

# HAVE OUR FIRST YEAR SCIENCE STUDENTS CHANGED SINCE THE PANDEMIC?

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## A LONGITUDINAL STUDY ON FIRST YEAR SCIENCE STUDENTS

Covid-19 has had a significant impact on student learning at all levels of education, forcing changes to curricula and methods of teaching at a pace never seen before. In addition, the workforce has changed as the necessary work from home arrangements extend into an often-blended mode of work and burgeoning technologies, such as artificial intelligence, change our sense of core skills needed for work. In 2020, a new subject was introduced at the University of Wollongong (UOW), SCII101 *Global Challenges in Science*. This subject is core in the Bachelor of Science and although paused in 2021-2022, has since become core in all science courses offered by the Faculty of Science, Medicine, and Health at UOW. This subject is designed for first year commencing science students with a focus on exploring the methods of science while students explore challenges of modern life in the context of the United Nations Sustainable Development Goals (UNSDGs). This subject is also utilised to provide guidance for students to map their program of study and navigate their transition to university. An initial survey administered through Qualtrics was conducted with SCII101 students in 2020 to examine their sense of professional identity, intended job/profession and commitment to that pursuit, alongside the skills they think are important for success in that profession. This survey has since been conducted with first year science students in 2021-2024.

## A FOCUS ON IDENTITY, JOBS AND SKILLS

**IDENTITY:** A student's own professional identity can heavily impact their intended graduate destination and has been highlighted as important to a student's motivation to continue their studies and pursue meaningful employment beyond graduation (Pelco & Ball, 2018). Our study looked at whether students entering first year of a science university course identify as a scientist, if that is important to them, and the factors that influence their development of identity as a scientist.

**JOBS:** Students enrolled in a generalist degree, such as the Bachelor of Science, will have a diverse range of potential graduate destinations (Palmer et al., 2018) and it is believed that declining numbers in generalist programs, such as the BSc are reflective of this lack of clear alignment to a profession. Initially with a focus on BSc students our study explored what jobs/professions new commencing students intended to pursue and their self-rated level of commitment to that pursuit.

**SKILLS:** There are numerous studies or reports that highlight a gap in skills developed at university to what is sought by employers (Moore & Morton, 2017). In this study we explore the student's perceptions of skills or core capabilities they believe are necessary to be successful in their intended profession to compare to those identified by employers and targeted within university courses. The results of this longitudinal study have the potential to impact science curricula through an understanding of our new student cohort and impacts from the pandemic.

## REFERENCES

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