

Technology-enhanced assessment: Seizing opportunities & addressing challenges

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Innovation in learning engagement, diversification of student population and massification are pressing concerns in higher education. These interconnected concerns have particular impact on assessment. As our student populations and learning engagements become more diverse and class size grows, the use of assessment for promoting and determining student achievement becomes increasingly challenging.

Technology is often seen as essential to meeting this challenge. Technology enhanced assessment (TEA) is a meeting place for digital learning and assessment of, as and for learning. TEA is an area rich with opportunity, but also fraught with risks. Achieving success while avoiding failure is a key mandate for members of university communities, from individual teaching staff to senior leadership.

This panel discussion explores TEA from several perspectives, drawing on university-situated practice cases, the field of TEA research, and empirical research conducted by panelists. Key topics include understanding what enhancement means in the context of TEA, incorporating student voice, how factors such as teachers' pedagogical beliefs and university culture mediate TEA, how TEA may affect provision of feedback, and negotiating resistance to assessment and technology change.

A key attraction of technology-enhanced assessment is the promise of greater opportunity for personalised learning. Significant challenges in both research and practice raise issues with the degree to which this vision is being successfully enacted. Thus, this panel aligns most closely to Conference Stream 2: Practices and Challenges in Technology Enhanced Learning.

The panel is intended for any ASCILITE attendees, but special attention is paid to areas of interest for subject lecturers, program coordinators, developers and researchers who are interested in successfully exploring and advancing technology-enhanced assessment. Audience engagement will include dialogue with the panelists. Intended outcomes of the panel include further a research and practice dialogue, inclusive of ways forward for better research and practice.

Individual topic areas & speakers

The then and now of tech-enhanced assessment: Implications to teacher practice

What does *enhancement* look like in technology-enhanced assessment? Technology-enabled assessment has progressed over time from supplementing assessment practices to one that is promising to transform student learning experience. Through the use of two examples, this presentation will attempt to unpack what *enhancement* looks like as technology in teaching and learning advanced over time. Specifically, the first example is about the use of pre-determined quizzes with well-constructed distractors that has made way for the more contemporary use of calibrated assessment items presented adaptively to learners based on their responses. The second example illustrates how the more traditional approach of assessing online discussions has made way for the modern use of artificial intelligence that autonomously consolidates 'confusion reports' or thematic clusters for teachers.

As technology-enabled assessment evolves towards the betterment of teaching practice, there are both opportunities and challenges for teachers to consider. Teachers could capitalize on the more intelligent and personalised forms of assessment to engage students in the higher-order or deeper learning. To do so, on the other hand, requires skilful teaching, and perhaps even to incorporate students' voices into the assessment practices to which it begs the question if teachers are ready and prepared for.

Dr Lim Wei Ying Rebekah is an Associate Professor and Director of the Teaching & Learning Centre at the Singapore University of Social Sciences (SUSS). Her research interests include professional identities, teacher learning and technology-enabled pedagogy; areas in which her research grant awards and publications are based on.

Technology-enhanced assessment: Implications for the design and delivery of professional learning

Assessment has been described as ‘the Achilles’ heel of quality’ education. For university teachers, primarily employed for their subject matter expertise, the focus of teaching practice is often on learning outcomes (what do I want students to learn) and teaching and learning activities (how do I want students to learn), with assessment becoming an afterthought. Technology-enhanced assessment offers the potential to transform student learning experiences, for example, through the delivery of personalised feedback at scale. However, the integration of technology with assessment adds a further level of complexity to teachers’ assessment practice.

It is generally accepted that the decision by university teachers to integrate technology into their teaching practice broadly, and assessment more specifically, is complex and influenced by factors both intrinsic and external to the teacher. This presentation will examine internal factors, including teachers’ pedagogical beliefs, conceptualisations of teaching, and motivations, together with external factors, such as, institutional culture, pedagogical context and access to resources, as a way of highlighting the opportunities and challenges facing university teachers in relation to technology-enhanced assessment. From this analysis a key question then arises – what are the implications of such opportunities and challenges for the design and delivery of professional learning for technology-enhanced assessment?

Dr Kristine Elliott is an Associate Professor in Higher Education within the Melbourne Centre for the Study of Higher Education. The central theme of Kristine’s research is how contemporary and emerging technologies can be used to enhance the learning and teaching experiences of students in higher education.

The use of educational technologies to enhance and increase formative assessment and feedback practices

Typically, a key element of students’ concerns around their learning and assessment experiences in higher education is the provision of meaningful, actionable, personal and timely feedback. Increased academic workloads and administrative expectations as well as the casualisation of teaching staff can mean that this provision of feedback (especially dialogic feedback and particularly with large student cohorts) proves too overwhelming.

This paper considers how the integration of two polling educational technologies into the classroom and LMS teaching practices of university teachers enhances the provision of at-point-of-learning feedback for students, including the generation of dialogic feedback and peer review opportunities, ultimately allowing for and more adaptive or customisable teaching practices

Bronwyn Disseldorp is a Senior Learning and Teaching Consultant (Assessment) in Learning Environments at the University of Melbourne. Bronwyn provides advice, support, and professional development for staff using the Learning Management System and related learning technologies, with particular focus on assessment and feedback activities. Bronwyn has worked with a multi-disciplinary project team in 2019, helping prepare staff and students for the institution-wide transition to the new Canvas Learning Management

Resistance, perceptions and action: The complexities of TEA change management

Assessment is the most high-stakes element of higher education curricula. It is also the area most resistant to change. Adding technology to the mix affords new opportunities but adds additional risks to an already challenging area. Drawing on key literature reviews and original, empirical research, this panel topic will examine risks, resistance and solutions to TEA change management and adoption. Areas to be addressed include:

- Why stakeholders resist TEA change and how to engage with motives and outcomes
- The complex relationships of perceptions to actions in enacting TEA
- Key factors for making progress in the scholarship and practice of TEA

Dr. Christopher Deneen is a Senior Lecturer in Higher Education Curriculum and Assessment with The Melbourne Centre for the Study of Higher Education. Chris’ research focuses on large-scale assessment change management and the critical evaluation of assessment-enabling technologies. He has authored over thirty publications on assessment-related topics, including two books and twenty journal articles.

Appendix I: Full author bios in alphabetical order

Dr. Christopher Deneen is a Senior Lecturer in Higher Education Curriculum and Assessment with The Melbourne Centre for the Study of Higher Education. His work focuses on effective learning engagements in universities. Chris has held several higher education positions in the culturally diverse contexts of New York, Singapore, Hong Kong and Australia. He is the recipient of multiple awards for innovation and excellence in teaching practice. Chris' research focuses on large-scale assessment change management and the critical evaluation of assessment-enabling technologies. He has authored over thirty publications on assessment-related topics, including two books and twenty journal articles. His recent chapter in *The Cambridge Handbook of Instructional Feedback* critically examines technology-enabled feedback in higher education contexts and the corresponding field of research. Chris has received over 2.5 million AUD in external, competitive research funding; his most recent research grant from the Singapore Ministry of Education examines perceptions, policies and practices of assessment for learning at a national level.

Dr Kristine Elliott is an Associate Professor in Higher Education within the Melbourne Centre for the Study of Higher Education. Her role supports the University's digital learning strategy through the development, implementation and evaluation of professional development for University staff in the use of educational technology for learning, teaching and assessment. The central theme of Kristine's research is how contemporary and emerging technologies can be used to enhance the learning and teaching experiences of students in higher education. Kristine has over 20 years experience in this field, in which time she has been instrumental to the successful development and implementation of more than 25 technology-enhanced curriculum and courseware programs/systems. The high quality and impact of these products is reflected in their current use at local, interstate and international institutions. Kristine has published extensively in the field, including in highly ranked journals, and has either led or been a co-investigator on successful grants.

Bronwyn Disseldorp is a Senior Learning and Teaching Consultant (Assessment) in Learning Environments at the University of Melbourne. Bronwyn provides advice, support, and professional development for staff using the Learning Management System and related learning technologies, with particular focus on assessment and feedback activities. Bronwyn has worked with a multi-disciplinary project team in 2019, helping prepare staff and students for the institution-wide transition to the new Canvas Learning Management System. Bronwyn has taught in several teacher education courses in the Melbourne Graduate School of Education and led staff professional development workshops in the use of technologies to support learning and teaching. In Learning Environments Bronwyn has been involved in the selection and adoption of a range of learning technologies, and supported staff in exploring the opportunities of Technology Enhanced Learning (TEL) in assessment and feedback practices.

Dr Lim Wei Ying Rebekah is an Associate Professor and Director of the Teaching & Learning Centre at the Singapore University of Social Sciences (SUSS). She leads the Centre in areas of academic development of lecturers, learning support for learners, and Scholarship of Teaching & Learning. Her research interests include professional identities, teacher learning and technology-enabled pedagogy; areas in which her research grant awards and publications are based on. Her other awards include the Hewlett Packard Innovation in IT in Education, Dean's commendation for research award, and the teaching excellence award 2011 & 2013. She has served as consultant to both local schools and international bodies, such as the Commonwealth of Learning, and more recently Southeast Asian Ministers of Education Organization, Southeast Asian Regional Centre for Graduate Study & Research in Agriculture (SEAMEO SERCA) in areas of professional development and technology-enabled learning.

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