Building Academic Tenacity in Students for Improved Wellbeing, Deeper Learning and Increased Success

OSOT 511 - Learning in the Natural Environment

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As an instructor in the Master of Occupational Therapy (MOT) program, Katie strives to foster life-long, self- directed learning and encourages students to stretch their minds by engaging in learning from a place of creativity and curiosity – key skills for occupational scientists and occupational therapists.

In the literature

- Students' educational environments impact their learning (Zandvliet, 2014).
- K-12 educational research on the effects of access to and immersion in nature has identified multiple benefits: stress reduction, decreased anxiety, improved social connections, stronger connections and accountability to nature, restoration from directed attention fatigue, and better academic performance (Bell & Dyment, 2008; Kaplan, 1995; Rugel, 2015; Ulrich, 1979, 1981); enhanced learning outcomes and engagement in subsequent indoor classes (Kuo et al., 2017).
- A positive correlation found between time post-secondary students spend in green spaces and their quality of life (McFarland et al., 2008).
- Having a sense of place on campus fosters cohesion, community, and a sense of self (Blakey, 2012).

Our research questions

In OSOT 511, students:

- Learn the Kawa Model (Iwama et al., 2009), an OT conceptual model that uses a river as a metaphor for life.
- In the Nitobe Gardens and in a forested area, work in small groups to apply the Kawa Model to a case study.
- Outdoor education and place-based pedagogies used.

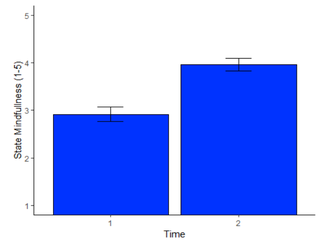
This study asks, in a higher education setting:

- How does learning in the natural environment affect students' self-regulation, and students' sense of connection to nature, campus, and their peers?
- What features of the natural environment facilitate these effects?

Methods

- Mixed methods design: pretest & posttest and descriptive qualitative approach.
- N=35 students completed the survey the week prior to class; N=22 completed the same survey up to one week after class. The survey included items from:
  - Undergraduate Experience Survey (UBC, 2018)
  - Inclusion of Nature in Self (Schultz, 2001)
  - Place-based and Constructivist Environment Survey (Zandvliet, 2014)
  - Academic Buoyancy Scale ((Martin & Marsh, 2008)
  - Sense of Belonging Scales (Tovar & Simon, 2010)
  - State Mindfulness Scale (Tanay & Bernstein, 2013)
- N=9 completed semi-structured face-to-face interviews regarding their experience.

Preliminary findings



Significant increase in State Mindfulness ($p < 0.001$) and Academic Buoyancy scores ($p = 0.046$).

"…I learn a lot more from experiences than like looking at a screen. And if I'm out in nature and **I'm really like present and calm and learning**, **I absorb so much more** than I would if I was just staring at a screen" - Kris

"…like normally after class I might get a headache from having to listen and look at the screen and stuff, but **after that class I felt more energy and just I think the fresh air and open space and just being able to move around instead of just sit in a desk was really helpful**" - Abby

Next steps

- Complete full analysis
- Develop resources for faculty members who would like to explore learning in the natural environment
- Assess impact in additional contexts

Acknowledgement

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