



ECO-MENTORING PROGRAM AT TRENT UNIVERSITY

Trent University is home to a rich partnership involving Camp Kawartha and Fleming College. With support from the Gainey Foundation, a new Environment Centre has been built on Trent's campus by the *Sustainable Building Program* at Fleming College. The Centre is run by Camp Kawartha staff and provides training to Trent teacher candidates as well as programming to regional schools and the broader community. The building is one of the most sustainable in Canada.

Since 2011 teacher candidates in the consecutive B.Ed. at Trent University have been offered the opportunity to participate in an extracurricular eco-mentoring program. This is a collaborative initiative involving members of faculty, staff from the Camp Kawartha Education Centre, and partners from the local community and beyond. By drawing on the collective expertise and enthusiasm of members of faculty, camp staff, local teachers, an elder from a nearby First Nations reserve, and experts in the greening of school grounds, the program offers teacher candidates a rich variety of experiences. The involvement of partners from outside of the School of Education and Professional Learning gives the program a distinctive flavour and models the opportunities available to teachers when they reach out to local experts.

The program comprises four, three-hour workshops held on Saturdays during the autumn. Each workshop has a theme:

- *Nearby Nature* - One of the most important ways to help students develop a sense of advocacy for the environment is to provide them with rich encounters with the natural world during childhood by exploring biodiversity. In this workshop, we review a variety of hands-on strategies and techniques for using nearby nature areas as venues for environmental education. The intent of this workshop is to explore ways to inspire students to adopt an ethic of care and stewardship for their local environment.

- *Removing Barriers* - Finding the time to teach environmental education as well as meeting all other curriculum commitments can be overwhelming. This workshop examines how to reduce/remove some of the barriers to delivering effective environmental education. We also discuss how to obtain administrative support for outdoor excursions, where to access funding and what local resources may be available to help teachers deliver environmental education in their own community.

- *Inspiring Hope* - The challenges facing the planet can be both frightening and daunting to children. This workshop explores how we can provide learning opportunities that are both age appropriate and inspire hope for action.

- *Cross-curricular Connections* - With a jam-packed curriculum, it is not surprising that teachers often say: "I'd love to do environmental education but I just don't have the time." This workshop shows how an integrated approach to environmental learning can effectively cover a number of expectations in a variety of subject areas. As a specific example, we show participants that a combining Indigenous and environmental education perspectives can enrich both.



To receive a certificate in eco-mentoring from the School of Education and Professional Learning and Camp Kawartha, participants have to demonstrate that they have implemented ideas from the program. They may do this during their final school-based practicum or during the three-week Alternative Practicum that comes at the end of the B.Ed. program. An honour-based system simply requires participants to submit a short report on how they have infused environmental perspectives into their teaching, involved themselves in extra-curricular activities with an environmental theme, or designed a suitably themed teaching resource.

The program was developed in response to an urgent perceived need. The program is not credit-bearing and, by working outside of the confines of normal university planning procedures, it was possible to start running it soon after it was first conceived. Faculty contribute to the program voluntarily and receive no teaching hours for it. The director of Camp Kawartha gives his time freely and his staff and other contributors receive a modest honorarium for their involvement. The program has been funded by small grants from the School of Education and Professional Learning and the Biodiversity Education Awareness Network. In addition, The Frost Centre for Canadian and Indigenous Studies funded a graduate research assistant in 2013 to help gather research data on the program.

*Paul Elliott,
Trent University
For more info on this program, refer to Bell,
Elliot, Rodenburg and Young (2013).*



DEEPENING ENVIRONMENTAL EDUCATION ACROSS A FACULTY OF EDUCATION

Many faculty members in Ontario's initial teacher education programs are designing and implementing a variety of pathways into environmental education as a means of deepening environmental learning throughout their programs. This approach provides different ways of bringing a presence for environmental curriculum and instruction into programs already at capacity. The following outlines some of the different pathways used by initial teacher education programs in Ontario over recent years.

OFFER ENVIRONMENTAL EDUCATION COURSES

Some faculties of education in Ontario have chosen to create and offer elective courses in environmental education as part of their initial teacher education programs. This approach has proven to be an effective means of offering environmental learning to teacher candidates with an interest in developing their expertise in this area. (At the time of this writing, there are no Ontario faculties that offer a mandatory course in environmental education, however this may change with the revised initial teacher education curriculum in 2015.) These electives are offered in a variety of formats - in person and on-line, on campus and off, for credit or personal interest. Some of these electives focus more closely on a specific approach, such as outdoor experiential education, while others offer a broader range of approaches.

There are a range of innovative and important elective courses in environmental education offered in Ontario's faculties of education. For example, Lakehead University is offering an elective course in Climate Change Pedagogy in the winter of 2014. For sample syllabi from other elective courses in environmental education offered by Ontario faculties of education, refer to Appendix E on page 89 for the first time.

COMPLEMENT WITH CO-CURRICULAR LEARNING

Many of Ontario's faculties of education offer a variety of co-curricular, or extracurricular, events, workshops, lectures, and talks on environmental education in addition to elective courses as a means of engaging teacher candidates. These can provide an enriching way to learn about environmental education from diverse perspectives and allow for a broad introduction to contemporary practices in the field. Co-curricular learning events can be an excellent means of highlighting the work of local teachers, students, or community-based environmental educators. The establishment of reciprocal partnerships with environmental educators can present a low-cost of way of bringing in guest speakers to campus as well.

Balancing theoretical and pedagogical aspects of environmental education is an important part of co-curricular learning. Many teacher candidates want to learn strategies that can be directly applied during their placements. Asking workshop leaders to model the pedagogies they are recommending is one way for teacher candidates to experience the high level of engagement that is characteristic of environmental education. As you plan events over the course of the year, remember that these types of co-curricular activities are often attended by those teacher candidates keen to learn about environmental education, but can be missed by those who most need an introduction to this subject. Therefore, every effort should be made to actively include those learners new to environmental education; as well as those who may already be competent in this area.

DEVELOP AN ENVIRONMENTAL EDUCATION CERTIFICATE PROGRAM

Providing incentives that encourage teacher candidates to participate in co-curricular learning in environmental education programs is important if credit courses are not available. These incentives can help teacher candidates to document their learning and demonstrate their dedication to environmental education as part of their studies. Certificates can be tailored to align with faculty of education priorities and can

involve a range of course-based, co-curricular, or community-based activities which can help to develop students' environmental/ecological literacies and stewardship skills. Support from NGOs, school boards, and environmental organizations may help in the delivery of a certificate program and, in exchange, students can be asked to volunteer for these organizations as part of the certificate's requirements.

Inspired by Trent University's Eco-Mentor Program, UOIT's Faculty of Education has instituted the Enviro-Mentor Program in which teacher candidates engage in a number of seminars, workshops, practicum activities, and action projects focused on environmental education. This program was developed in conjunction with members of UOIT's Aboriginal Resource Centre and includes environmental education activities focused on Traditional Ecological Knowledge and Wisdom.


FACILITATE FACULTY PROFESSIONAL DEVELOPMENT

Urging faculty and staff members to engage in environmental education and sustainability practices is an important part of deepening environmental learning across a faculty of education. Certainly raising awareness about climate change and other environmental issues is part of this, as is encouraging faculty to integrate discussions about issues and environmental education more generally into all courses. Professional development activities may help to shift attitudes, and hopefully will lead to the implementation of sustainable practices in teaching and learning. Raising environmental awareness and providing opportunities for faculty and staff to adopt sustainable teaching practices can be one way to begin this process. Following up these activities by asking teacher candidates to do the same in their classes may encourage faculty members and staff to learn more about environmental teaching and learning.

BUILD ENVIRONMENTAL EDUCATION INTO THE FACULTY'S INFRASTRUCTURE

Ensuring that sustainability practices are in place and accessible to all members in a faculty of education is central to embedding environmental education; teacher candidates need to see that faculty are practicing what they preach. Working in conjunction with a university's facilities department is important in this, as staff should support or extend existing practices. Ensuring that recycling bins are in classrooms and public areas is just a start; supporting their proper and consistent use can be taken on as a project for a student eco-club. Bike racks, water bottle filling stations, battery recycling, composting, sustainable purchasing, and environmental artworks can all help to make sustainability more visible and effective. While changes to physical infrastructure can be costly, running campaigns to encourage more sustainable behaviours doesn't have to be. Posters, Twitter campaigns, or contests can be used to encourage faculty and staff to conserve water and energy, use sustainable transportation, protect local wildlife, or consume locally-produced food, to name but a few. Working with your institution's administrative staff to establish more sustainable purchasing practices may help increase the success of campaigns; for example, ensuring that copy paper is made from Forest Stewardship Council sources or recycled content, or that reusable plates and cutlery are used for meetings and events.

Ultimately universities need to move towards more innovative and ecologically sound models, examples of which are being realized at campuses around the world. One Canadian example of this can be found at the University of British Columbia. Through regenerative sustainability, UBC is attempting to improve environmental quality and produce net benefits for human and natural systems through its approach to physical infrastructure and curricular changes. (Refer to their website for more info: <http://www.publicaffairs.ubc.ca/2012/01/03/regenerative-sustainability-from-damage-control-to-improving-the-environment/>)



Some faculties of education are taking steps to demonstrate a fuller commitment to embedding environmentally-friendly practices into teaching and learning at all levels. Some are creating outdoor classrooms that recognize the benefits of moving beyond the four walls of classrooms or lecture halls. Others are supporting the development of learning gardens which emphasize the role of plants, animals, and ecological systems in the environment. Still other institutions are designing and installing green roofs to simultaneously conserve energy, provide habitats for plants and animals, and inspire learning. While each of these activities can be viewed as small steps for a faculty of education, when taken together they can have a wider effect in the community.

SUPPORT ENVIRONMENTAL EDUCATION THROUGH CONTINUING EDUCATION

Developing a presence for environmental education in continuing education departments is important in expanding its presence in a faculty of education; this provides ongoing learning opportunities for alumni and other educators. Additional Qualification (AQ) courses can serve this purpose. In 2014, the Ontario College of Teachers intends to release the framework for a new series of AQ courses on environmental education that providers can choose to offer. Ensuring that these AQ courses are being offered at your university not only raises the profile of environmental education in a faculty of education, but can help to develop a network of active environmental educators in your local school board and community. AQ courses can be taught in person or on-line, further widening the potential audience for environmental education.

Digital learning environments provide myriad types of continuing education opportunities for teacher candidates and alumni to engage in environmental education. *Green Teacher Magazine* offers a series of free webinars on environmental education open to the public (and archived for subscribers; please refer to <http://greenteacher.com/webinars/> for more info). Massive

Open Online Courses (MOOCs) on topics such as sustainability and environmental studies are starting to emerge around the world; offering a MOOC can be a unique opportunity for a faculty of education to gain recognition as a leader in the field.

INVESTIGATE ENVIRONMENTAL EDUCATION THROUGH RESEARCH

To complement the deepening of environmental education across a faculty of education, faculty researchers may incorporate aspects of environmental curriculum, teaching, and learning into their research program. Since integration of environmental education into initial teacher education is still a relatively new area of study, there are many aspects that need investigation, analysis, and documentation. Keeping a journal of your progress can be the starting point for a case study of a faculty's deepening engagement with environmental education; contrasting this with others' work in this area in Ontario can help faculties better understand which strategies and practices are most effective. (For a brief introduction to some of the work currently being done by Ontario educational researchers in environmental education, refer to page 17.)