

# **The ‘SDGs-in-the-Classroom’ Curricular Innovation Hub: A Pan-University Interdisciplinary Scaffolded Strategy to Incubate and Accelerate the Infusion of the United Nations’ Sustainable Development Goals into York’s Classrooms**

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## **Abstract**

York University, situated in Toronto, Canada is committed to advancing the Sustainable Development Goals (SDGs) through its University Academic Plan and thereby positioning itself as an agent of positive change on a local and global level. To foster the development of innovative curricular projects, York University established an Academic Innovation Fund (AIF) to support projects that build awareness and understanding of the SDGs within academic courses and programs. With a three-year funding commitment from the AIF program, the **‘SDGs-in-the-Classroom’ Curricular Innovation Hub** aims to foster and enable the pan-university interdisciplinary infusion of the SDGs into classrooms across York University campuses. As an additional pedagogical framework for the student learning experience, the SDGs strengthen the applicability of students’ education by linking purpose with impact and encouraging a global perspective on topics that concern them. The project will be achieved through interdisciplinary faculty/instructor engagement, capacity building and creating an infrastructure of support for faculty/instructors who wish to develop innovative ways to include the SDGs meaningfully in their classrooms. Further, the project will foster experiential education initiatives that amplify existing innovations and incubate the development of others, advance e-learning through blended and fully online methods, enhance student success strategies within the curriculum, and advance internationalization by encouraging and strengthening SDG-focused Globally Networked Learning (GNL) projects.

**Keywords:** Sustainable Development Goals (SDGs), curricular innovation, education for sustainable development (ESD), experiential learning, experiential education, post secondary-education, teaching and learning practices, faculty/instructor professional development

## Introduction

The 2030 Agenda for Sustainable Development, published by the United Nations<sup>1</sup>, is one of the most ambitious and important global agreements that has been signed in recent history. The Sustainable Development Goals (SDGs) make up the core of the global agenda. These global goals are designed to alleviate poverty, hunger, pollution, climate change, and ensure that everyone has the opportunity to live a healthy, prosperous, and fulfilling life and to foster peaceful, just, and inclusive societies.<sup>2</sup> The SDGs recognize that addressing the challenges of the 2030 Agenda is everyone's responsibility, and specifically call on business, civil society, and the academic sector to coordinate their efforts.

As an institution of higher learning, universities have a broad remit for knowledge creation and dissemination, and their unique position within society positions them to play a crucial role in achieving the SDGs and implementing the SDG framework as a whole. It is universities' responsibility to raise awareness of the SDGs among students in diverse programs, enabling students to recognize SDG relevance, regardless of their discipline. Universities have access to large numbers of passionate, creative, and committed students who want to make a positive impact on the world. For this reason, universities should make sure they are preparing future leaders, decision-makers, teachers, innovators, entrepreneurs, and citizens with the knowledge, skills, and motivation that will help them contribute to achieving the SDGs and thereby addressing important global issues.

As universities look to respond to societal needs and act as agents of change toward solving global challenges, York University is re-thinking their role in the twenty-first century. York University made incorporating support for the SDGs an integral part of their core mission. The SDGs have been embedded into the university's current University Academic Plan (UAP) "*Building a Better Future: York University Academic Plan 2020-2025*".<sup>3</sup> The new UAP sets out a community challenge to elevate York University's contribution to the SDGs, bringing together students, faculty/instructors and staff to work together to build new tools, develop strategies and solutions to global challenges.

The Academic Innovation Fund (AIF)<sup>4</sup> supports projects that advance York University's priorities in terms of teaching, learning and the student experience. Since 2011, the AIF has supported faculty/instructors and campus partners in their efforts to develop new and exciting ways to educate students. In 2021, the AIF actively encouraged proposals that support SDG-framed projects within undergraduate and graduate degree programs. In answering the call to elevate York Universities' action toward the SDGs, the **'SDGs-in-the-Classroom' Curricular Innovation Hub: A Pan-University Interdisciplinary Scaffolded Strategy to Incubate and Accelerate the**

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<sup>1</sup> United Nations, "Transforming Our World: The 2030 Agenda for Sustainable Development ... Sustainable Development Knowledge Platform" (United Nations, 2015), <https://sustainabledevelopment.un.org/Post2015/Transformingourworld>.

<sup>2</sup> SDSN Australia, New Zealand and Pacific, "Getting Started with the SDGs in Universities" (SDSN Australia, New Zealand and Pacific, March 2, 2022), <https://ap-unsdsn.org/regional-initiatives/universities-sdgs/university-sdg-guide/>.

<sup>3</sup> York University, "Building a Better Future," York University UAP, June 2020, <https://www.yorku.ca/uap2020-25/>.

<sup>4</sup> York University, "AIF," Associate Vice-President Teaching and Learning, June 15, 2022, <https://www.yorku.ca/avptl/academic-innovation-fund/>.

## Infusion of the United Nations' Sustainable Development Goals into York's Classrooms'

proposal was submitted and awarded up to \$300,000 through the AIF. This paper will outline the key priorities of the SDGs-in-the-Classroom Curricular Innovation Hub (SDGs CIH) including building interdisciplinary faculty/instructor capacity to teach the SDGs and advancing student success strategies within the curriculum through experiential learning, eLearning, and internationalization. Figure 1 represents a schematic representation of the different elements of the SDGs CIH.

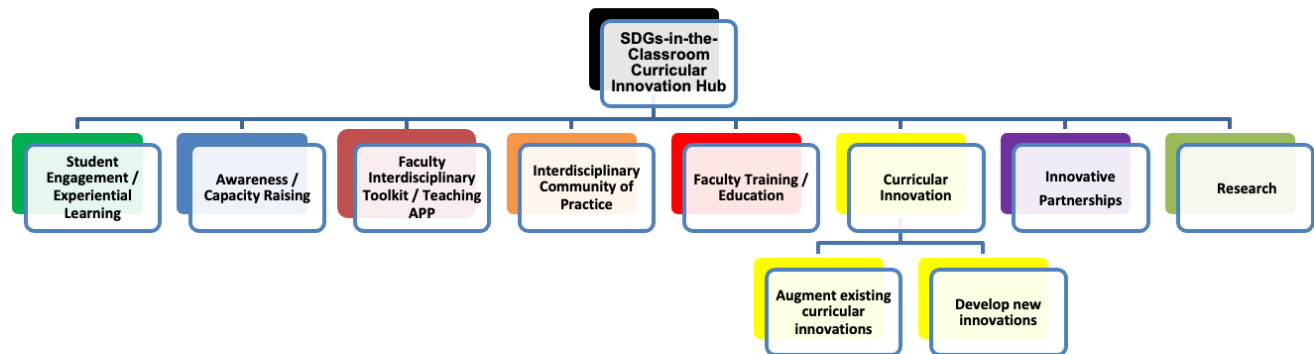


Figure 1: Schematic of the SDGs CIH

### Building Faculty/Instructor Capacity to Teach the SDGs

The SDGs CIH is built on the momentum, partnerships, and strategies associated with an innovative program whereby Provostial Fellows are appointed for one-year terms in order to grow the UAP. As stated earlier, central to York University's UAP is infusing the SDGs and building our impact. To that end, the initiative "*More Than Bees and Trees: Seeing the SDGs in our Curriculum*" was born. Through the fellowship's 50+ consultations, it became evident that there are a plethora of initiatives going on across York University's campuses regarding the SDGs, including some faculty/instructors working to take them up in their classrooms and programs on their own initiative. However, while they are laudable achievements, they are not sustainable or scalable on their own. Hence a key priority of the SDGs CIH is faculty/instructor engagement, capacity building and creating an infrastructure of support for faculty/instructors from any program who wish to find innovative ways to include the SDGs in their courses. A number of key initiatives are underway to build interdisciplinary faculty/instructor capacity around the SDGs, including the development of an SDG-in-the-Classroom Community of Practice, organizing a Community of Practice Visioning Day, developing an Interdisciplinary SDG-in-the-Classroom Toolkit/SDG Teaching App, and providing SDG Curricular Training/Professional Development and research support.

## The SDGs-in-the Classroom Community of Practice (CoP)

The SDGs-in-the-Classroom CoP was developed to bring together York University faculty/instructors involved or interested in infusing the SDGs into their classrooms. Using a co-creation approach, the CoP fosters interdisciplinary collaboration to build upon each other's expertise and experience, and provides coordination, leadership, and training. SDGs-in-the-Classroom CoP group members mentor other faculty/instructors in the university to understand the latest pedagogical thinking on how to integrate SDGs in meaningful ways in their classrooms.

### CoP Visioning Day: Visioning. Sharing. Drawing

In March of 2022, a visioning exercise was held with current members of the CoP in order to discuss why the SDGs are important to them in their classrooms, what they would want a CoP to provide and what would it take to create change with the CoP, i.e. what ripple effects would members envision a strong CoP would enable. A desire to “breathe life into the SDGs at YorkU” stood out as a key finding of this visioning, and it is upon the insights from the visioning exercise that the future iteration, function, structure and intended goal of the CoP will be based upon. Drawing Change<sup>5</sup>, facilitated the graphic recording of the day with the resultant illustrations found in Figures 2,3,and 4.



Figure 2: Graphic Representation: How are the SDGs Important to You? Created by Sam Brad, Drawing Change.

<sup>5</sup> Drawing Change, “Visuals for a Better World,” Drawing Change, April 25, 2022, <https://drawingchange.com/>.





Figure 3: Graphic Representation: How Could this Community of Practice Support You? What Could Ripple out Today and Create New Possibilities? Created by Sam Brad, Drawing Change

*To breathe life into the SDGs at York University*

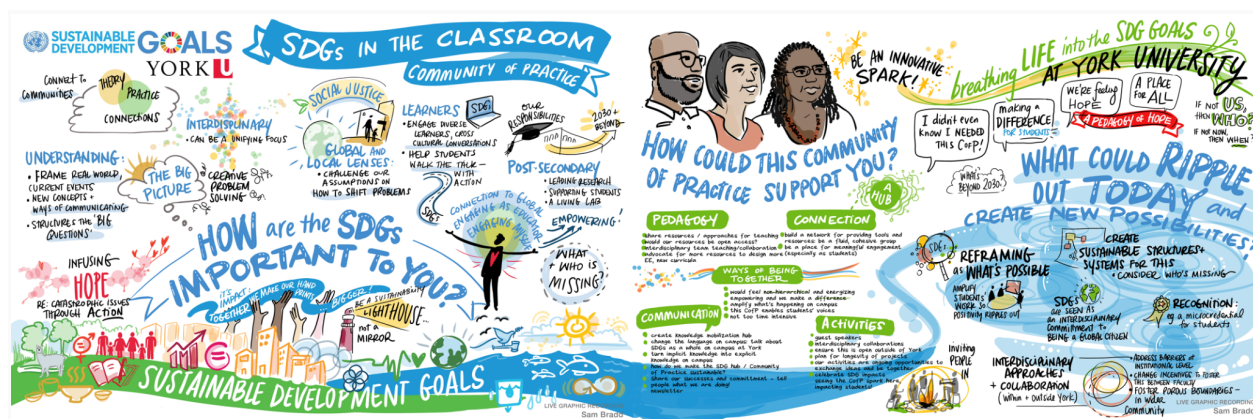


Figure 4: Full Graphic Representation. Created by Sam Brad, Drawing Change

### Interdisciplinary Teaching Toolkit and SDG Teaching App

A key innovative strategy to build internal faculty/instructor capacity to teach the SDGs is through the development of the SDGs-in-the-Classroom Toolkit.<sup>6</sup> Building on the prototype developed under the SDG Provostial Fellowship, this interdisciplinary toolkit serves as a platform for

<sup>6</sup> Tracy Bhoola and Nitima Bhatia, "The Sdgs-in-the-Classroom Toolkit," Toolkit for the Interdisciplinary Infusion of the SDGs into Classrooms, June 20, 2022, <https://www.yorku.ca/unsdgs/toolkit/>.

faculty/instructor collaboration and includes resources, tools, templates, videos, lesson plans, websites, and pedagogical approaches to support the infusion of the SDGs into the curriculum. The toolkit will also include a teaching app that will incorporate gamification and simulation strategies as innovative ways to educate students about the SDGs.

### SDG Curricular Training / Professional Development / Research

A future responsibility of the CoP will be the development and provision of SDG curricular training / professional development for faculty/instructors. SDG webinars, workshops, and possible faculty certification programs will be offered to all York University faculty/instructors with the aim of developing general knowledge of the SDGs and building support networks for creating discipline-sensitive strategies for SDG integration in readings, activities, and assignments. Another key responsibility of the SDGs-in-the-Classroom CoP will be the provision of an annual SDG Curricular Showcase Event as a way to foster and highlight faculty/instructor innovation in teaching about the SDGs. As such, the inaugural SDGs-in-the-Classroom CoP offered its first SDG virtual teach-in half-day event, *Teaching the Sustainable Development Goals: The World's Challenges Can Be Found in Your Classroom*<sup>7</sup>, on May 10, 2022. This successful event invited participants to explore how the SDGs might intersect with students in their classrooms and showcased expertise from those who have deep research and teaching familiarity with the global goals. Lastly, the CoP will support faculty/instructor-led research around SDG curricular infusion and support interdisciplinary research grounded in the scholarship of teaching and learning.

### **Advancing Student Success Strategies within the Curriculum**

To create a more sustainable world and to engage with sustainability-related issues as described in the SDGs, students must become sustainability change-makers. The SDGs CIH proposes a strong education for sustainable development (ESD) approach. This will incorporate a variety of student success strategies within the curriculum to empower and motivate learners to become active sustainability citizens who are capable of critical thinking and able to participate in shaping a sustainable future.<sup>8</sup>

### Advancing Student Success Strategies (First Year Experience)

In 2013, the First Year Experience (FYE) Working Group at York University (YU) created a report *A Case for Change: A FYE Framework*.<sup>9</sup> This framework is a key driver of York University's overarching goals of student success, academic quality, and student experience and retention. YU

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<sup>7</sup> York University, "York Presents First Sustainable Development Goals Virtual Teach-In Day," YFile, March 16, 2022, <https://yfile.news.yorku.ca/2022/03/16/york-presents-first-sustainable-development-goals-virtual-teach-in-day/>.

<sup>8</sup> UNESCO Educator Sector, "Education for Sustainable Development Goals - UNECE," Education for Sustainable Development Goals - UNECE (UNESCO Educator Sector, 2017), [https://unece.org/fileadmin/DAM/env/esd/13thMeetSC/Documents/Presentations/ESDG\\_learning\\_objectives\\_EN\\_long\\_version.pdf](https://unece.org/fileadmin/DAM/env/esd/13thMeetSC/Documents/Presentations/ESDG_learning_objectives_EN_long_version.pdf).

<sup>9</sup> First Year Experience Working Group, "A Case for Change - Colleges.yorku.ca" (York University, December 13, 2013), [https://colleges.yorku.ca/files/2018/11/FYECASEforChange\\_FINAL.pdf](https://colleges.yorku.ca/files/2018/11/FYECASEforChange_FINAL.pdf).

Prep<sup>10</sup> is a series of online modules and workshops designed for incoming first-year students based on the FYE framework. The SDGs CIH will expend these resources with a YU SDG Preparation Module which will provide an opportunity for new students to start their SDG learning journey at York University.

### Advancing Student Success Strategies through Advancing Experiential Education

As one of York University's strategic priorities, experiential education (EE) is defined as “the application of theory to a concrete experience either within the classroom or within the community, which advances the learning outcomes of a course or program and requires students to reflect upon their learning”.<sup>11</sup> The SDGs CIH advances EE through several innovative pedagogical strategies. For example, augmenting existing SDG-focused co-curricular EE activities increases opportunities for students to engage with the SDGs throughout their university experience rather than limiting it to their major field of study. Each year more than 300 students from across York University engage in an intensive experiential event called the UNHack, which is focused on helping students understand the creative problem-solving process by focusing attention on local problems that are linked to the SDGs.<sup>12</sup> A second example involves supporting the SDG Student Hub at York University. This student-driven initiative is designed to help students of all disciplines learn about SDGs and take action to help achieve them *on-campus and in our communities*.<sup>13</sup> The SDGs CIH will provide faculty/instructor mentorship and annual funding for student-led SDG-focused projects to uphold the SDG Student Hub in their experiential student-driven initiative to learn about, engage with, and take action on the SDGs.

### Pan-University Interdisciplinary SDG Course / SDG Certificate

The SDGs CIH is exploring the creation and delivery of a ‘for credit’ pan-university interdisciplinary SDG course and an SDG certificate for students. The pan-university SDG course is envisioned to be a collaboratively developed, interdisciplinary, EE journey with innovative eLearning opportunities (web-enhanced learning, blended/hybrid learning, fully online strategies and gamification) for students to develop critical skills and enhance their knowledge and application of the SDGs in their relevant field/discipline. The SDG Certificate will be developed from a repository of designated courses identified from programs within our 10 faculties. Students will select courses based on their interests in exploring and broadening their learning of the ways other disciplines address the SDGs.

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<sup>10</sup> YU Prep, “YU Prep: Experience the University Classroom,” Future students (York University), accessed June 29, 2022, <https://futurestudents.yorku.ca/you-prep>.

<sup>11</sup> York University, “Experiential Education,” Associate Vice-President Teaching and Learning, March 1, 2022, <https://www.yorku.ca/avptl/strategic-priorities-teaching-innovation/experiential-education-ee/>.

<sup>12</sup> York University, “‘UNHack’ to Build Sustainable Development Goals into Experiential Learning,” Lassonde School of Engineering, November 5, 2021, <https://lassonde.yorku.ca/unhack-to-build-sustainable-development-goals-into-experiential-learning>.

<sup>13</sup> York University, “New Student-Driven Initiative Offers a Hub for Students to Take Action on the Sdgs,” YFile (York University, April 22, 2021), <https://yfile.news.yorku.ca/2021/04/22/new-student-driven-initiative-offers-a-hub-for-students-to-take-action-on-the-sdgs/>.

## Integration of ESD Competencies

The SDGs CIH supports the integration of the ESD Competencies within York University's Competency Framework.<sup>14</sup> The university is in the process of reframing the competencies already used in the undergraduate and graduate degree level expectations, the Becoming YU program and the Confidential, Managerial, Professional (CPM) competencies. This is the ideal time to fuse the ESD Competencies within this framework, so they become part of the professional development processes for the entire York University community.

## Advancing Student Success Strategies through Advancing Internationalization

The SDGs CIH partners with York International<sup>15</sup> and Globally Networked Learning (GNL)<sup>16</sup> to encourage and strengthen SDG-focused GNL projects. York International advances York University's internationalization by offering quality services and programs for international students, creating global learning opportunities for degree-seeking students and facilitating global partnerships for York University. Globally Networked Learning refers to an approach to research, learning, and teaching that enables students, faculty/ instructors, and non-academic researchers from different locations around the world to participate in, and collaborate on, knowledge-making processes and concrete research projects. The SDGs CIH will offer mentorship to CoP members each year to engage in SDG-focused GNL projects and support GNL-focused student-led projects.

## **Measurements of Project Success**

Measurements of project success will focus on the following key priority areas.

## SDG-related Measurement and Reporting Frameworks

The overall impact of the SDGs CIH will be measured using the Times Higher Education (THE) Impact Ranking Scores.<sup>17</sup> These scores measure universities' success in delivering the SDGs (Compulsory indicator 17. iv Education on the SDGs) and the SDG Accord<sup>18</sup> which is a qualitative self-assessment survey to capture institutional integration, contribution, and impact on the SDGs across all areas of the university, including areas relating to learning, teaching and research.

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<sup>14</sup> York University, "Becoming Yu," Division of Students (York University), accessed June 29, 2022, <https://becomingyu.yorku.ca/competencies>.

<sup>15</sup> York International, "Welcome to York University! Bienvenue à L'université York!," York International (York University, May 12, 2022), <https://yorkinternational.yorku.ca/>.

<sup>16</sup> Globally Networked Learning, "Get Involved in Globally Networked Learning," York International (York University, March 16, 2022), <https://yorkinternational.yorku.ca/gnl/>.

<sup>17</sup> York University, "York Reaches World's Top 35 in Times Higher Education Impact Rankings for Meeting UN's Sustainable Development Goals," York University, April 27, 2022, <https://www.yorku.ca/about/times-higher-education-global-impact-rankings/>.

<sup>18</sup> SDG Accord, "SDG Accord Reporting 2021 - Official," accessed June 28, 2022, [https://www.sdgaccord.org/files/sdg\\_accord\\_reporting\\_2021.pdf](https://www.sdgaccord.org/files/sdg_accord_reporting_2021.pdf).



### Student Engagement with SDGs

Increased student engagement in, understanding of, and responsibility for furthering the SDGs and their relevancy to their discipline/program and future lives will be measured through pre- and post qualitative surveys +/- focus groups, student enrolment in the YU Prep Course and the Pan-University SDG Course, and student engagement with EE opportunities.

### Faculty/Instructor Engagement with SDGs

Increased faculty/instructor engagement with the SDGs CIH's activities and resources and SDG infusion into classrooms will be measured through pre-and-post-qualitative surveys +/- focus groups of faculty/instructor engagement with the SDGs CIH, faculty/instructor usage of the toolkit and teaching App, and faculty/instructor participation in the CoP and curricular training sessions.

### **Conclusion**

This paper outlines a three-year project to create a 'SDGs-in-the-Classroom' Curricular Innovation Hub' to facilitate the pan-university interdisciplinary infusion of the SDGs into classrooms at York University. The overarching intent of the SDGs CIH is to foster interdisciplinary curricular innovation whereby every program, discipline and faculty/instructor will have access to resources, collegial support, and developmental opportunities to identify how their courses could identify a meaningful connection with the SDGs. Further, the SDGs CIH seeks to incubate creative ways to infuse attention to the wicked problems that are addressed by the SDGs. Through pan-university strategies, games, simulation, classroom activities, and cross-curricular faculty engagement, the SDGs CIH will breathe life into the SDGs in borderless ways. This project will enhance student success strategies through advancing EE, eLearning, and internationalization and will create opportunities for students to engage with the SDGs at the local and global levels, preparing them to be effective changemakers upon graduation and throughout their careers.

The SDGs CIH envisions this project as a systemic and cultural change to York University's response to the UN call for action. By implanting the SDGs firmly into the ecosystem of York University, we are ensuring their ability to be sustained within York University's curricular, research and development, and professional development system and process, and as such, as an integral component of York University's identity.

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