

**A pedagogy of place:
Promoting relational knowledge in science teacher education**

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As a science teacher educator, I am interested in the possibilities of a teacher education program based on the principles of “place-based education” that assists teacher candidates to become better able to learn from a science curriculum of place. Central to this research is the identification and potential of key features associated with deliberate place-based pedagogical interventions intended to better integrate theory and practice and also expose participants' assumptions and beliefs about their science learning through more effective practices. The design of our curriculum of place, housed within the four-year Bachelor of Education program at Mount Royal University (Calgary, Alberta, Canada) might be best characterized as a pedagogy that is responsive to local conditions and the cultural, social, economic and environmental traditions of the educational context. Focusing on theory and practice links, our program integrates science field studies and inquiry-based projects utilizing a place-based approach that puts considerable onus on ecological field studies and longitudinal environmental assessments.

Those participating in our program demonstrated an uncommon level of engagement and environmental responsibility. These teacher candidates refer to the challenging and significant place-based field studies, the co-operative work relationships that develop during their semester and diverse instructional processes used throughout the program as features that impacted their development as learners and teachers. Field studies resonated with those students who learn best experientially and in social contexts. A number of teacher candidates indicated they struggled with conventional classes yet found success and engagement in the environmental field studies approach to courses.

The development of teacher leaders who internalize community and global challenges, are proficient in theory-practice integration and place-based pedagogies related to science education appears to be an essential aspect of preparing new science teachers for the complexities of not only the science curriculum but the educational context in general. This research sheds light on how a university teacher education program may contribute to such development. This research provides compelling qualitative evidence indicating that educational processes involving place-based activities that encourage data collection, reflection and action are important antecedents to responsible and sustainable science education pedagogy. If the initial results of this self-study are indicative, far greater attention must be paid to the notion of place in the education of future science teachers.