



Defining a next-generation ecosystem for online learning: from changing the platform to shifting the paradigm

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While disruptive and disconnecting, the events of the last two years have also created a rich opportunity to change how we think about what we do and the contexts we work in. This conceptual paper explores the development of a more complex realisation of the ecological view of online learning and educational technologies as a new paradigm to reconnect people with technology in the organisational context. Drawing on a range of disciplines and practices, a 'next-generation' ecosystem establishes the social and organisational domains as critical additions to the technological and pedagogical domains. Also explored are the ways in which third space practitioners are pivotal in the design and delivery of such an ecosystem, and examples of the ecosystem development in practice. By considering and designing a wide range of experiences and practice domains, the 'next-generation ecosystem' concept may provide a way to meaningfully reconnect people with educational technology.

Keywords: Ecosystem, virtual learning environment, change, third space, organisational practice

Introduction

While the COVID-19 pandemic brought on a mass pivot to online delivery in the higher education sector, not all institutions experienced this shift in the same way. University of New England (UNE), as a primarily online university with a long history of online delivery and infrastructure and practices already in place, had no need to pivot. UNE did, however, encounter other challenges - the sudden large-scale emergence of other institutions into the online learning domain brought our identity as an institution into relief. As an institution whose staff worked largely on a physical campus, we also shared the universal experience of suddenly finding our individual identities entangled with the online environment as digital place (Gourlay, 2022).

The pandemic also coincided with two other major organisational changes. UNE underwent a major restructure at the end of 2020, and saw a complete change not only to organisational structure but to resourcing and practices. An entirely new division was established with carriage of the business, the strategy and the technologies of online educational delivery. UNE has also been undertaking a review of its Learning Management System (LMS) and other major virtual learning environment (VLE) platforms via full-scale tender evaluation processes – an initiative that carries the potential for large-scale change.

Finally, in late 2021 a storm cell event occurred on UNE's campus, creating significant damage to physical infrastructure. This further compelled staff into digital spaces for work, during a time when much of the rest of the sector was returning to campus-based work.

These significant events worked together in concert to create widespread uncertainty and anxiety about the future, resulting in a sense of disconnect from our previous ways of understanding and enacting our work. Our digital environment was poised and ready to reconnect us in new and dynamic ways, but it was clear that existing ways of thinking about online learning and VLEs as a collection of tools and techniques would not enable this reconnection. Continuing the common sector narrative of 'implementing a new LMS platform' and conceptualising our work practices separately would only serve to further disconnect.

What these experiences highlighted was the need to think in much more rich and complex ways about how our staff, our students and our technologies connect. We needed to move beyond thinking about the suite of platforms we curate and the pedagogies that take place within them, and instead take a complex and connected view of our full context. We needed more than a change of platforms to reconnect us – we needed to shift the paradigm.

Designing a paradigm

In considering a new paradigm, it was necessary to look at the current sector landscape, and then draw in new lenses from different bodies of literature to frame thinking, beginning with educational technology and then connecting outwards into pedagogical, organisational and behavioural domains to establish a much broader perspective.

The conceptualisation of educational technologies in the sector has been a long-evolving space, and while much progress has been made in understanding technologies not as 'other' or a 'bolt-on' but a key environment for teaching and learning, there are two dominant narratives that emerge:

- A dichotomy view, where concepts like pedagogy and technology (Fawns, 2022; Laanpere et al, 2014; Sankey, 2020a) or online and face-to-face (Gourlay, 2021; Mihai, 2022) exist in tension and practices are characterised along a continuum; and
- An ecological view, where 'ecosystem' or 'ecology' is used to describe a subset environment, such as an integrated collection of technologies (Kiely, 2022; Sankey, 2020b) or the interactions between people and technology characterised in the teaching and learning domain (Ellis & Goodyear, 2009; Reyna, 2011)

What is missing from these conceptualisations is the organisational context – as Orlikowski & Scott (2008) note, technology is frequently characterised as separate from work and organisational practice. This seems particularly true in the educational technology space, where theory and practice focus on the teaching and learning domain and the technology-mediated design and delivery of educational products. Yet how people behave and interact, the identities we hold, the decisions that we make, the processes and policies we develop, are core parts of our experience as people. Surely, these should also be considered key components of an 'ecosystem'.

To realise this, it necessitates a transition away from thinking about the elements of a system to the relationships and interactions between them. The psychological and organisational literatures offer some key theoretical lenses for this, such as sociomateriality, sociotechnical theory, affordances theory and behavioural economics. Navarro-Bringas et al (2020) apply a sociotechnical theory approach that brings the organisational perspective into consideration, but in regards to physical learning spaces. Orlikowski & Scott (2008) draw the organisational and technical together through establishing sociomateriality, but the teaching and learning perspective is missing. Ostern & Rosemann (2021) draw on affordances theory to quantify a range of relationships and interactions between humans and technologies. Wordham et al (2018) apply behavioural economics and behavioural design as a frame for organisational efficacy – the 'people side' of technology implementation and change.

Fawns (2022) offers the concept of 'entangled pedagogy', where technologies and practices are interrelated with values and agency and other cultural domains, but the organisational perspective is still limited to teaching and learning practice. Gourlay (2021) connects sociomateriality to teaching and learning to disrupt the digital vs face-to-face dichotomy and connect context to practice, but invites consideration of organisational practice and policy for future exploration.

Drawing all of these lenses together allows us to create a rich and complex picture of an ecosystem, that captures the organic interrelationships between the technical domain, the learning and teaching domain and the social and organisational domains. This can frame the definition of a 'next generation' realisation of the ecosystem concept as such (illustrated by Figure 1).

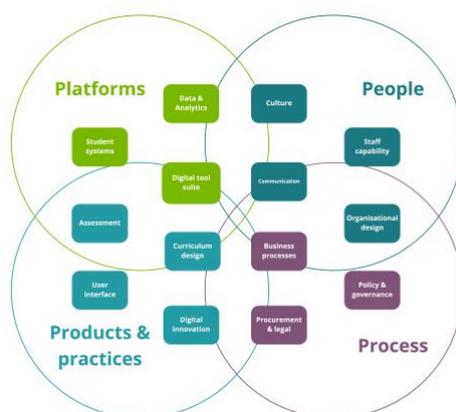


Figure 1: Next-generation ecosystem model

Next-generation ecosystem: The people, platforms, processes, products and practices that work together to shape online learning

Designing and delivering an ecosystem

Defining a next-generation ecosystem is an act of change, and in complex organisational contexts, change's biggest challenge is impact. A complex and emergent approach, rather than a linear approach, is necessary to move from innovation to adoption (Cooksey, 2011). Another challenge is the drawing in of people, processes and practices as a key components of the ecosystem - it's critical to intentionally address these as something dynamic that can be acted upon and recreated through design expertise (Hambeukers, 2018).

A high-agency avenue to address these challenges is third-space practitioners (Whitchurch, 2008), who not only bring pedagogical and technical expertise but design and change expertise and the lived professional experience of the organisational context. The business and organisational learning literatures provide some key strategies through which third space staff can be empowered to both design an ecosystem and effectively implement change to deliver it.

Hambeukers (2018) describes a model that connects Peter Senge's Organisational Learning disciplines with design and technology disciplines, and the concept of organisational learning design (Thorneycroft, 2020) can be overlaid to extend design expertise to cultural and interpersonal domains, providing an effective lens for conceptualising the affordances of third space practitioners across the ecosystem context.

As change agents, third space practitioners can move fluidly across boundaries to connect and engage. They can act as the brokers, nodes and informal influential leaders that Cooksey (2011) notes as critical for embedding innovation into complex organisational contexts. They can also act to establish 'cultural islands' (Lipshitz, Friedman & Popper, 2006) that enable cross-organisational learning conversations (Gravett et al, 2022) to establish common understandings, cultural growth, and develop teaching and organisational practices.

As designers, third space practitioners can establish new ways of working that are grounded in context to maximise outcomes. Business Process Re-engineering (BPR) provides an avenue for considering and acting on business processes as a design domain. Empowering third space staff to engage in BPR has significant transformational potential, bringing the ownership and creativity that Ackermann et al (1999) note as essential to domains that are often treated as only administrative or managerial.

Third space practitioners can also draw on their organisational expertise to establish a rich institutional 'data practice' - normalising the use of data to inform decisions and directions in all domains (Diaz et al. 2018; Soulski, 2018). Staff in third space roles in online learning often have enhanced data fluency and ability to translate data into practice developed from learning analytics and technical analytics contexts, and access to organisational data that may be under-utilised but has the potential to significantly impact practice.

By empowering third space staff to work in these new domains, a fully realised ecosystem for online learning can be designed and delivered in ways that meaningfully connect staff to the new paradigm.

Ecosystem in practice

UNE has begun implementing the next-generation ecosystem model through empowering its third space practitioners, establishing a range of projects and initiatives that focus on the intentional design and curation of various components of the ecosystem. A small subset of these are captured here to illustrate how the ecosystem concept can be applied in practice:

Platform

- Undertaking major platform tenders in parallel, rather than isolation, to reinforce interconnection
- Adopting a top-down design approach to procuring and integrating technologies rather than a 'plug-in', bottom-up approach

People

Intentionally designing 'cultural islands' with strong identities through:

- Embedding communities of practice at core team and portfolio levels
- Establishing university-wide consultative groups to connect key stakeholders across faculty and discipline siloes

Practices

- Establishing an integrated organisational model that embeds third space practice in fluid ways across the institution
- Leading assessment policy renewal through drawing on third space expertise and surfacing key organisational data sets to design policy that serves practice rather than practices that serve policy

Processes

Engaging core teams in BPR to design and implement new processes in a range of areas such as online unit development, online examinations, media production and student support processes.

Products

Enhancing curriculum and teaching practice through frameworks and processes that are owned, designed and driven by third space practitioners.

Conclusion

After a turbulent two years where significant changes forced us to reconsider who we are and how we work, reconnecting people with educational technology in the UNE context required us to think in new ways. By harnessing the power of third space practitioners and drawing on theory and practice from a diverse range of disciplines, we have defined a rich and complex 'next-generation ecosystem' approach that allows us to move beyond a change of platform to establish a new paradigm for online learning.

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