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Evolution or Revolution in EE/SE Research? A Collaborative Dialogue From First-Year PhD Students

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Abstract The AAEE 2014 research symposium in Hobart provided a privileged space for researchers and practitioners within environmental education and sustainability education (EE/SE) to come together and create dialogues about education for sustainability research. This essay is a critical reflection from postgraduate researchers about the symposium and the EE/SE research landscape more broadly. The authors interrogate contemporary research frameworks and practices, and deliberate on how current perceptions enable and inhibit performance within EE/SE research. The authors ask provocative questions and encourage readers to imagine for themselves what a new research landscape, freed of calcified frameworks and entrenched systems, might look like. The essay then draws on an ecological systems perspective as a means of reimagining EE/SE research within a more emergent landscape that values inclusivity, democracy, collaborative inquiry and curiosity.

'It's about dialogue and it's about time' was the theme of the 2014 AAEE Research Symposium. As emerging researchers in environmental and sustainability education (EE/SE), we, the authors, found the symposium to be a catalyst for thinking about how it is that we 'consider' and 'perform' EE/SE research. As a group of first-year PhD students, we have reflected on the research landscape in which we are located. In this essay, we aim to open a penetrating dialogue about the practice and meaning of research within contemporary research frameworks. We ask provocative questions and invite EE/SE researchers to critically reflect on how their own research practices and performance are mediated by deep-rooted frameworks and methodologies.

A key stimulus for the symposium was to respond to the provocation: 'What are key research questions in EE/SE research?' We challenge the status quo that research questions are best determined through academic networks of knowledge building and sharing. Instead we contend that key research questions in EE/SE can be identified and created collaboratively.

Indeed, we agree 'it's about dialogue and it's about time'. Developing research questions worth investigating requires dialogue and time, not just among our peers and

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research participants (those who we choose to engage with), but more broadly and collaboratively across disciplines and communities (those that might choose us, if we are accessible). It is time to listen; to foster a shared language of research; to facilitate collaboration across themes, disciplines, and research approaches; to be inclusive of diverse and different forms of knowledge; and to be generous with our own.

As researchers, our practice is governed by the precedents of the past. We are not dismissive of the value of past practice, but we question the unconscious currents of research that flow and churn, becoming inaccessible to anyone unfamiliar with the waters. Research practice is imbued with theories and models that are based on prescribed sets of criteria predetermining what is deemed knowledge and its relative merit (for a more detailed discussion, see Biesta, 2010; Stevenson, 2007). An emphasis on scientific reasoning and rational thought situates the governance of EE/SE research within capitalist values (Poole, 2015). The need to produce, sell, commercialise, commodify, and consume knowledge is paradoxically challenging the essence of EE/SE research (Gruenewald, 2004). Some movement is happening in this space through initiatives such as open-source publication and self-initiated communities of practice. Exemplars of collaborative inquiry are increasingly present (Barton & Baguley, 2014; Jain, Aggarwal, Sharma, & Sharma 2013; Salter, Venville, & Longnecker, 2011); one example that the authors are familiar with is the Curious Schools project that brings together researchers, practitioners, children and community (University of Tasmania and Chicago Arts Partnerships in Education, 2013). Yet the authors feel a sense of urgency to generate more open, accessible and inclusive research outside of formal networks to address the challenges of our time.

St.Pierre (2014) invites educational research into a budding movement of postqualitative inquiry where 'new' work is emerging from an 'ontological and material turn' requiring a shift in the ways we think about methodology and research design. We assert EE/SE research is well positioned to be at the forefront of such a shift, as described by St.Pierre (2014), and new approaches that ground our research culture in values of inclusivity, democracy, collaborative inquiry, and curiosity (Biesta, 2010; Dadds, 2002; Nind & Vinha, 2014).

A key question for the field of EE/SE research must be: How can we break down calcified frameworks and entrenched systems that continue to dominate the research landscape to allow a more organic process of research to emerge and be valued? Le Grange (2011), inspired by Deleuze and Guattari's (1987) book *A Thousand Plateaus*, examines the (in)capacity of disciplinary knowledge and traditional scholarship to respond to the complex and pressing problems of contemporary society. Similarly inspired, Gough (2006) distinguishes between aborescent thinking (traditional tree of knowledge approaches) and rhizomatic thinking (chaotically connecting stems and interconnecting shoots) in the context of science education. Is it time for EE/SE to come down from the trees and look to the rhizome grasses of the understorey?

The central focus of research should not be to only generate knowledge that branches from the trunk but to generate useful knowledge, knowledge for change, shared knowledge, knowledge that crosses disciplines, knowledge that sprouts from the ground up, connected but new and unique in its own right. The stated objective of the symposium was to create a space for researchers in the EE/SE field to come together to share thinking. The symposium provided a forum for networking with mentors, teachers, leaders, and thinkers in EE/SE. Such events spur new energy among researchers and educators alike.

Yet it appears that implicitly, EE/SE researchers and educators remain governed by preordained powers and frameworks, reflective of power relations inherent in organisational structures (Foucault, 2002). The symposium represented both continuance and

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disruption of governing structures. Continuation of pre-existing power relations was evident in the development of predefined themes for the symposium, the breaking up of the day into preorganised sessions, and the preconceptions about outcomes sought and the validity of outputs. Even the requirement for these reflective essays to respond within the themes of the symposium represents a continuation of these frameworks and power relations. It was this very requirement that served as a hurdle for us novice co-authors, each drawn to different themes, such that on numerous occasions we considered going our own way. Our appreciation for the connections among themes and our mutual axiological position of valuing working together above all else stimulated us to reflect on these constraints and the overarching constraints of conducting EE/SE research. We therefore navigated this hurdle, ultimately by side-stepping it, deciding instead to bend the rule to enable our collaboration and to sustain our shared thinking and facilitate this provocation.

This leads to further questions of power between participants and facilitators, where precedence is given to those coordinating sessions which then open up the discussion to others. Fishbowl dialogues and sticky note brainstorming emerged as popular approaches employed by presenters on the day. Fishbowls in particular require careful facilitation and an explicit acknowledgement of the power dynamics that may be present (Flor, De Meulemeester, Allen, & Isaksson, 2013). While this power may not be intentional, decisions about who starts a fishbowl (generally highly respected people in the field) can largely dictate the conversations that will occur and influence who does and does not participate.

We acknowledge that these methods for facilitating dialogue have progressed enormously from the once common 'expert led panel' at the front of a silent and submissive audience, and thus represent a disruption of previous governing structures. Questions remained for us regarding the dialogical approaches adopted for the symposium. We wondered who should be asking the questions, whose voices were being heard, who was silent, who was misheard, and how were we positioned and indeed 'governed' by the framework of the day? We ask, would an alternate model of dialogue result in the emergence of entirely different questions about research priorities in EE/SE?

In a similar light, we wondered about the presence of reciprocity at the symposium, which spurred us to consider reciprocity more broadly in the research landscape. What does the participant and the researcher gain from the experience? This is a relevant question for any researcher but particularly so in EE/SE, which values social relationships. At times during the symposium, there was an emphasis on extraction of thoughts rather than a space for nurturing conversation or free discussion of ideas without imposed time limits. While this is understandable given the context of academia and event management, we wondered if the side conversations were seen as a distraction from the agenda rather than the genuine dialogue of the day. Did we miss moments and ideas for momentum beyond the symposium? And if so, are there lessons for EE/SE research in this?

What happens when we consider research outside of the frameworks and systems dominating EE/SE research? Let us entertain the notion that there is more than one system within which to conduct research, an (un)unified theory of contemporary research that values all forms of knowledge and seeks philosophical interaction with knowledge outside of peer-reviewed academic discourse. There are systems pushing these boundaries; for example, the concept of the 'unconference' (www.unconference.net.au). Can we further these ideas and look to ecological systems to imagine a different research paradigm? Rhizomatic thinking offers us a metaphor for diverse yet connected thinking. We suggest restimulation of an ecological metaphor, one that embraces diversity and offers inclusivity by fostering opportunities for exploring the

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complexity of social interactions as well as recognising its importance in meaning-making and decision-making.

In some ecological systems a disturbance leads to renewed biodiversity. Imagine our research space as a shoreline, home to an assemblage of sessile, intertidal animals competing for space on the rocky substrate. In this provocation we envisage dialogical space wherein new ideas flow in the drift of a current, settle, take hold, and grow into a colony, reaching into and connecting with the others already there; adding colour, texture, and richness to the rocky landscape of EE/SE research.

We are privileged to have a voice in this dialogue, and we acknowledge that many do not. As researchers, many of us seek to represent a silent environment and amplify the voices of the marginalised, of children, of cultural perspectives, of individuals and communities; but we start with our own voice, our questions: we ask and we guide and we interpret. Can we ever really hear the voices of others if the questions have been predetermined? If we seek to hear, we need to learn to listen. Can we value all forms of knowing and allow the stories and the ideas to emerge through our relationships with our environment and each other?

In being inspired by an ecological metaphor, we look to the evolution of organisms, the self-organisation and emergent properties in biological systems, and the interactions and connections that shape them (Green, 1992). What capabilities might emerge from adapting our research approaches to be driven from outside of the academic system? An ecological systems perspective to conducting EE/SE research could be expansive, all encompassing, and value inherently the unique elements and relationships. Diverse and unique ways of solving problems and generating knowledge are waiting to emerge in response to complex and comprehensive interactions and experiences. We wonder, is it time for a new ecology of EE/SE research to emerge, and are we willing to offer up space in this rocky landscape to allow it to take hold?

Keywords: discourse, environmental education, knowledge, sustainability, systems, ecology

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