

Power

READING – Power Excerpts

How can we better understand who are students are and what power dynamics are playing out during science conversations? What race/language/gender power dynamics need to be addressed in the classroom specifically and in science generally? How can we engage in conversations about power in the discipline?

Power, Historicities, & Futures Matter

- Science is a profoundly cultural endeavor, and human experience has been entwined in helpful and harmful ways with discoveries and their applications. For instance, power within society and power within a classroom both determine which ideas get taken up and how ideas get used. Histories of peoples and places continue to shape the experiences of students and their communities. And keen attention must be paid to the possible futures of students and how their engagement with and use of science might shape those outcomes. ([Giroux, 1994](#); [Tauheed & Jones, 2022](#); [Thomas, 2021](#); Winn, [2021](#), [2022](#))

Why is thinking about power and historicity important?

Power and historicity permeate all aspects of socio-ecological systems. This framework provides an overview of the ways power and historicity, as well as some routine dimensions associated with power and historicity in a US context, are present in learning environments and shape interactions at individual and institutional levels. This framework is intended to articulate some key concepts, and can support the development of orientations and practice that transform normative forms of power and privilege and engage learner, family, and community agency towards ethical, just, and sustainable forms of learning and being.

Historicity refers to cultural perceptions of the past, the principles, experiences, and values that shape these perceptions, and how historicized practices, tools, and information continually and consequently **shape the present and future**. Importantly, historicity is distinct from history—or the concept of clear “fact”—and fundamentally recognizes that positionality is always shaping what is observed, known, or even considered, and further, how narratives and meaning are construed. Central to the idea of historicity is the recognition of systemically constructed power dynamics that structure relations between and among individuals, communities, and institutions (involving humans and more-than-humans). This includes, at minimum, political, social, technological, and industrial dynamics that are intimately intertwined with place, race, class, gender, and sexuality, amongst other dimensions.

Power is ubiquitous in social systems and how power is understood has consequential impacts on what is seen as important to act on. Power is not inherently good or bad, rather it is a question of how it is utilized and why. In our frameworks we highlight two meanings of power: 1) systemic power and 2) individual and/or collective agency.

Further Reading: Pages 2-3 from the Learning in Places framework:

http://learninginplaces.org/wp-content/uploads/2021/10/framework_power-and-historicity_rev10142021.pdf

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Choice 1: Read [Appendix C: Scaffolds for Reflecting on Your Own Enactments of Power and Historicity in Science Learning and Teaching](#) (below). Discuss: What practices resonate with you? What questions and wonderings do you have about these practices? How might these practices address power dynamics and create space for student agency and ownership of their learning?

Because power and historicity are ubiquitous, your daily practices are opportunities to exercise agency and work toward transformation. Here are some important practices and orienting sensibilities that can support refusing problematic forms of power and historicity in learning environments:

Daily practices	Example questions or strategies
<p>1. Incorporate multiple, intersecting histories of places through walks, community research, and investigations (this includes making visible the lineage of systemic injustices, and resistances to these injustices).</p>	<ul style="list-style-type: none"> • See Ms. Poppy's timeline example above • Research local natural history sites, especially those that incorporate Indigenous presence, about the histories of the places that surround your learning environment. • When on walks, you can ask questions such as, "who do you think decided to build these apartments here and why? What do you think was here before these buildings were here? How do you think this place will change in the future?"
<p>2. Learn to recognize the ways in which you have benefited from power structures, the way powered relations show up in your interactions with learners, families, and communities including behavior management and disciplinary practices (which disproportionately affect Black, Brown, and Indigenous learners). This also includes being aware of how white-centric discourses are made normative and, at the same time, invisible within curriculum materials, your pedagogical strategies, and micro- and macro-interactions in learning environments.</p>	<ul style="list-style-type: none"> • Regularly examine how and who you discipline in your learning environment. For example, do you often find yourself assuming that the boys of color are off-task or disruptive? Do you "pay closer attention" to their behavior than the white learners? • Be a critical consumer of curriculum materials. Ask yourself: how do these curriculum materials make Indigenous peoples visible and present (not just in the past)? Do these curriculum materials support multiple ways of knowing, or do they steer students to one "correct" answer? Do these curriculum materials describe outside places in terms of humans' use of those places, or do they take the perspective of more-than-human inhabitants of places?
<p>3. Restructure your model of family and community engagement towards cultural thrivance (see Family and Community Engagement Framework). Value, encourage, and include multiple knowledges and practices in the learning environment and in socio-ecological deliberations and decisions.</p>	<ul style="list-style-type: none"> • Regularly elicit and value family knowledges and practices in your teaching practice. Use family tools to enrich your lessons. • Use family knowledges and practices to guide your teaching. • Make space in discussions for family knowledges and practices to have equal value to the knowledges that you build in your learning environment. • Ask family members to share their expertise with learners. Incorporate family members as valued members of the learning community.
<p>4. Engage in ethical deliberation and decision-making that actively disrupts historicized power imbalances among institutions and learners and their families. Adopt a justice-oriented stance that refuses white-centric, normative, socio-ecological relations that rely on human dominance, resource extraction and the marginalization of communities of color.</p>	<ul style="list-style-type: none"> • When thinking about field-based data collection, consider family members as important community members with which learners can collect data, interview, and understand multiple perspectives to inform ethical deliberation and decision-making. • This requires constant reflection on your own teaching practices, your attitudes and relationships toward families and communities, language and design of curriculum materials, and examination of school or other organizational policies. • Reflect on your own multiple, intersecting identities and how those shape your practice and the ways that you see places, learners, and their families (see Appendix D below).

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Choice 2: Complete the [Self-Reflection in Appendix D](#) (below). Reflect on what you do well and set some new improvement goals for yourself. Discuss: What supports might be helpful to you as you continue to deepen your practice? What practices do you already do well and how do you know? What are 3 practices you could try to include in your instruction this year?

Dimension of Power	Dimension of Practice	I do this well!	but want to get better	not yet tried this
Systemic Power	I reflect on the power and privilege I hold as an educator in my relationships with learners and their families.			
	I see learners through a <i>sensemaking</i> lens, rather than a <i>behavioral</i> lens in both the indoor classroom and in field based activities.			
	I continually reflect on my implicit and explicit bias when it comes to valuing learners' perspectives, knowledges, values, and forms of sensemaking.			
	I consider the ways that I may experience privilege - such as access to resources - differently than learners and their families.			
	I distribute resources <i>equitably</i> (not necessarily equally) to learners based on their needs and relative access to power and privilege.			
Individual / Collective Agency	I recognize the complexities of my own identities and experiences.			
	I recognize and value the complexities of learners' and their families' identities and experiences.			
	I recognize and value the intersectional identities of learners, and consider how these may shift in different settings.			
	I acknowledge that I hold authority, power, and privilege in my role as an educator, and that this power is interwoven with systemic power from my educational institution.			
	I recognize the role of my own power and position in decision-making and interactions with learners and their families.			
Race, Racialization, and Racism	I recognize and consider how learners of color are faced with issues of race and racialization differently than white learners, and actively seek to interrupt these dynamics .			
	I reflect on the ways I / my institution perpetuates or combats racialized and racist systems of power.			
	I engage in daily practices that actively seek to dismantle racism in my learning environment and at my institution.			
Colonialism and Settler - Colonialism	I study the multiple and intersecting histories of places where I live and work.			
	I engage learners in Histories of Places learning activities throughout the duration of my learning program.			
	I actively discuss and make sense of issues of settler-colonialism with learners and their families. Including: forced removal of Indigenous peoples, Indigenous presence and survivance, forced enslavement of African, indentured servitude of multiple ethnic groups in the "building" of the settler state.			
Key Dimensions of Power and Historicity	I reflect on key dimensions and relations of power and historicity at multiple levels (for example: child-to-child, school-to-family, etc.)			
Multiple Scales	I reflect on how power and historicity operate (often simultaneously) at multiple scales (for example: micro, meso, and macro- scales)			

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