# Collaboration or competition? The value of sector-wide collaboration in educational technology research

**Henk Huijser**
Queensland University of Technology

**Kate Ames**
Torrens University

**Aras Bozkurt**
Anadolu University

**Linda Corrin**
Deakin University

**Eamon Costello**
Dublin City University

**Michael Cowling**
Central Queensland University

**Laura Czerniewicz**
University of Cape Town

**Chris Deneen**
University of South Australia

**Feifei Han**
Australian Catholic University

**Allison Littlejohn**
University College London

**Alyssa Wise**
Vanderbilt University

**Mary Wright**
Brown University

**Tracy Zou**
Chinese University Hong Kong

Collaboration or competition? This question is at the centre of this editorial, which explores the importance of sector-wide approaches to research into educational technology. This has become particularly relevant in recent years in response to a range of significant challenges or disruptions the tertiary education sector has had to face, for example, responding to the COVID-19 pandemic or the emergence of new generative AI tools. To address these challenges, we have taken a collaborative approach to writing this editorial, with contributing authors from across the world responding to four key questions. The responses to those questions were then arranged into four key themes: collaboration in response to disruption, individual benefits from collaboration, communal benefits from collaboration, and ensuring collaborative wisdom. The editorial concludes with a section that situates the preceding discussion in a broader context and challenges us to consider our wider impact on the world as a sector and, in particular, as related to educational

technology. We conclude that collaboration is a must and has the potential to empower us to push the boundaries of what is possible.

*Keywords:* collaboration, competition, educational technology, educational technology research, editorial

## Introduction

The tertiary education sector has gone through some significant changes and disruptions in recent years, and in each case, educational technology has been, and continues to be, a key factor in both the response to such disruptions and changes, or in some cases has itself been the driver of the changes. The theme of this editorial – collaboration or competition – was initially suggested by former AJET Co-Lead Editor Jason Lodge, and was formed upon reflection on major disruptive events in recent years where research collaboration across the sector (in relation to educational technology) has been effective in developing sector-wide responses to those disruptions: the pandemic was one, of course, but more recently the emergence of new generative artificial intelligence (AI) writing tools has required a similarly collaborative approach. In some of these cases, we have seen some very rapid mobilisation of joint forces, even if borne out of necessity. Other trends over the last decades, such as the emergence of learning analytics, massive open online courses or micro-credentials, and even the adoption of various learning management systems, have similarly benefitted from sector-wide approaches to garner rapid collective expertise that can then be leveraged to inform good practice across the sector. A range of organisations and associations (ASCILITE comes to mind) have been established for precisely this reason, building on collaborative approaches through various special interest groups and communities of practice.

However, whilst collaboration clearly has significant benefits, it also presents some potential tensions, for when it comes to individual career trajectories, tertiary education institutions are structurally set up to reward individual endeavours, especially when it comes to research. Academic career progression, in particular, relies on individual research outputs and metrics, and in some institutions, publications are not even counted as part of an individual promotion portfolio, unless one is first or second author. Thus, while institutional rhetoric often praises and celebrates collaboration across the sector, ultimately the highest value is awarded to output and achievements that can be attributed to an individual. Thus, a definite tension in our space can be seen, not only between individual academics each vying for a piece of the research pie, but also amongst institutions competing amongst themselves to gain maximum position in global rankings and metrics, which can then be used as a recruitment tool. In the context of a sector increasingly characterised by disruptions and associated challenges, exacerbated by ever-tightening budgets, the current AJET Editorial Team felt it was timely to explore the tension between collaboration and competition in educational technology research, and what better way to do that but collaboratively?

We, therefore, asked several academics and practitioners who work in the educational technology field to reflect on their experiences of collaboration and its value, and how this is affected by competition at an individual level. We presented each of them with the following questions:

- How has collaboration occurred in your context in response to large sector-wide disruptions?
- What is the individual benefit from such collaborations?
- What is the communal benefit from such collaborations (in particular as it relates to the educational technology community)?
- What should the incentives for collaboration be to ensure collaborative wisdom is leveraged to address sector-wide challenges?

What follows is a synthesised version of their responses.

## Collaboration in response to disruption

Collaboration is critical as part of becoming resilient during sector-wide disruptions. Bringing creative minds together leads to innovative solutions that surpass individual capacities. Collaborations in response to large sector-wide disruptions often take place initially from an overall strategy established by governments and then in the form of a hybrid combination of top-down support and educational leaders' self-initiated programmes or communities of practice. However, when it comes to sector-wide disruption, the approach in the educational technology community appears to have changed in recent years, and it could be argued that the pandemic pitted institutions against each other, as emergency remote teaching gave way to a clear desire to keep as many students as possible, as well as add additional distance students, meaning that during and immediately post-pandemic, institutions found themselves competing.

Certainly, major sector-wide disruptions like the pandemic and the emergence of generative AI have highlighted the need for and importance of collaborative responses, but there is another critical issue in the field of educational technology that has started to be seen as a crisis in the United States of America. This is that educational technology research often fails to make a meaningful impact in practice. This longstanding issue intersects with the pandemic-induced rapid pivot to online learning and the proliferation of AI tools, as the responses to these disruptions in the field have not been sufficiently informed by research-based practices or tools. Some institutions have therefore begun to develop technology incubators to address this gap by uniting expertise from fields such as computer science, education, business and the humanities, along with external partners such as local schools and companies, designing innovations with user needs and sustainable impact in mind from the outset.

Within institutions, interdisciplinary university-wide collaboration is essential in relation to educational technology adoption, as it is often directly related to innovation and requires the pooling of resources to make it affordable. Innovation in tertiary contexts, as well as industry contexts in some cases, has been largely driven by the pragmatic need to connect learners, educational technology researchers and the learning content or environment, often to address new problems or challenges (e.g., how to maximise the potential of generative AI). Amongst academics, learning designers, practitioners and technologists, collaboration usually occurs informally, for example, through panel sessions, case study presentations, special interest groups and sometimes white paper reports and workshops. However, we do face barriers in three main areas when it comes to research collaboration. First, some of our technical design work is commercial-in-confidence, so we are unable to share our work or the research we may do around our designs publicly. Second, if we are a member of academic staff, we are measured as individuals when we go for promotion, which is a systemic issue. A research profile is often not valued or needed by non-academic staff and not supported by workload models. This means we possibly miss opportunities to collect meaningful and useful data along the way.

On a more fundamental level, digital technology itself is actively changing how people collaborate, as digital technology systems and data transform work practices and ways of knowing. Cross-disciplinary, scientific collaboration around these systems is an essential part of addressing some of the world's most pressing problems, with physical science, bioscience and social science communities working with engineers, data stewards and computer scientists to forge novel collaborations to design, develop and implement groundbreaking science. These collaborations are transforming the ways we address climate change, rethink inequalities and unlock new health treatments (Gray & Purdy, 2018). Arguably, the transformation of science depends on novel collaborations and ways of working, supported by technology.

## Individual benefits from collaboration

On an individual level, cross-disciplinary collaborative work broadens perspectives, enabling faculty and students to achieve more than they could alone. It is reinvigorating to see the world through the eyes of colleagues from different fields as well as the very pragmatic views brought in by external industry-based

partners. And for students, working in interdisciplinary teams provides valuable training that will benefit them in their future careers.

Collaboration offers many advantages for individuals. First and foremost, it offers an opportunity to be part of a community and network. Connections can lead to visible outputs like research publications and invisible benefits such as friendships and professional support from peers, which may give individuals a competitive edge. Collaborative work increases capacity, boosts academic productivity, broadens perspectives and allows us to transcend single-discipline boundaries. In many parts of the world, collaboration also facilitates access to research funding. A further individual benefit of involvement in collaborative networks is that we can benchmark our knowledge and practice beyond the walls of our own institutions. Involvement in research also benefits us by broadening our methodological and analysis skills. Finally, faculty members and third space workers (such as learning designers, educational technologists and instructional designers) (Simpson, 2023) may also benefit from building a stronger education profile by collaborating on a large sector-wide educational innovation or change initiative, and they can use the project's profile for their own individual career development, including applying for teaching excellence or research-based awards.

Despite these many benefits, there are also a number of emerging vulnerabilities to consider, which have been associated particularly with new forms of collaboration (Durán del Fierro et al., 2024; Littlejohn, 2024). For example, one vulnerability experienced by early career academics is whether and how they can demonstrate their contributions to collaborative work as they shift from working in small teams to working in distributed networks (Littlejohn, 2024). Early career academics tend to work on short-term contracts and need to demonstrate their contributions to collaborative research to secure their next job, yet they do not always have enough agency to clearly demonstrate their contributions within the process of collaboration (Eteläpelto et al., 2014). Vulnerabilities like these may cause academics to resist, rather than to engage, in new ways of working collaboratively. Therefore, it is important that academic communities take account of these vulnerabilities and support academics to address them through new forms of professional learning, which we currently do not do well. This could take the form of specific professional learning that helps early career academics and professional staff to find effective ways to concretely document and showcase their contributions to collaborative projects.

Other vulnerabilities include fear of judgement when work is through open collaboration; concerns that new collaborations mean losing valued, systemic forms of practice; erosion of trust and difficulty communicating when collaborating in multi-disciplinary teams (Durán del Fierro et al., 2024; Littlejohn, 2024). Negotiation is an important way to encourage academics to feel less vulnerable as they collaborate in order to direct their agency towards realising collective benefits, rather than engaging in forms of resistance. This process of negotiation would need to involve the creation of a climate of mutual trust and idea improvement, or what Bereiter and Scardamalia (2014) have called "knowledge creation". In this way, we need to design, instantiate and evaluate forms of professional learning that support negotiation processes that address vulnerabilities and generate incentives to engage in new forms of collaboration (Narayan et al., 2024).

## Communal benefits from collaboration

Beyond the politics of institutions and considering individual academics, the story is perhaps clearer. Whilst on the surface, metrics and measures may pit academics against each other, there appears to also be a growing realisation that siloing work makes no sense, especially in the educational technology field. By contrast, the communal benefits of collaboration can be profound. As a recent study by Zou et al. (2022) about four large-scale cross-institutional collaborations in Hong Kong shows, educational leaders creatively align the disruptive strategies they aim to develop with existing plans and activities in their departments or institutions, suggesting significant mutual benefits.

Within institutions, educational technology is often distributed across different organisational units, requiring collaboration to cross potential boundaries. Himmelman's (2002) collaboration continuum

notes six relationships organisations might occupy in relation to each other: immuring, networking, coordinating, cooperating, collaborating and integrating. Recent United States of America survey data (Wright et al., 2024) shows that educational developers who work in central learning and teaching units, rather than being embedded within specific faculties, most frequently indicate that online and distance learning are integrated into their centres for learning and teaching, while learning technology itself is more frequently a collaborative arrangement between two separate units. The benefits of organisational integration within institutions are that it is economical and offers easier access for support: instructors do not have to forage around campus to find what they need. Furthermore, the expertise is often employed in more specialised and targeted ways, addressing, for example, educational technology support in the context of engineering or the arts, rather than in a more generic sense. The benefit for learning and teaching centres is that organisational integration offers a systemic lens into the teaching and learning ecosystem, which can be powerful (Wright, 2023).

Combining expertise in cutting-edge technology with a deep understanding of on-the-ground teaching and learning needs, ethical issues and social entrepreneurship approaches can help us create tools that are better positioned for initial adoption, long-term integration and overall impact for learners. Interdisciplinary teams can not only tackle bigger problems but also generate bold, unexpected ideas and have a better chance to eliminate blind spots as, for example, collaboratively organised events allow for different ideas to "bump up against each other" and "have their tires kicked" in unexpected ways.

Collective wisdom thus paves the way for results that may serve the greater good and enhance societal welfare. Collaboration promotes and encourages strict adherence to ethical principles, transparency and validation of knowledge from multiple perspectives, which would make communal benefits more attainable. In contrast, individual endeavours can sometimes become ego driven, detracting from fair and ethical progress. Within the educational technology community, collaborative efforts potentially ensure that innovations are comprehensive and ethically sound (Cowling et al., 2022).

Within a collaborative research context, the benefits of open data sharing include greater transparency and accountability as well as supporting and enabling new forms of data analyses (Hoeppe, 2021; Lodge et al., 2021). One example of open data sharing is from radio astronomers using the new Square Kilometer Array, the largest telescope in the world that has been developed over several decades involving organisations from around the world and located across multiple countries (Carilli & Rawlings, 2004). New collaborations when using the Square Kilometer Array afford a range of benefits, including being able to analyse large amounts of data that allow the astronomers to look further back in time towards the beginnings of the universe (Durán del Fierro et al., 2024). Similar benefits could potentially be gained through collaborative data sharing within the field of educational technology, and indeed they already are, as can be seen in examples such as DataShop (Carnegie Mellon University, 2024), "a data repository and web application for learning science researchers" and LearnSphere (2018), which "integrates existing and new educational data and analysis repositories to offer the world's largest learning analytics infrastructure". Both examples offer collaboration opportunities at significant scale.

## Ensuring collaborative wisdom

Most recently, in addressing the generative AI challenge, institutions seem to have moved past the competitive impulse and worked together, recognising that it is only together that these problems can be addressed. Events like generative AI symposiums and AI festivals clearly show this collaboration, and they do perhaps build on lessons learnt from the pandemic (Liu et al., 2023). If we can move beyond institutional politics and encourage institutions to see the value in academics working together, we can build a community that is well placed to address collective challenges into the future (Selvaratnam et al., 2024). The incentive for everyone is that good collaborative work in the educational technology field (and beyond) lifts all institutions and ultimately the global rankings for all. Perhaps most importantly, it has the potential to significantly improve students' learning experiences, as it moves beyond pockets of innovation and cottage industries.

Although individual success is still rewarded, as noted, there is a growing emphasis on scalable real-world impact, both within institutions and for major funding bodies, which makes collaboration increasingly essential and thus incentivised. Partnerships between researchers, product developers, and educators are increasingly a core component of calls for funding proposals.

Incentives for collaboration can also be intrinsic, such as the fulfillment from contributing meaningfully to the learning ecosystem and advancing scientific knowledge. Intrinsic motivations often have a more lasting impact. Establishing a shared purpose and common goals serve as one of the best incentives, as they unite the collaborative community in co-creating collective wisdom. Incentives for collaborative research work could include funding, opportunity for experimentation within enterprise environments and recognition of engagement and time allocations for research or scholarship in workloads for non-academic and academic staff alike, all of whom should be interested in the questions "How well does this work?" and "What is the impact of this on our students or staff?"

On a practical level, collaboration sounds good, as outlined in this editorial, but as Czerniewicz (2021) has noted in relation to writing: "collaborative writing is not a walk in the park" (para 6), and the same could be said for collaboration in a more general sense. In her blog post about writing collaboratively, Czerniewicz (2021) then goes on to outline 10 reasons to write collaboratively, as well as a set of principles and advice on how to make it work for everyone. In relation to research collaborations (including the collaborative process for this editorial), it provides very useful pointers.

## The bigger picture

So far, we have discussed collaboration within and between tertiary education institutions, and the individuals within them, in response to educational technology challenges and opportunities. However, these institutions do not exist in isolation and nor does the tertiary sector overall. They are an integral part of a global society, which they are impacted by, and importantly, on which they have significant potential impacts themselves. This recognition comes with responsibilities.

As we claim collective educational wins, so too must we claim losses. The climate crisis is an ongoing collective failure. The rate of species extinction we are responsible for is hard to comprehend. We have, as yet, no answer for increasing societal energy usage including by the technologies of education. Generative AI may be the biggest offender yet. Similarly, although educational technology has long offered much potential to make tertiary education more accessible, with many potential students who could benefit, many are sadly facing violence and destruction on a massive scale in numerous wars and conflicts, and they have no choice but to focus on basic survival.

Thinking about all of the above will badly impact your mood if not your sanity, and it raises questions about our collective imagination and our ability to address these wicked problems. As individuals, we must prioritise developing and sustaining our own happiness and well-being. Such battery packs will keep us charged while facing seemingly insurmountable problems. Importantly in the context of this editorial, we also need community. We need a network of (re)charging stations, spaces for people to think together but also to think otherwise. We need "safe spaces for curious crafters" in our digital classrooms (Costello et al., 2024) and beyond.

For collectivism and community building, we need inclusive on-ramps that level the playing field (Treviranus, 2019), that bring on board those who see further precisely because they experience the biases of systems trained on existing stratifications and normals (Bali, 2024), or alternatively, we could rethink our curricula and technology use so that no learners may need any on-ramps. Community building may challenge those who enjoy existing privileges. It may not always be a smooth process. Problems worth working on are like this. The collectives we cherish are only legitimate if they can welcome new members and ideas. As Toni Morrison (2003) would tell her students: please remember, once you get that job you have been preparing for, that "if you are free, you need to free somebody else".

## Conclusion

Collaboration minimises personal limitations and amplifies collective strengths. This results in more effective and efficient outcomes. It not only fosters collective wisdom but also empowers us to shape the future and set agendas in critical situations. Embracing interdisciplinary and transdisciplinary approaches through collaboration helps eliminate echo chambers.

Finding collaborative opportunities to embrace and act on curiosity should be a priority for educational technology innovation, as it enables us to push the boundaries of what is possible. On a more pragmatic level, to survive in a competitive global world, and indeed to make that world a better place, we must collaborate.

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**Corresponding author**: Henk Huijser, h.huijser@qut.edu.au



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