



Groundskeeping to Nurture Emerging Discipline-based Education Researchers

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Abstract: Newcomers to Discipline-based Education Research (DBER) face numerous challenges and supportive practices in becoming active members of their communities of practice. We present a framework for Montgomery's groundskeeping leadership, which seeks to mitigate barriers and nurture community members for their growth and development (2020). We then apply that framework in the context of education researchers to examine some data from a set of interviews with Emerging Discipline-based Education Researchers.

Introduction

Researchers new to Discipline-based Education Research (DBER) face several challenges in navigating the DBER community (e.g., Hass et al., 2022). Established education research leaders (faculty, program coordinators, conference organizers, etc.) are positioned to nurture Emerging Discipline-Based Education Researchers (EDBERs), and prior work has identified important factors in supporting new education researchers (e.g., El-Adawy, 2023). *Groundskeeping* leadership mitigates barriers and builds supports for individuals to grow (Montgomery, 2020). Leaders who practice groundskeeping foster an environment where individual community members' ideas and aspirations interface with an organization's goals, thus allowing new members' ideas to take root, develop, and flourish to the benefit of the entire community. Groundskeeping requires leaders to shape the environment to support individuals and "weed out" the root causes of barriers and impediments to success. Here, we address the research question: **How does groundskeeping adapt to a framework for understanding the experiences of EDBERs?** Our poster will generate discussion on how groundskeeping is enacted and the role of learning communities in developing new members.

Groundskeeping as a framework

From our review of Montgomery's body of literature on mentorship, structural change, and academic leadership (e.g., Montgomery, 2023), we articulate three philosophical principles of groundskeeping and two characters of groundskeeping actions, shown in Table 1. Groundskeeping requires the intersection of action and philosophy, with transformation and resource distribution (actions) motivated by the philosophical principles of being anti-deficit, human-centered, and recognizing the impact of environment on individuals. Groundskeeping happens when a leader is motivated by one or more of these principles to take action that facilitates the growth of an individual or group of individuals. We recognize that these philosophical principles and characters of action may not be all-encompassing of groundskeeping, but we posit that they encompass the key ideas as a functional start to formalizing groundskeeping as a framework.

Table 1

The Philosophy and Actions that Comprise the Groundskeeping Framework

Type	Name	Description
Philosophy	Anti-deficit	Groundskeeping counters narratives of individuals failing in a particular environment or relationship by considering the ways that an environment lacks the critical factors their growth.
	Human-centered	The success of individuals is not measured by a universal metric established to maintain a status quo, but by their unique aspirations and goals. Centering the growth of individuals allows them to thrive, which leads to a thriving institution.
	Environmental impact	Environments are comprised of networks of structures and individuals, policies, and practices. Groundskeeping attends to the many structures that individuals exist within by supporting individuals to fit into the environment and by shaping the environment to better support the individuals. Groundkeepers recognize how these environments promote or impede growth.
Action	Transformation	Groundskeepers tend to environments by removing barriers (especially systemic ones) and creating new resources to support individuals or groups of people.
	Resource Distribution	Groundkeepers understand the existing resources within their institution and work to increase the access to those resources and to direct individuals to the resources best suited for them.

Methods

We interviewed 28 EDBERs from a wide range of experiences and backgrounds, including senior tenured faculty from non-education sub-disciplines, newly appointed faculty, and individuals transitioning from other career paths into academia. Semi-structured interviews were approximately one-hour long and focused on the participants' experiences in DBER, their research goals and projects in DBER, and their career experiences. We apply the groundskeeping framework to two quotes from the interviews.

Results

Alex is a tenure track faculty member doing math education research (MathEd) at a teacher-training focused institution. They recounted an experience with a senior researcher at a conference:

“I told Ben that I was thinking ‘maybe I'll get a master's in math [education research] that year and that's what I do and that'll be like fill in some of the gaps, and get me the credential’, and he's like, ‘No, you do not need any more degrees. Don't do that. You just need to go visit some people and do some projects with them.’ And then he just summoned Kevin over and said to Kevin that I needed somewhere to go on a sabbatical, and Kevin was like, ‘sure.’”

We see Ben removing a perceived barrier (needing a MathEd degree) by validating Alex's existing experiences. This approach is *anti-deficit*, as Ben did not view Alex's lack of a MathEd degree as a barrier. Additionally, Ben exhibits a *human-centered* philosophy by identifying a sabbatical experience as a path for Alex to pursue their goal of becoming a MathEd researcher. Additionally, Ben recognizes that the sabbatical environment would be better suited for Alex than another degree program (*environmental impact*) and *distributes resources* by sharing his network with Alex and connecting them to Kevin, who could offer that sabbatical experience.

Akemi's background is in condensed matter physics, but she identifies more as an education researcher now. She taught at the university level for 10 years and recently transitioned to teaching at the high school level. She still collaborates with universities for her research. She participated in a professional development field school put on by the Professional Development for Emerging Education Researchers (PEER) Institute. She reflected on how her early suggestions on improving collaboration was implemented into the field school:

“So, for example, there's this [questionnaire] in the last like three-day workshop asking us to put our interest and things, so for kind of help us to do the collaboration group. That's what I proposed in my survey [earlier in the field school]. And then it actually appears, so I'm very happy because when I proposed that, I feel like PEER has already done so much for me, was I like asking too much? . . . Everything that PEER has done based on my feedback, I think that's also kind of boost[ed] my confidence.”

We see the PEER organizers valuing Akemi's suggestion on collaboration-group formation (*human-centered*). Rather than seeing the barriers to effective collaboration as individual deficits, the field school organizers chose to modify the field school environment (*anti-deficit*). They *transformed* the field school by adding an interest questionnaire to make informed decisions about building collaboration groups. These actions impacted both the ecosystem by making it easier for groups to collaborate, but also built-up Akemi's own sense of confidence.

References

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