NAVIGATING THE FUTURE OF SCIENCE EDUCATION: THE ROLE OF PROGRAM DESIGN IN STUDENT SUCCESS

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As higher education institutions across Australia adapt to the rapidly changing educational landscape, many of us are confronting a shared set of challenges. The widespread adoption of online and remote learning, while enhancing accessibility, has unintentionally diminished student engagement, connection, and a sense of belonging (Kahu & Nelson, 2018). Meanwhile, increasing economic pressures on university students exacerbate these issues, forcing many to juggle substantial work commitment with study. Discussions with colleagues highlight a growing concern: a prevalence of a transactional, grades-focused mindset that often clashes with the principles of meaningful learning, limiting students' engagement and diminishing ownership of their educational journey.

In generalist, pre-professional degrees like the Bachelor of Science, many students struggle to find a clear sense of purpose in their studies, which is essential for developing intrinsic motivation; this lack of direction negatively impacts their engagement, retention, and overall success. (Yukhymenko-Lescroart & Sharma, 2023). For many, this challenge is closely linked to their uncertainty about career pathways. A 2022 review of the Bachelor of Science at UNSW revealed that the vast array of study options, though designed to cater to diverse interests, often overwhelms students, leading to decision paralysis and difficulty in navigating the available choice. This issue is compounded by the low career literacy of science students, where students often struggle to connect and articulate their academic achievements with their graduate skills and professional aspirations (Hill, 2021). Research shows that students are more likely to persist when they feel a sense of belonging to their institution and peers (Tinto, 2017) and thrive when empowered to take ownership of their academic journey (Kift, 2009). So, what needs to change in our approach to programmatic design to tackle these challenges?

In my presentation, I will explore the strategic approach that UNSW Science has undertaken, culminating in the creation of SciConnect—a comprehensive digital platform that places students' sense of purpose at the heart of their academic journey. I will detail how SciConnect is designed to enhance students' sense of belonging and support their academic and professional development. Additionally, I will demonstrate how the platform is integrated into program design and assessment, creating a cohesive and supportive educational experience that addresses the challenges faced by science students today.

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