

Improving engagement of interns and employers with the United Nation's Sustainable Development Goals

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There is growing focus on graduating global citizens who can advocate for and operationalize sustainable futures by advancing the United Nations' Sustainable Development Goals (SDGs). With the high volume of internships the University of Waterloo facilitates, there was need to better understand how these internships might be contributing to the SDGs in deeper, more meaningful ways. The researchers conducted a pilot study to classify a sample of international internships in terms of their impact on one or more of the 17 SDGs (Ivkovic et al., 2020). A key outcome of the study is that there is need to build greater awareness of the SDGs and better assess actual impact on the SDGs. This paper explains the design and development of a low-resource activity, based on a guided-conversation exploration instrument for interns and organizations to recognize how their roles could contribute to advancing the SDGs.

Keywords: UN Sustainable Development Goals, impact of international internships, guided conversation, SDG engagement and motivation

The United Nations' Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 (United Nations, n.d.). Higher Education Institutions (HEIs) are exploring ways to have a more compelling and significant impact on the SDGs as fundamental allies for achieving the SDGs through their contributions in teaching, work integrated learning, research and international partnerships. (Kestin et al., 2017). In fact, globally, HEIs are now being measured on their contributions towards advancing the UN's SDGs (Times Higher Education, 2019).

University of Waterloo, Canada (Waterloo), is a comprehensive mid-size university with a unique, world-class co-operative education program that facilitates 21,000+ co-op internships (referred to as work terms) annually across about 120 programs, more than 3,200 of which are completed internationally across about 60 countries. About 1,000 of these internships are taken outside Canada and USA (University of Waterloo, 2019a). Such scale of internships puts Waterloo in the unique position of being able to gather a large data set of data points of outcomes and observations, in order to study any programming put in place. In 2019, Deloitte conducted a study of the impact of co-op internships over 2018/19 on Canadian organizations, and by extension, the Canadian economy. The findings from this study showed that the contribution of Waterloo co-op internships over one year was \$310 million in labor income, \$567 million towards GDP and 5779 jobs (University of Waterloo, 2019b, p. 5). This study provided significant evidence of the economic impact Waterloo co-op students provide to organizations, which led the desire to examine the ways in which the work of co-op students might be contributing to the SDGs.

Within the University of Waterloo, units such as the Waterloo Professional Development Program (WatPD), whose mandate is to facilitate credit-eligible professional development courses during the internships, and the Centre for Career Action, which provides internship recruitment and career support to the students, have put in place programming to further interns' understanding of and

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engagement with the SDGs. The Sustainable Development Solution Network Canada, whose mission is to mobilize Canadian scientific and technological expertise to facilitate learning and accelerate problem solving for the UN's Agenda 2030 and the SDGs (Sustainable Development Solutions Network, 2020), is housed in the University's Faculty of Environment. The University has an active and impactful Sustainability Office who guide and deliver on the University's commitment to advancing sustainability. All these supportive structures have created a robust ecosystem to contribute towards advancing the UN's SDGs.

As an educational entity, with the volume of co-op and other internships and the robust ecosystem to advance the UN's SDGs, Waterloo now has an opportunity to design how to educate employers and interns to be more effective agents of change for advancing the UN's SDG agenda (UNESCO, 2017). Institutionally, there is a credible platform to explore the role that internships can play in advancing institutional aspirations towards contributing towards the SDGs.

While University of Waterloo's international internships are a starting point for studying ways to improve SDG programming, the outcomes of this work will be applicable to all work-integrated learning experiences, from all of Canada (Canadian Bureau of International Education, 2016) not just the growing number of mostly co-op internships abroad. Understanding the role that employers and interns can play in addressing the SDGs, will result in a deeper understanding of global problems (World Economic Forum, 2020), including the recent challenges posed by COVID-19, and how to solve these.

APPROACHES TO IMPACT ASSESSMENT AND OUTCOMES

To better understand Waterloo's contributions towards advancing the SDGs, pre-existing impact assessment models for how international internships might contribute to the SDGs were sought. It became apparent that much research can be found on graduate talent mobility impact (Solimano, 2008), impact of international internships on the individual themselves by area of discipline such as health (Zanchetta et al., 2013), social work (Hunter & Hollis, 2013), business (Mandal & Vong, 2016) and teaching (Lupi & Batey, 2009), impact of international development efforts on the local area (Chen, 2018, Georgalakis et al., 2017), and integrating SDGs in academic curricula (Beynaghi et al., 2016; Brugmann et al., 2019). However, there was little that could be implemented for assessing the impact of international internships on advancing the SDGs. Hence the need for developing a model for such impact assessment was identified – a model that would go beyond superficial metrics such as how many NGOs and not-for-profit organizations hired Waterloo interns (Ivkovic et al., 2020).

Three community and institutional sustainability expert units whose mandate is to advance the SDGs through policy work, facilitating WIL experiences, and research, were consulted; University of Waterloo's Sustainability Office (UWSO), Waterloo Institute of Sustainable Energy (WISE), and Waterloo Global Science Initiatives (WGSII). In this work (Ivkovic et al., 2020), the researchers provide details of the pilot study's methodology, data gathering and analysis. Each unit independently applied their own assessment approach, designed and developed based on their expertise, to a curated sample of 78 internships from the Environment Faculty (believed to be a more mature sustainability curriculum) held in 12+ countries across the development spectrum; for example, Netherlands, China, and India. Each internship was assessed from a number of perspectives, including internship job description, specifics of the project assigned, the intern's agency within the internship, relevant application of the SDGs' 169 targets and 232 indicators (United Nations, 2018) to current use case,

company mandate, company CSRs, etc., and coded into having had an impact on one or more of the 17 SDGs. Of the 78, only 13% were assessed as having made a definite impact on the SDGs.

University of Waterloo's Sustainability Office (UWSO)

UWSO followed a qualitative approach to assessing impact of the internships. Using the SDGs' targets and indicators, they matched the organization, job description, and responsibilities to the indicators. For example, if the job description was related to scaling up of renewable energy projects in developing countries, it contributed to Target 7.1. A brief description or justification as to how the organization and the job advances the related SDG was included. The intent was to identify how many jobs contribute to each of the SDGs, where more than one SDG could apply to a job.

Waterloo Institute of Sustainable Energy (WISE)

WISE followed a quantitative approach. They applied four criteria to each internship with a scale of 0 = *no SDG impact*; 1 = *some impact*; and 2 = *deep SDG impact*. These four criteria are as follows:

Organization / Job-related:

1. Business Model – Core Questions: Is the Organization a Non-Profit or Social Enterprise? Does it engage in local enablement? Does it monitor, evaluate, and/or publicize its SDG impacts?
2. Organizational Mission – Core Question: Is the mission of the organization to address one or more SDG via its mission, vision, values, or highly-visible public statements?
3. Stakeholders/Clients/Beneficiaries – Core Question: Does the organization's work primarily benefit underserved communities or the natural environment?

Student-experience related:

4. Internship Experience – Core Question: Does the co-op student's role involve learning about the SDGs via training/educational resources or direct work contributions?

Each internship, then, could cumulatively score as low as 0 and as high as 8 across the 4 criteria.

Waterloo Global Science Initiatives (WGSi)

WGSi also took a quantitative approach. Based on their deep SDG domain knowledge and engagement with several frameworks (Canadian Business for Social Responsibility, n.d.; Ho et al., 2015; Ho & Runnalls, 2018; International Labour Organization, n.d.; Living Wage Canada, 2013; Possibilian Ventures, n.d.), WGSi came up with seven criteria to apply to each internship:

Organization-related:

1. Sustainable purpose (scale: 0 = *No*; 1 = *Yes*)
2. Sustainability culture & governance (scale from -1 = *Did not consider impact* to 4 = *Verify impact*)
3. Value chain influence (scale from -1 = *Negative* to 2 = *Leader*)
4. Actively trying to do things differently (scale: 0 = *No*; 1 = *Yes*)

Intern-related:

5. Has agency within role (scale: 0 = No; 1 = Yes)
6. Has influence on decision making (scale: 0 = No; 1 = Yes)
7. Makes a living wage (scale: 0 = No; 1 = Yes)

Each internship, then, would score as low as -2 and as high as 11.

Outcomes of the Study and Key Additional Learnings

The outcomes of the three approaches, shown in Table 1, revealed that a relatively low percentage of internships were coded as having had an impact on one or more of the 17 Sustainable Development Goals

TABLE 1: Impact of international internships on United Nation's SDGs via three independent approaches:

	UWSO	WISE	WGSJ
Measurement	By number of internships that impacted an SDG Records flattened to 57 (by organization name)	By cumulative score	By cumulative score Records flattened to 63 (organization name & job title)
Outcome	No impact: 34 internships Impact on at least 1 SDG: 20 internships Impact on 2 or more SDGs: 3 internships Specifically: SDG 4, 5, 6, 10, 13, 14: 1 count SDG 15: 2 counts SDG 9: 3 counts SDG 8: 4 counts SDG 7, 11, 12: 5 counts	Score 0: 37 internships Score 1 – 4: 25 internships Score 5 – 6: 6 internships Score 7 – 8: 10 internships (considered as having significant impact)	Score -2 – 0: 41 internships Score 1 – 4: 6 internships Score 5 – 7: 7 internships Score 8 – 11: 9 (considered as having significant impact)
Key Takeaway	Since the records were flattened by organization name, it can be said that 23 of 57 (40%) organizations had impact on at least 1 SDG	10 of 78 (13%) internships had significant impact	9 of 63 (14%) internships had significant impact

Even though each model provided robust and reliable impact outcomes, each was fairly resource-intensive and the inputs into the models had significant gaps. It was evident that for all internships, not just international, to be analyzed, a low-resource, low-cost approach is required. This resource needs to be scalable, consistent and sustainable for the 21,000+ internships completed annually. More importantly, there is demonstrated need for building SDG awareness, interest, and knowledge. Building these in partnership with interns and employers is ideal as they can be impactful agents of change (Tremblay et al., 2020).

On average, each approach took about 8-10 hours of one expert's time, split evenly between developing the approach and applying it across the internships. Such an approach, where entire job descriptions are reviewed and organizations are researched, is not scalable, as the resourcing needed to categorize impact in this manner is prohibitive.

An additional challenge was that the way the co-op process is set up, organization names and job titles were a poor indicator of anything SDG related. Some job descriptions were very sparse, and/or had no information that indicated anything sustainability related. More systematic SDG-related data gathering is needed upfront from interns and/or employers.

Also, co-op staff are not sustainability experts. Researching company corporate social responsibility and other sustainability indicators and applying this research to the internship information, is not possible. Interns and employers themselves would need to share their SDG-related actions and experiences with the program.

FACILITATING AWARENESS OF THE SDGS AND COLLECTING IMPACT DATA

In undertaking this pilot study, it became clear that for Waterloo's co-operative education business case, the next key step is to amplify awareness of the SDGs in a guided manner, and to systematically gather intern and employer perceptions of their engagement with the SDGs. Lack of awareness and knowledge was one of the more critical challenges in achieving the SDGs. The Global University Network for Innovation (2019) suggests that awareness-raising is key towards implementing the SDGs for 2030. Hall and Tandon (2017) suggest building knowledge in partnership to overcome this challenge. Given the large volume of internships at Waterloo, there is need for a scalable, consistent, and sustainable low-cost, low-resource process to get intern and employer perceptions of their engagement with the SDGs.

As such, Waterloo is implementing programming that can systematically facilitate a self-directed guided conversation activity during the term based on an amalgamation of the three approaches during the term to raise awareness of the SDGs with the interns and the organizations. Then, data about the intern and employer perceptions of their engagement with the SDGs will be collected through surveys at the end of the term. The intent is to better understand how this process impacts awareness of and motivation to engage with the SDGs, and to provide some concrete data on the actual impact Waterloo's international internships might be having on the SDGs. This study has received ethics clearance from the Office of Research (#42353).

Value of Conversation

Baker et al. (2005) suggest that conversation is an excellent way to facilitate experiential learning. Even though interns are getting their co-op internship experience, a guided conversation will be an added experiential learning piece within the internship, especially as it is SDG related. Additionally, good conversations advance professional learning and development (Haigh, 2005); all of which accrue towards better quality of internship experiences (McRae et al., n.d.). Dubberley and Pangaro (2009) suggest that conversation offers opportunities to learn, coordinate, and collaborate. They have presented a simple but effective process of conversation that is an excellent design structure for Waterloo's SDG awareness and perception of engagement activity for international internships (see Figure 1).

FIGURE 1: Design structure for Waterloo’s SDG awareness & perception of engagement activity.

Process of conversation	Open a channel	Commit to engage	Construct meaning	Evolve	Converge on agreement	Act or intersect
Waterloo’s activity structure	Introduce the instrument	Encourage ongoing conversations	Improve understanding of SDGs, or get involved	Improve contributions, as much possible	Self-report on any actual impact	Influence further direction
<i>interpersonally or individually</i>						

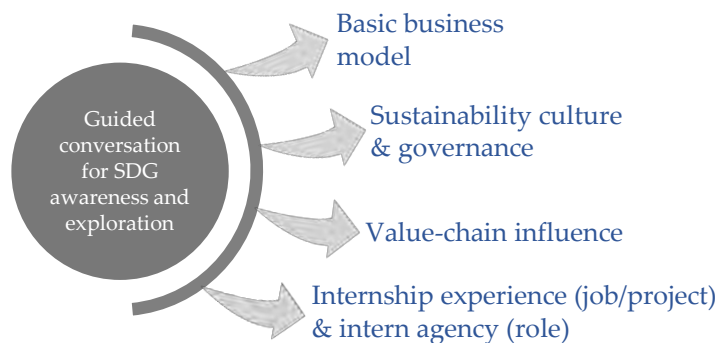
The Process

The approaches taken by UWSO, WISE and WGSi were complementary across the three models, which led to the development of a guided exploration instrument for interns and organizations to recognize how their roles could contribute to advancing the SDGs. The instrument is to be introduced early in the internship with messaging to engage in conversations during the term. Towards the end of the internship, interns and their supervisors will be invited to fill in a survey to gather intern and employer perceptions of their engagement with the SDGs. This is a simple and brief questionnaire to gather their perceptions of their awareness of the SDGs, self-reported impact on the SDGs, and how this awareness and engagement might influence their future direction.

The Instrument

The self-directed guided conversation instrument was reviewed by two faculty members from Waterloo’s Faculty of Environment whose key areas of research and teaching are SDG-related. The spirit of the instrument is for it to be non-prescriptive so that it does not come across as an evaluation or assessment instrument. Currently, the intent of the conversation is for it to be an easy, free-flowing exchange of information and ideas between intern and supervisor. There are four areas included in the instrument, as shown in Figure 2: three are organization related (basic business model, sustainability culture and governance, and value-chain influence), and one is related to the intern’s experience (internship experience [job/project] & intern agency [role]).

FIGURE 2: Areas of exploration in the guided conversation for SDG awareness.



The sections below contain the specific prompts that interns and supervisors are encouraged to explore.

The prompts for 'basic business model' include:

1. Type of organization by size (e.g., multi-national companies, small- and medium-sized enterprises, start-up) and maturity of business lifetime (e.g., start-up, industry stalwart) with a strong commitment to sustainability, and not just NGOs, NFPs, and social enterprises
2. Majority of products and/or services, production, and/or supply chain operationalized in developing, or transitioning economies
3. Products and/or services that benefit disadvantaged or marginalized populations, underserved communities, and/or the natural environment
4. Organization's engagement in local training, skills development, hiring in underprivileged regions/communities, co-design of products/services, community planning (enabling locals to self-sustain), local leadership development, re-investment of financial gains, advocacy for reducing inequalities
5. Organization's commitment to human rights, equity, diversity and inclusion in the workplace
6. The impact of COVID-19 on amplifying challenges and revealing opportunities in engaging with the SDGs

The prompts for 'sustainability culture and governance' include:

1. The organization's public (or internal) Sustainability or Corporate Social Responsibility statement, and/or report; perhaps, a dedicated staff person responsible for performance accountabilities
2. Mention of the SDGs (or closely related terms) in the organization's mission, vision, values, or highly visible public statements
3. Monitoring, evaluation, and/or publicizing of organization's SDG impacts
4. Organization's sustainable investments, for example, tree-planting efforts or international development projects
5. Relevant environmental or sustainability framework certifications, and/or awards
6. Member of or signatory to any local, national, or international (voluntary) sustainability initiatives
7. Internal focus on, but not limited to, waste minimization, reduction and diversion, repair/recycle/reuse programs, reduction of greenhouse gas emissions, low carbon footprint business travel & transportation, and/or human rights, equity, diversity and inclusion initiatives

The prompts for 'value-chain influence' include:

1. Direct support or engagement with – upstream and downstream – other organizations that might reasonably be considered SDG champions themselves
2. Publicly committed (or internal) goals for engaging with environmentally friendly and/or ethically sourced supply chain management and/or sourcing
3. Products/services that have third-party certification of any environmental and/or ethical standards
4. End-of-life takeback program or disposal management program for their products

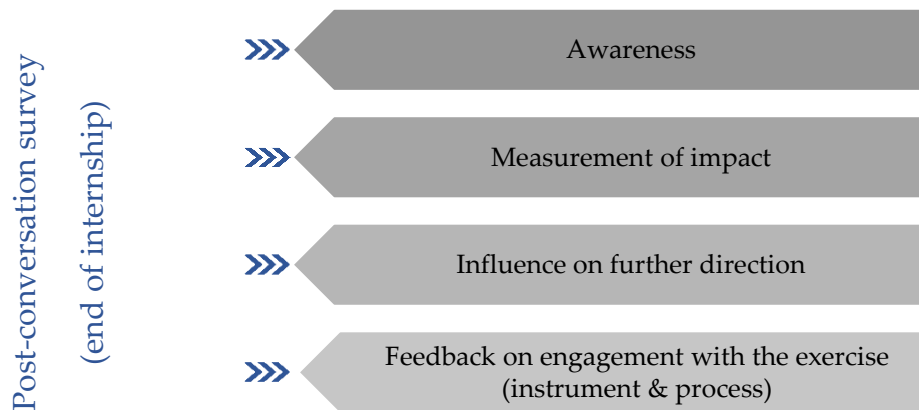
The prompts for 'internship experience (job/project) & intern agency (role)' include:

1. Role involvement with learning about the SDGs and/or sustainability
2. Training/educational resources received from the organization that specifically reference the SDGs or sustainability
3. Feeling of agency within the role to advance the SDGs, from asking to get involved with an unrelated-to-internship project to having influence on decision-making on SDG impact of their current work
4. To what degree the intern's work contributes to the core SDG-driven mission of the organization
5. To what extent the intern experiences the SDGs firsthand (in the field)
6. Impact of intern's presence in the location on sustainable consumption and production patterns, on respecting cultural diversity, and on reduction of inequalities of outcome

End-of-Term Post-Activity Survey

During the term, the intern's Student Advisor will continue to encourage the intern and their supervisor to engage in SDG-related conversations. At the end of the term, both will be invited to fill in surveys, and participation will be optional. The number of survey responses will be an indicator of engagement. Multiple-choice questions are preferable given the high volume of internships. Figure 3 shows the four areas covered by the questions. The assumption is that to improve authenticity this piece should not be tied into credit. The appropriate incentive should be to build awareness within the student of the impact they could make and generate interest in furthering the attainment of the SDGs. Noteworthy was that there are no questions about intern or employer interests and commitment to the SDGs, so that the survey does not come across as an assessment, criticism, or judgment.

FIGURE 3: Areas of end-of-term survey for the activity.



For each of the topic areas above, survey items were designed as outlined in Table 2. The actual questions in the survey are built from these items.

TABLE 2: End of term survey item topic areas.

Topic Area	Intern-Focused Item Areas	Employer-Focused Item Areas
Awareness	<ul style="list-style-type: none"> • knowledge about SDGs and about the organization's efforts to advance SDGs before and after the guided conversation activity 	<ul style="list-style-type: none"> • knowledge about SDGs and about the organization's efforts to advance SDGs before and after the guided conversation activity
Measurement of impact	<ul style="list-style-type: none"> • impact of the intern's work on what specific SDG • whether the intern felt they had agency within their role to advance the SDGs • to what degree did their work contribute to the core SDG-driven mission of the organization • to what extent did the intern experience the SDGs firsthand 	<ul style="list-style-type: none"> • the relatedness of the intern's project to advancing a specific SDG • whether the intern's specific tasks and responsibilities contributed towards this • were opportunities made available to the intern to engage with the larger organization's sustainability, SDG advancement and/or CSR goals
Influence on further direction	<ul style="list-style-type: none"> • how compelled the intern feels to take action or contribute towards the SDGs in some way before and after the conversation activity • what is their plan for doing so going ahead • what connections does the intern see to their degree 	<ul style="list-style-type: none"> • how compelled the supervisor (and/or organization) feels to take action or contribute towards the SDGs in some way before and after the conversation activity • what is their plan for doing so going ahead • what connections does the supervisor (and/or organization) see to their future business direction
Feedback on engagement with the activity (instrument & process)	<ul style="list-style-type: none"> • motivators and demotivators to engage in the activity • challenges faced • any specific personal benefit to the intern • feedback on the instrument & process 	<ul style="list-style-type: none"> • motivators and demotivators to engage in the activity • challenges faced • feedback on the instrument & process

FUTURE WORK

This self-guided conversation activity has been implemented for the Spring 2021 semester across all international internships, whether done remotely from Canada or in-location. The outcomes from the surveys at the end of the semester will help the researchers better understand how this activity impacts awareness of and motivation to engage with the SDGs, and to provide some concrete data on the actual impact Waterloo's international internships might be having on the SDGs. If the survey response rate is low, there might be a need to improve engagement with the activity using some form of recognition, such as, the recently launched Employer Impact Awards that have an SDG category (University of Waterloo, 2020) and/or SDG-related internship specializations.

The longer-term vision is to make any adjustments to the instrument and the survey questions, if at all, to account for interns as learners and non-experts providing their perspectives of SDG engagement and impact, and then extend the activity to Waterloo's 21,000+ domestic internships facilitated annually.

The outcomes of the set of data points from the pilot (and after) will be shared with the global higher education community, perhaps through collaboration with the Sustainable Development Solutions Network.

There is some interest from the Faculty of Environment in integrating the instrument itself in their own courses, so that students can continue to use it to grow their understanding of, and engagement with, the UN's SDGs even when they are back in class.

Longitudinally, using the AAA* WIL Quality Framework (McRae et al., n.d.), the plan is to identify effective intersections within the internship process to sensitize interns and employers to the significant impact their roles during internships can have on advancing the SDGs, and to inform improvements in WIL programming. Areas include better understanding of career motivations, value and purpose via supports in the Centre for Career Action, seeking SDG-related internships, reflecting systematically on internships via reflective work reports and the professional development courses facilitated by the Waterloo Professional Development program.

While historically, co-op internships have been tightly associated with outcomes related to employability and economic benefits, current interest is in furthering the impact of these internships to include the goals stated in the SDGs. These goals relate to any sector, field of study or career, and as such, provide a future-oriented framework that provides students and graduates with meaningful goals to aspire to (Kestin et al., 2020). The desire is to graduate students who have the awareness, the skills and the motivations to tackle significant global challenges (World Economic Forum, 2020). Helping students understand these challenges, the role that they can play and the contributions that organizations can make, could be a positive strategy for institutions of higher education who are committed to the UN SDGs. Furthermore, as a society, there is urgent need for graduates who can apply themselves to these complex global challenges. This research is a step toward understanding how to better illuminate and leverage the impact of co-op internships towards this critical challenge.

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The outcome of the pilot study that forms the basis of this work was presented at the CEWIL (Co-operative Education and Work-Integrated Learning Canada) Research Webinar Series, Volume 3, on October 22, 2020. A high-level overview of the conversation instrument was presented at the World Association of Co-operative Education's Annual Conference on May 13, 2021.

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