



Ready for Change: Building Youth Engagement through Climate Conversations™

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a project of
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SHARED PLATFORM

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1. Introduction

Enviromentum - Focus on Youth

Enviromentum, a project of Tides Canada, is the leading organization in the Greater Toronto Area for building evidence-informed behaviour change interventions to mitigate climate change.

Over the past several years, Enviromentum has extensively studied and translated behavioural science knowledge from the health sector into climate change programs.

One of Enviromentum's core program strategies is to work with young people to help them connect with their intrinsic motivations to address climate change in both their personal lives and communities.

Climate change is a centerpiece in the lives of young people today. This generation is growing up with knowledge that changing environmental conditions, such as extreme weather, are resulting in very high human, ecological and financial costs around the world. Feedback received from students who participated in Enviromentum's program indicates that they are concerned about the impact of climate change on their health, families and future access to essential resources such as water and food. Many of these young people also reported feeling powerless to act on climate change.

Enviromentum empowers young people to address their concerns about climate change by equipping them with the personal and interpersonal tools to take action. This generation has great opportunities to develop solutions for preventing the worst impacts of climate change and building resilient communities. To help young people realize this potential, Enviromentum begins with building their motivation and confidence to achieve positive results through personal choices and actions.

We are empowering a generation of young people to lead a cultural transformation built on the core values of ecological and social responsibility.

Purpose of the Report

This report highlights the program outcomes, lessons learned and insights generated from the continuous improvement and evaluation information collected by Enviromentum from its Climate Conversations™ workshop. The purpose of this report is to inform the future development of Enviromentum's youth programs and share key outcomes with our collaborators and stakeholders.

Climate Conversations™ - A Novel Approach

Climate Conversations™ is an interactive workshop for high school students modelled on evidence-based, behaviour change interventions. The workshop is designed to help young people connect with their own intrinsic motivations for adopting ecologically sustainable behaviours.

Climate Conversations™ is designed to meet the Ontario high school Grade 10 civics, geography and science curriculum objectives, and is delivered in one standard class period. Teachers are provided with an optional follow-up assignment for students.

The workshop is implemented in a stepwise format with each exercise or module designed to employ one or more evidence-based behavioural techniques such as motivational interviewing and normative feedback. Students are engaged with a values priming exercise and then asked to draw connections between their values and various impacts resulting from climate change. Students form teams to work through a creative problem solving model, helping them to explore climate mitigation options within their own lives.

Overview of Program Outcomes

In May 2017, Enviromentum concluded the first phase of the Climate Conversations™ program, reaching over 800 young people in the Greater Toronto Area. Enviromentum received a grant from the TD Friends of the Environment Foundation to support this work.

Enviromentum used evidence-informed measures to assess the impact of the program, which demonstrated that overall **69% of individuals in our workshop increased in their readiness to take on new environmentally-conscious behaviours**. These measures have been correlated to the uptake of new behaviours in hundreds of health sector scenarios. Insights were also generated into which personal values (e.g. health, family) youth participants connect most closely to climate-related concerns.

Chapter 2 describes the iterative process for developing Climate Conversations™ and collecting continuous improvement and evaluation data.

Chapters 3-6 describe the modules in the workshop.

Each chapter is structured as follows:

Method: describes the method used for delivering the module and its scientific foundation (i.e. how it is evidence-informed).

Outcomes: describes the specific outcomes achieved or insights generated by the module or element.

Discussion: explores potential applications of the results or insights generated by the module.

Chapter 7 discusses future plans and applications of Climate Conversations™.

2. Methods: Program Evaluation & Continuous Improvement

Climate Conversations™ is a knowledge translation project. The workshop takes proven behavioural concepts and techniques from the health sciences and applies them to engage young people in climate change mitigation. The objectives of Climate Conversations™ are to:

- Deliver a high quality, evidence-informed program that enhances intrinsic motivations for pro-climate/environmental behaviour choices;
- Help people form values-based connections to change so that motivation is more innate, and therefore more likely to be maintained over time; and
- Measure the attitudinal results of a novel program for the dual purposes of evaluating its impact and generating a data stream for continuous improvement processes.

To achieve these objectives, the Enviromentum team undertook a process of continuous improvement and iterative workshop development. A version of Climate Conversations™ was conducted with over 800 young people; however the results generated by different modules are taken from different sized samples. In other words, for consistency, only the results from young people who received the same version of a particular module are reported. These results were generated from anonymized feedback collected from participants from May 2016 - May 2017 and analyzed by Enviromentum for the purposes of evaluation and continuous improvement.

The contemplation ladder was instituted (Chapter 3) and conducted with over 500 young people. Since this measure is a pre and post evaluation tool of the entire workshop, the data presented in this report is from the final cohort of 190 young people (chronologically), all of whom received a standardized version of the workshop. Additionally, the normative feedback exercise (Chapter 4) has a sample size of 243 young people. This represents the total sample collected under this module, since normative feedback was not part of Climate Conversations™ until the latter part of program implementation.

Other aspects of Climate Conversations™ also changed. Early on, a number of different climate science topics were presented to students. Eventually the team realized that climate science topics, and even answering climate science questions from students, resulted in less motivation improvement in a class overall. As a result, the final version of the workshop includes no focus on climate science - a significant departure from traditional environmental discourse. Similarly, the visioning activity to map participants' core values was revised, and several activities were removed since they did not engage participants as effectively as other activities.

Lastly, facilitators gained greater skill in facilitation and motivational interviewing (MI). MI is arguably the most powerful and scientifically-validated approach to behavioural change in the health sector. MI is a collaborative, person-centered approach that is focused on evoking the individual's personal reasons (intrinsic motivation) for change, and promoting their autonomy.¹ The facilitation style deployed in the workshop was to evoke discussion from the participants during each module, rather than providing instruction.

3. Measuring the Impact of Climate Conversations™

This chapter describes how Enviromentum measures the impact of the Climate Conversations™ workshop and the results achieved to date.

Method

Our method for measuring impact, much like the program itself, is derived from the behavioural sciences. Climate Conversations™ is evaluated with a scientifically-validated measure called the Contemplation Ladder (Figure 1). This measure of an individual's readiness to change was first demonstrated to correlate with the uptake of new behaviours in the areas of smoking cessation, alcohol and drug use, and is now used in a wide range of applications from exercise to cancer screening behaviours.²

Enviromentum is the first organization to develop a customized Contemplation Ladder for a climate change program (Figure 2). In this exercise participants are told, "Each rung on this ladder represents where various people are in their thinking on new environmental behaviours. Circle the number that best indicates where you are now." This exercise is conducted before and after the workshop (pre-post).

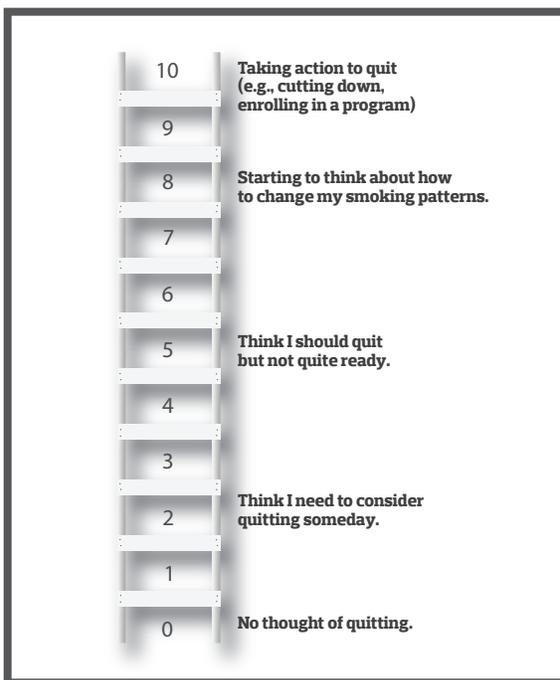


Figure 1. Original Contemplation Ladder²

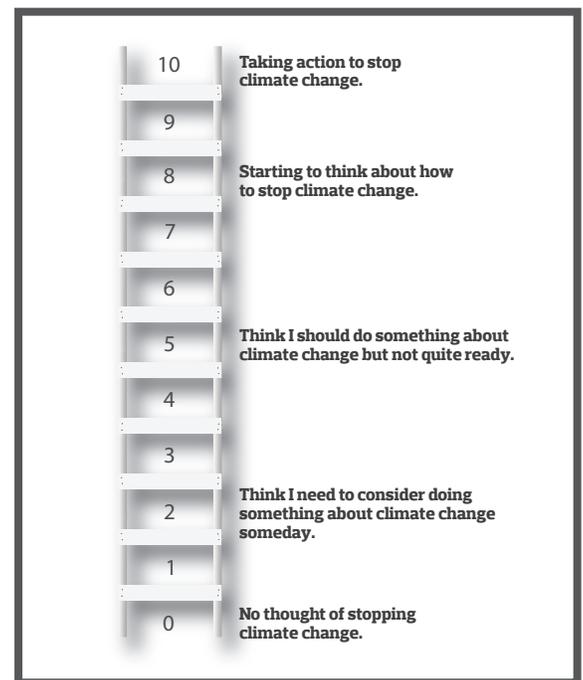


Figure 2. Enviromentum Contemplation Ladder

Program Outcomes

The results of Enviromentum's contemplation ladder were used in many ways. During program implementation, the contemplation ladder and other measures of quality control were used to continuously improve our work. This section reports the results of the last cohort of 190 students, all of whom received a standardized version of the Climate Contemplation Ladder and the workshop as a whole.

The results of the pre-post Contemplation Ladder data are shown in Figure 3. **Overall, 69% of individuals who participated in our workshop increased in change readiness** (i.e. moved up the ladder). A significant pre to post change observed was the number of young people (frequency) that gave an initial self-rating of "5" pre-workshop in comparison to the number giving a self-rating of "8" by post-workshop. In addition, the number of individuals who identified on the lower levels of readiness to change between rungs 1-4 became significantly less frequent after the Climate Conversations™ workshop. There was also a slight increase in the frequency of individuals at the highest rungs of the ladder.

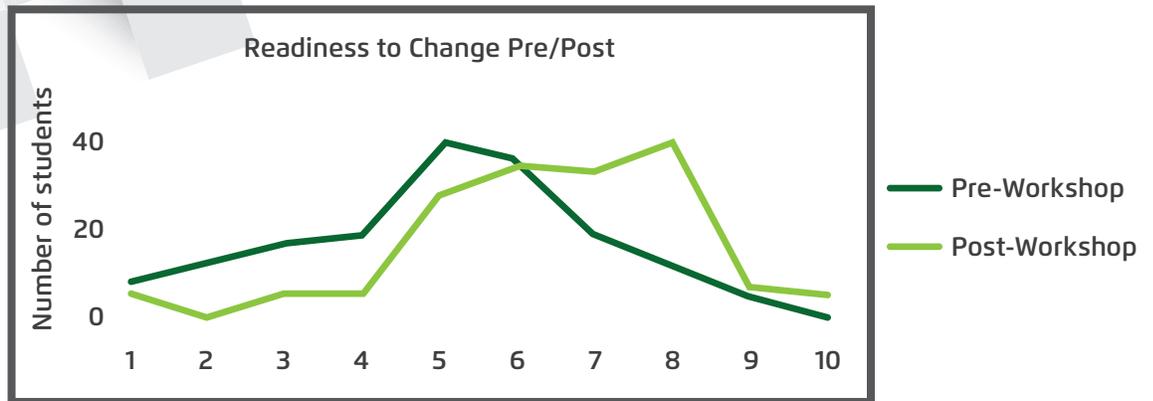


Figure 3. Readiness to Change Pre/Post

These three core observations reflect exactly what is expected to result from a motivational interviewing (MI)-informed workshop. MI is most effective in helping individuals who identify at low and mid-range levels of change readiness to improve to a mid to high level.

Discussion

Enviromentum's work represents the first application of an attitudinal measure frequently used in health-related behavioural scenarios to a climate program. The contemplation ladder measurements, and delivering programming built on an MI-informed approach, were instrumental to improving the key variable "change readiness" in our climate change program.

This reconception of how the environmental movement should approach behavioural outcomes has its foundation in Prochaska's Stages of Change (precontemplation, contemplation, preparation, action, maintenance) and the Transtheoretical Model.³ A theme within this body of research is that people make sustained changes as a result of self-reflective processes, which gradually realign individuals with new behaviours that are harmonious to their identity. Furthermore, behavioural science demonstrates that self-reflective processes can be accelerated in brief motivational interventions by including evidence-based techniques like MI, and normative feedback.¹

Ultimately, when applying empathic approaches to an environmental program, a more accurate picture of an audience's intrinsic needs can be perceived. Rather than seeing an audience as a homogeneous group that can be moved (or not) to decisive action, individuals are understood as being on a spectrum or continuum of change readiness. For example, providing people with a range of positive consumption practices can create an entry point for low change readiness individuals to "prepare" for the possibility of future behaviour changes. These concepts are explored further in Chapter 5.

4. Disrupting Self-Silencing Behaviour

This chapter describes Enviromentum’s use of normative feedback as a specialized version of social proof and the perception-based results generated by this exercise.

Method

The concept of normative feedback is a special application of the broader concept of social proof as a path for influence first studied by psychologist Dr. Robert Cialdini. Social proof is the concept that people can look to the behaviours of others as a basis for deciding what behaviour they should choose in a given situation.⁴

Normative feedback is a planned intervention, so there is a clear goal in mind when it is undertaken and can easily be delivered in a scenario-controlled environment. For example, 18-year-olds are asked upon arrival to a college campus, “What percent of people at this campus do you think get drunk on a given weekend?” The answer to this question (percentage of people getting drunk) is consistently much higher than the reality, so providing respondents with feedback (the correct answer) helps to correct their false perception of the social norm.⁵

Essentially, in certain situations, people think they know something about other people, and through this perception, they believe they know the societal norm. Motivation happens when the individual realizes they have falsely perceived the behaviour of others. Their false perceptions, which are correlated with an uptake of certain negative behaviours, are replaced with an accurate understanding of the real social norm, and as a result, individuals are more motivated to behave in the direction of the behavioural goal.

Normative feedback is proven to be highly effective in many scenarios and most evidence-based brief motivational interventions (one hour or less) include a normative feedback element. Our specific application of normative feedback is based on a paper by Dr. Nathaniel Geiger and his colleagues which used a measurement scale known as the Six Americas.^{6,7} Enviromentum has adapted this scale to the form of a normative feedback data-generating question (Figure 4) and asks participants two questions:

1. “What best describes your level of concern regarding climate change?”
2. “What best describes your perception of other young people’s concern regarding climate change?”



Figure 4. Normative Feedback Question

In this way, two key pieces of information used for normative feedback are generated: participants' individual perceptions, and the actual social norm.

Program Outcomes

As shown in the data from 243 young people, the majority of workshop participants perceived themselves as “concerned” or “cautious”. This is contrasted with their perception of their peers, which was most commonly indicated as “disengaged” and “dismissive” (two steps lower than their own level of concern). These results emerged not only in the whole group, but in all individual classes.

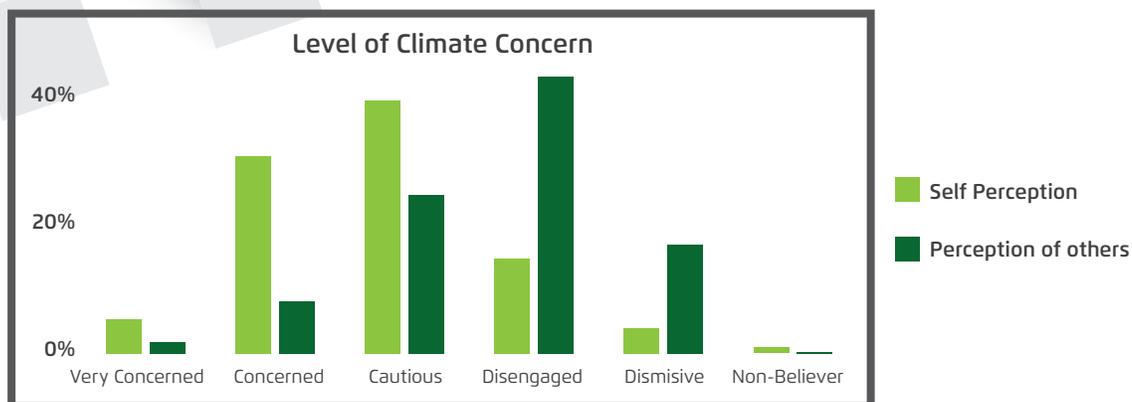
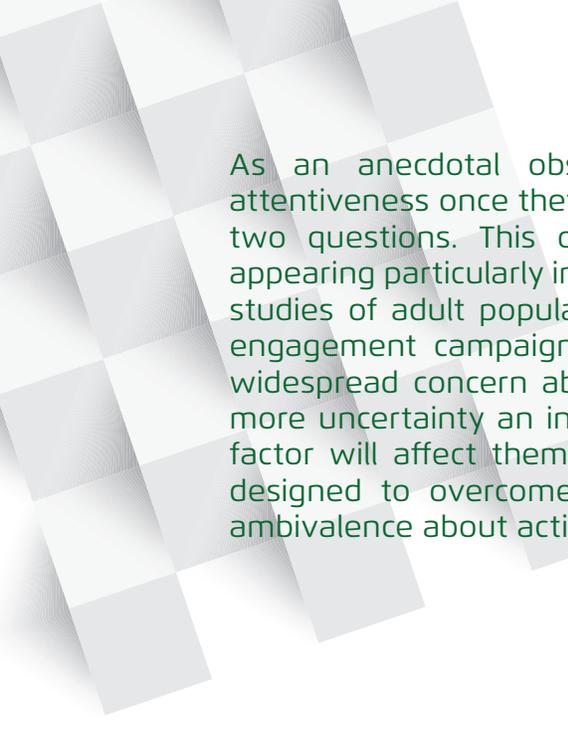


Figure 5. Normative Feedback Results

Discussion

Geiger and colleagues first diagnosed that there was a gap between individual's perceptions of themselves and their perceptions of others.⁶ This gap was referred to as “pluralistic ignorance”, and has resulted in self-silencing behaviours on climate change. In the workshop, after the two questions were individually answered by participants, the Enviromentum team added the data to the existing dataset and presented it to the students as a live update. **The goal of presenting this live data was to undo the pluralistic ignorance paradigm by helping the young people to overcome a feeling that others are disengaged from climate change and encourage them to have conversations on the topic.**

The data presentation was followed by a classroom discussion where the facilitator evoked responses from participants on the implications of their differing perceptions of themselves and their peers. The young people typically expressed that they seldom discussed climate change with peers, and the facilitator helped them to explore the implications of self-silencing behaviour.



As an anecdotal observation, participants often displayed very high levels of attentiveness once they were told they would see how their peers had responded to the two questions. This observation reinforces the power of social norms, and while appearing particularly important to this teenage cohort, it has also been observed in other studies of adult populations' perceptions of climate change.⁸ This suggests that public engagement campaigns could draw on and reinforce positive social norms, such as widespread concern about climate change. Furthermore, studies have shown that the more uncertainty an individual feels, the more likely that social proof as an influencing factor will affect them.⁴ This observation is highly applicable to developing strategies designed to overcome social paralysis and help people to resolve their feelings of ambivalence about acting on climate-related concerns.

5. Exploring Connections between Values & Climate Concerns

This chapter describes how Enviromentum uses a technique called develop discrepancy to explore and build stronger connections between individual values and climate concerns. The chapter discusses the insights generated from Enviromentum's analysis of these connections.

Method

A core feature of MI is the concept of priming an individual's values. A well known way to achieve this goal is to conduct a values card sort. These sorting activities locate power and responsibility in the individual to choose for themselves what is important. In the group setting of the Climate Conversations™ workshop, this priming exercise is delivered with a carefully crafted activity worksheet (Figure 6).

This activity primes both individual values as well as individual concerns about climate change. Each participant chooses the top five values that resonate with them, as well as their top five concerns about climate change. They are then asked to draw lines connecting the values and concerns they have selected which they feel are connected.

1 – Rank the top five options that best represent what you value in life.		2 – Choose five climate change effects that are most concerning for you.	
GOAL	DESCRIPTION	PLANETARY HEALTH	
Family	to have a happy, loving family	<ul style="list-style-type: none">● Loss of habitat● Invasive species● Ocean acidification● Water & air pollution	
Justice	to promote fair and equal treatment for all		
Contribution	to leave the world a better place		
Health	to be physically well and healthy		

Figure 6. A portion of the visioning worksheet used in Climate Conversations™

This exercise is a written version of a technique used in MI called develop discrepancy.¹ Developing discrepancy helps people to perceive the misalignment between their behavioural choices and personal values. This discrepancy manifests an emotional desire to change to be in greater alignment with one's own core values. This can serve as a powerful motivator for individuals to choose new behaviours that are in line with what they value the most. Experiences like these are highly memorable because they touch a person's deepest and most sincere goals in life. When new behaviours emerge as a result of aligning behaviours with values, the new behaviours are relapse-resistant. In addition, small steps in a positive direction can spill over into other behavioural choices (e.g. choosing to compost more can spill over into a greater likelihood to ride a bike more often).⁹

Program Outcomes

After the completion of the workshop series, as part of an internal evaluation, Enviromentum aggregated the data on the participants' selected values and climate concerns. Figures 7 and 8 show the prevalence of specific values and climate concerns in a group of 190 young people (the % of participants who selected these). The top five values were:

Family (86%), Health (74%), Success (50%), Fun (48%) and Safety (36%).

A second tier of values emerged as important but with less frequency:

Wealth (30%), Comfort (26%), Respect (25%) and Justice (22%).

Figure 8 shows that two climate concerns were vastly more concerning to workshop participants:

Water and air pollution (72%), Reduced availability of food and water (69%).

A second tier of concerns are:

Loss of habitat (44%), Economic recession & unemployment (42%), Increased cost / reduced availability of energy (41%).

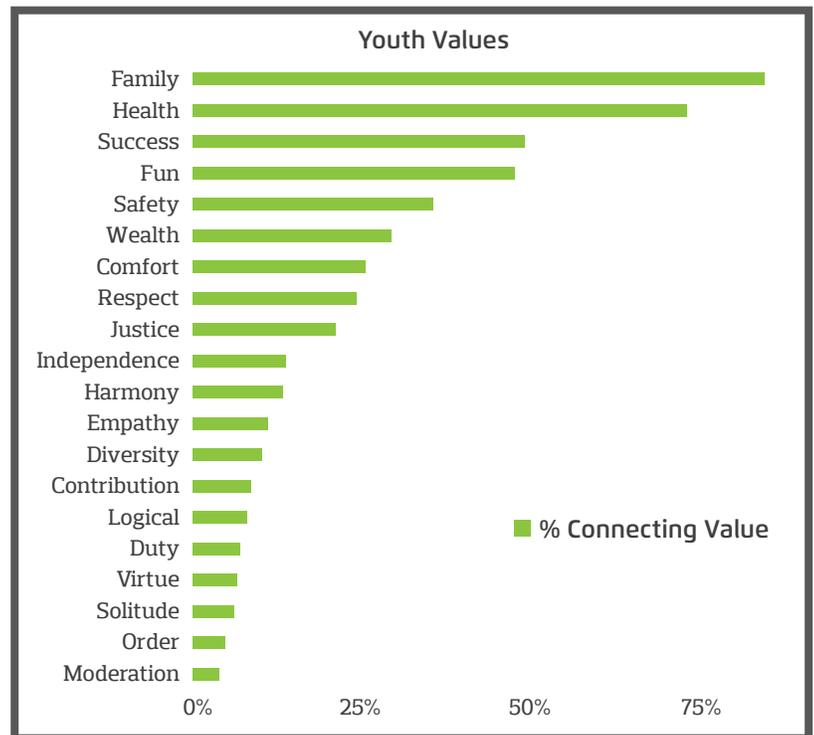


Figure 7. Youth Values

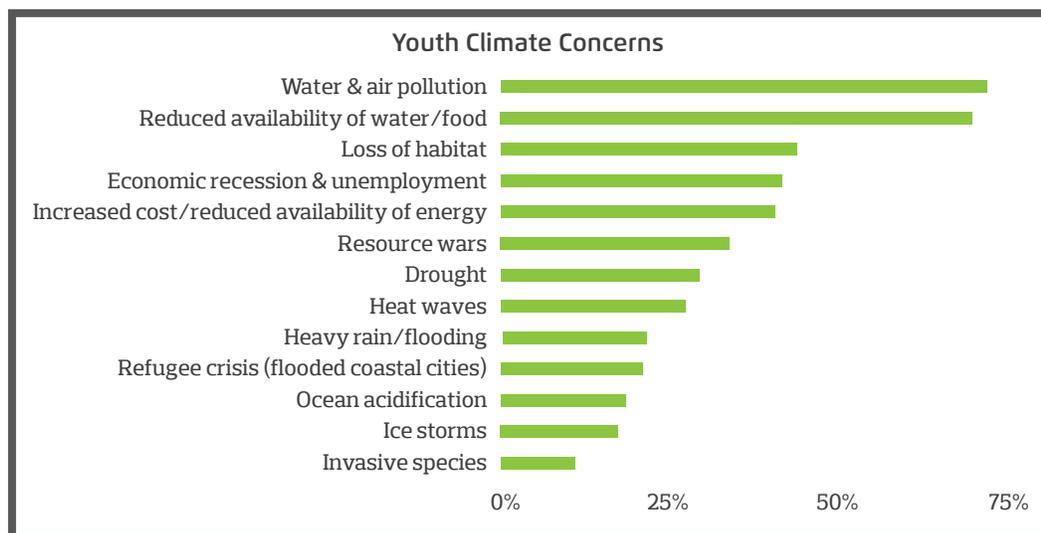


Figure 8. Youth Climate Concerns

Figure 9 shows the values that were most commonly linked to climate concerns (percent of participants who drew connections linking a specific value to any climate concern).

While family was the most selected value overall, health (53%) surpasses family (33%) in its likelihood to be connected to a climate change concern. Similarly, safety (25%) surpasses success (19%) and fun (20%) in connectedness to climate concerns.

Health is the value participants most commonly linked to climate concerns.

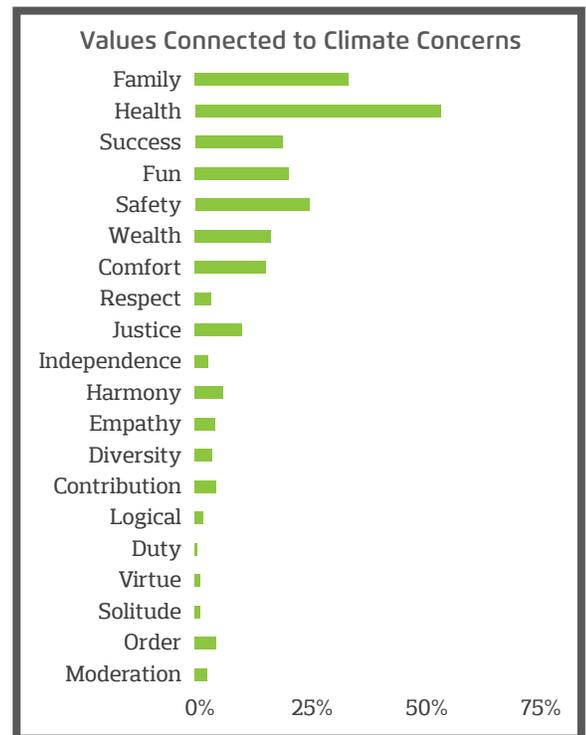


Figure 9. Value-Climate Concern Connectedness

Figure 10 shows the number of connections (i.e. lines drawn) between specific values and climate concerns, demonstrating the strongest pairings.

Chosen climate concern	Personal value	Draw connection	% Making connection
Water & air pollution	Health	61	32%
Reduced availability of water/food	Health	45	24%
Reduced availability of water/food	Family	27	14%
Economic recession & unemployment	Success	18	9%
Economic recession & unemployment	Wealth	16	8%
Increased cost/reduced availability of energy	Wealth	13	7%
Loss of habitat	Family	12	6%

Figure 10. Most Common Value-Climate Concern Pairings

In terms of the connections drawn by participants, there are multiple layers of data that can be explored. While only 8% of young people overall drew a connection between wealth and the climate concern economic recession & unemployment, among those who chose both of these options on their visioning sheet (Figure 6), 70% drew a connecting line. This makes the economic recession & unemployment to wealth connection the strongest connection revealed in our analysis in the context of engaging specific groups based on their top-rated values.

This final section reports the results of value-based **Potential Relevance Effectiveness (PRE)** communications scores. Enviromentum has developed a new scoring structure designed to reveal the most impactful intersections between personal values and climate concerns.

These scores are a relative weighting system that can be used to compare and select the framing of environmental messages to maximize audience impact.

Two scores are calculated (Figure 11). The general audience score (light green bars) illustrates the PRE of values-based messaging for a random group of people. The specific audience score (dark green bars) illustrates the PRE of values-based messaging for people who personally hold a specific value.

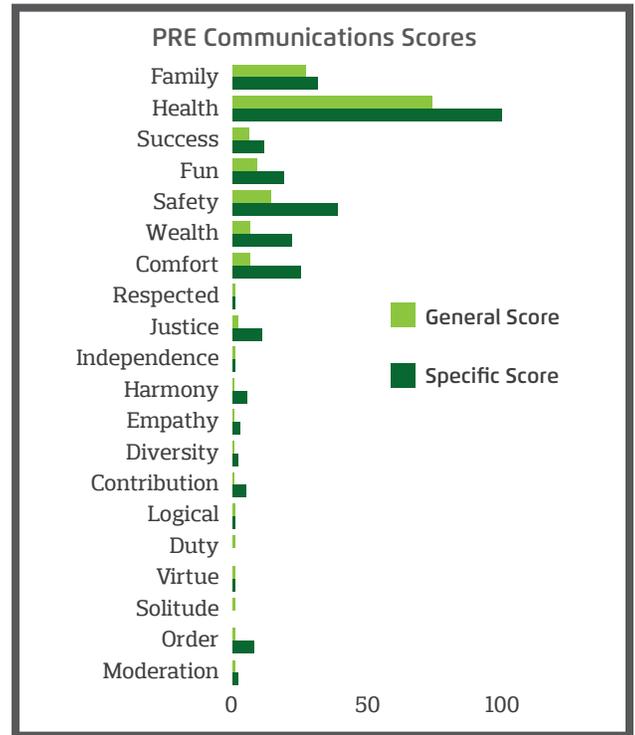
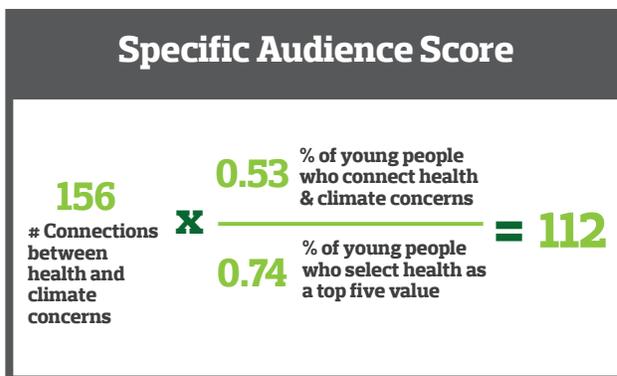
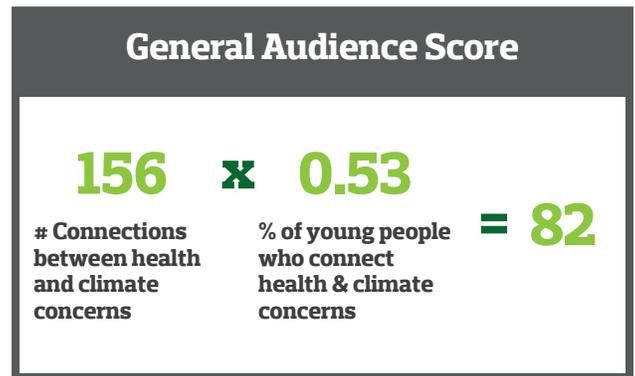


Figure 11. PRE Communications Scores

Each **general audience score** is calculated as follows: the raw number of connections made between an individual value and any climate concern is multiplied by the percent of people who connect that value.

This suggests that a health-based message on climate change will play well with the workshop's general audience relative to other values, such as logic, with a much lower score.



Additionally, **specific audience scores** were calculated to show how much more value could be obtained by engaging specific audiences (dark green bars).

This score factors in data from two steps of the workshop exercise: **personal values selected** and **values connected to climate concerns**.

This is calculated by multiplying the number of connections by the percent of people who connected the value **divided by the percent of people who chose that value** in the first step of the exercise.

The workshop results suggest that health is by far the most influential value in its connectedness to climate concerns. The specific audience score for safety is also noteworthy. When both safety and family are analyzed with this method (i.e. targeting an audience of people who hold each of these as core values), safety surpasses family in its score.

Discussion

It is important for environmental organizations to consider the values and concerns of different target audiences when building their theory of behavioural change or influence, much like other industries do. Enviromentum's framework and workshop findings may be useful in comparing and developing environmental or climate-focused messages and approaches.

For example, an environmental organization is considering launching a climate change mitigation campaign. On the table is a subway poster campaign that uses the question, "How would you like it if your home was melting around you?", in conjunction with an image of a polar bear stranded on a single piece of ice. This message, which is designed to pull on people's heartstrings and evoke concern for and empathy with the polar bear's circumstance, may motivate some individuals, but may not be optimal for a target group such as our workshop participants. As reflected in Figure 10, loss of habitat is connected less frequently to personally held values. Its most significant pairing is with family, which was only made by 6% of participants. Therefore, campaigns leveraging this concern may be unlikely to resonate with this group of young people or help drive a change in their behaviours.

Values-based insights can be used to develop maximally effective approaches for new initiatives. In this cohort of young people, health had the highest general audience score and was commonly connected to reduced availability of water and food by participants. Therefore, a case can be made for developing an initiative that pairs this value with this climate concern. For example:

- A program which teaches young people to grow healthy foods in community gardens could serve as an entry point for engaging them in solutions that address their climate concerns about the food system.
- A project that engages young people in conducting air quality monitoring with mobile units could build on the most commonly made connection between health to water and air pollution, potentially driving new ecologically-oriented behaviours.

Specific audience approaches have the potential to further optimize strategies with a niche focus. For example, safety scored fairly high as a value that was linked to climate concerns among individuals who specifically value safety. This suggests that a tailored strategy that builds on safety may be effective for this specific subpopulation, but less so for the workshop's general population (which would respond better to a health or family-focused campaign). In this instance, a niche campaign could be designed around building community emergency preparedness for extreme weather. Similarly, building a message directed at individuals who value wealth that is framed around the climate concern of economic recession, could be a very effective communications strategy.

6. Enhancing Autonomy through Personal Choices

This chapter describes how Enviromentum uses a climate impact spectrums tool to encourage personal reflection and autonomy building.

Method

Evoking an individual's current level of behaviour, and helping them to locate themselves on a spectrum or continuum, can be useful in motivating new behaviours. Rather than confronting people with an "all or nothing" choice, this can encourage an individual to build a plan and take achievable steps towards a goal. In the climate change context, care must be taken to be neither prescriptive of low-impact behaviours, nor complicit in high-impact behaviours.

Enviromentum has developed a customized tool with five spectrums that enables each workshop participant to locate their own realistic level of climate impact across a range of possibilities. The five spectrums are:

- Clothing
- Waste
- Transportation
- Food
- Encouraging Change

Each of these spectrums was selected as an area where young people have some amount of autonomy to choose new behaviours. The content of each spectrum has been designed specifically to reflect realistic choices that young people can make in their own lives. The spectrums are designed with the highest greenhouse gas (GHG) impacts on the left and the lowest impact choices on the right (see Figure 12).

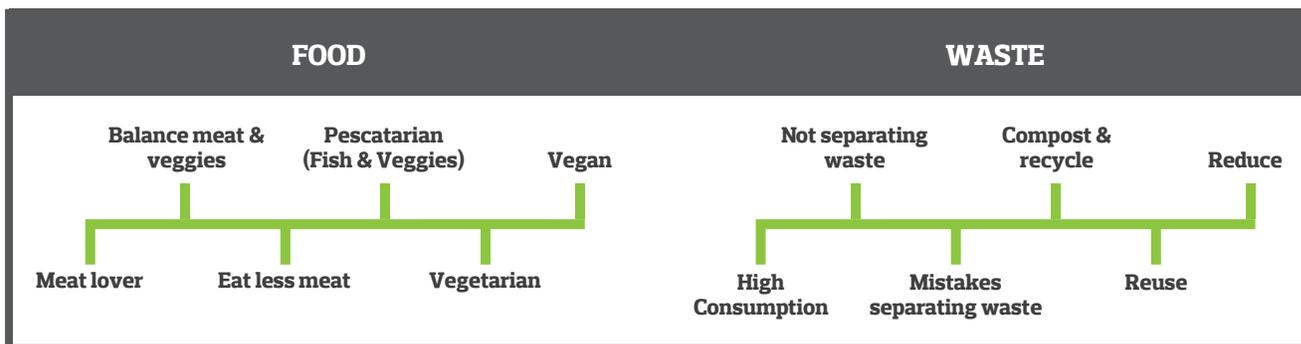


Figure 12. Food & Waste Spectrums

Each participant is asked to locate where they fall on the spectrum. Care is taken to normalize the spectrum activity with the introduction, "Some people may be on the left side eating large portions of meat at each meal. Some may be on the right side eating mostly fruit and vegetables and non-meat products. There is no right or wrong answer, just choose what best represents you along each spectrum."

This exercise allows each individual young person to judge their own behaviour, and removes the negative feelings associated with being judged by somebody else.

As the final step in the Climate Conversations™ workshop, students form teams to work through a creative problem solving model, helping them to explore climate mitigation options within their own lives. The creative problem solving exercise is explicitly tied to the spectrums activity, since each group chooses one spectrum, and builds a plan to “shift to the right” in their chosen category.

Program Outcomes

The focus of this exercise was to encourage young people to reflect on their own behaviours and stimulate thinking where they have the ability to make positive changes. As a relatively new element in the workshop, the spectrums have undergone some improvements to make them as relatable as possible.

Enviromentum has aggregated the data from this exercise to learn how the workshop participants perceive themselves. Some of the interesting outcomes from the last cohort of 190 students are described below.

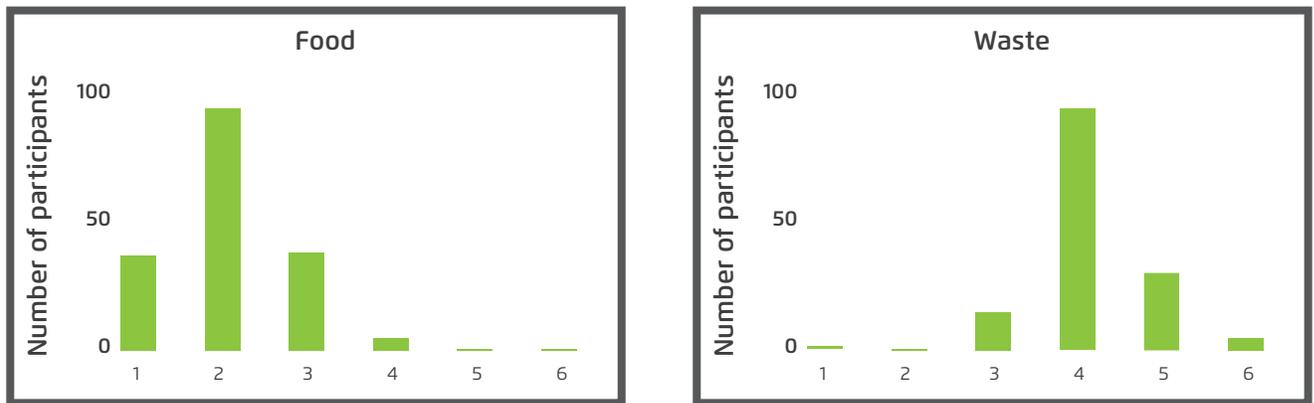


Figure 13. Food and Waste Results

Figure 13 shows the results of the food and waste spectrums. Enviromentum hypothesizes that the contrast between these results may reflect not only the self-rating of participants behaviours, but also the degree of autonomy these young people have to make personal choices in these areas of their lives.

Another notable result was observed on the encouraging change spectrum, where the self-rating was significantly polarized in one category: **feeling powerless on climate change**.

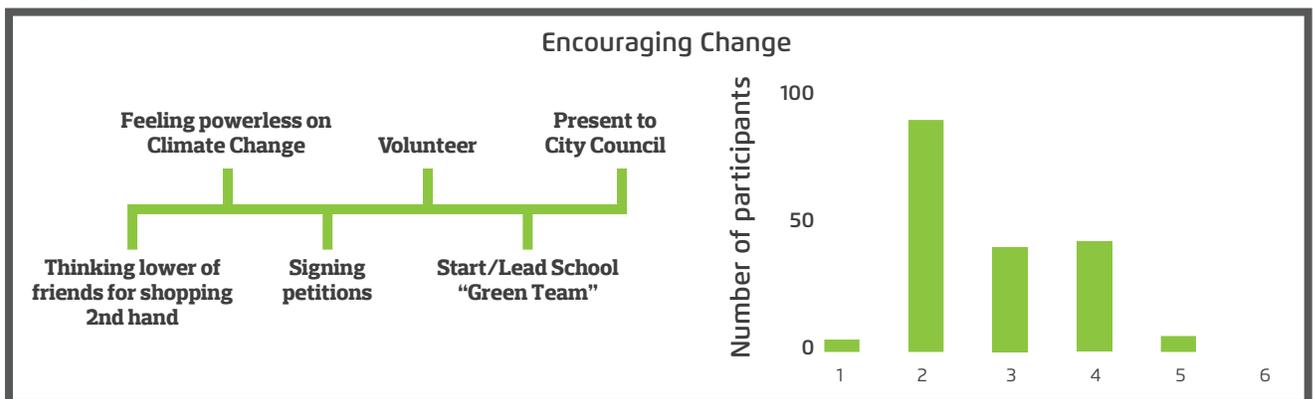


Figure 14. Encouraging Change Spectrum & Results

Discussion

Waste

The distribution on the waste spectrum points to a clear pattern. A large majority of workshop participants rated themselves at the category of compost and recycle. A notable number also selected reuse. Less than one percent of people identified with not sorting waste. This may demonstrate the existence of a social norm (sorting waste is expected), as well as potentially reflecting a higher level of autonomy over individual waste actions relative to other areas.

In general, people have a positive view of themselves in regards to their waste behaviours and sorting ability. This perception sits in contrast with macro-level data at the municipal level that demonstrates that waste diversion practice is routinely much worse than the City's waste system's diversion capacity. These results suggest that this is an important area to target with our workshop in order to help these behaviours to come in line with participants perceptions of themselves.

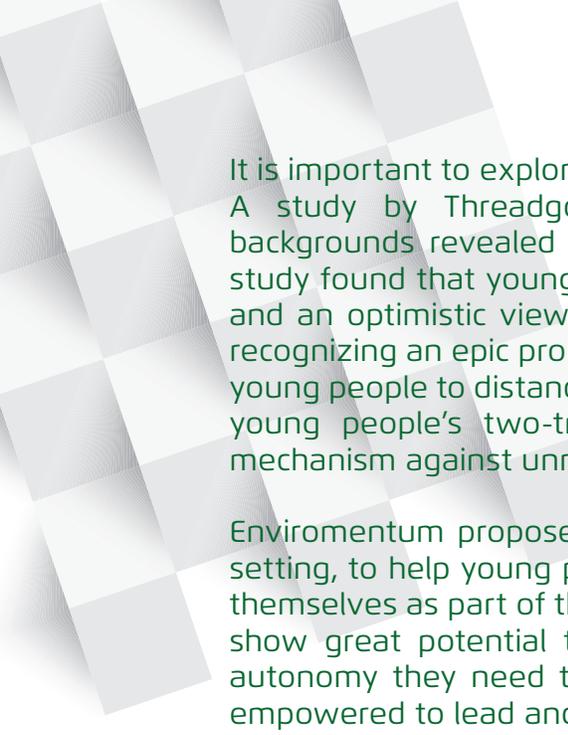
Food

In contrast to the waste spectrum, the food distribution was highly weighted toward the lower end of the spectrum. Half of participants self-assessed at balance of meat & veggies, with meat lover the next most frequent. Since this exercise was not established with a scientific design, it is not possible to isolate the different factors at play, including the extent to which these young people make food choices independently of their families. If the spectrum had specifically been scoped on lunch, it may have provided more insight on individual choice. Furthermore, food is both an accessible and complex entry point into climate impact discussions. Household food practice can be closely tied to culture and tradition, which are in turn, closely related to people's values.

The concept of a spectrum can be useful in examining food behaviours, even if individual behaviours start at the high GHG impact end. For example, promoting veganism may establish an expectation that is a larger step than most people can take at one point. This type of message may be more effective in targeting individuals who already eat less meat, rather than the whole population. In addition, espousing a confrontational or guilt-evoking approach, may actually decrease motivation to eat less meat. Approaches that focus on motivating people to switch part of their diet from meat to other foods may serve as a better entry point for behavioural change.

Encouraging Change

The high modality of the selection feeling powerless on climate change is an important observation. This highlights that youth participants feel a lack of autonomy to make meaningful changes on this global issue. This finding has been anecdotally echoed during Environmentum's discussions with young environmental leaders, who have specifically stated that they felt that the rigidity of in-school structures limited their ability to move forward on their environmental initiatives.



It is important to explore the implications of young people's feelings of disempowerment. A study by Threadgold with 324 young people across different socioeconomic backgrounds revealed "two-track thinking" among the young people in Australia. This study found that young people held the dual perceptions of an apocalyptic global future and an optimistic view of their own individual futures.¹⁰ It is possible to speculate that recognizing an epic problem exists, but not feeling adequate autonomy to act, might lead young people to distance themselves from both the problem and the solution. In this way, young people's two-track thinking may be considered as a psychological defense mechanism against unresolvable threats beyond their control.

Enviromentum proposes that more work is needed, both in and outside the classroom setting, to help young people to contextualize climate change in their own lives and see themselves as part of the solution. Evidence-based behavioural approaches, including MI, show great potential to help young people develop the confidence, motivation, and autonomy they need to take leadership on climate change. When young people feel empowered to lead and make change within their own capacity, their ability to cope with the realities of a changing climate can be significantly improved.

7. Looking to the Future: New Directions

Enviromentum is exploring new opportunities to scale our work and reach new audiences. As leaders in the emerging field of applying behavioural science to climate change mitigation, we are committed to further testing and analyzing the impact of our work through scientific evaluation and study. We are also eager to integrate learning from individual and community experiences, and listen attentively to the voices of young people to help shape our future directions.

Climate Conversations™ 2.0

Since the initial delivery of Climate Conversations™, Enviromentum has conducted a process of continuous improvement based on data analysis, observations in the classroom, exploration of new scientific literature and discussions with young environmental leaders. In 2017, Enviromentum hired three Youth Program Developers through a summer employment program for students. The Youth Program Developers first experienced the Climate Conversations™ workshop, and then reviewed the modules and made recommendations for improving content. They explored how concepts can be more effectively conveyed to a youth audience (both visually and through use of different language) and revised workshop exercises to better connect with how young people experience autonomy in their daily lives. In 2018, Enviromentum will implement Climate Conversations™ 2.0 and we hope to build greater linkages between the workshop and EcoSchool activities.

"As someone who approached climate change activism with depressing statistics and frustration, Enviromentum truly helped me not only become a better advocate, but a critical thinker who can approach situations from a place of empathy."

Geetha, environmental youth leader & Enviromentum summer student

Community Applications

Enviromentum also works with young people outside of the classroom setting. Our work with environmental youth leaders has been particularly rewarding. For young people who are highly motivated, Enviromentum's approach of encouraging autonomy, appears to be particularly effective in building their confidence and motivation to develop and implement their own climate-focused initiatives. In addition, since these young people are communicating environmental messages in their schools and communities, they are well positioned to use communication approaches informed by behavioural sciences.

Enviromentum has recently adapted elements of Climate Conversations™ to working with adult community organizers from diverse communities across the Greater Toronto Area. Workshop content was adapted to an adult audience and delivered together with other behavioural training modules, including an introduction to MI. The feedback to-date has been very positive, with participants reporting that the training built their confidence to lead climate-focused initiatives in their communities.

Climate Conversations™ Online

Based on Enviromentum's goal to reach as many young people as possible, we have begun work to develop an online, interactive version of Climate Conversations™. There is strong evidence in the health sciences literature that technological adaptations of motivational interviewing (TAMIs), evidence-based apps and other web-based interventions, can be just as effective as in-person interventions in achieving behavioural change.¹² Building on this knowledge base, we have envisioned a modular, algorithm-based program that provides a maximized, tailored experience for each individual user. The customized interactions will be developed based on specific behavioural techniques, and the research and development required to generate this experience will be complex. This platform will provide young people with a unique, motivational experience that is customized to their values and helps them to explore climate mitigation options within their own lives.

Research

Enviromentum wishes to develop collaborations with researchers and academics to further test and validate our applications of behavioural science in climate change programming. Building on an extensive body of evidence from the health sciences, we believe there is a great opportunity to scientifically demonstrate the effectiveness of behavioural tools and concepts in our sector. We are interested in deploying a range of quantitative and qualitative approaches to evaluate and improve our work. Enviromentum is specifically excited to explore the emerging research area of "spillover" behaviours to demonstrate the potential of small, positive steps to lead to other pro-environmental behavioural choices.⁹

Enviromentum ultimately aims to empower a generation of Canadians to integrate sustainable behaviours into their lives and lead a cultural transformation to an ecologically responsible society. We believe that this level of societal change is essential in order to prevent the worst impacts of climate change and build resilient, caring and prosperous communities. Behavioural science offers a powerful set of tools with which to do this work.

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