterman, G. (2017). A motivational account of the undergraduate experience in science: brief measures of students' self-system appraisals, engagement in coursework, and identity as a scientist. *International Journal of Science Education*, 39(17), 2433–2459.

Proceedings of the Australian Conference on Science and Mathematics Education, The University of Canberra, 18 – 20 September 2024, page 75, ISSN 2653-0481.