

# BREAKING BARRIERS: THE EFFECTS OF SOCIAL BELONGING AND GROUP IDENTITY ON ACADEMIC OUTCOMES IN THE AUSTRALIAN STEM UNIVERSITY SECTOR

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**SUBTHEME:** Belonging

## BACKGROUND

In Australia, less than 45% of undergraduate STEM students complete their degrees, with higher dropout rates among under-represented groups (Department of Industry, Science and Resources, 2021). This issue perpetuates social disadvantage and reduces diversity in STEM fields. Research from the United States indicates that low-cost social belonging interventions can significantly improve retention and performance, particularly for under-represented groups (Walton et al., 2023; Brady et al., 2020). Social belonging, defined as the sense of being a valued member of the college community (Hausmann et al., 2007), enhances student retention and academic success (Edwards et al., 2022; Knekta and McCartney, 2021). It is influenced by factors such as race, ethnicity, and gender (Rainey et al., 2018; O'Brian et al., 2020).

## CURRENT WORK

Our study aims to evaluate the impact of social belonging and identification with under-represented groups on retention and academic performance among first-year STEM students, focusing on marginalised groups such as Indigenous Australians and first-generation university students. We surveyed 163 first-year science students (18% response rate) using a validated instrument (Walton & Cohen, 2007). Our findings reveal that students who work longer hours in paid employment and first-generation university students experience the greatest sense of marginalisation. We will discuss additional factors affecting student belonging that would benefit from targeted initiatives to enhance retention and academic success.

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