

The Canada 2080 workshops: An arts-based activity to support climate change education

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Abstract

Research has shown that youth are aware and concerned about climate change; however, traditional approaches to climate change education sometimes fail to adequately address learners' affective responses to the learning process. Between September 2023 and March 2024, 21 workshops were delivered based on principles of positive psychology, and arts-based methodologies (Art Hives) were delivered to students aged 9 to 25 in classrooms across Canada. The workshops aimed to foster an environment where students envisioned a positive future for themselves, their communities or their country, which they depicted through creative arts and imaginative storytelling. More than a thousand students participated ($n = 1067$) in a workshop, and nearly everyone ($n = 1064$ or 99 %) was able to complete the workshop, imagining potential solutions to climate change and ways in which the world might look or feel more hopeful in the future. This practice report shares the design and delivery of the workshop, offering reflections about how the workshops may be repeated or adapted in future based on teacher and facilitator feedback.

Résumé

Les études montrent que les jeunes sont sensibles aux changements climatiques. Les approches éducatives traditionnelles permettent d'éveiller leur conscience écologique. Cependant, elles ne tiennent souvent pas compte des réactions émotionnelles déclenchées par ce sujet. Entre septembre 2023 et mars 2024, partout au Canada, des apprenant·es de 9 à 25 ans ont participé à un atelier fondé sur les principes de la psychologie positive et les méthodologies basées sur les arts (ruches d'art). Dans le cadre de 21 ateliers, les jeunes ont imaginé un avenir positif pour eux-mêmes, leur communauté ou leur pays, par le truchement des arts et du récit oral. Plus d'un millier de personnes ont participé ($n = 1\,067$) et presque toutes ($n = 1\,064$, soit 99 %) ont terminé l'atelier : elles ont réussi à concevoir des solutions aux changements climatiques et des perspectives prometteuses pour l'avenir. Le rapport détaille la conception et la prestation de l'atelier afin qu'il puisse être reproduit, ainsi que des pistes d'adaptation suggérées par les équipes d'enseignement et d'animation.

Keywords: climate change education, arts-based interventions, storytelling, workshops, classroom, future

Context

In Canada, mental health diagnoses associated with concern about climate change, such as solastalgia and eco-anxiety, are on the rise among young people (Galway, 2025; Galway & Field, 2023; Rosenbaum & Levitt, 2023). Despite the efforts of many parents to shield their children from the climate crisis (Graham et al., 2025), a 2024 review revealed that adolescents are experiencing eco-anxiety alongside clinical depression and sustained strong emotions like grief, sadness, and fear, due to strong emotional attachment with the natural environment coupled with heightened awareness about climate change (Mondal et al., 2024). To support young people to better understand, cope with, and act on the climate crisis, climate change education (CCE) at all levels of schooling is necessary (Aeschbach et al., 2025).

Traditional approaches to CCE have predominantly focused on the climate science (Nepraš et al., 2022), paying less attention to the social justice and political dimensions that undergird the issue. In the Canadian context, most provinces (which govern the education system and dictate the curriculum) include climate education in the science curriculum, but not in other courses, and generally focus on three core topics: “physical climate mechanisms (‘It’s climate’), observed increase in temperature (‘It’s warming’), [and] anthropogenic causes of warming (‘It’s us’)”, typically offering little content or instruction on the impacts of climate change, the possible solutions, or the affective dimensions of the crisis (Wynes & Nicholas, 2019, p.4).

Further, researchers have noted that due to the significant negative consequences of the climate crisis, learning about the crisis can take an emotional toll on the learner (Field et al., 2023; Diffey et al., 2022), with Sarah Jaquette Ray (2018) likening it to an “affective roller coaster” (p. 303). Some researchers and educators have stressed that CCE is an affective process as much as it’s a cognitive process, and that young people’s affective responses to climate change are often derived from the seriousness of the problem (Burkholder et al., 2017; Ojala, 2015). Put simply, the better a young person understands the climate crisis, the more likely they are to experience complex and challenging emotions in response. These wide-ranging emotional responses should be anticipated by educators and can be mitigated through the use of storytelling that is “affective and connective,” targeting the learner’s affective process (Verlie, 2021) and through the promotion of constructive coping strategies (Brown et al., 2023) such as introducing solutions and empowering students to act, even if in small ways (Ojala, 2016). In this practice report, we introduce a new, classroom-based workshop, leveraging positive psychology approaches (Seligman & Csikszentmihalyi, 2000; Csikszentmihalyi et al., 2014) and arts-based methods (Moon, 2016) to support students to learn about the climate crisis through a solutions-oriented framing.

Designed as a break from ordinary science-based class discussions on climate change, which tend to ignore – or sometimes inadvertently exacerbate

– negative affective responses to the crisis (Diffey et al., 2022), the Canada 2080 workshops were brief (1-2 hours), positively framed, and led by trained external facilitators to allow teachers the opportunity to participate too. The workshops invited students to envision their future selves and the world they would be a part of in 2080 through a positive lens, then depict that future in a work of art.

Intervention Approach

Choosing a Positive Psychology Approach

Positive psychology, founded in 1997 by Mikaly Csikszentmihalyi and Martin Seligman offers an alternative to problem-centred approaches so common in climate change education. By focusing on “what goes right in life, from birth to death, and at all stops in between” (Kristjánsson, 2012; Peterson, 2006), positive psychology interventions (PPIs) are characterized as programs which elicit or center positive feelings, behaviours, and cognitions (Sin & Lyubomirsky, 2009).

It should be noted that several scholars have argued for and demonstrated the benefits of engaging hard or negative emotions and psychologically painful experiences in dealing with topics like climate change (e.g. Blenkinsop & Kuchta, 2024). For example, Haraway (2016) argued that we need to “stay with the trouble” of living on a damaged earth; however, she balances this with an emphasis on understanding nonhuman beings in complex ways to build more liveable futures. Here, the focus on codesigning healthy liveable futures with other beings requires some degree of optimism, while holding space for the real and embodied pain of the present condition. Others have noted that overly or exclusively positive approaches to climate education can lead students to feel numb or to disengage from climate action (Blenkinsop & Kuchta, 2024, p. 71). We do not contest the importance of engaging the full range of emotional responses to the crisis and align with calls from Blenkinsop and Kuchta (2024), and Macy (2012; Macy & Johnson, 2021) and others to support students to experience and cope with the full affective roller-coaster of climate change education.

Addressing a range of emotions is especially relevant given that different emotions can be useful in coping with and addressing climate change (Lambert et al., 2021). A meta-analysis by Bouman et al. (2020) revealed that negative emotions (e.g., grief, fear, guilt) can be harnessed for climate action, while another systematic analysis of published literature by Schneider et al. (2021) showed that positive emotions can act as antecedents to climate change engagement as well as a result of this engagement.

Notably, PPIs do not imply avoiding negative emotional responses emerging from students’ awareness of climate change or the polycrisis. Rather, PPIs acknowledge that strong negative emotions are often a healthy response to scary,

sad, or otherwise challenging phenomena. Following in the tradition of PPIs which have addressed climate change in other contexts (Malboeuf-Hurtubise et al., 2024), affective difficulties related to the climate crisis are acknowledged, and participants are supported to cope with the issue by identifying strengths, resources, opportunities, and fostering positive emotions (Lomas & Ivztan, 2016; Lomas et al., 2021, Wong, 2011). This approach offers students a brief reprieve from the negative emotions so endemic in climate change education.

Importantly, we do not advocate for PPIs as the *only* approach to CCE, but rather, an important tool that can be leveraged to alleviate – even if only temporarily – the affective strain on children and teens relating to the climate crisis. We also emphasize that the time framing of each lesson or intervention is relevant to its design. In particular, asking young people to focus on positive emotions when thinking or learning about the present moment, which is rife with natural disasters and widespread human and nonhuman suffering (IPCC, 2023), risks discrediting or diminishing the justified negative feelings students may experience in relation to the crisis. However, in a future-oriented intervention such as the one described in this report, where the emphasis is placed on *what could be*, rather than what is, a more positive and optimistic orientation can sit alongside the full range of affective responses to the present condition and drive constructive conversations about the “liveable futures” Harraway described in her work (2016).

Our choice to adopt PPIs is further supported by the evidence that these have proven successful in classroom settings. Lea Waters’ (2011) review of school-based PPIs in Australia showed the effectiveness of a model focused on positive emotions, engagement, relationships, meaning, and accomplishments (‘PERMA’ model) as the basis of effective interventions. Positive education fosters academic achievement while emphasizing well-being (Waters, 2011). PPIs which focus on hope and character strengths can address the whole student and promote more prosocial behaviours. This focus on hope and strengths is important as Gillham et al. (2002) showed that garnering hope may be the most significant contributor to improving well-being, increasing resiliency, and helping persons recover from setbacks and stress, as well as creating the capacity to seek new opportunities and growth. In another example, the Penn Resiliency Programme (PRP) demonstrated the potential for PPIs to reduce feelings of depression, hopelessness and anxiety (Seligman et al., 2009) – all emotions which are common responses to learning about the climate crisis. In sum, intentionally designed PPIs have strong potential to produce positive outcomes for learners engaging difficult topics.

Art Hives

The methodological approach we applied to our workshop design was modeled after Art Hives. The “Art Hive,” a community arts-based intervention developed by Concordia University professor Janis Timm-Bottos for arts therapy purposes,

champions individuals from all backgrounds as artists and invites them to participate in free and accessible art sessions, which “experiment with ideas through humble inquiry and arts-based research” (Art Hives, nd). In the context of climate change, art-based approaches such as art hives have been transformative in the way they help participants develop a sense of agency in regards to our collective future through the practice of imagination and creation (Galafassi et al., 2018). Our team chose to adopt this format, combining communal interventions with positive psychology principles to create a classroom workshop that offered students the opportunity to reflect on social issues and the existential questions that accompany the climate crisis, while working through their affective responses through the making of art.

Intervention Delivery

Between September 2023 and March 2024, we conducted 21 workshops in 16 schools (or universities) from Corner Brook, NL to Whitehorse, YK (see Table 1). Schools and classes were selected for the workshops based on interest (following a general invitation sent to school board contacts in each destination) and to maximize diversity in the sample of classes (i.e., different grades, a mix of rural and urban schools, a mix of public, private, and Catholic schools, and a mix of classes – ranging from history to science to art). Workshops were scheduled during the school day in a class period of the host teacher’s choosing. All participants (or their parents, for minors) signed consent forms which included agreement to participate in the workshop, be photographed or video-recorded by our team during the session, and to have our team collect and keep the artwork produced at the end of the session.

Prior to starting the tour of Canada to conduct these workshops, the workshop structure was piloted with three school groups in the United Kingdom and one in Canada. The pilots revealed minor flaws in the original workshop design (e.g., amount of time needed, types of art media that would be most interesting to young people), and offered the workshop facilitators a chance to iterate and improve the intervention, including the script used to introduce the workshop, the ice-breakers, and the music being played in the room.

Intervention Structure

The Canada 2080 Workshops were delivered by the first and second authors, in classrooms during the school day, typically for one or two class periods. The duration ranged from 60-180 minutes. At the beginning of the session, the facilitators would introduce themselves and the workshop, offering the students a chance to get to know them and build rapport. To ensure participants understood what their parents had signed on the consent forms, in the introduction of each

	Location	School Type	Grade	Class subject
1	Beechy, SK	Public elementary school	7/8	Science
2	Calgary, AB	Public high school	11	Art
3	Charlottetown, PEI	Public high school	12	Oceanography
4	Corner Brook, NL	Catholic high school	10/11	Science
5	Fredericton, NB	Public high school	9	Social studies
6	Fredericton, NB	Public high school	10/11	Art
7	Hamilton, ON	University	undergrad	Health sciences
8	Montreal, QC	Public high school	11	Science
9	St Peter's Bay, PEI	University	grad	Island studies
10	Sydney, NS	Public high school	11	Sociology
11	Toronto, ON	Public high school	10/11	Art
12	Toronto, ON	University	undergrad	Research methods
13	Toronto, ON	University	undergrad	Kinesiology
14	West Vancouver, BC	Public elementary school	6	Science
15	West Vancouver, BC	Public elementary school	5/6	Art
16	Whitehorse, YK	Public high school	11/12	Social Justice
17	Whitehorse, YK	Catholic elementary school	7	Art
18	Whitehorse, YK	Catholic elementary school	8	Art
19	Winnipeg, MB	Public high school	10	Science
20	Yellowknife, NT	Catholic high school	8/9	Art
21	Yellowknife, NT	Catholic high school	11/12	Art

Table 1. Descriptive of the schools and classes that hosted workshops

workshop, facilitators explained the outline of the session and requested verbal consent (or a “show of hands,” “thumbs up”) from students to confirm they agreed to participate, be photographed or filmed (we respected anybody’s wishes to abstain from this), and to have their work collected at the end. Then, depending on the age of the group and whether their teachers had discussed the workshop with the group ahead of time, one of two ice-breakers were run. For each icebreaker, students were given a colourful cue card and a wax crayon.

The flip the script icebreaker: For the first minute of the exercise, students were invited to draw a current issue (e.g., from the polycrisis) or icons that referenced the issue. Then, students flipped the card over to reflect on ways the issue could be solved. The intention was twofold: to encourage students not to worry too much about the aesthetic results, and to have them think directly about the multiple narratives of the polycrisis. Once the students completed this task, we followed up with a group discussion about the issues they wanted to tackle, celebrating the students’ diverse and innovative responses and ability to

quickly come up with tangible ideas. By placing the emphasis on their ability to problem-solve, students began focusing on a range of solutions. This icebreaker was most suitable for groups which did not have a chance to discuss the topic of the workshop ahead of time to quick start the optimistic future-building efforts of the workshop.

The happy memory icebreaker: Students were given two minutes to draw an image of something that represented a good memory. This icebreaker was intended to put students in a good mood, and prepare them to think positively about the future. Then, they had a moment to share the memory with their group (or the person sitting next to them, if there were no clear groupings or tables of students). This icebreaker was most suitable for groups that did discuss the topic with their teacher ahead of time because they had already thought about problems-and-solutions. So, the purpose of the icebreaker shifted to encouraging self-expression and storytelling through artistic creation and focusing on positive outlooks.

Once the icebreakers were complete, students were invited to begin thinking about the future, and specifically the year 2080. To help students imagine that year specifically, facilitators would ask students how old they would be in 2080, and what their own lives might look like at that point (most will be retirees and possibly grandparents in the age range of 60-80). Once the students had a grasp on the timeline, they would be invited to take a piece of craft paper (white, half-letter size, or A5) and any arts materials they wanted from a selection of acrylic paints, watercolors, markers, crayons, pencils, pastels, and collage material, to depict life in the year 2080 assuming it is free from polycrisis. This depiction could be done at any scale (individual, community, city/town, or national), in any art-style (concrete or abstract imagery, poetry, short-story, etc.).

Students were informed of three things to keep in mind when making their art. First, it had to be Canada-based (or turtle-island more broadly), but not focused on the whole planet, nor somewhere foreign, outer-space, or an imaginary land. Second, whatever they depicted had to be something they considered positive (no apocalyptic scenes). And third, the work did not have to focus on them as individuals, it could broaden to include their communities, cities/towns, provinces/territories, or the whole nation.

Finally, students were told before starting that the goal of the session was to collectively illustrate a future that Canadians would be motivated to run towards, instead of resigning ourselves to the certainty of negative outcomes. Students were also informed that their work would be collected at the end of the session (if they were willing to give it to the facilitators) to be shown in a public gallery exhibit called "Canada 2080."

Students spent between 45 and 165 minutes creating their artwork. Depending on the length of the session, typically they would be given the full time minus 15 min for introductions, icebreakers, and wrap-up. Some used paint, others chose to draw, and a few made a collage or wrote poetry.

Facilitators played pre-recorded music during the art-making session, using a playlist curated specifically for the project by a Quebecoise artist and DJ (Georgette¹), who chose to feature all Canadian music in the playlist. Facilitators invited students to share what they were working on with their peers, if that was their choice. Alternatively, students were equally supported if they chose to sit quietly and create alone.

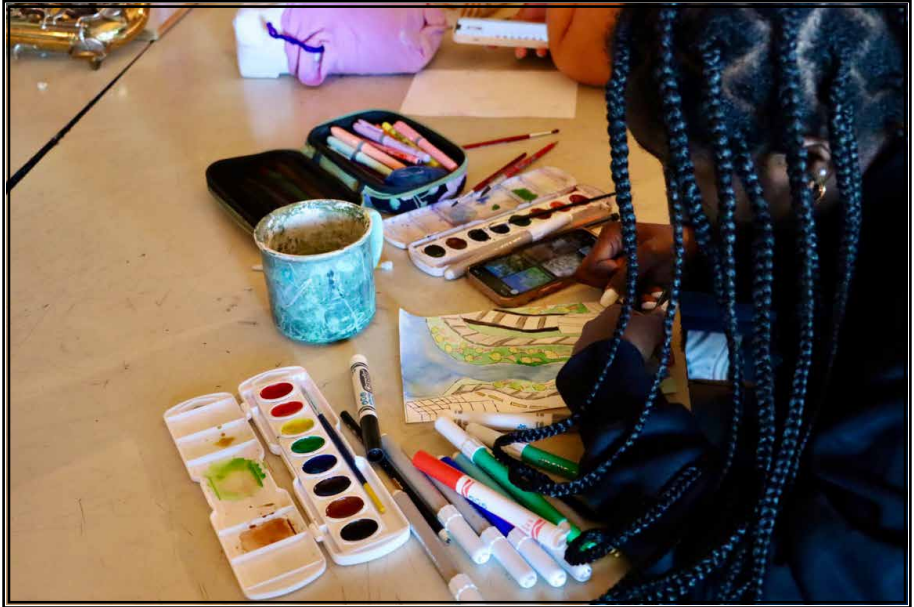


Figure 1. Photo of student participating in the project in New Brunswick

Toward the end of the session, as students finished their artwork, they were invited to flip over the page and write an artist's statement on the back, underlining any keywords that represented the intention of their work. If students wanted to share their ideas and their work with the class, they were given the opportunity to do so. Typically, younger groups (grades 5-8), and university students were more willing to share their work with others than high school aged groups. At the end of each session, the artwork was collected in envelopes labelled with the name of the teacher, class, and school.

To help capture the unique experiences and ideas of each session, a local professional artist was often invited to participate through observation, note-taking, and discussion with participants, and to eventually create a piece of their own, which we commissioned to anchor the gallery showing of all the students' work. Specifically, the artists took inspiration from the students' pieces and created a composite image based on those ideas in the artists' medium of choice.

Professional artists who attended and participated in the sessions were given 60 days to complete their work. All artists were paid for their time and efforts, at standard commission rates, and reimbursed for shipping costs to send the original works to the researchers. Composite images were a minimum of 24 x 24 inches in size and a maximum of 36 x 36 inches, with most landing at 24 x 30 inches (in either portrait or landscape). This provided some consistency in the sizing so that when the collection was shown in gallery settings, there would be cohesion regarding framing options.



Figure 2. Promotional poster for the first gallery showing in Toronto, Canada

Facilitator Observations and Feedback Received

As facilitators of this project, we documented the process of workshop design, delivery, and iterations/changes in daily note-taking and ongoing communication, in addition to keeping meeting minutes of our team meetings which covered logistics, planning, and debriefs of each session. With permission from participants' parents (included in the consent forms) we also documented the sessions through videos and photography, which we later referenced when checking our notes and memos to ensure accuracy. These cross-checks between notes and photos/videos were done on a weekly basis, limiting the time which had elapsed since the sessions.

Across Canada, 1067 students participated in 21 sessions. In total, just over 1000 pieces of art were collected (some students didn't finish their work during the session or felt strongly about keeping their piece). Twelve professional artists were engaged to create composite works, one from each province, plus Yukon and Northwest Territories.

A curated version of the collection was displayed at the Papermill Gallery, Toronto Canada in August/September 2024, attracting several hundred visitors in foot traffic. A second public showing was held in September/October 2024 at McMaster University's Wilson Hall, Hamilton, Canada.

Students' Perspectives

We did not formally solicit feedback from students on this project as we wanted to allow the full time in-class for students to complete the work, and we were more interested in the process (for both us as facilitators and the students) of running these workshops than in the specific art being produced. We note that future work might conduct an analysis of the artwork produced; however, that is beyond the scope of this practice report.

We did ask teachers to report back to us on any feedback they received from students, and overwhelmingly, the feedback was positive. We also had some students in high school and university groups reach out to the facilitators directly to thank them for coming and for offering the workshop. Examples of responses received directly are included here:

"I haven't really thought about it [climate change] like that before, but this made it easier to wrap my head around it and not get bogged down in the bad news."
(12th grade student from Charlottetown, Prince Edward Island)

"Art class is usually just about how to make art, not about what the art is actually supposed to show, so this was different. But I really liked it. And it was cool to see what other people did." (12th grade student from Charlottetown, Prince Edward Island)

“This stuff is on my feed a lot, and I’ve taken classes that touch on some of this stuff, but I hadn’t drawn it before, and that felt cathartic even though I have no art skills and it turned out pretty bad.” (2nd year university student at University of Toronto)

The limited student feedback we received suggests that at least for these students, the workshops were successful in helping students to understand and address the topics of climate change, social injustice, health and economic crises. Based on this informal student feedback, it seems the positive lens shifted the affective landscape typically associated with learning about some of these issues. Students referenced a range of affective responses to the workshop, including catharsis, relief, and joy, even if that was simply linked to a more pleasant way to spend an hour than another typical class. As one 10th grader put it, “this was so much better than the math class I was supposed to have this period.”

Teachers’ Perspectives

In the weeks following each workshop, emails were sent to the principals, teachers, and university professors whose classes had participated, inviting them to provide critical feedback on the workshop and to share any follow-up discussions they had with their students after the workshop. Here again, feedback was overwhelmingly positive, and no negative or constructive feedback was received with the exception of three comments which expressed that they wished they had more time (two teachers), and that they regretted not having invited more students to participate (one principal).

“I mean, they’re sixth graders, so I don’t think they’ve really considered many of these issues before except for the wildfires and heat, because it’s so obvious out here. And we talk about it in science class, but this project really drove it home for them, and in a way that made them feel empowered to address it and find solutions.” (Teacher in West Vancouver, 6th grade)

“Thank you for showing interest in my students’ work! We don’t often get people coming up to visit this part of Canada, so having you here and giving them the opportunity to think about some of these issues differently was really refreshing and led to quite a few conversations in our class in the days following the session. Overall, they really enjoyed it, and I think it made a difference. Especially for some of our quieter ones who don’t speak up in class but were really engaged by this activity. They really shone.” (Teacher in Northwest Territories, 11th and 12th grades)

“These kids, they have a lot of challenges. It can be complicated to get their attention and hold it for even 10 minutes, let alone an hour. But they were locked in the whole time. And they all were able to do it, and stay positive for the hour, and engage. It was cool.” (Teacher in Manitoba, 10th grade)

Artists' Perspectives

When each artist sent us their final piece, we invited them to share an artist's statement about the work which would be shown with the piece (online and in galleries). They were also invited to provide critical feedback about the process of attending the workshop, engaging with students, and creating their own composite artwork after the session. Again, feedback was overwhelmingly positive.



Figure 3. Picture of FLOURISH, a painting by Kaydence Clarke, based on ideas from students in Corner Brook, Newfoundland

“Being a part of this workshop was such a privilege! It was a lovely experience to be able to see the students visually document their ideas on what they would like to see in our world/country in the future. I was pleased to see some ideas such as clean oceans, peace amongst world leaders, and an improved climate. After the workshop took place, I was inspired to take some visual symbols from

a handful of the students ideas/drawings and incorporate them all together into one large artwork. As a whole, I loved this project. Both the workshop and working on the painting was such a delightful experience and I can't wait to see what the other students and artists have come up with.” (Kaydence Clarke, Artist from Newfoundland and Labrador)



Figure 4. Picture of needle-felted tapestry PRAIRIE OPTIMISM by Mary French, based on ideas from students in Beechy, Saskatchewan

“Beechy is a farming community, and many of the ideas that students had were about weather, crops, and farms. The love for the land and the rural way of life was obvious, and many students plan to stay in the community to farm. Since farming depends very much on weather, climate change could present significant challenges, but the students were optimistic. Some predicted more rain, which would be a boon to this area, which is, historically, very dry. Others hoped for a reversal of the current trend toward ever-larger farms and a declining rural population, predicting that in the future, there would be more farms and farmers. I thoroughly enjoyed getting a peek into the students' thoughts, and I was, frankly, surprised and encouraged by their positive and hopeful vision for the future.” (Mary French, Artist from Saskatchewan)



Figure 5. Design titled HEALTHY PLANET, HEALTHY PEOPLE by Tanya Handley, based on ideas from students in Whitehorse, Yellowknife

“The more I thought about the kid’s ideas, the more I realized that they had followed the instructions even better than I had first understood them. They were to imagine a world where we had solved the climate crisis, what would our world look like then. Once that crisis was averted, they envisioned us working on people issues, making individuals’ lives happier and healthier, mentally and physically.” (Tanya Handley, Artist from Yukon)

Facilitators’ Perspectives

From our perspective as workshop facilitators, a few lessons were gleaned in early iterations of the workshop that made it go more smoothly in later iterations. For example, we learned that the longer sessions (90-120 minutes) tended to produce better results in terms of the number of students who completed their piece, and the level of engagement students showed to the topics. In sessions that ended after 60 minutes, students appeared somewhat rushed and a few expressed frustration at not having enough time to complete their work. Some of these sessions also yielded more surface-level responses, as the time allotted did not allow us to explore topics or associated feelings in greater depth. Based on this, we realised that increasing the length of the workshop – ideally between 90 and 120 minutes – would benefit the creative process.

It also became apparent early in the process, that being able to offer a range of media options was important to ensuring engagement. While watercolor

and pastels proved popular, collage was less popular or perhaps required more concrete imagery to spark ideas. Most students chose to work with markers or pencils as it seemed most familiar given the time restrictions. Still, the choice of media reliably generated excitement among the student groups and reinforced the underlying messaging of the workshop around students having the agency to craft their own futures – literally and figuratively.

Some of the workshop structure had to be finessed over a few pilots and the first couple workshops in this series. For instance, after conducting three pilot workshops with letter-sized (A4) paper for the participants' art, we pivoted to a half-letter sized (A5) paper by cutting the sheets in half. This proved less intimidating for participants as they had less area to cover with their work, and thus consistently generated complete pieces. Additionally, we experimented early-on with the icebreakers: whether to do just one, or both, and which one to use with which age group. We also chose to forgo the icebreaker activity in one workshop due to time constraints and felt it was a *miss* – students struggled to get into the right headspace to think of positive visions of the future. We also experimented with how to help students understand the timeline (2080), and it took a few different prompts before we landed on the “how old will you be in 2080?” question, which really seemed to help the student envision themselves in the future, and frame the task in a more personal and tangible way.

Additionally, working with professional artists in the room was a huge boost to the project, for both the students – who benefited from an artistic role model and someone who could provide immediate support for their work – and the teachers, who enjoyed having an extra set of hands in the room to help guide the students and share the load with the two facilitators.

We perceived that room configurations had some effect on the outcomes in the workshops. We found that having students sit together at tables was more fruitful for discussions than having them sit alone at desks in rows. This isn't always possible to facilitate depending on the class and time constraints, but this is a recommendation we provide to teachers who are interested in running this workshop in their own classes, and to teachers whom we visit in future.

Seeing teachers engage with the workshop was one of the most interesting (and unintended) developments of the workshop. Some were wonderful artists themselves and produced beautiful and complex images. Many expressed how nice it was to have a break from teaching; some noted that they would be using this method again in their classes to teach challenging topics. Building rapport with teachers and relating to their struggles (as fellow educators) was also a meaningful part of this process for the facilitators.

Some students, during the introduction of the workshop, expressed feelings of overwhelm with how many issues needed solving. Some were able to articulate their feelings of fear, grief, dread, and hopelessness which arose toward the topics being raised. While the majority of students were able to harness their feelings in a positive way, a few struggled more visibly in the workshop and

required more direct one-on-one engagement with facilitators to solidify their ideas. Following a PPI approach, and with support from the teacher who knew the students better, we (as facilitators) would engage students who struggled with this by inviting them to talk to us about their views and experiences in small groups or one-on-one with a facilitator or teacher, ask questions about how they felt about these experiences, and as they felt comfortable, support them in moving toward considering solutions. For instance, in the Northwest Territories, many students had personal traumatic experiences with wildfire (e.g., evacuations, near-miss home loss, or actual home loss). In response, a longer small-group discussion was led by the lead facilitator and the teacher with those students who shared these experiences and emotional responses. In the small group, we invited students to share their experiences, if they felt comfortable doing so, and then invited students to consider what might help them to feel safe, supported, and better prepared in future. The core idea that emerged as a solution was fire-safe and universal housing for people in the Territory – which was what two students chose to depict in their art.

Finally, while a full content analysis of the art is beyond the scope of this practice report, here, we describe a few stand-out observations we noticed as facilitators. In the artists' statements describing their work (professional artists and older student participants), some common themes emerged, centred around animal welfare and stronger animal-human relationships, less pollution, and greener cities with fewer vehicles. Most works depicted more concrete ideas (i.e., a pedestrian street with no cars and plenty of tree cover) while few were abstract (i.e., a watercolor painting that blurred pastel reds, pinks, and yellows, which the student described in their statement as "the feeling of warmth we'll feel in the future because we'll be more happy").

Discussion and Limitations

Following 21 iterations of the workshops with different age groups, classroom environments (science class, art class, university courses), and geographies across Canada, the Canada 2080 Workshops were well received. Based on the feedback we collected from artists and teachers and the interactions we had in classes as facilitators, we conclude the project was largely positive and impactful.

Consistent with previous research which incorporate PPIs in school environments (Galafassi et al., 2018), and arts-based interventions for supporting individuals to address and emotionally process complicated challenges like climate change (Mreiwed et al., 2021), the Canada 2080 workshops were generally effective insofar as – based on the facilitators' observations and feedback received – participants were able to engage the question ("what will Canada look like in 2080 if we get everything right?") with a positive lens, imagine new stories about the future, and process a wide-range of emotional responses to major socioecological problems.

The process of designing and delivering these workshops was iterative and changes were made to suit the unique needs of each group. We anticipate additional changes will be needed if this workshop design were to be repeated by teachers or other external facilitators, reflecting the differences in age groups, class topics, and teachers' areas of expertise. Still, the core structure of the workshop (introduction, icebreaker, art making, idea sharing, closing) remained consistent and offers a template that can be replicated.

In its simplest form, the workshop featured limited touchpoints between external facilitators, teachers, students, and artists. For these sessions, there was little communication between the facilitators, artists, and teachers ahead of the sessions except to coordinate the logistics of time and place, and to share the parent/guardian consent forms with the teachers so these could be signed ahead of the day. While this format proved successful, our team's experience was that the sessions which had more advanced communication with teachers progressed more smoothly. In particular, introductory calls ahead of time to help set expectations, discuss the purpose and goals of the workshop, gather information regarding teachers' and artists specific areas of expertise, and understand the particular challenges and dynamics of each participating group contributed to the fullest student engagement and art works created.

Teachers and facilitators should anticipate reluctance or outright exasperation from some students who are frustrated by the current state of the world, and those who have already experienced severe impacts of climate change. We learned from the first few minutes of each workshop (the introductions and the opening icebreaker) that some students struggled with the immense scope of the polycrisis, and the prospect of imagining a positive future – either because they voiced these concerns directly, or because the facilitators and teachers noticed they struggled to jump into positive framings in the icebreaker. While our positive psychology approach focused on positive ideas about the future, we were committed to holding space for students with negative or uncomfortable feelings about the polycrisis and invited any students who struggled with the ice-breaker or the opening introductions and framing of the workshop to chat one-on-one with the teacher or facilitator, or to discuss this in small groups with those at their table. Generally, our discussions about the varied emotional responses to the polycrisis highlighted how these feelings are often framed as inherently negative, but that these can be useful emotions and a healthy response to a scary phenomenon. In better understanding the usefulness of various eco-emotions, we can begin to harness the affective dimensions of the climate crisis to reject the narrative of guaranteed climate disaster and encourage others to take the threat of climate change seriously (Comtesse et al., 2021).

By having external facilitators lead the workshop, teachers also benefitted from an opportunity to engage in a supportive, participatory role alongside students. This allowed them to understand the student perspective more fully as

they were not solely responsible for managing the classroom and were provided necessary respite from the ever-increasing workload they face as educators. External facilitators bring fresh energy to the classroom, mixing up the daily routine, and increasing students' sense of excitement and meaning in the learning activity. Giving students the opportunity to have their perspectives be seen, heard, and celebrated by adults proved critical to the success of these workshops, as students began to understand the value and impact of their ideas. We suggest that teachers looking to replicate these workshops take the extra step to ensure students' work can be appreciated by other community members, whether by featuring it in their school, public spaces such as local libraries, or sharing completed works with local politicians and decision-makers.

The Canada 2080 workshop design and this practice report has several limitations. First, on the workshop design and delivery, it must be noted that delivering this national series of workshops in schools and universities was a time and resource-intensive undertaking. A significant amount of travel was involved including three separate two-week trips to distant regions of the country, plus three shorter trips to nearby provinces. We also invited schools through their school boards and worked with those who responded to the open invitation, thus there was some positivity bias in the level of interest in the workshops coming from teachers. Finally, the funding for this project was substantial and made it possible to purchase art materials, travel across the country, produce a gallery exhibit that was shown at two venues in the fall of 2024, and pay researchers, facilitators, and artists. Smaller and cheaper iterations of the workshop could be achieved using art materials already available in a school and having a teacher or a volunteer facilitate the workshop using the outline and guidance above (instead of a paid facilitator).

As for this practice report, the data included is largely observation based (using facilitators' notes from each session and from the design process) and solicited responses from teachers and professional artists, alongside a few unsolicited bits of feedback from student participants. Our team is considering an arts-based approach to analysing the 1000+ pieces of artwork that were produced in the workshops (e.g., contextual and interpretive analysis) and a longitudinal round of surveys of student participants to measure whether the workshop produced any long-term outcomes on how they consider the polycrisis or their own agency in shaping futures – noting that the two years that have elapsed since these workshops were conducted which might dilute the findings. Future iterations of this workshop might consider a pre-and-post workshop survey design to assess any shifts in students' affective responses to the polycrisis and to measure other outcomes of the workshop (e.g. any new ideas generated through the workshop, changes in participants' sense of agency, etc.), or at least include a more formal mechanism for collecting student feedback on the process.

This workshop is highly adaptable and can thus be incorporated into a variety of school subjects, including sciences, languages, social studies, politics,

or any type of art class. We are hopeful that future iterations of these workshops might include dramatic arts, movement and dance, language arts, photography, video production, and more.

Conclusion

This project highlights the transformative power of arts and storytelling in climate education and contributes to a global movement for social justice and change. It allowed for the voices of students to be heard both within the class and beyond, as the students' ideas and artworks were publicly displayed in gallery exhibits in the fall of 2024. The workshops also provided teachers with the scaffolding of prompts, icebreakers, and arts-based activities that can be repeated in the future to revisit some of the topics explored in the workshop (i.e. climate change, social justice) or other sensitive topics as they arise. By emulating and iterating on the Art Hives model, we offer a rich description of the workshops which can be used as a resource by educators to deliver workshops of their own. Through this work, we wish to tap into the creative and affective power of young people and foster a sense of empowerment and possibility among future workshop participants

Notes

¹ Georgette is the solo project of Quebec-based singer-songwriter Emily Skahan.

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