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Fostering Sustainability Leaders

Contribution to GTI Forum [The Pedagogy of Transition](#)

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I agree with many of the concerns about the way formal post-secondary education is organized and delivered, but feel that it is also important to look at how current delivery models might change in ways that permit a more holistic and engaged form of student involvement in sustainability issues. So what follows is an attempt to offer a contribution at a much more applied as opposed to conceptual level, focused on how we could change the current delivery of sustainability content to students at post-secondary institutions. Perhaps larger system change can be anticipated and even enabled by more modest forms of innovation that can be undertaken now.

At the University of Toronto, following on earlier work at the University of British Columbia, we are trying to establish sustainability learning trajectories, called sustainability pathways, which are aimed at that larger population of students and have the following attributes:

- (1) Accessible to all undergraduate students regardless of degree program;
- (2) Interdisciplinary and transdisciplinary;
- (3) Completable by students within their existing degree programs;
- (4) Inclusive of research, co-curricular projects, and/or community-engaged learning courses; and
- (5) Comprehensive and coherent in the sustainability education they provide.¹

An underlying premise of this approach is that, while sustainability professionals will continue to be needed for the foreseeable future, students not specializing in sustainability issues must also be able to add sustainability to their education. All graduates of the university can use sustainability knowledge and skills in whatever job they may find themselves. Indeed, a major

function of our education system should be to train students as agents of change, from a sustainability point of view, so that they can actively support the sustainability transition in their place of employment. This may be a welcome message to students suffering from eco-anxiety who are looking for positive strategies for change that they can adopt.

Crucial to any attempt to develop sustainability pathways is to consider explicitly what conception of, and approach to, sustainability underlies the pathways. At U of T, we have adopted the concept of regenerative sustainability, which goes beyond damage limitation and harm reduction approaches, and also beyond purely environmental approaches, to look first for forms of human activity that do not have to be limited because they are damaging, but that actually improve human and environmental well-being.²

Another important consideration has to do with whether sustainability courses or programs are mandatory or voluntary. Based on some skepticism about the pedagogical value of mandatory courses, and evidence that these are not popular with—or necessarily useful to—students, we have elected to develop sustainability pathways that are voluntary. In this way, we will obtain some sense of their appeal to students and be able to adapt the pathways accordingly.

A final initial consideration has to do with interdisciplinarity and transdisciplinarity. While the need for interdisciplinary approaches to sustainability issues is widely accepted (at least in principle), there is less recognition of the need for transdisciplinary approaches that involve non-academic partners actively in the research process itself. There is however, a growing literature on the co-production of knowledge, co-creation of research questions, co-design and co-management of research, etc., all of which involves a recognition of the need for academic researchers to move away from extractive approaches to research (where society is primarily the source of data, and a secondary audience of research findings) to a much stronger partnership model.

It is hard to imagine a teaching practice more in need of transdisciplinary approaches than the teaching of sustainability. This means that teaching practices must be attuned to both interdisciplinary and non-academic engagement, in ways that do not easily fit the disciplinary structure of academic departments, or the skill sets of many faculty.

Taking these considerations into account, the U of T Sustainability Pathways program is a voluntary program that will provide integrated curricular and co-curricular pathways to explore sustainability issues for all undergrad students, regardless of what program they are enrolled within.

U of T Sustainability Pathways are clusters of courses and co-curricular activities with a common theme of sustainability that allow students to explore that theme from various disciplinary, methodological, and practical perspectives. Such pathways provide each student with the opportunity to incorporate sustainability learning into their program, to be given community-engaged learning opportunities, and to develop cross-cutting transdisciplinary skills.

The Sustainability Pathways are offered within a three-tiered framework:

- (1) **Sustainability Citizen:** Student completes a certain number of approved sustainability-oriented co-curricular activities
- (2) **Sustainability Scholar:** Student completes Certificate or Minor in sustainability
- (3) **Sustainability Leader:** Student completes Citizen and Scholar requirements, and adds an experiential learning capstone activity

The Framework provides formal recognitions on their transcripts (Scholar), Co-Curricular Record (Citizen), or both (Leader).

The Sustainability Scholar program, in the form of a sustainability minor or certificate, has so far been approved in three Faculties: the Faculty of Applied Science & Engineering; the Faculty of Architecture, Landscape and Design; and the Faculty of Arts & Science.

Although each Faculty or Division designs and approves their own certificate or minor for the Sustainability Scholar designation, the transcript indicates "U of T Sustainability Scholar" in parentheses after the name of the certificate or minor. This indicates that the certificate or a minor program was not an initiative of one faculty but an area of institutional importance.

With regard to the Sustainability Citizen tier, we have been working with the Student Life team on this opportunity for students to actively participate in sustainability-related activities, and

to build important skills and knowledge in that area. We are exploring validating sustainability-oriented student group leadership positions and designing a student-generated accreditation model, along with defining the expected learning outcomes.

Once the first two tiers are in place, we plan to develop the program for the third tier of Sustainability Leader program, which will include a capstone experience, incorporating experiential learning, which will bring otherwise separate elective elements of the Citizen and Scholar tiers together and guide students onto a leadership path in sustainability.

An important component of the Sustainability Pathways program is our plan, based on student suggestions, to develop leadership workshops and training sessions to give students the skills and tools to become agents of change for sustainability in whatever organization they work for after graduation.

Creating the Sustainability Pathways Program has required the development of a number of inventories of sustainability teaching, research, and other activities already going on at the university. We have developed the following six inventories, all using UN Sustainable Development Goals (SDGs) keywords, and all updated regularly:³

- An inventory of all [undergraduate courses](#) that speak to one or more of the SDGs
- An inventory of [community-engaged learning \(CEL\) courses](#) that focus on sustainability issues
- An inventory of all [student clubs](#) that focus on sustainability issues
- An inventory of all [community engaged learning \(CEL\) and campus as a living lab \(CLL\) projects](#) focused on sustainability
- An inventory of all [Master's theses and PhD dissertations](#) that address sustainability issues

These inventories provide a snapshot of sustainability activities at the university, and of the faculty and student involvement in those activities. They are an indispensable input to designing sustainability minors and certificates in each Faculty.

Obviously, the Sustainability Pathways program represents only one way of addressing the issues raised at the beginning of this contribution. It does however offer a practical path to increasing sustainability teaching and learning at universities that is well within the capabilities of

sustainability supporters to implement within their university. And it offers the potential to reach a much larger fraction of the student population than the very important other approaches aimed at increasing the number and popularity of programs for students who want to specialize in sustainability issues.

Endnotes

1. UBC Sustainability Initiative, *Transforming Sustainability Education at UBC: Desired Student Attributes and Pathways for Implementation* (Vancouver: University of British 2013). For a description of the various U of T sustainability programs up to the end of last year, see <https://www.president.utoronto.ca/2020-annual-report-of-the-presidents-advisory-committee-on-the-environment-climate-change-and-sustainability-ceccs>. For a brief description of our new mandate and the programming being planned, see <https://www.utoronto.ca/news/new-appointments-u-t-deepens-commitment-sustainability-goals>.
2. John Robinson and Raymond Cole, "Theoretical Underpinnings of Regenerative Sustainability," *Building Research & Information* 43 (2015): 133-143.
3. For a description of the development of the U of T course inventory, and its use in the Pathways program, see Rashad Brugmann et al., "Expanding Student Engagement in Sustainability: Using SDG- and CEL-Focused Inventories to Transform Curriculum at the University of Toronto," *Sustainability* 11 (2019): 530. or more, see <https://sustainability.utoronto.ca/>.

About the Author



John Robinson is Professor at the Munk School of Global Affairs and Public Policy and the School of the Environment at the University of Toronto, where he also serves as Presidential Advisor on the Environment, Climate Change, and Sustainability. His research focuses on the intersection of climate change and sustainability; the use of visualization, modeling, and citizen engagement to explore sustainable futures; the role of the university in contributing to sustainability; and the history and philosophy of sustainability. He holds a PhD in geography from the University of Toronto.

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