

ASCILITE 2024

Navigating the Terrain:

Emerging Frontiers in Learning Spaces, Pedagogies, and Technologies

Exploring Design-Based Research as a framework for addressing pedagogical problems faced by higher education: A panel discussion

Thomas Cochrane

Centre for the Study of Higher Education, The University of Melbourne, Australia

Kelly Galvin

Swinburne University, Australia

Solange Glasser, Margaret Osborne, Gavin Buskes, Vijay Rajagopal

The University of Melbourne, Australia

Design-Based Research (DBR) presents a pragmatic approach to addressing both pedagogical problems and innovations within a rigorous framework that aims to build transferable practice. This panel discussion will explore four examples of implementing DBR in various higher education contexts and draw participants into a discussion of how they might apply DBR to address identified pedagogical problems or innovations in their own contexts.

Keywords: Design-Based Research, collaborative curriculum design, transferable praxis

Why DBR?

This panel discussion is a focal point for exploring how design-based research (DBR) in higher education in 2024, can address pedagogical problems brought about by the global pandemic and the explosion of generative artificial intelligence use in assessment and learning (For examples).

In a period of continuous disruption in higher education, flexible and ethical research strategies that embrace unexpected influences in teaching and learning is paramount (Cochrane et al., 2023), leading to a new generation of educational researchers embracing DBR. Furthermore, practical examples demonstrating students as partners in curriculum design to inform 'what works' in practice are essential for researchers to gain confidence in adopting research-teaching-practice methods of inquiry (Bakker, 2018; Cochrane & Munn, 2020). Understanding how the processes and outputs of DBR can meet these needs is crucial to alleviating both business and educational tensions about timing, funding, resources, and workload planning (Cochrane, 2022; McKenney & Reeves, 2019; Reeves & Lin, 2020).

At the core of DBR is the opportunity to explore pedagogical problems or innovation through four phases: problem analysis, develop solutions to the identified problem, explore and evaluate the impact of the design in iterative interventions in real learning situations, leading to the development of transferable design principles and theory building (McKenney & Reeves, 2019) Various research methods can be applied to progressively ask participant perspectives, including students, teachers and learning designers, on appropriate approaches or technologies to solve an identified problem (McKenney & Reeves, 2019).

The intended outcome of this panel discussion is to collaborate with participants in implementing DBR in higher education in response to specific pedagogical problems identified by the participants. Beginning with a brief background to DBR followed by four examples to stimulate discussion on its application in broader contexts to address identified problems in curriculum design.

Relevance to Higher Education

The relevance of debating the role of design-based research in higher education in 2024 is to stimulate

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discussion for how this pragmatic research approach informs ‘what works’ in situated learning contexts to develop cutting edge design principles and theory that can be transferrable (Galvin & Cochrane, 2023). The methodological framework of DBR invites students, teachers, and learning designers to collaborate from the conception of a design artefact or educational approach to solve a learning problem through to iterative stages of delivery. Following a new normal in higher education where change is inevitable, and fast-paced, research design that does not shy away from the progressive and ‘messy’ elements of educational settings to improve real time learning is essential. Finding a balance between naturalistic and interventionist research methods to explore this complexity is a way forward that DBR can provide. It is acknowledged that greater understanding for the value of DBR and how to plan practical stages with multiple participants is needed for teachers, researchers, and leaders in higher education to confidently adopt this approach (Haagen-Schützenhöfer et al., 2024). Opening discussion with peers models the collaborative ethos of DBR and opens potential connections and networking avenues to establish and generate knowledge for DBR in higher education.

The Panel Members

The panel will be comprised of project leaders from four DBR projects: Clinical reasoning development, interdisciplinary engineering education, biomechanics, performance anxiety. These projects were introduced in a concise paper for the ASCILITE 2023 conference (Cochrane et al., 2023) and the authors are in the process of collaborating on a full journal article analysing these DBR projects (Cochrane et al., 2024) that should be published in time for the ASCILITE 2024 conference.

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