



## WORKSHOP

# How do Teachers Respond to Sustained Change?

Roger Hadgraft<sup>a</sup>, Franziska Trede<sup>a</sup> and Monika Rummeler<sup>b</sup>  
<sup>a</sup> University of Technology Sydney, <sup>b</sup> Technische Universität Berlin  
Corresponding Facilitator's Email: Roger.Hadgraft@uts.edu.au

## OVERVIEW OF WORKSHOP

Higher Education is facing profound shifts: employers seek graduates who can work effectively with others in rapidly changing, transdisciplinary contexts, defined by globalisation, digitalisation, sustainability, complexity and, most recently, a global pandemic. COVID caused an instantaneous acceleration to online learning, where academics were forced to conduct their normally face to face classes through video conferencing tools. The calls for sustained change are challenging academics to rethink their traditional teaching role.

This workshop seeks to understand how academics have responded to these challenges, both short term (emergency remote teaching) and the longer-term shift to transdisciplinary teaching, where problems in the world have become more complex and where graduates need to be prepared for transdisciplinary learning, working with diverse communities on their solutions. The workshop will build upon a matching workshop held at SEFI in September 2021, to enable comparison of results between Australia and Europe.

## ACTIVITIES

Participants will work in small groups to discuss three big domains:

1. Teaching changes due to COVID: What have been the **positive and negative changes in your teaching practices** in the last 18 months due to COVID? How have these changes **affected you and your colleagues** as teachers? What have you observed about **student reactions** to this new form of completely online teaching and learning? **What are we learning** for the future of learning and teaching?
2. Preparing graduates for their professional future: What do you see as some of the **big challenges** facing your graduates, in their lifetime? How do you see the **academic role changing** to prepare graduates for this increasingly complex world?
3. Supporting teachers for their changing role: What formats, topics, and methods of **continuing education** would prepare you to become a more future-focussed academic teacher to prepare graduates for their professional engineering future in this constantly changing, increasingly more complex and uncertain world?

## TARGET AUDIENCE

All conference attendees will be welcome. Teaching academics will be the main focus.

## OUTCOMES

At the conclusion of this workshop, participants will have explored future trends in teaching engineering, with the intent of defining continuing education needs for those future skills. They will personally benefit from exchanging points of view and collectively developing didactic strategies for future transdisciplinary teaching. The workshop will generate useful data for the implementation phase of the Engineer 2035 project, for ACED, AAEE, and the ADLT Network.

The anonymous data gathered at the workshop will also help the workshop facilitators to shape an ongoing research project: *Developing the Deliberate Teacher's Voice in the Age of Complexity, Sustainability, Globalisation, Digitalisation and Transdisciplinarity – how do Continuing Education Programs for Academics need to Change to Enhance Teaching Competence at University?*

## KEYWORDS

globalisation, digitalisation, sustainability, complexity, COVID, transformation

## **PRESENTERS' BACKGROUNDS**

Roger Hadgraft has 30 years' experience in transforming and researching engineering education, with a focus on project-based learning. This current research builds on research in the last 10 years on student outcomes and curriculum design.

Franziska Trede has dedicated her research career to professional practice exploring agency, identity, and professional responsibility. This current project builds on her concept of educating the deliberate professional.

Monika Rummler is the Deputy Director of TU Berlin's Centre for Scientific Continuing Education and Cooperation, where she is responsible for the continuing education program for the scientific staff of TUB with the focus on teaching and learning to improve academic teachers' teaching and learning competencies.

This research will compare academic development needs between Australia and Europe, through a matching workshop held at SEFI in September 2021.

## **ETHICS STATEMENT**

We have received Ethics approval through the University of Technology Sydney's Human Research Ethics Committee Approval No. IML 202103 for this workshop. This workshop is part of a wider study to explore teaching experiences during COVID pandemic and the future higher education challenges to gain insights into the future directions of higher education, and engineering education in particular; see information and consent sheet in the appendix below.

You are invited to participate because you are a university teacher. We will audio record this session and use contributions into the chat function and a shared digital document from small group activities as our research data. All data will be de-identified and stored in a password protected secure space. Only the facilitators of this workshop have access to this data which will be kept for 5 years. Participation in this workshop will be assumed as consent for the anonymous and ethically responsible use of the ideas generated.