12.30 - 2PM, Friday 24 November

Festival Finale: Lunchtime Expo Gallery

Hosted by UNSW PVCESE

On campus only: The Roundhouse
(Main Room, Ground Floor)

Add event to my calendar

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In-person interactive breakouts for student engagement **Presenter:** Dr Ingrid Astrid Jimenez Barbosa	Abstract
Practical considerations for improving sustainability in teaching labs **Presenter:** Dr Grace Yan	Abstract
Concept Mapping as an active learning strategy – Do students like it? **Presenters:** Dr Vinod Maseedupally, Dr Revathy Mani, Dr Ruby Kala Prakasam and Srikanth Maseedupalli	Abstract
Engaging Students with Industry: Co-curating Knowledge through Podcasts **Presenter:** Dr Sandeep Mysore Seshadrinath	Abstract
Simple, seamless generative AI to explain programming errors **Presenters:** Dr Sasha Vassar, Dr Jake Renzella, Dr Andrew Taylor and Enzo Lee Solano	Abstract
Partners in Healing: From community to classroom **Presenter:** Dr Kalli Spencer and Ms Kiran Thwaites	Abstract
Getting Students Back in the Lab: BABS Lab Skills Workshop **Presenters:** Dr Timothy Williams and the BABS Technical Support Team	Abstract
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Student Support Services EXPO	

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In-person interactive breakouts for student engagement

Presenter: Dr Ingrid Astrid Jimenez Barbosa (UNSW Medicine & Health)

This work explores the implementation of breakout activities in enhancing student engagement in an in-person tutorial session in week 3. In VISN3111 in T1 2023, two groups of 20 to 25 students were assigned a research article related to development and aging of visual system for a group presentation in the upcoming tutorial in week 7. The breakout activity was aimed to enhance student interaction and collaborative learning of their allotted topic within sub-groups made of 4-5 students. Two distinct breakout activities were designed for two cohorts of student's groups.

The first group concentrated on a vision disorder called amblyopia, which requires early diagnosis and intervention using an interactive simulation exercise, students roleplayed and communicated the complexities of amblyopia to other cohort of students, emphasizing the vital role of clear communication in conveying essential eye health information.

The second group explored the effects of aging on visual functions and cognition using a collaborative challenge exercise using playdough sculptures to investigate the interplay between visual perception, cognitive function, aging, and problem-solving.

These activities yielded profound insights into group collaboration dynamics and underscored the significance of teamwork, despite initial skepticism from some students to interact. The activities ultimately provided various benefits, including active engagement, improved collaboration, and the cultivation of critical thinking abilities.

In conclusion, these breakout activities, initially met with doubt, emerged as powerful tools enriching the student learning experience. The activities enhanced deep learning capabilities and incorporated creativity and fun. These activities helped students understand real-world eye problems and improved their science communication. Thus, breakout activities are important in University Education because they help students learn and grow in different ways.

Dr Ingrid Astrid Jimenez Barbosa, a skilled academic, holds a Ph.D. in Optometry from the University of New South Wales, Sydney, Australia (UNSW). With a diverse educational background encompassing a master's in administration and specializations in Pedagogy and Occupational Health Management, she earned her bachelor's in optometry from De La Salle University Bogota, Colombia. Currently serving as a Lecturer at UNSW's School of Optometry and Vision Science, Dr. Jimenez Barbosa passionately explores vision health education. Her research investigates varied pedagogical methods, focusing on student and vision health professional learning styles. Dedicated to enhancing student engagement, she employs innovative techniques such as game-like elements, podcasting, movie case analyses, and active learning activities in her teaching.

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Practical considerations for improving sustainability in teaching labs
Presenter: Dr Grace Yan (UNSW Science)

The talk aims to open the discussion for various considerations and potential pitfalls when trying to improve the sustainability of teaching labs. This year, BABS has begun to implement a number of strategies to try and reduce waste in our teaching labs.

Dr Grace Yan, After completing her PhD in microbiology (virology), Grace began work as a technical officer in the School of BABS. She is passionate about improving lab sustainability and has directed her efforts towards reducing the amount of waste generated in the teaching labs. She has implemented several waste reduction strategies, most recently the inaugural BABS Lab Swap Day, which encouraged teaching and research labs to redirect unneeded items towards productive use.

Engaging Students with Industry: Co-curating Knowledge through Podcasts
Presenter: Dr Sandeep Mysore Seshadrinath (UNSW Business)

The presentation will propose a model for engaging industry alumni and students via podcast production. The engagement method seeks to enhance student employability by giving them an opportunity to learn and interact with both recent graduates and established professionals.
The engagement method seeks to enhance alumni engagement by giving them a platform to share and showcase their knowledge, skills and experience.
The engagement method seeks to build a repository of podcasts by curating various career pathways of information systems graduates.

Dr Sandeep Mysore Seshadrinath is a Senior Lecturer in Information Systems at UNSW Business School. His teaching interests lie in the analysis and design of information systems to drive digital innovation and sustainability in organisations and society. His teaching pedagogies strive to immerse students in authentic real-world challenges, fostering practical insights and problem-solving skills. Sandeep's teaching approach equips future professionals with the acumen to navigate and contribute proactively to the digital landscape.

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Concept Mapping as an active learning strategy – Do students like it?

Presenter: Dr Vinod Maseedupally, Dr Revathy Mani, Dr Ruby Kala Prakasam and Srikanth Maseedupalli (UNSW Medicine & Health)

Building Concept Maps (CMs) is an active learning strategy involves students organising concepts as nodes and linking other closely related concepts using various terms and arrows. A CM can be drawn on a paper or can be built on a software platform. CMs fosters clinical thinking and problem-solving abilities and is widely used as a learning strategy used in several disciplines, its usefulness has not been explored in optometry.

In this work we aim to report our survey results on how students liked the CM building as an active learning strategy at the School of Optometry and Vision Science. In Term 2 2023, CM as a learning activity was introduced to the third years of Bachelor of Vision Science/Master of Clinical Optometry students. In the first stage, students were instructed to complete a CM activity as homework, for which students needed to review online resources on how to construct a CM. In the second stage, CMs were built by the students in a tutorial setting with the help of two supervisors. A total of 5 tutorials were conducted, each attended by approximately 24 students. Finally, students completed a CM related question independently in the final online exam. In the end-of-the-term survey, 97% (35/36) of students expressed a positive experience in learning from the activity, and 89% (32/36) agreed that CM activity helped them learn better than other activities such as writing a report or completing a quiz. The CM as a teaching technique must be adopted in higher education to promote critical thinking and discourage rote learning.

Dr Vinod Maseedupally is a Senior Lecturer and an Education-focused Academic at the School of Optometry and Vision Science, University of New South Wales. He coordinates courses relating to contact lenses and his research focusses on contact lenses and student engagement and experience.

Dr Revathy Mani, a Lecturer and an Education-focused Academic at the School of Optometry and Vision Science, University of New South Wales, with a Ph.D. in Vision Science. She teaches Vision and Aging and Vision Science in the Consulting Room clinical to Vision Science and Clinical Optometry students. Her research focusses on understanding abnormal eye movements in Traumatic Brain Injury. She has extensive clinical experience in the field of binocular vision, pediatrics and optometry education.

Dr Ruby Kala Prakasam is a faculty at Standard Chartered - LVPEI Academy for Eye Care Education, L V Prasad Eye Institute, India. She is involved teaching and training contact lens subjects to undergraduate optometry students. She is also developing optometry education tools, spearheads an online program benefiting Indian optometrists, and is focused on investigating active learning methods in education.

Srikanth Maseedupalli M.Optom, PGDHRM is an optometry educator with extensive roles at the Brien Holden Institute of Optometry & Vision Sciences, LV Prasad Eye Institute, Hyderabad. With a background in clinical optometry and HRM, his leadership spans optometry education, ophthalmic dispensing, and clinical training. His research encompasses areas like concept mapping, ophthalmic lenses, and anthropometry. Srikanth has also pioneered game-based learning in optometry and has significantly contributed to academic publications, conferences, and innovative teaching tools.

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Simple, seamless generative AI to explain programming errors

Presenter: Dr Sasha Vassar, Dr Jake Renzella, Dr Andrew Taylor
and Enzo Lee Solano (UNSW Engineering)

In this presentation, we present a novel, scaffolded, and heavily evaluated integration of a Large Language Model into UNSW's largest undergraduate course: Programming Fundamentals. We integrate Large Language Models (LLM) into the Debugging C Compiler to produce enhanced compiler error explanations, in simple language and using an expanded web interface. It is well documented that compiler error messages have been known to present a barrier for novices learning how to program. Although our initial use of DCC in introductory programming (CS1) has been instrumental in teaching C to novice programmers by providing safeguards to commonly occurring errors and translating the usually cryptic compiler error messages at both compile- and run-time, we proposed that incorporating LLM-generated explanations would further enhance the learning experience for novice programmers. Through an expert evaluation, we observed that LLM-generated explanations for compiler errors were conceptually accurate in 90% of compile-time errors, and 75% of run-time errors. Additionally, the new DCC-help tool has been increasingly adopted by students, with an average of 1047 unique runs per week, and positive reviews, demonstrating a promising initial assessment of using LLMs to complement compiler output to enhance programming education for beginners. The next phase of the project will be in developing a web interface to provide the ability to communicate via chat and clear up any misunderstandings observed initially. Initial student evaluations of the project will be presented. We release our tool as open-source to the community.

Dr Sasha Vassar has a cross-disciplinary background in Computer Engineering, Biomedical Engineering and a PhD in Education (UNSW). She has spent time working in the engineering industry improving problem solving and design processes before her passion for education and teaching brought her back to the university to join the School of Computer Science and Engineering, where she is a Senior Lecturer. Sasha is interested in the intersections of human-computer interaction, user experiences, and interfaces, in engineering solution design; the role of design thinking in engineering problem solving; and the application of cognitive load theory concepts to improve pedagogy. Currently, her research focuses on an integration of an educational compiler and Large Language Model to improve student learning outcomes. Sasha is an Associate Fellow of the Higher Education Academy, and an Early Career Academic member of the Australasian Association for Engineering Education.

Dr Jake Renzella is a Lecturer and Co-Head of the Computing and Education research group in the School of Computer Science Engineering at UNSW. Jake's research is at the intersection of novel software and artificial intelligence-based systems applications and world-class computing education. Jake's work has been published in premier conferences and journals such as the International Conference on Software Engineering. More importantly, it is embedded in open-source education projects such as SplashKit, and notably, Formatif, used at several Australian and New Zealand universities with over 230,000 students. Jake also works in higher education's academic integrity, focusing on student-friendly approaches to retaining integrity. Jake is an Associate Fellow of the Higher Education Academy, and an Early Career Academic member of the Australasian Association for Engineering Education.

Partners in Healing: From community to classroom

Presenter: Dr Kalli Spencer & Ms Kiran Thwaites (UNSW Medicine & Health)

In Year 1 and 2 (Phase 1) of the medicine program students learn how to take a medical history from patients. A lot of the teaching revolves around communication skills. To assist this process, for several years we have relied on volunteers from the community to give medical students an opportunity to perfect their skills through conversation. People with lived experience take on an authentic role, serving as an alternative to a sick patient in a health care facility. Through a purpose-built online application, consultations are organised and conducted for students to practice in their own time and convenient to volunteers. With a recent drop in volunteer numbers we had to find new people to assist. This is where we turned to community-based patient support organisations to assist. In this session we share with you the process and the outcomes of this partnership.

Dr Kalli Spencer heads the clinical skills unit on Kensington Campus and is the Phase 1 Lead for Clinical Skills Education in the Medicine program. He is an education focussed academic responsible for teaching communication skills and examination of patients. He is a surgeon by training and professional councillor and has a special interest in advocating for support of cancer patients.

Kiran Thwaites has been with UNSW Medicine & Health for 8 years. She comes from a mix of local government and advertising roles overseas, and English language teaching.
With a strong interest in volunteer management and communication skills development, she recognises the latter as an area often over-looked and underappreciated - yet so important!
Under Kiran's management, the Phase 1 Simulated Patient Program has become a firm favourite in the timetable, bringing in enthusiastic community members to work with junior students.

Getting Students Back in the Lab: BABS Lab Skills Workshop

Presenter: Dr Timothy Williams and the BABS Technical Support Team (UNSW Science)

Following the disruptions to face-to-face teaching caused by Covid restrictions, and the ensuing emphasis on online teaching, it became apparent that many new research students have not had the chance to develop practical hands-on skills that are essential for laboratory work. Plus, many students appear reticent about entering and working in a laboratory environment. To address this gap, the School of BABS developed an informal drop-in, hands-on program that covers basic techniques used in biotechnology and molecular biology research laboratories. This is the Honours Lab Skills Workshop, led by Tim Williams, with support from the BABS Technical Support Team. Students are taught individually or in small groups and can actively participate in activities such as mammalian cell culture, bacterial culture, pipetting and serial dilution, light microscopy, gel electrophoresis, and spectrophotometry. We have rolled out these sessions to other UNSW Schools and Faculties at their request and have received excellent feedback from participants and Honours supervisors.

Dr Tim Williams is a Senior Research Associate and course convenor in BABS. His research focus is studying the ecology of microbes in their natural environments, especially Antarctica, using molecular analysis. He has experience supervising and working with a great many HDR and undergraduate students.

The BABS Technical Support Team, led by Jason Sercombe, consists of Technical Officers and Technical Assistants, and delivers hands-on and online practical teaching support for the School of Biotechnology and Biomolecular Sciences (BABS). BABS teaches undergraduates, mentors postgraduate research students, and conducts research in the disciplines of biotechnology, biochemistry, genetics, molecular biology, microbiology, environmental microbiology, medical microbiology and immunology. BABS currently offers 37 coursework subjects and employs 33 Research/Teaching academics and 8 Education Focused academics. The School also employs approximately 80 casual demonstrators per term.

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Education Immersive VR Demo

Presenters: Graham Hannah, Xueqing (Sherry) Lu, Seyha Sok, Tim Dodds, Paul Dyer, Ashley (Ash) Hall, Brian Landrigan (UNSW PVCESE)

Come and check out a range of virtual reality experiences and simulations created specifically for teaching here at UNSW by the PVCESE Media & Immersive team. The developer team will be on hand to showcase examples of VR experiences used in classes and discuss how we worked with the academics to design and build them.

EdTech Support for Teaching and Learning

Presenters: Education Technology Support (ETS) Team (UNSW PVCESE)

Come meet the team that provide holistic support for educational technology at UNSW. Ask your questions and learn more about how you can receive assistance and training on using educational technology to elevate student experience.

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