INTERWEAVING INTERDISCIPLINARY EXPERIENTIAL LEARNING WITH CO-BUILDING SOLUTIONS WITH STUDENTS

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The University of Sydney TechLab engages with hundreds of students across the STEAMM portfolios each semester to deliver meaningful Educational outcomes. This paper will discuss and outline the viability of a small unit with specialist futurist expertise for delivering real graduate and learning outcomes in tertiary science education.

We will highlight the capabilities required to deliver this expertise via a collection of 3 case studies employing vastly different methodologies, as well as addition subjective and objective measures that the TechLab targets.

- **Case Study 1: Embedding Virtual Reality creation in the science curriculum.**
  These projects range from in-depth XR experiences inside a human skull, canine skeletal VR integrated with University’s Learning Management System for assessments, 360-degree log book for veterinary doctors, researchers and pet owners

- **Case Study 2: Leveraging 3rd Year Coursework to design Interactive Pedagogical tools**
  These projects entail third year coursework students building learning experiences for first year students or solutions for business challenges in other parts of the University – ranging from wayfinding in remote campuses, deep learning for candidate application reviews and many more.

- **Case Study 3: Developing Industry based XR tools through Interdisciplinary Project based Learning.**
  Student teams doing multidisciplinary Industry and Community Project Units (ICPUs) each semester showed higher engagement and impact when engaged actively with industry and/or supported for entrepreneurship. Between mid-2018 to early 2019, six start-ups emerged from TechLab and industry engagement e.g., frameworks to check for unconscious bias in HR recruitment systems, WHS training systems in FMCG sectors etc.

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