

Establishing a community of practice for transforming the design and delivery of laboratory-based education

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We believe that laboratory-based education incorporating scientific inquiry and hands-on skills is integral to the experience of many undergraduate and postgraduate degrees and that experiential learning in well-designed laboratory classes can be highly motivating for students. In addition to developing specific skills, students can acquire and apply a range of generic skills that are valued in the workforce.

The Educational Enhancement Unit at the University of Western Australia has recently offered funding for Communities of Practice (CoP) initiatives that encourage collaboration across the university on innovative and multidisciplinary themes that enhance learning and teaching.

In recent years, staff within the School of Molecular Sciences at UWA have been recognised for innovations in learning and teaching that enhance the student experience, using a flipped learning, modular format based on specific laboratory techniques. We have established a CoP with the aim of transforming student laboratory learning and teaching. The CoP will be a vehicle for bringing a variety of groups and individuals together to share their expertise and transform how laboratory-based education is taught.

Initially we plan to review and improve the current modular structure, followed by dissemination across other disciplines. Impacts are expected to be far reaching and will involve laboratories, the student experience, and broader stakeholder relationships. One of our objectives is to identify and include other potential stakeholders such as those involved in laboratory-based industry, post-graduate students, research scientists, scientific providers and secondary school science teachers. Our vision is to transform laboratories into a centerpiece of experiential learning that will be contemporary and relevant to a broad range of stakeholders.