GOING BEYOND THE FADS AND JARGON: WHAT DOES RESEARCH TELL US ABOUT TEACHING FOR HIGH QUALITY LEARNING IN SCIENCE AND ENGINEERING?

There is much contemporary talk on how university teaching is outdated, and how radical change is needed to accommodate the needs of current students and the expectations of the workplace. Many of these calls, whether for active or problem-based learning fall into a longer and broader tradition of progressivism in education. To interrogate their applicability, a carefully formulated position is needed on knowledge and learning in science and engineering. In this talk, Jenni Case draws on contemporary research in engineering education to consider the nature of knowledge in the curriculum, and what we know about learning challenges in these fields, and how teaching can best support high quality learning outcomes.

JENNIFER CASE is Professor and Head of the Department of Engineering Education at Virginia Tech. Prior to her appointment in this post she was Professor in the Department of Chemical Engineering at the University of Cape Town, South Africa, where she retains an honorary appointment. She completed postgraduate studies in the UK, Australia and South Africa. With more than two decades of undergraduate teaching and curriculum reform work, she is also a renowned researcher in engineering education and higher education. Her work especially on the student experience of learning as well as on topics around teaching and curriculum, has been widely published. She was the founding president of the South African Society for Engineering Education (SASEE). She is a coordinating editor for the international journal Higher Education and a co-editor for the Routledge/SRHE series Research into Higher Education.

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