

ASCILITE 2025

Future-Focused:

Educating in an Era of Continuous Change

Tools of entanglement: Making interdisciplinary learning happen (despite everything)

Dr Miriam Pollard, Dr Bevan Warren, Ms Angela Kerry

RMIT University

Universities, learners and educators face an increasingly challenging and interconnected world (Corbacho 2025; Spelt et al. 2009). Technological change and generative AI mean access and production of knowledge are no longer limited domains, and the role of universities is evolving. Traditional binary and disciplinary approaches to education are no longer adequate. Rather, we need to work with learners to become change-agents able to face and thrive in the context of intractable global challenges (Bertolini et al. 2024; Stephens et al. 2008).

Future-focused learning requires more than new content; it requires ways of thinking, working, relating and enabling that are adaptive and reciprocal. From this perspective, interdisciplinary approaches have much to offer, traversing multiple ways of knowing and understanding, while addressing 'wicked' problems. This will require innovative curriculum structures and practices that mirror its complexity, including hybrid tools, collaborative cultures, and conceptual agility (Lindvig et al. 2025). The process of enabling interdisciplinarity is itself interdisciplinary.

In this paper we share the story of a cross-institutional initiative that challenged our large dual-sector institution, providing a catalyst to realise our interdisciplinary aspirations. Our interdisciplinary initiative, a minor built around the theme of global challenges, is underpinned by a constructivist approach, adopting an inquiry-based pedagogy, focused on co-design and collaborative teaching models. This required cultivating new relationships, connections and tools for learning and teaching – fostering the generative entanglements that underpin our interdisciplinary toolkit.

Our toolkit, inspired by the work of Edinburgh Futures Institute (Overend et al. 2024) is not a fixed product but a dynamic mindset, evolving and shaped through practice. Co-designed through grant-supported collaborations, our toolkit is an ongoing structure that includes examples of assessment innovation and collaborative learning experiences that support and guide interdisciplinary endeavours (Laursen et al. 2024). Operating from the educational third space, our role has been not just to enable new ways of learning, but to clear space within legacy systems to allow educators and learners to think and work differently.

This work has articulated the idea that interdisciplinarity is not just a way of organising learning, it also shapes the ways in which we facilitate learning. Supporting complexity requires a diversity of tools, systems, methods and metaphors (Newell 2001). We embraced both digital and embodied modes, using hybrid collaboration platforms, experimenting with AI tools for reflection and design, while also valuing physical environments and tactile tools.

Some of the most generative entanglements emerged in low-tech, embodied moments, demonstrating that fostering new learning is situational, relational, and multimodal. Much of this work involved a sometimes-messy interplay between the analogue and the digital. We brought everything we had – frameworks, metaphors, platforms and technologies – holding all lightly and ready to adapt or abandon when it no longer served. In co-creating this work, we found that enabling interdisciplinary practice requires not only tools and mindsets, but ways of working that challenge our assumptions, reaching across distance and disciplines to make space for a connected future.

Keywords: interdisciplinary learning, collaborative infrastructures, regenerative education.

References

Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter.

ASCILITE 2025

Future-Focused:

Educating in an Era of Continuous Change

- Signs: Journal of Women in Culture and Society*, 28(3), 801–831.
- Bertolini, L., Gerritsen, D., & Sol, K. (2024). Supporting students to become agents of change: Introducing and evaluating the Transition Cycle approach to teaching transformative skills. *Futures*, 164, 103459.
- Corbacho, A. (2025). A comprehensive model for interdisciplinary teaching. Times Higher Education, viewed 20 June 2025, <https://www.timeshighereducation.com/campus/comprehensive-model-interdisciplinary-teaching>.
- Lindvig, K. E., Sexton, S., Earle, D. & Hillersdal, L. (2025). Building collaborative infrastructures for an interdisciplinary higher education master's program. *Humanities and Social Sciences Communications*, 12(1), 321.
- Newell, W. H. (2001). A Theory of Interdisciplinary Studies. *Issues in Integrative Studies*, 19, 1–25.
- Overend, D., Choi, S., Cross, A., Cullen, C., Dures, S., Jay, D., Scoles, J., Winter, M. & Zhang, S. (2024). TILT: Toolkit for Interdisciplinary Learning and Teaching, blogs.ed.ac.uk/tilt/. University of Edinburgh.
- Spelt, E. J. H., Biemans, H. J. A., Tobi, H., Luning, P. A. & Mulder, M. (2009), Teaching and Learning in Interdisciplinary Higher Education: A Systematic Review. *Educational Psychology Review*, 21(4), 365–378.
- Stephens, J. C., Hernandez, M. E., Román, M., Graham, A. C. & Scholz, R. W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. *International Journal of Sustainability in Higher Education*, 9(3), 317–338.

Pollard, M., Kerry, A., & Warren, B. (2025, Nov 30 – Dec 3). Tools of entanglement: Making interdisciplinary learning happen (despite everything) [Pecha Kucha Presentation]. Australasian Society for Computers in Learning in Tertiary Education Conference, Adelaide, Australia. DOI: <https://doi.org/10.65106/apubs.2025.2742>.

Note: All published papers are refereed, having undergone a double-blind peer-review process. The author(s) assign a Creative Commons by attribution license enabling others to distribute, remix, tweak, and build upon their work, even commercially, as long as credit is given to the author(s) for the original creation.

© Pollard, M, Kerry, A., & Warren, B. 2025