

Environmental Engagement and Generation Z:
Evaluating and Modifying the YEEP Framework Against Research and
Observations on Generation Z Youth and Youth Leaders

by
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A thesis
presented to the University of Waterloo
in fulfillment of the
thesis requirement for the degree of
Master of Environmental Studies
in
Sustainability Management

Waterloo, Ontario, Canada, 2019
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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

ABSTRACT

In October 2018, the United Nations Intergovernmental Panel on Climate Change (IPCC) announced that the global community has 12 years to stop the rapid growth of climate change and avoid increased threats of drought, flooding, and extreme heat, affecting millions of people. During this 12-year timeframe, millions of children, teenagers, and adolescents will come of age as voters and members of the workforce. Generation Z, the emerging group of youth we see today, will be the change makers during these pivotal years of climate change adaptation. Born post-Internet after 1996, the Internet Generation, iGen, Centennials, or Generation Z, consists of approximately 7.3 million people in Canada, and 65 million people in the United States. Generation Z first began to enter the labour force in 2014, when its oldest members turned 18, and they will continue to enter the labour force until 2029 and beyond, as younger members age into adulthood and complete post-secondary studies. In 2014, Riemer, Lynes and Hickman published the Youth-Based Environmental Engagement (YEEP) framework to help guide the further development of informal environmental education programs for emerging adults. This research evaluates the YEEP framework against current literature on Generation Z attitudes and behaviour, as well as an existing youth engagement program that successfully works with Generation Z participants, the Peel Environmental Youth Alliance (PEYA) in the Region of Peel, Canada. The research finds that the YEEP framework could be strengthened to successfully target Generation Z participants through a greater inclusion of questions that address the tech-savvy nature of this generation, the threats and benefits that come with this technology, as well as the generation-specific values that require an emphasis on practical and emotional skills-building opportunities.

ACKNOWLEDGEMENTS

I would first like to acknowledge that this research was conducted at an institution that operates on unceded territory and is situated on the Haldimand Tract, land that was promised to the Haudenosaunee of the Six Nations of the Grand River, and is within the traditional territory of the Neutral, Anishinaabeg, and Haudenosaunee peoples. In addition, the case study was conducted with participants living and working on the traditional territory of Anishnabek, Huron-Wendat, Haudenosaunee (Iroquois), Ojibway/Chippewa peoples, and is a territory that is covered by the Upper Canada Treaties. Both of these spaces continue to be home to many diverse Indigenous and Métis communities. I would like to express my grievances for conducting this research from a perspective that is not within an explicitly Indigenous worldview, despite conducting this work on Turtle Island, and I acknowledge that this is a space where I need to continue to learn and grow. I would also like to thank the FNMI and Indigenous communities who have always been and continue to be trailblazers for environmental education and protection, and whose voices have helped make these conversations possible. I also thank the Indigenous and diverse BIPOC who came before me as students, and have helped make my education and existence in this space possible. I hope that those who come after me know that I would be honoured to provide support and guidance wherever possible.

I would also like to thank the University of Waterloo, the Faculty of Environment, and the School of Environment, Enterprise and Development for taking me in and supporting me through this journey. Thank you to my supervisor, Dr. Jennifer Lynes, committee member, Dr. Amelia Clarke, reader, Dr. Paul Parker, and department staff Dragana and Marion for your continued support and guidance over this past year. A huge thank you to my wonderful cohort for their friendship and conviviality—I could not have done this without your dinner parties, pedicures, and in-depth discussions of shared insecurities. And most importantly, thank you to my amazing partner, family, friends, and therapist. Without your love and support, my education and career would not have been possible.

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1. Introduction

In October 2018, the United Nations Intergovernmental Panel on Climate Change (IPCC) announced that the global community has 12 years to stop the rapid growth of climate change and avoid increased threats of drought, flooding, and extreme heat, affecting millions of people (IPCC, 2018). The IPCC has predicted that within the next 12 years, if society continues to function following current models, the temperature will rise by more than 1.5 degrees Celsius, leading to higher levels of natural disasters and subsequent challenges including poverty, mass migration, and climate genocide (IPCC, 2018). Within this timeline, large societal changes need to be made (IPCC, 2018).

During this 12-year timeframe, millions of children, teenagers, and adolescents will come of age as voters and members of the workforce in Canada. Generation Z, the emerging group of children and youth we see today, will be the change makers during these pivotal years of climate change adaptation. Born post-Internet between 1996 and 2010, the Internet Generation, iGen, Centennials, or Generation Z, consists of approximately 7.3 million people in Canada, and 65 million people in the United States (Claveria, 2019; Statistics Canada, 2011). Generation Z first began to enter the labour force in 2014, when its oldest members turned 18, and they will continue to enter the labour force until 2029 and beyond, as younger members age into adulthood and complete post-secondary studies. The oldest members of Generation Z are currently 23 years old, and the youngest members are 9 years old. Stretching across the expanse of elementary school, all the way into the current labour force, Generation Z is an important generation to target and educate on sustainable change, especially as they move through and beyond their youth over the next 12 years. If we wish to see widespread environmental change leading up to 2030, we must create a system that not only engages and encourages today's youth, but also influences and stays with them as they age into adulthood, and additionally allows them to work with the generations before and after them.

For the purpose of this research, youth is defined as individuals between the ages of 15 to 24, in line with the United Nations definition of youth (United Nations, n.d.). This definition has been

selected as the research is framed within the context of the United Nations IPCC report, and the consequential generational implications, as well as the United Nations Sustainable Development Goals (“Transforming our world,” 2015). At present, Generation Z youth within this age range are those born between 1996 and 2004, encompassing those aged 15 to 23. The term “young people” will be used interchangeably with the term “youth” in this paper, but it should be noted that this research does not address the attitudes and behaviours of younger Generation Z children, unless otherwise specified for a particular context.

Young people, while comprising a large portion of the population, are often among those not heard. Children and youth are underrepresented in the political process (Checkoway, 2011; Cushing, 2015), and are often excluded from decisions that will affect their social, economic, and environmental futures (Powers, Evangelides, & Offerdahl, 2014). In a 2003 World Youth Report, the surveyed youth expressed they want to be involved in their community and make a difference towards a sustainable future, but they consistently feel disenfranchised and excluded from their community (World Youth Report, 2003).

Giving young people the option to be educated and engaged on climate change and more broadly with sustainable development, is an important mission, globally (United Nations, 2015). In 2015, the United Nations unveiled its 17 Sustainable Development Goals, a global blueprint for improving sustainability and equity across nations (“Transforming our world,” 2015). Goal number 4, Quality Education (United Nations, 2015), outlines 10 different targets for year 2030, all aimed at improving access to and quality of education for students of all ages. One of the ten targets states:

By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development (United Nations, 2015, para. 104).

Sustainable education has been deemed a globally important mission (United Nations, 2015), and youth want to be engaged in sustainable futures (United Nations, 2003), but young people are still not given a comfortable seat at the table when it comes to climate change decisions and conversations about community development (United Nations, 2003). As Generation Z moves from classroom learners to societal decision-makers over the course of the next decade, having a viable plan for the integration of environmental education, whether in or outside the classroom, is important if we wish to see lasting change and meaningful environmental engagement. In order for today's young people to have the impact on society that they desire, space needs to be made to engage and educate today's youth in an effective way, so that they are prepared to make decisions not just throughout their youth, but also into their future as emerging adults and adults.

Creating environmental engagement and education spaces that welcome and embrace today's generation of young people will not only give youth the option to vocalize their concerns, but these spaces can also improve, widen and contribute to important conversations on climate change mitigation and sustainable behaviour change. In order to better engage Generation Z in environmental engagement conversations, more research needs to be done on the specific wants and needs of the current generation, and the conclusions need to be better integrated into the engagement tools used today, and efforts to involve young people should be consistently viewed as an ongoing activity, rather than an isolated process (Barber, 2009; Campbell, D. & Erbstein, 2012; Cushing, 2015). At present, there is a research gap connecting youth environmental engagement efforts with Generation Z behaviour, and existing engagement frameworks have not been tested for their effectiveness when dealing with the current generation. Extant research on Generation Z attributes and attitudes points to this group having unique differences when compared to past generations of young people, and these differences need to be addressed if society wishes to adequately engage them over the next ten years.

1.1 Generational Theory

In their inaugural 1992 publication on generational theory, *Generations*, as well as their follow-up 1997 publication *The Fourth Turning*, Howe and Strauss, explain that modern history moves in cycles, with each one lasting about the length of a long, healthy human life. Starting from

roughly one century after the start of the industrial revolution, modern history has moved through four eras or turnings that repeat themselves sequentially in a fixed pattern (Strauss & Howe, 1992; Strauss & Howe, 1997) These cycles are what we commonly refer to as generations, with each generation possessing unique characteristics and awakenings. Howe and Strauss' (1992, 1997) four cyclical generations are the High, the Awakening, the Unraveling, and the Crisis (Table 1). According to the authors, generations are defined by their shared early life experiences which lead to lives following similar trajectories, as well as shared values related to things like family, work, risk, and cultural values. They believed that certain personality types tended to follow one another throughout history, and proposed the idea of cyclical generations, the values of which could be predicted over time and used to imagine future societies and important moments of transition. This same idea of repeating fourfold cycles has been observed by other scholars (Modelski, 1987; Toynbee & Somervell, 1957), as well as world religions and spiritualities (González-Reimann, 2014; Simpson, 2008).

In consulting the generational cycles in the context of modern societies and the generations that exist today, according to the authors, the High refers to a timeline when the Baby Boomers (born as early as 1946) were being born, and the traditionalists (born prior to 1945) were implementing values in line with strong institutionalization and low individualization (Strauss & Howe, 1992). This was an era when society made collective decisions that would shape the foundations of North American and global culture. The next wave, the Awakening, was when people tired of social discipline and began to seek personal authenticity, culture, and spirituality (Strauss & Howe, 1992). This was the era when boomers were moving towards the frontlines of decision-making, and when Generation X actors (born as early as the late 1960s) were being born and beginning to come of age (Strauss & Howe, 1992). The third cycle, the Unraveling, is an era that can be viewed as opposite to the High: a time when institutions began to weaken and individualism began to grow stronger (Strauss & Howe, 1992). This is a time when Generation X actors began to become stronger decision-makers, and when Millennials (born as early as the early 1980s) were being born and entering their childhoods (Strauss & Howe, 1992). The fourth and final era in the cycles, the Crisis, is a time of destruction, predicted to include war and revolution (Strauss & Howe, 1992). The authors explain that the Crisis is a time when institutional life is destroyed and rebuilt in response to a large-scale perceived threat (Strauss &

Howe, 1992). This era is the modern day of the late 2010s. It is when decision-makers are comprised of a variety of generations, and when Millennials are confronted with becoming the “hero” generation of this era. When Howe and Strauss first wrote *Generations* to predict the modern future, they concluded their theory with Millennials, predicting that this generation will mirror the same traits of the G.I. generation (born 1901 to 1924), a group who were viewed as the heroes of society, prior to modernization during the High, leading civic and social movements, and improving collective confidence (Strauss & Howe, 1992). Generation Z was not directly included in the predictions for the four cycles, and instead they arrive at both the end of the Crisis generation, and if this theory is to be observed, at the restarting of these four cycles, so at the start of the new High cycle. That being said, Generation Z is poised to be a unique and interesting generation that pulls traits from both Millennial actors who have shaped and lived through the Crisis, and early traditionalist actors that were at the forefront of collective systems development during the High. If we follow generational theory, this group of young people will be the leaders of institutionalized and collective systems changes during an era of global challenges.

Table 1.1: Strauss and Howe’s (1992, 1997) “Generations,” in today’s context.

Howe and Strauss Cyclical Generation	Societal Generation
The High <ul style="list-style-type: none"> - Strong institutionalization - Low individualization 	Dominant Generation: The Traditionalists Emerging Generation: Baby Boomers
The Awakening <ul style="list-style-type: none"> - Emphasis on personal authenticity, culture, spirituality 	Dominant Generation: Baby Boomers Emerging Generation: Generation X
The Unraveling <ul style="list-style-type: none"> - Opposite of “The High” - Weak institutions - Strong individualization 	Dominant Generation: Generation X Emerging Generation: Millennials
The Crisis <ul style="list-style-type: none"> - Destruction, war, revolution 	Dominant Generation: Millennials Emerging Generation: Generation Z

<ul style="list-style-type: none"> - Dominant “Hero” generation with emphasis on solutions - Emerging generation will dominate start of the next cycle 	
<p><i>The start of a new generational cycle</i></p>	
<p>The High</p> <ul style="list-style-type: none"> - Predicted strong institutionalization and low individualization 	<p>Dominant Generation: Generation Z Emerging Generation: Alpha Gen</p>

To understand and appeal to this generation of young people, and the world in which they are coming of age, consulting academic literature can help identify their unique attitudes and behaviour that make them different from generations past. According to recent research from Monitoring the Future, as shared in Twenge’s (2017) book *iGen*, Generation Z individuals, in the context of North American research, have experienced less in-person interaction, greater threats of mental illness, and in relation to these conclusions, an overall lower level of empathy when compared to past generations of young people (Twenge, 2017). However, they have also been found to have higher levels of creativity and innovation (Bassiouni & Hackley, 2014; Dougherty & Clarke, 2018; Schwieger & Ladwig, 2018), a natural ability with and inclination towards social media and technology sharing (Campbell, P., 2018; Leopold & Bell, 2017), and high levels of open-mindedness and social acceptance (Mitchell, 2008; Pandit, 2015; Twenge, 2017). These conclusions, among others, emphasize the differences between present and past generations of young people, and the provides the rationale for analyzing and redesigning youth environmental engagement to match this unique group of emerging adults.

Over the next 12 years of vital change, Generation Z will still be the dominant “youth” group in society. If we wish to see the improved environmental education and youth engagement required before 2030, research on Generation Z behaviour and attitudes needs to be better integrated into existing youth program frameworks, and specific tools and strategies should be employed in order to better integrate their mindsets and skills. There is currently a gap regarding Generation Z

youth engagement within environmental activities, and understanding how this emerging group of adults interacts with and is influenced by youth environmental programming. This thesis looks to fill this gap by combining conclusions about Generation Z attitudes and behaviour with existing research on youth engagement and environmental change.

1.2 Generation Z Youth and the YEEP Framework

In 2014, Riemer, Lynes and Hickman published the Youth-Based Environmental Engagement (YEEP) framework to help guide the further development of informal environmental education programs for emerging adults. While formal youth environmental education is a popular research subject, Riemer et al. (2014) identify the need for an expanded body of research on informal youth environmental engagement programs.

The action model of the YEEP framework is aimed to help determine the program activities that are necessary for the creation and implementation of a successful environmental engagement program (Riemer et al., 2014). Their framework provides an opportunity for a more standardized approach to designing and evaluating youth environmental engagement programs, and aims to help assist emerging programs to create an immediately effective program that is able to achieve its goals earlier on in the process (Riemer et al., 2014). When programs are developed according to evidence-based research, there can be an increase in overall success and create what has been referred to as scientific-theory based programs (Chen, 2005).

To help identify these qualities and strategies, the evidence-based YEEP framework outlines five major components that should be included in the development of successful and impactful youth environmental programs: (1) an engagement activity; (2) an engagement process; (3) initiating and sustaining factors; (4) mediators and moderators; and (5) outcomes (Riemer et al., 2014). The framework is based on the evidence that there are certain factors, such as modeling after a parent or peer, that initially motivate youth to become engaged in the program, and that their engagement while part of the program can differ in intensity, duration and breadth (Riemer et al., 2014). The sustaining factors, such as room for positive learning experiences and early successes, play a key role in keeping the youth engaged for an extended period (Riemer et al.,

2014). Successful engagement can lead to positive short- and long-term outcomes both for the individual youth and also in regard to their relationships with others and society more broadly (Riemer et al., 2014). The complexity of the engagement process is recognized by factoring in third-party mediators and moderators that may interfere with the process outside of the program, as well as noting feedback loops that occur between different components (Figure 1).

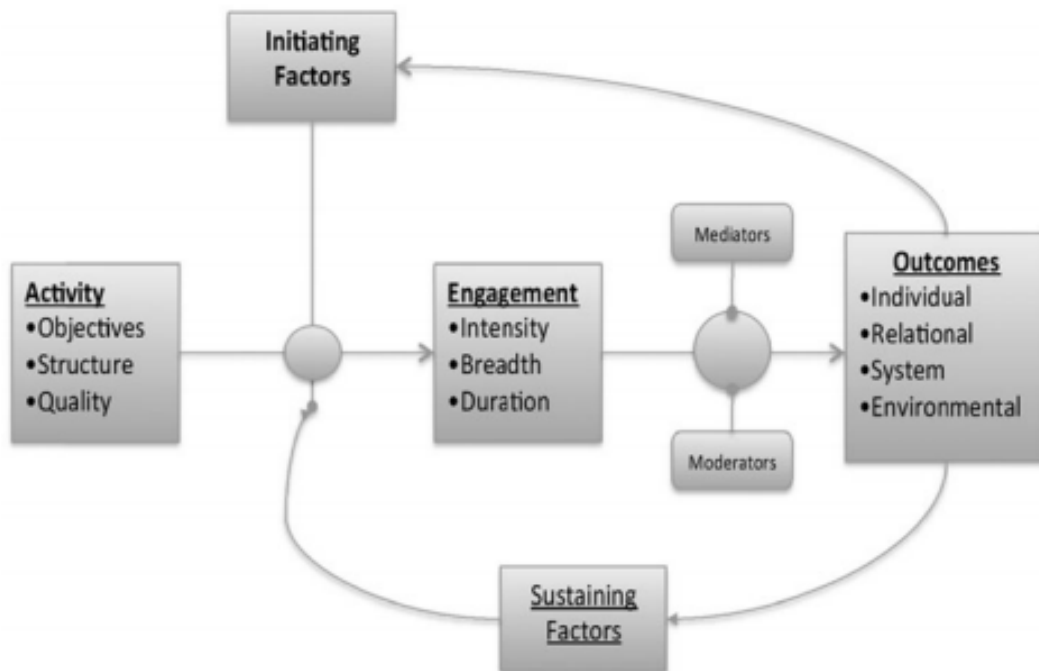


Figure 1.1: The YEEP Framework (Riemer et. al, 2014, p. 558)

As acknowledged by Riemer et al. (2014), limited analysis has been done in support of creating a comprehensive understanding of ‘best practices’ in non-formal environmental programmes where youth have decision-making power despite extensive research conducted on what environmental education and youth-engagement mean and why both theories are important. In order to fill this gap, the authors call for rigorous testing and evaluation of the YEEP framework against existing and developing youth engagement programs. This thesis aims to contribute to this call for testing. This research also looks to understand whether or not the YEEP framework addresses the needs and behaviours of Generation Z youth participants. The framework does not explicitly call out this generation, but it is possible that some of the findings can be applied

across multiple generations of young people. This thesis hopes to not only test the YEEP framework, but also provide valuable insight about directly engaging with this generation of emerging adults.

This research looks to combine the findings of Reimer et al. (2014) with those of Generation Z scholars, as well as unique data collected for this paper. For example, does the current YEEP framework cater to the specific needs of Generation Z? And if not, what can be done to better integrate this game-changing generation into the framework? This thesis analyzes the existing YEEP framework against new and existing research on Generation Z engagement behaviour, testing the framework against a case study, and also reframing it in the context of Generation Z attitudes. In conducting a literature review and case study of an existing, successful, youth environmental engagement program, this thesis explains whether or not the YEEP framework is still an effective model for Generation Z youth, and if not, what modifications should be made to better target this group of emerging adults, based on larger lessons from youth engagement and environmental education conversations.

1.3 Research Objectives

The goal of this research is to better understand how to best engage Generation Z actors in environmental programs, across a period of youth between ages 15 and 24. This study builds on previous research related to the YEEP framework. Reagan (2015) applied the YEEP framework's best practices to the creation of a new youth group associated with the Ecology Action Centre in Halifax, Nova Scotia (Reagan, 2015). This research builds upon this previous work by testing the YEEP framework against an existing, successful youth environmental engagement program. More specifically this study asks if/how the framework applies and what elements, if any, have been important for engaging the current Generation Z audience currently, or recently, enrolled in the program. This thesis poses two primary research questions that are addressed with the literature review and the collection of primary data. The first question asks:

What are the unique attributes of Generation Z youth, and how do these attributes modify existing understandings of youth engagement and environmental education?

The second question asks:

Does the current YEEP framework cater to the unique attributes of Generation Z youth, and which elements of the framework can apply or be modified to suit this generation?

These two questions are posed together to gain a more holistic understanding of the YEEP framework and to evaluate not just the specificities of the framework itself, but also the rationale for the framework and for youth engagement more broadly. When the framework was first designed, the authors provided an overarching multigenerational rationale for the importance of youth engagement, and used that rationale as part of the framework design (Riemer et al., 2014). Together, these two questions aim to evaluate the entire framework against Generation Z attitudes and behaviour in the context of environmental engagement.

In line with these two questions, this research has five main objectives:

1. Compile and analyze recent and relevant literature on Generation Z attitudes and behaviour, both in general and in the context of the sustainability
2. Use the findings drawn from the literature to compare against existing conclusions on youth engagement attitudes and behaviour, as outlined in the YEEP framework
3. Gather primary data on an existing youth engagement program working with Generation Z, and test those findings against the new and existing YEEP framework conclusions
4. Begin to understand which, if any, YEEP elements are effective for Generation Z, and how to include additional Generation Z-specific qualities in the YEEP framework
5. Suggest modifications to the framework that factor in conclusions related to both the literature review, and the secondary data collection
6. Determine contributions to theory and practice, in the context of youth engagement, environmental education, and Generation Z

In line with Howe and Strauss' (1992) generational theory, stating that each generation has slightly different attitudes and behaviours based on the circumstances into which they were born (Strauss & Howe, 1992), this research proposes that due to their unique behavioural qualities, Generation Z will require a modified approach to environmental engagement that can be integrated into the existing YEEP framework. It is predicted that some elements of the framework will be able to stay the same, but that existing research as well as secondary data proposed in this paper will suggest some additions or modifications.

1.4 Research Approach: Literature Review and Case Study

To answer these questions, this thesis first conducts a thematic literature review. The literature review focuses on analyzing Generation Z behaviour against historical youth dynamics and attributes, as outlined in the YEEP framework as justification for youth environmental engagement programs. It works to better understand how this emerging generation does or does not still fall in line with youth behavioural conclusions, and how their new attitudes, preferences, skills, and quirks can be best engaged with environmental programming.

After the literature review, this thesis then analyzes nine semi-structured interviews conducted with Generation Z youth from an existing environmental engagement group in Mississauga, Ontario. The purpose of the interviews was to ask the youth about their experience participating in a youth engagement program, evaluating their experiences directly against the YEEP framework, while also evaluating against the conclusions expressed by Generation Z scholars from the literature review. The participating youth are past and present members of the Peel Environmental Youth Alliance (PEYA), an environmental engagement group for teens and young adults in Mississauga, Ontario. Run by the grassroots organization Ecosource, PEYA has been operating for approximately 16 years across the Region of Peel, a geographic region of urban and suburban municipalities in Southern Ontario. This thesis presents a case study of an existing youth environmental engagement program that already actively works with Generation Z students. It compares this case study against the YEEP framework to understand which of its elements prove to be accurate and effective for already successful engagement programs, as well

as to understand if new elements should be integrated into the framework for improved Generation Z engagement.

1.5 Thesis Structure

1.5.1 Chapter 2: Literature Review

In Chapter 2, this thesis presents a literature review of existing conclusions on youth engagement, and how these conclusions may have changed as Generation Z has become the dominant “youth” group in society. When the YEEP framework was designed, the dominant youth group in society was Millennials. If we now wish to understand what Generation Z wants from environmental engagement programs, we must analyze those past conclusions about Millennials and other generations of the past, and reframe them in the context of today’s emerging adults. This chapter looks to create a clearer portrait of what both youth and society can gain from improved Generation Z youth environmental engagement. This chapter provides a detailed analysis of different academic sources that have provided the rationale for youth environmental engagement programs, as well as additional sources that provide insight into the new Generation Z attitudes and behaviour.

1.5.2 Chapter 3: Methodology

This section of the research further explains the methods, literature review and semi-structured interviews being employed for the data collection and data analysis of this paper. It also provides a more detailed background on the case study group, the Peel Environmental Youth Alliance, as well as the selected location for the research, Mississauga, Ontario. This chapter provides a rationale for the specific case study, as well as provides details about the structure of the data collection.

1.5.3 Chapter 4: Results

This section of the research outlines the results gathered during the data collection phase, and tests that data against the existing YEEP framework. It pulls together the results from nine different semi-structured interviews, grouping together different themes, and indicates whether

or not this environmental engagement program satisfies the different elements of the YEEP framework. It also proposes some unique additions to the YEEP framework, and some areas of improvement.

1.5.4 Chapter 5: Conclusion, Limitations, Discussion, and Future Directions

This section outlines improvements and commentary on the YEEP framework, as well as future directions both for the YEEP framework as well as for Generation Z environmental engagement research more broadly.

1.5.5 Chapter 6: Conclusion, Limitations, and Future Directions

This final chapter provides the conclusions and future directions for this research. It summarizes the points made during the literature review and case study results, and addresses the limitations of this study.

1.6 Definition of Terms

1.6.1 Youth/ Emerging Adults

Despite a diverse body of research on youth and youth engagement, the age range of “youth” has been unable to reach consensus (Ho, Clarke, & Dougherty, 2015). That being said, this thesis will be using the terms youth, young people, and emerging adults interchangeably, but all in line with the United Nations definition of “youth,” as stated earlier (United Nations, n.d.). According to the United Nations, youth is defined as individuals between the ages of 15 to 24. This definition has been selected as the research is framed within the context of the United Nations IPCC report, and the consequential generational implications, as well as the United Nations Sustainable Development Goals (United Nations, 2015).

The term youth will refer to individuals that can fall within the Generation Z or late Millennial category, consisting of persons aged 15 to 23, at the time of the study (2018-2019). This range

has been chosen to make the research more inclusive to eligible participants, and more reflective of present Generation Z actors.

1.6.2 Generation Z/ iGen

For the purpose of this research, this thesis will also be using the term Generation Z to refer to any person born between 1996 and 2004, also as stated earlier, and also in line with the definition of youth, and the subsequent age range. Generation Z has also been referred to as iGen, the Internet Generation, and the Silent Generation (Twenge, 2017). All of these terms refer to the same group, but Generation Z has been chosen as the preferred term for this research, as it has been widely used across popular media periodicals, and can be recognized by the general public (Chou, 2018; Williams, 2015).

1.6.3 Generation Y/ Millennials

This thesis will often use the term “Millennials” to refer to the group born before Generation Z. Millennials includes all those born from 1981 to 1994 (Strauss & Howe, 1997). While they will only be referred to as Millennials in this paper, they have also been called Generation Y, or the Hero generation (Strauss & Howe, 1992) .

2. Literature Review

As acknowledged in the YEEP framework, there is a diverse set of research that contributes towards understanding why youth can be and have been strong targets for environmental engagement programs, as well as how both society and the participating youth serve to benefit from this engagement (Arnett, 2006; Dryzek, 2003; Mohamed and Wheeler, 2001). However, this research was designed to target youth more broadly, and has yet to be applied in a generational context or evaluated in the context of Generation Z. That being said, some of these conclusions may require reanalysis and reshaping in order to effectively describe the unique youth of today's society. In order for youth environmental engagement programs to effectively target today's set of young people, past conclusions and frameworks need to be challenged and reassessed to better understand unique Generation Z attitudes and behaviour. The past conclusions being tested are those of the YEEP framework. This framework was selected for analysis as it presents a comprehensive literature review of a diverse body of research on youth engagement and environmental education. The framework, presented in 2014, included research across an extended timeline that included early conclusions on youth engagement from the 1980s and 1990s, as well as recent and relevant conclusions that factored in research from youth of the 2000s and 2010s. The YEEP framework provides the most recent comprehensive literature on youth engagement with environmental education.

Reimer et al. (2014) explain that youth are strong and important targets for social change for five primary reasons: (1) They are experiencing a transitional period in life that fosters identity exploration and development; (2) Youth have often been at the forefront of social movements across the globe; (3) Young people serve as good messengers to their peers as well as different groups of people such as parents and family members; (4) They are exposed to a variety of educational material through coursework and modern technologies like the Internet and social media; and (5) Young people are more likely to take risks since, in most cases, their jobs and livelihoods are not threatened by choices made in their personal lives. Since 2014, more thinking has also been added to this conversation, often highlighting the emerging generations, Millennials and Generation Z, as having unique attitudes and behaviours, such as inclinations

towards innovation, equality, and entrepreneurship (Dougherty & Clarke, 2018; Frunzaru & Cismaru, 2018; Pandit, 2015).

At the time of these conclusions, with citations ranging from 1980 to 2010, youth conventionally referred to young adults from the Generation X and Millennial age brackets, or young people born as early as the late 1960s and as late as the early 1990s (Strauss & Howe, 1997). While many of these conclusions were intended to be cross-generational, these generalizations may no longer remain true for today's unique young people and youth of the future. This literature review looks to analyze these conclusions and generalizations about historical youth attitudes and behaviours against current analyses of Generation Z attitudes and behaviours. In line with Howe and Strauss's (1992, 1997) Generational Theory, based on where this group of young people falls in the four cycles of generations, Generation Z is predicted to bear similarities to Millennials and Traditionalists, two very different generations that have come before them. That being said, it is predicted that some past conclusions may still hold truth, while others may require some reassessments.

The five conclusions listed above, as pulled from Riemer et al. (2014), will be expanded upon and explained in the context of broad and historical youth engagement, and then compared and contrasted against recent research on today's emerging adults. The five conclusions have been divided into different subheadings: Identity Development, Desire for Subversive Socio-Political Change, Resilience and Community Building, Education and Awareness, and Risk Taking Nature.

It should be noted that the bulk of these sources represent North American youth, but due to the nature of the field with Generation Z still being an emerging area of academic study, some academic sources from Europe and Asia are also referenced, as well as a few grey literature sources.

2.1 Identity Development

In Riemer et al.'s YEEP framework rationale, the authors explain that young people are a prime target for engagement discourse due to their search for unique identity that drives their desires to participate and experiment. Since the 1960s, it has been noted in youth behavioural studies that this conclusion rings true (Arnett, 2000; Erikson, 1968), and in consulting research on today's emerging generations, this conclusion continues to hold value when discussing present day youth engagement (Mueller & Mullenbach, 2018; Twenge, 2017).

In 1968, human development theorist Erik Erikson noted that industrialized societies, especially those with higher concentrations of cities and suburbs, tended to allow a period of prolonged adolescence and a consequential period of prolonged identity exploration (Erikson, 1968). In other words, industrialized societies provided a longer time for children and teenagers to act like children and teenagers, and generally avoid the conventional responsibilities that came with early adulthood (Erikson, 1968). Contrasted against youth in less developed and more rural communities where adolescents may have had responsibilities to provide for the home and care for younger siblings from an earlier age, young people in industrialized societies were allowed to shirk certain responsibilities during their youth, thanks to the accessibility of modern infrastructure that provided opportunities for alternative careers and pay inflation, childcare services, and political systems that granted gender diverse careers and consequential two-income households (Erikson, 1968). Thanks to these industrial advancements, youth instead had more time to prepare to face conventionally adult responsibilities later in life (Erikson, 1968). In these societies, Erickson explained that youth were granted a "psychosocial moratorium" that allowed them opportunity to explore and experiment to find a "niche" of society that best suited their interests and personalities (Erikson, 1968). The psychosocial moratorium is defined as a time when young people are given a temporary pass, or moratorium, from conventional societal responsibilities to explore and discover new avenues of understanding through autonomous decision-making, and the active expression of their own agency. While Erikson distinguishes this group from others based on their exposure to increased industrialization, often in urban surroundings, a similar phenomenon has become more inherent not just in urban youth, but across a more socially diverse set of youth, possibly due to the pressures of late modern society, and its spread of industrialization (Cuzzocrea, 2019; Markstrom-Adams & Adams, 1995).

Similar to Erickson's conclusions, in 2006, Jeffrey Arnett coined the term "emerging adulthood," referring to the time of life between ages 18 to 25. He outlines five different features that make emerging adulthood distinct: it is the age of identity exploration, the age of instability, the self-focused age, the age of feeling in-between, and the age of possibilities (Arnett, 2000). However, he explains that these features are not mutually exclusive, and emerging adulthood is a time of heterogeneity, when elements of life can be very distinct from one another, requiring different actions and directions for the unique individual at hand (Arnett, 2000). Much like the psychosocial moratorium, this period of emerging adulthood is viewed as a time of transition when young people begin to discover and form their individual identities (Arnett, 2000). Arnett explains that it is important that during this time of identity formation, youth are able to see themselves as active participants in society (Arnett, 2000). The author explains that emerging adulthood is a demographically diverse timeline with members experiencing various different and unpredictable developmental decisions, such as attending or not attending post-secondary school, moving away from their families or choosing to actively stay at home, and experimenting with relationships, career choices, and self-exploration (Arnett, 2007b; Arnett, 2015). Emerging adults tend to have a much wider access to a diverse set of activities and communities, making them an unpredictable but open-minded and exploratory group. Arnett explains that young people are aware of the responsibilities that come with their futures, but these responsibilities do not reflect conventional or historical responsibilities like settling down, owning a home, and getting married (Arnett, 2006). Instead, his research, spanning from 1998 to 2006, indicates that during this time, the highest priorities for young people are the development of individual qualities of character; accepting responsibility for one's self; and making independent decisions (Arnett, 2006). Integrating environmental engagement into the lives of young people can help emerging adults explore and interact with important ideas of social responsibility during a pivotal time of their development (Arnold, H., Cohen, & Warner, 2009; Barton & Tan, 2010; Bastien & Holmarsdottir, 2017; Riemer et al., 2014).

When it comes to Generation Z, the majority of the current literature on youth transitions stays the same: today's youth are still going through a period of transition towards adulthood, and they are still looking for opportunities to explore their identity (Pandit, 2015; Twenge, 2017). However, what makes this generation different from those of the past is their extended period of

transition, and their existing beliefs that allow for a more diverse understanding of identity (Pandit, 2015; Parker, Graf, & Igielnik, 2019; Twenge, 2017). According to research from Monitoring the Future, there has been a steady decrease in the amount of youth participating in conventional youth to adult transitional activities, with more youth taking more time to stay in their period of adolescence (Twenge, 2017). That being said, Generation Z young people are still experiencing a transition towards adulthood, however, this transition is happening much slower than it has in the past (Cuzzocrea, 2019; Twenge, 2017). For instance, fewer young people today are getting their driver's licences as teens, fewer teens are working part-time jobs or staying home alone after school, and fewer young people are dating and engaging in premarital sex. Instead of these activities happening in their teen years, today's emerging adults have pushed these experiences into their mid to late-twenties, an age bracket that during the times of Erickson and Arnett referred to a time closer to the end of emerging adulthood, or directly within the bracket of adulthood itself (Arnett, 2006; Cuzzocrea, 2019; Twenge, 2017). Arnett and Erickson agreed that the emerging adulthood period ended around the age of 25, with this age being the tail end of the period of youth. However, looking to modern research, for Generation Z youth and the Millennials that came before them, this period of youth is more likely to stretch to their late-twenties or even up until age 30. In Twenge's (2017) novel *iGen*, the author concludes that these trends indicate an extended period of youth and childhood different from previous generations. Generation Z is experiencing a much longer psychosocial moratorium than past generations, extending almost ten years longer than moratoriums of the Boomer generation, and over five years longer than moratoriums of Generation X (Arnett, 2006; Erikson, 1968; Twenge, 2017). This reality has both pros and cons. Because the length of the psychosocial moratorium is linked to the length of time for identity exploration, one of the pros is that today's youth have a potentially even longer amount of time for identity exploration (Erickson, 1968). According to existing research, Generation Z actors tend to be more tolerant, socially aware, and technically inclined than past generations (Mitchell, 2008; Pandit, 2015; Twenge, 2017). Generation Z youth tend to be even more open-minded than emerging adults from the past, due to their increased exposure to different people, cultures, schools of thought, and a variety of other things, in part thanks to the world of the Internet that served as their childhood playground (Kahne, Middaugh, Lee, & Feezell, 2012; Mitchell, 2008; Pandit, 2015). Likewise, today's young people have a higher exposure to new and interesting ideas, providing them with ample fodder for their

personal identity exploration (Kahne et al., 2012; Karakaya & Glazier, 2019). For instance, according to Monitoring the Future, today's emerging adults are increasingly more likely to be accepting of LGBTQ identities, more likely to accept and legalize gay marriage, more likely to interact with someone outside of their race, more likely to be critical of institutions that perpetuate racism, and are less likely to believe that women and men should maintain conventional roles in the house (Twenge, 2017). When it comes to gender, sexual, and racial identity, today's emerging adults are more open to differences, and more likely to explore where they fall in one of these categories. This same degree of open-mindedness also applies to Generation Z beliefs about climate change (Parker et al., 2019). In a study from Pew Research Centre, 54% of Generation Z actors from the United States¹ believe climate change is caused by human actions, only 2% lower than their Millennial counterparts (Parker et al., 2019). This discrepancy in numbers can be seen in the higher percentage of Gen Z actors saying they are "Not Sure" about the causes of climate change, with 22% expressing uncertainty compared to the 19% of Millennials (Parker et al., 2019). Since adolescence and emerging adulthood is a time for identity exploration, an extended period of youth has the potential to allow young people to experiment with a greater variety of activities and interests (Erikson, 1968; Kahne et al., 2012; Wallerstein, 1998).

On the opposite side of this conversation, a con from the extended psychosocial moratorium is that since Generation Z actors are not participating in conventional transitional activities, they are also experiencing a slower development of essential skills (Arnett, 2015; O'Connor, A. & Raile, 2015; Turner, 2015; Twenge, 2017; Wiedmer, 2015). For example, in delaying an act like getting a driver's license or waiting until their twenties to begin dating, youth are not exploring conventional emerging adulthood activities, and they miss out on the building of important and vital skills such as communication, independence, and self-confidence, all of which are skills that come with working part-time, exploring relationships, and venturing outside of the house on their own (Arnett, 2015; O'Connor & Raile, 2015; Turner, 2015; Twenge, 2017; Wiedmer, 2015). Today's youth are building these skills at a much slower rate, and they may end up

¹ While this statistic is from the U.S., similar numbers have been shown to reflect the Canadian population at large. In a 2018 study of Canadian opinions, 28% of Canadians believe there is strong evidence to support human-caused climate change, and 33% believe the evidence to be "solid," totalling 61% of Canadians somewhat believing in human-caused climate change (Zimonjic, 2018). Statistics divided by age or generation are not currently available.

missing out on opportunities for early and important identity exploration due to the feelings of fear, uncertainty and anxiety that come from lacking independence and self-confidence (Arnett, 2015; Twenge, 2017).

To conclude, as Riemer et al. (2014) stated, youth are good targets for environmental engagement because of their search for identity that leads to increased experimentation and participation in society. Today's youth continue to demonstrate these traits, however, they are experiencing their identity development at a slower rate than the generations that came before them (Arnett, 2015; O'Connor & Raile, 2015; Turner, 2015; Twenge, 2017; Wiedmer, 2015). With progressive socio-political values being linked to an increased belief in climate change (Wang, J. & Kim, 2018), a potential positive reality is that Generation Z's social open-mindedness also has the potential to improve open-mindedness towards climate action (Wang & Kim, 2018). In consulting the existing literature, as well as the YEEP framework, it is clear there exists a research gap, in regards to Generation Z, on the current perceived timeline of youth, and when and how identity development is happening. To better understand this emerging generation of young people, it is important to consider when vital social skills are being developed, and how a change in timeline could change existing engagement models, like the YEEP framework.

2.2 Desire for Subversive Socio-Political Change

The second rationale for youth engagement in Riemer et al. (2014) is that youth have often been at the forefront of social change campaigns in the past. They list the American civil rights movement of the 1960s, the prominent Chipko movement in India, and the Palestinian youth's intifada challenge of the Israeli military, exhibiting that throughout world history, youth have often been involved in political protests, and have even been the founders of social movements (Karan, 1994; Mohamed & Wheeler, 2001; Quiroz-Martinez, Wu, & Zimmerman, 2005; Youniss et al., 2002).

Early studies about youth political protests for peace, environmental issues, and civil rights often suggested that youth were drawn to the act of protest and oppositional politics because of a natural and intrinsic need to develop their identity away from social norms (Erikson, 1968).

However, more recent studies suggest that there is a more nuanced link between youth and a desire to protest, with dissent and civil disobedience providing a positive influence away from dangerous social norms, and encouraging higher levels of tolerance and respect for differing social values (Torres, 2007) . In O'Brien, Selboe, and Hayward's paper on exploring youth activism on climate change, risk-taking and politically engaged young people are referred to as "dissenting youth" (2018). Dissent, referring to an expression of conscious disagreement with the status quo, has been used to describe the current state of civil interactions with global affairs. Similar to Howe and Strauss' predictions for the era of the Crisis, today's current period has been referred to as the "age of dissent," with youth playing strong key roles in the promotion of change and active disagreement (Okolosie, Bragg, Hattenstone, Dhaliwal, & Power, 2016) .

Generation Z youth are coming of age in the age of dissent. However, conventional definitions of youth rebellion and dissent have changed over the years and may look different than those of the past (Campbell, 2018; Castells, 2015). When we look at historical examples of youth dissent, we often imagine picket lines and protests, with young people making a difference using their physical voice and presence (Twenge, 2017). While these actions no doubt still happen today, with the current youth-led School Strikes for Climate Change as a strong example (Crnogorcevic, 2018), Generation Z, much like their Millennial counterparts, also expresses dissent through another, less conventional means: social media. In Twenge's *iGen*, the author negatively expresses that many of today's Generation Z teenagers are "slacktivists," meaning they will express their distress with current social, ecological or political actions through posts on their social media accounts, but not as many will actually take physical action and head to the streets (2017). However, taking to the streets is no longer the only means of popular dissent, and slacktivism and digital activism has started to take shape and make a meaningful difference (Piat, 2019; Rotman et al., May 7, 2011). Social movements are increasingly becoming one and the same with online activism, and social media is playing an increasingly important role in establishing controversial social discourse (Piat, 2019; Rotman et al., May 7, 2011).

In 2011, several social movements across the globe found momentum with the help of youth-led social media activism, including the Arab Spring across the Middle East, the Taksim Square protests in Turkey, and the Occupy Wall Street and Black Lives Matter protests in the United

States, the year was a hotbed for political activism spurred by youth-incited actions across social media platforms (Campbell, 2018; Lopez, 2018; Uldam, 2018; Yammine, Liu, Jarreau, & Coe, 2018). In response to this surge in technological social activism, a large body of research emerged, focusing on how digital spaces have helped reinvigorate youth participation in social causes (Campbell, 2018; Castells, 2015). As digital natives, youth of the mid-2000s were able to use social media tools not just as organizing and promotional tools, but also to help form a collective voice that gave their movements a strong and consistent platform (Castells, 2015; Piat, 2019). In addition, using digital technology allowed groups that were scattered across the globe, with different but related causes, to easily interact, stay in touch, and cross-promote through acts of solidarity (Campbell, 2018; Noueihed & Warren, 2012). Through these social campaigns, youth were able to use social media to not only create physical protests, but they were also able to spark conversation about important social issues across a diverse set of popular media (Campbell, 2018; Lopez, 2018; Uldam, 2018; Yammine et al., 2018). While many younger teens may limit their “slacktivism” to sharing posts on their social media accounts, looking at recent history more broadly, having social media as a means for activism and engagement is an important tool for instigating early social change (Piat, 2019). It plays an especially important role since other means of activist engagement has sometimes led to wrongful persecution and a subsequent fear of physical protest (Leopold & Bell, 2017) , and instead allows youth actors to get involved and educated from a more comfortable position, earlier on in the movement, often asking much less of them than a physical protest (Gladwell, 2010; Piat, 2019). While these earlier social media campaigns were incited by predominantly Millennial youth, this same tradition has carried through to the past two years. The March for Our Lives Campaign for improved gun regulation, the #MeToo movement against sexual assault, and most recently the aforementioned School Strike for Climate (Skolstrejk för Klimatet) which brings together global youth for climate action, all involve important Gen Z actors, and all have had strong roots in social media promotions and conversation (Correal et al., 2018; Thomson, 2019). Whether through hashtags, the sharing and linking of stories online, or allowing for marginalized youth voices to find a platform, social media has been an important tool for the promotion of these early movements (Campbell, 2018; Piat, 2019).

In O'Brien et al.'s research on youth activism and climate change, the authors make a similar case for broad dissent as others have for social media activism. The authors explain that not all forms of dissent look like the conventional picket lines and hunger strikes of the past, which have skewed the perception of different styles of dissent (O'Brien, Selboe, & Hayward, 2018). The authors distinguish between three different types of dissent, all framed in the context of climate action, during this predicted age of dissent: dutiful dissent, disruptive dissent, and dangerous dissent. The authors explain that these unique styles of dissent are not mutually exclusive and are not the only forms of active disagreement engaging youth in society (O'Brien et al., 2018). Rather, they are more an abstraction of the dissent they have observed.

Dutiful dissent refers to when young people's concerns are within existing or newly created spaces aimed at activism and change (O'Brien et al., 2018). In these cases, dissent is expressed by joining activities or organizations that work to express resistance against an existing social norm (O'Brien et al., 2018). Dutiful dissent can take place in youth groups that exist as branches of existing environmental change organizations, extracurricular clubs at a school, religious institutions, community centres, or participation with a political party (O'Brien et al., 2018). Disruptive dissent refers to a type of activism that arises when young citizens concerned about climate change seek to modify or change existing political and economic structures. Disruptive dissent actively targets power relationships and the actors that maintain harmful dynamics (O'Brien et al., 2018). Youth disruptive dissent can look like protests and collective actions like petition campaigns, boycotts, political marches or rallies, or disrupting international climate meetings. Dangerous dissent refers to a type of activism that defies business as usual by initiating, developing, and actualizing alternatives that inspire and sustain long-term actions (O'Brien et al., 2018). The term "dangerous" does not necessarily refer to a level of physical danger that may be caused by this dissent, but instead refers to the danger it causes to existing structures and established power elites (O'Brien et al., 2018). Like disruptive dissent, dangerous dissent refuses to operate within existing systems. It instead looks to create completely new systems, and overhaul existing political, economic, and social structures leading to climate change. This style of dissent is dangerous because it develops new and alternative systems and encourages a degree of reclamation and strength for the youth involved. Dangerous dissent can look like a number of different things, but most commonly in today's society, it looks like the

anti-capitalist and degrowth movements that challenge the consumption and economic-growth based strategies being pushed as models of societal success.

O'Brien et al. (2018) explain that today's youth are not "becoming" change makers, they are already participants in the sphere of politics and social change. Their diverse expressions of dissent are their means of embracing and showcasing their agency and autonomy. These three very different approaches work together to complement one another and create unique systems that foster change on various levels (O'Brien et al., 2018). There is no single one of these styles that is more important or valuable than the other, but each serves a different purpose in the realm of social change, and for large scale differences to come about, each of these dissenting styles need to be present (O'Brien et al., 2018). Dissenting youth are required to navigate this complex field of social retaliation, and if youth are to gain significant momentum with their actions of social change, then they should also be informed about the different styles of dissent, and the different ways they can be used to assist one another. Understanding these modern definitions and expressions of dissent, and the way they work together to progress similar causes, is crucial in understanding how Generation Z actors are and will be approaching change making, especially in the context of today's existing and evolving youth engagement programs.

2.3 Resilience and Community Building

The third rationale for youth engagement programs according to the YEEP framework is their ability to act as good messengers to their peers, members of their communities, and family members (Riemer et al., 2014) . In other words, youth engagement with environmental activism can contribute to the building and growth of communities, and the expansion of circles interested in climate action. In a 2005 study from the Movement Strategy Centre (MSC) in California, it was noted that young people play a key role in bringing new ideas to existing social movements, and fostering multigenerational change (Quiroz-Martinez et al., 2005). However, at the time of this study, "young people" predominantly referred to youth in the Millennial age bracket, making reference to the already mentioned Occupy Wall Street and Black Lives Matter movements (Campbell, 2018; Lopez, 2018; Uldam, 2018; Yammine et al., 2018).

When it comes to Generation Z, this point about multigenerational change remains mostly true, but encouraging increased community building among today's emerging adults could require a bit of extra work, and a bit of extra time, due to differences in the development of communication and life skills (Arnett, 2015; O'Connor & Raile, 2015; Turner, 2015; Twenge, 2017; Wiedmer, 2015). According to recent research findings from Monitoring the Future, Generation Z students have been found to have less in-person social interaction with peers and family than previous generations, have more frequent diagnoses for mental illnesses like anxiety and depression, and have an overall lower level of empathy than previous generations. These three observations all have a direct effect on Generation Z's ability to build community and have effective in-person communication with people outside of their immediate circles (Twenge, 2017).

Referring back to the last section on alternative methods of dissent, while today's youth have fewer in-person interactions and tend to have increased digital interactions (Piat, 2019), that is not to say that they are unable to build community and engage in important conversations through social media. If anything, they could be more likely to spark interesting and controversial conversations through social media (Leopold & Bell, 2017). However, due to the lack of social cues in digital communication, social media interactions are not able to completely replace in-person interactions (Sherman, Michikyan, & Greenfield, 2013). Engaging in face-to-face communication remains an important tool when it comes to building essential communications creating lasting social and community connections (Sherman et al., 2013). While social media can be a powerful tool, it often needs to be coupled with in-person interactions in order to create consistent shifts in behaviour change (Kristofferson, White, & Peloza, 2014; Soman, 2000). The Internet is a great jump off point for many social movements, but without follow-up actions and intentions, as well as people making the effort to physically come together, Generation Z runs the risk of perpetuating their slacktivist stereotype (Lee & Hsieh, Apr 27, 2013; Rotman et al., May 7, 2011; Twenge, 2017).

When it comes to the conversation on Generation Z mental health, it is reported that depression in Generation Z boys has increased 21%, and depression in Generation Z girls has increased by 50% between 2012 and 2015 (Twenge, 2017). The cause of this decline in mental health has

been disputed. Some scholars accredit this to the fact that teens today are starved for in-person interactions, taking a toll on their mental health (Kardaras, 2016; Twenge, 2017), others believe that it is because of their perceptions of personal wellness and correlating global environmental, social, and political unrest (Barr, 2016; Patalay & Fitzsimons, 2016; Patalay & Fitzsimons, 2018; Sweeting, West, Young, & Der, 2010), while others express that this change in mental health statistics simply comes from a better awareness and understanding of these terms and diagnoses (Gunnell, Kidger, & Elvidge, 2018; Wiens, Williams, Lavorato, Bulloch, & Patten, 2017). But another possibility has to do with the reality of delayed “quarter-life crises,” and the fact that today’s youth are building their individual resilience at a slower rate alongside their extended psychosocial moratoriums. In 2007, Arnett returned to the subject to assess the picture of emerging adulthood years after the term was coined in 2000 (Arnett, 2007; Arnett, 2007a). It was concluded that this time of life has remained a timeline for identity exploration, and has been captured as a mostly positive time in one’s life. In North American culture, the term “quarter-life crisis” has been coined to describe the alleged turbulence experienced by identity-seeking emerging adults. This crisis is viewed as a mostly negative time, often being characterized as a time of increased anxiety, depression, insecurity, and a general air of confusion (Arnett, 2007; Arnett, 2007). However, the bulk of research suggests that even though these emotions feel negative at the time, wellbeing improves during the period of emerging adulthood, with a drop in depressive symptoms and a rise in self-esteem (Galambos, Barker, & Krahn, 2006). This disconnect between popular rhetoric on quarter-life crises and research on emerging adulthood wellbeing could be accredited to the fact that the time we now know as “quarter-life crises” may actually be a catalyst for improved mental health and self-esteem for young people (Arnett, 2007; Arnett, 2007). Initially, the pressure to develop and explore one’s identity, and come to terms with the responsibilities that face them in adulthood, can be daunting and challenging, however, once they have the chance to face these fears in a productive way, this can lead to an improved sense of self-esteem and confidence (Arnett, 2007; Arnett, 2007). Today’s young people are experiencing quarter-life crises in a potentially extended or delayed way as they age through a different timeline of childhood and youth (Erikson, 1968; Twenge, 2017). However, as young people are provided with more opportunities to explore their identity and enact their own agency, they may eventually see a rise in their mental health and overall resilience (Brailovskaia, Teismann, & Margraf, 2018; Leipold, Munz, & Michéle-Malkowsky, 2019).

In addition to a decline in mental health, Generation Z is also recorded as having lower levels of empathy than past generations, a trait that is necessary for the building of strong relationships and fostering multigenerational community change (D'Ambrosio, Olivier, Didon, & Besche, 2009; Riess, 2017; Salmon, 2003). This statement comes as ironic since in general, Gen Z actors feel a strong desire to help others, but at the same time, Gen Z actors feel that another person's problem is not their business (Twenge, 2017). With both of these statements being true for Generation Z, it could hint that Gen Z wants to be empathetic, but simply does not know how yet. Much like their mental health, a lower level of empathy could in part be credited to their extended psychosocial moratorium, which has given them less reason to begin viewing the world from another's perspective until they are of an older age (Erikson, 1968; Twenge, 2017). That being said, today's youth can continue to be messengers to their peers and community builders, so long as they eventually begin to develop empathy, and are able to build community both digitally and in person (Ferrara & Yang, 2015; Kristofferson et al., 2014). In a 2015 study, it was observed that "emotional contagion," or the ability to feel emotions shared through a digital post, has been noted across Facebook users, often with positive emotions being more contagious than negative ones (Ferrara & Yang, 2015). However, this same study stated that in the absence of non-verbal cues, the nuance between shared and actual emotions was difficult to understand, and the results could not indicate whether empathy, or even sympathy, was present in emotional contagion (Ferrara & Yang, 2015). Neuroscientist Helen Riess has proved that empathy can be something teachable, and is actually something tangible. Riess (2017) differentiates between cognitive empathy and emotional empathy, outlining that while emotional empathy is often organically acquired over time, for those who have not been exposed to these ideas, cognitive empathy can be taught and used to fill that void. The author outlines that empathy is not always an equal opportunity benefactor, meaning that individuals can be exposed to the same things, or age in the same society, and may come out with different levels of empathy based on a variety of variables (Riess, 2017). People are evolutionarily wired to respond to, react to, or fear certain situations, and different social and cultural situations can trigger different reactions for different people (Riess, 2017). Because of this evolutionary bias when it comes to emotional empathy, cognitive empathy, or taught empathy, needs to be employed. Generation Z actors have evolved in a time and place that may have pushed them away from early empathetic understanding, but

that is not to say it is too late for them to learn this behaviour, and use it when working with those different from them, and serving as messengers and community builders.

2.4 Education and Awareness

According to Riemer et al., the fourth rationale for youth environmental engagement programs is their increased exposure to new information through coursework and digital technology like the Internet and social media (Riemer et al., 2014). In a 2009 study of environmental youth leaders, participants sighted school, teachers, and extracurricular learning experiences as early influences on their experiences with environmental engagement and their desire to get and stay involved (Arnold, Heather E., Cohen, & Warner, 2009). Education has consistently proved to be an important source of influencing young people to get involved and informed about environmental change (Dryzek, 2003; Mohamed & Wheeler, 2001). When it comes to Generation Z students, education and knowledge is still important to today's emerging adults, however, the quality of information available and the desire to acquire knowledge through conventional means, such as higher education, is being questioned (Schwieger & Ladwig, 2018; Statistics Canada, 2017a).

Today's youth spend a lot more time on the Internet and social media than past generations (Young, 2018). A common belief is that today's emerging adults are dedicating less time to conventional adulthood transitional activities, and are experiencing more mental illness because they are spending more time on schoolwork and preparing for a more competitive post-secondary environment (Twenge, 2017). However, according to recent conclusions from Monitoring the Future, today's young people are actually spending roughly the same amount of time on homework and extracurricular activities as Millennials and Generation X young people, and instead of using their time to pursue conventional transitional activities, today's youth, in some cases, are filling their hours with more time spent on the Internet and social media (Twenge, 2017). Again, as already mentioned, the Internet is not necessarily some foreboding ultimate evil, this time spent on social media is not necessarily wasted time and correlation does not equal causation when it comes to the amount of time youth spend on social media versus other activities (Piat, 2019). But, regardless of these points, with increased time on a platform

that is not completely peer-reviewed or moderated in any way, there runs a definite risk of increased misinformation (Wilner, 2018).

Misinformation, or the spread of false truths, is a widespread problem when it comes to the Internet and social media (Kata, 2009; Wilner, 2018). Misinformation can look like a number of things—false reporting in a news article or open source publication, hacking and the threatening of cybersecurity, targeted ads used to promote incorrect information to already vulnerable groups of people, or propaganda in the form of ads, articles, accounts, or social media sharing trends (Wilner, 2018). When it comes to misinformation, the most effective way to combat its negative effects and the sharing and popularization is education (Kata, 2009). There is already an increased threat of misinformation for the general public, regardless of age group (Flanagin & Metzger, 2000; Schulten & Brown, 2017). However, since many young people are still going through their education and learning the difference between reputable or disreputable sources, and many young people are targeted for online scams and exploitation, there runs an even greater risk of increased misinformation (Berson, 2003; Guan & Subrahmanyam, 2009). While some Generation Z youth may believe that because they grew up with the Internet and can differentiate between these sources, misinformation has become more difficult to spot with smarter campaigns and sneakier applications (Mintz & Forbes, 2002; Wilner, 2018). Whether it is through sponsored articles on news media sites, advertising through social media, or the more sinister threat of hacked accounts and data, misinformation can be hard to detect on today's evolving Internet (Wilner, 2018). In order for young people to stay engaged and educated, and use that education to move forward with social change as well as their careers, today's youth need to be better educated about the challenges of misinformation, and need to be more exposed to reputable sources of information and research, so they are able to distinguish between sources over the course of their educations (Kata, 2009).

Misinformation is just one challenge when it comes to Generation Z education. Another hurdle comes with the pursuit of higher education, and the contradictory reality of the number of Gen Z degrees acquired, and Gen Z's perceived educational value (Statistics Canada, 2017). When it comes to post-secondary degrees and the young adult pursuit of higher education, degree ownership in Canada has gone up almost six percent from 2006 to 2016, with the highest

increase coming from 25 to 34-year-old Millennial women, who went from 32.8 percent degree ownership to 40.7 percent (Statistics Canada, 2017). It has not been predicted that these numbers will increase, stay the same, or decrease in Canada, but the trends suggest that degree acquisition has been steadily increasing over the years, with Generation Z young people continuing to enter post-secondary institutions at a comparable and steady rate (Statistics Canada, 2017). However, while degrees are still being acquired, research has also suggested that students' contentment with their educations, and the perceived values of their educations has been steadily decreasing since as early as the 1990s (Statistics Canada, 2017). Grade 12 students' intrinsic desires to go to school, such as the experience being enjoyable, meaningful and interesting, has been on a steady decline since the early '90s (with a brief increase in 2010 and 2011), and have since been rapidly decreasing (Statistics Canada, 2017). Grade 12 students' extrinsic desires to go to school, such as the feeling that schoolwork is important for life and will help when seeking job opportunities, have been steadily declining since the research first began in 1976, reaching a rapid decline in 2012 and onward (Statistics Canada, 2017). If we look to our definition of youth, and Generation Z youth, constituting those born between 1996 and 2004 (United Nations, n.d.), this rapid decline directly coincides with when Generation Z students would have been first entering the late stages of high school, and considering post-secondary school and career options. Generation Z students may still be pursuing degrees, but that does not mean they feel their degree holds the same value it did for earlier generations.

Looking at these statistics, youth have consistently questioned education and have not necessarily had a positive association with school since the 1970s (Statistics Canada, 2017). However, modern generations are not only unhappy in school, but also have different perceptions of conventional career development (Schwieger & Ladwig, 2018). Generation Z youth are showing more signs of an entrepreneurial mindset (Schwieger & Ladwig, 2018), and today's emerging adults have been proved to be self-aware, self-reliant, self-learners, and more inclined to innovation than past generations (Bassiouni & Hackley, 2014; Dougherty & Clarke, 2018; Schwieger & Ladwig, 2018). Like the cohort of Millennials before them, Generation Z actors have come of age in an era that has exposed them to increased innovation and alternative means of thinking (Dougherty & Clarke, 2018). This upbringing has made them more inclined to careers that allow for a higher level of innovation, and in order to better engage this group of

young people, innovative ideas should be at the center of business models (Dougherty & Clarke, 2018).

Today's emerging adults are also increasingly favouring a less conventional workplace, and see themselves as being able to create flourishing, independent careers (Frunzaru & Cismaru, 2018; Iorgulescu, 2016). Some of this fascination with entrepreneurship is accredited to the world of social media influencers and YouTube celebrities—a world where anyone can become rich and famous, and today's youth are able to see people their own age, and even their own peers, start lucrative careers in their teens (Chae, 2018; Khamis, Ang, & Welling, 2017). Unlike youth of the past, today's youth are exposed to more career influences and are able to see people in their age group succeeding outside of their community and classrooms (Chae, 2018; Khamis et al., 2017). With these alternative careers, while a university degree may not be a necessity, a certain degree of knowledge, self-awareness, and ingenuity is still required, shedding light on an alternative style of education and success (Duffy & Pooley, 2019; Khamis et al., 2017; Whitmer, 2019). Generation Z youth may be slightly disillusioned by conventional education models, but that does not mean they are moving away from the pursuit of more information, they may just be approaching education and knowledge with a different mindset (Duffy & Pooley, 2019; Khamis et al., 2017; Whitmer, 2019). Research has suggested that higher education is still an important means for creating socially aware and informed citizens, and today's emerging adults should hopefully still see the value in these programs (Dryzek, 2003; Finnie, 2012; Loewen, 1993; Mohammed et al., 2001). While alternative careers and alternative forms of knowledge are seen as an interesting direction, post-secondary education is still a requirement for creating well-rounded and informed individuals who are able to understand the nuances and intersectionality of challenges in their community (Dryzek, 2003; Finnie, 2012; Loewen, 1993; Mohamed & Wheeler, 2001). Perhaps then the challenge is less so Generation Z having apathy towards education, and more so the current education system learning to adapt to this new and creative generation. Similarly, if environmental education programs also wish to see continued and improved interest, they must also be able to adapt to this new generation, and provide opportunities that are perceived as being of higher value.

Today's youth are still exposed to opportunities for education and learning, but may encounter more potential obstacles towards trustworthy, academic, or peer-reviewed information. Looking back at Howe and Strauss' (1992) generational theory, it is not too surprising that today's youth are starting to see past existing institutions and structures. Unlike the Hero generation that came before them who looked to manage crisis control from within the system, Generation Z is entering the Crisis as new systems designers and looking to alternative means for change. Millennials were influenced by the hopeful generations before them to pursue higher education in order to find a career, and now Generation Z is being influenced by the frustrated Millennials who have started to realize that this system is no longer sustainable (Atay et al., 2018; Holt, 2018). Youth are prime targets for environmental engagement programs because they are at a stage that allows them to explore and expand their knowledge (Riemer et al., 2014), but for today's youth, this knowledge may no longer come from the education systems that are leaving them questioning (Statistics Canada, 2017). Generation Z skills tendencies towards alternative careers (Schwieger & Ladwig, 2018), as well as creativity and innovation (Dougherty & Clarke, 2018), can prove to be an asset for environmental engagement programs as they look to give students unique experiences outside the classroom.

2.5 Risk-Taking and Experimentation

The fifth and final listed rationale for the engagement of young people according to Riemer et al. (2014) is that emerging adults are considered prime targets due to their risk-taking nature. As mentioned earlier, during the psychosocial moratorium, young people have an opportunity to explore and engage with new ideas and movements, often with few perceived repercussions due to a lack of urgent work and family responsibilities (Erikson, 1968). This space encourages risk-taking, since their jobs and livelihoods are often largely non-existent, and therefore not threatened during this time (Erikson, 1968). Risk-taking can manifest in many forms, including in experimentation and exploration with social experiences and interests, as well as risks regarding protest, activism, and social change (O'Brien et al., 2018). Seeing as youth have a natural mindset towards risk and exploration, it is a prime time in life for engagement with causes that encourage their increased civic awareness (Riemer et al., 2014).

When it comes to Generation Z, out of the five premises, this is the one that has potentially strayed the furthest from historical youth observations, with Generation Z actors being consistently viewed as more risk-adverse than any other modern generation (Malone, 2007; Twenge, 2017; Williams, 2015). While the generations that came before them were often given room to explore their identity through whatever means available, Generation Z young people have grown up in a more sheltered and “safe” environment (Malone, 2007; Twenge, 2017; Williams, 2015).

Growing up experiencing increased anxiety and depression, increased exposure to upsetting news and information via the Internet and social media, fewer in-person interactions that allowed for the building of trust, more protection from parents and teachers, all on top of the luxury of an extended period of childhood and early youth (Malone, 2007; Twenge, 2017; Williams, 2015), Generation Z has been bred to avoid risky situations, knowingly or not. However, these traits are not the only justification for Gen Z’s cautious attitude, their aversion to risk may also come from very real situations that have affected their childhood and overall feelings of safety in society (Brennan & Moore, 2009; Wadman, 2018). If we look to the threat of climate change as well as the increased threat of gun violence against children and teens in the United States, in the form of both domestic terrorism and gang violence (Wadman, 2018), it is clear that Generation Z youth have been given genuine reasons to fear for their safety, alongside the fear and distrust already instilled throughout their upbringings. Recent data from 2006 to 2016 has shown that, in the United States, guns have killed more children than cancer, suffocation, drowning, or congenital abnormalities, with 62.6 percent of those gun-related deaths coming from homicide (Wadman, 2018). While youth gun-related deaths are not necessarily common in countries outside the United States, systemic violence and the mentality that leads to intentional firearm homicide is not uncommon in other societies, sometimes manifesting in the same way, or violence by another means (Brennan & Moore, 2009). A culture of systemic violence has been known to contribute to rape culture, violence against women, racial minorities and sexual minorities, and the perpetuation of colonial ideals (Brenes & Wessells, 2001; Collins, 1998; Elias & Rai, 2015; Holmes, Hunt, & Piedalue, 2015; Rose, 2013; Walton, 2004). All of this violence can take a toll on younger demographics, especially when they are the ones experiencing this violence firsthand, and especially when they are still learning to develop their resilience and coping

mechanisms (Daiute & Fine, 2003). In addition to the fear of violence, climate change is another pressing threat and growing fear for today's youth (Black & Walsh, 2019; Hickman, 2019). If we look to the climate change observations from the aforementioned IPCC report, by 2030, when many Generation Z actors will still be in their twenties, the world will have experienced irreversible climate damages, largely caused by the actions of earlier generations, as opposed to those of Gen Z and the groups that come after them. If anything, instead of a risk-taking innate nature mobilizing youth to participate in social change, it could be this very real fear that will burst the bubble of safety and security in which they once grew up, and encourage social change and activism (Skurka, Niederdeppe, Romero-Canyas, & Acup, 2018). It is no coincidence that these two threats are also the two motivators for present Generation Z activism in the form of the March for Our Lives protests and School Strike for Climate (Crnogorcevic, 2018; Laughland & Beckett, 2018). Risk-taking may no longer drive them to participate in programs, but a perceived pre-apocalyptic will to survive and protect their future, a recorded historical phenomenon across diverse generations and timelines, may be a strong driving force (Hoggett, 2011).

Related to their risk aversion, Generation Z youth are also more practical than the Millennials that came before them, in that Gen Z actors are more likely to look for lucrative careers and financial stability (Loveland, 2017), which is quite different from the "dreamy" Millennials that came before them (Suleman & Nelson, 2011). According to research from Monitoring the Future, over time, there was a steady decrease in grade 12 students who believed that work would be a central part of their life, and that other elements would take precedence over a job (Twenge, 2017). That began to change around 2004, when grade 12 students started to believe again that work should be central, leading to a steady increase in this value over the following 12 years (Twenge, 2017). Late Millennials and Generation Z students are feeling more connected and tied to their jobs, and see them as an important part of life (Twenge, 2017). Going back to Howe and Strauss' (1992) predictions that the generation after Millennials will mirror some values of the traditionalists, Gen Z is once again looking towards social situations that allow for their lives to have more structure. Like the traditionalists, they were born into a world that was coming out of a recession, and that upbringing has affected their larger economic worldview (Strauss & Howe, 1992). This more practical approach to work and an increase in value for a stable job is different from past generations who have consistently seen work as less important

than the generation before them (Twenge, 2017). While the psychosocial moratorium tends to be a time with less perceived risk due to a lack of commitments and family obligation, it is possible that with their desire to find a stable job in the future, they are less likely to do things that will risk the livelihood of their future self, even though that timeline could be distant (Caitlin Gibson, 2016). Another thing to consider when discussing Gen Z and late Millennial risk aversion is the role that social media plays in creating a digital archive of past behaviour (Meter & Bauman, 2015). With the Internet serving as a time capsule for anything one has ever written, shared, tweeted, or liked, today's youth have had to become more cautious about what they share, for risk of information being shared with the wrong people (Caitlin Gibson, 2016; Meter & Bauman, 2015; Moewaka Barnes et al., 2016; Pascoe, 2011). Today's youth have become fearful of what they share on social media as they see private posts, photos, videos, or written content, shared across platforms, ruining people's reputations, threatening their mental health, and making classroom and work environments difficult. Young students, as young as elementary school-aged, have even taken their own lives after experiencing cyberbullying, or having private information leaked without their consent (Brailovskaia et al., 2018; Hinduja & Patchin, 2019). This fear could be a contributing factor to Gen Z risk-aversion, as they want to protect themselves not only from trauma and difficult situations, but also protect the reputations of their future selves when it comes time to look for a stable career (Caitlin Gibson, 2016; Meter & Bauman, 2015).

While Generation Z risk-taking may be a conversation mired with tragedy and change, experimentation is a much more hopeful trait for this group of emerging adults, and can be a tool to foster greater risk-taking and more diverse experimentation. As already stated, today's youth are steadily more open-minded about people who are different from them, and are also often exposed to more alternative styles of thinking thanks to the world of the Internet (Kahne et al., 2012; Mitchell, 2008; Pandit, 2015). Today's youth are more likely to experiment with their socio-political views and sexuality (Twenge, 2017), which in and of themselves are also forms of risk-taking (Dworkin, 2005). Like the youth that came before them, Generation Z is still experimental, potentially even more so with their aforementioned inclinations towards innovation and alternative careers, and the fact that entrepreneurship is considered an act of experimentation and risk-taking (Kerr, Nanda, & Rhodes-Kropf, 2014). While they may be more

risk-adverse when it comes to moving beyond their bubble (Malone, 2007), that is not to say that their inclination towards other types of individual experimentation cannot result in eventual engagement with different social, environmental, or political causes (Doster, 2013).

2.6 Need for Alternative Skills-Building Opportunities

While completing this literature review, it became clear that one additional category was missing from the original YEEP rationale for youth engagement, especially in the context of Generation Z young people. In finding research that indicated high levels of innovation, low levels of empathy and in-person communication skills and community building skills, as well as a growing desire for alternative careers (Dougherty & Clarke, 2018; Schwiager & Ladwig, 2018; Twenge, 2017), it became clear that this generation has a need for skills that are not being fulfilled. Another reason why youth, today's youth in particular, are strong targets for environmental engagement programs, is their current skillset provides room for growth, as well as skills that could use program-specific engagement.

According to the Future of Jobs Report, released in 2018, it is predicted that as Millennials and Generation Z actors enter the workforce during the fourth industrial revolution, they will likely be sharing office space with artificial intelligence (AI) and automation (World Economic Forum, 2018). The Report predicted that the skillset of the future would emphasize concrete, often STEM-related skills, like coding, tracking, and intricate computer proficiencies (World Economic Forum, 2018)—all of which have often been marketed as careers for Generation X and Millennials (O'Connor & Raile, 2015). However, since that report was published, it has been noted that AI will likely be able to replace these skills (Wang, W. & Siau, 2019), through a historically documented phenomenon, known as “technological unemployment” (Peters, 2017). Instead, the “future of jobs” will look more like the “future of humanity,” with technological skills working together with inter and intrapersonal communication, emphasizing retraining towards a skillset that includes social skills, creativity, and human skills (Wang & Siau, 2019). In order for today's youth to thrive in this future environment, they need to begin to develop these skills that are currently lacking (O'Connor & Raile, 2015; Turner, 2015; Twenge, 2017; Wiedmer, 2015). Going back to earlier conclusions, Generation Z's extended psychosocial

moratorium may indicate that even though they may be missing some of these skills at present, that is not to say that they will not develop at a later time in their lives when they begin to experience the conventional adult activities that encourage this type of personal growth. However, given the fact that today's youth are in a position where they have less time to take action and get involved and mobilized due to the increasing threat of climate change, this skills-building process may need to happen sooner rather than later.

Research on the future of jobs and work has indicated that today's youth will not be able to enter careers with the same tech-heavy skills that have been emphasized over the last few years, but will also require skills related to creativity, communication, and cultural competencies (Marr, 2019; Wang & Siau, 2019). According to previously discussed conclusions, they are currently lacking in some of these skills, in particular, communications and cultural competencies in the form of empathetic understandings (Twenge, 2017). In addition, their creativity skills have potential given their proven inclination towards innovation (Bassiouni & Hackley, 2014; Dougherty & Clarke, 2018; Schwieger & Ladwig, 2018), that can be harnessed for increased creative and innovative learning. Youth can be a strong target for environmental engagement programs, not just because their attitudes have a lot to offer programs, but also because engagement programs can also have a lot to offer them, in terms of skills-building. Generation Z youth are looking for opportunities to explore alternative and stable careers (Schwieger & Ladwig, 2018), and environmental engagement programs can provide opportunities to build essential skills necessary for a stable career, especially if it is integrated into the framework that is meant to create effective engagement programs.

In creating a more holistic approach to youth attitudes and behaviours, in terms of youth being able to provide skills to environmental engagement, as well as vice versa, environmental program designers will, explicitly, have as much to offer to the participating youth as the youth have to offer to the growth of the environmental movement. Youth environmental engagement programs have always been able to offer a skills output to participants (Riemer et al., 2014), however, those offerings may not be as obvious or as desired, since youth are now required to enter the existing workforce with a different set of skills, skills that some young people are not feeling they receive with their high school curriculum (Statistics Canada, 2017). Youth

environmental engagement programs could be a means for helping young people develop the conventional and essential skills that youth have always had, as well as help today's young people find the alternative systems for which they tend to have preference. In order for young people to continue to dissent, advocate for change, and become informed and aware decision-makers, these new youth traits need to become emboldened and encouraged through a means with which they are comfortable. We are starting to see more dissenting youth from Generation Z as children and teenagers bring new social movements to the forefront of global society. However, if we wish to see these youth stay engaged, environmental engagement programs need to consider these new and modified traits in their program design and development.

At present, there is a large research gap pertaining to effective skills-building opportunities for Generation Z, as well as the concrete wants and desires of Generation Z in terms of skills-building opportunities. While this research looks to begin this conversation, it must be noted that due to the lack of available research and citations, this observation will be further discussed, with new ideas and observations, in the Discussion chapter of this paper.

2.7 Final Thoughts

Over the years, youth have proved to be appropriate targets of environmental engagement for a number of reasons. After consulting the literature, the initial YEEP rationale for engagement remains somewhat true, but all categories need to be reassessed and reconceptualised to more accurately frame this tech-savvy, innovative, independent, and risk-adverse group of young people.

In order to understand the new rationale for Generation Z youth environmental engagement, the results of the literature indicate that these earlier conclusions can be rephrased to be more applicable to today's emerging adults. When the YEEP framework was developed in 2014, Reimer et al. explain that youth are strong and important targets for social change for five primary reasons. Given the information presented for each of these rationales above, the five primary reasons could be re-worded as follows: (1) They are experiencing an extended transitional period in life that fosters identity exploration and development, stretching from

elementary school into their late twenties and early adulthood; (2) Youth are at the forefront of social movements across the globe, and are able to use digital tools to participate in diverse styles of dissent; (3) Young people can serve as good messengers to their peers as well as different groups of people such as parents and family members, so long as they are equipped with the necessary tools to build strong individual resilience and empathy; (4) Young people are creative and innovative, and are exposed to high amounts of peer-reviewed information and new ideas through formal education and smart interactions with the Internet; (5) Young people are experimental, and need opportunities that allow them to take risks and move towards more resilience and less protection; (6) Young people have a desire and need for new skills-building opportunities, including communications skills, empathetic understanding, and tools to explore innovative and alternative careers.

Table 2.1: Previous YEEP rationales (Riemer et al., 2014) versus Generation Z-specific YEEP rationales, according to the literature.

Initial YEEP Rationale	Generation Z YEEP Rationale
<ol style="list-style-type: none"> 1. They are experiencing a transitional period in life that fosters identity exploration and development. 2. Youth have often been at the forefront of social movements across the globe. 3. Young people serve as good messengers to their peers as well as different groups of people such as parents and family members. 4. They are exposed to a variety of educational material through 	<ol style="list-style-type: none"> 1. Youth are experiencing an extended transitional period in life that fosters identity exploration and development, stretching from elementary school into their late twenties and early adulthood. 2. Youth are at the forefront of social movements across the globe, and are able to use digital tools to participate in diverse styles of dissent. 3. Young people can serve as good messengers to their peers as well as different groups of people such as

<p>coursework and modern technologies like the Internet and social media.</p> <p>5. Young people are more likely to take risks since, in most cases, their jobs and livelihoods are not threatened by choices made in their personal lives.</p>	<p>parents and family members, so long as they are equipped with the necessary tools to build strong individual resilience and empathy.</p> <p>4. Young people are creative and innovative, and are exposed to high amounts of peer-reviewed information and new ideas through formal education and smart interactions with the Internet.</p> <p>5. Young people are experimental, and need opportunities that allow them to take risks and move towards more resilience and less protection.</p> <p>6. Young people have a desire and need for new skills-building opportunities, including communications skills, empathetic understanding, and tools to explore innovative and alternative careers.</p>
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The interesting thing about these revised conclusions is that youth are no longer seen as an individualized group of society, but one that will require give and take from the different generations that come before and after them. The rationale for their engagement with environmental programs is no longer based on what they can give to the social change movement, but also what the social change movement can give to them—an approach that could be more enticing to this generation that is less empathetic, more online, and seeking new opportunities away from conventional careers

3. Methods and Methodology

To further the results and conclusions from past research in the literature review, this thesis provides unique and relevant results through a case study of an existing, successful, youth environmental engagement program. With a qualitative analysis of nine interviews with youth actors in an environmental engagement program, this thesis hopes to better understand the initiating and sustaining factors necessary for improved Generation Z environmental engagement.

This chapter provides detailed information about the selection of the case study group, as well as further details on the YEEP framework that, as discussed in Chapter 1, is being evaluated for effectiveness and tested for potential improvements. This chapter also explains the basis for the interview structure, and the reasoning for the selection of a qualitative case study consisting of interviews.

3.1 Qualitative Research

This thesis is a qualitative case study involving a combination of deductive and inductive reasoning, in that order. As called for by Riemer et al. (2014), the YEEP framework and its diverse stated elements required rigorous testing to be proven effective. In Hyde's (2000) paper on deductive reasoning in qualitative processes, the author explains that because qualitative research is traditionally based on an inductive approach to reasoning, the results of qualitative enquiry most often remain untested. Introducing formal deductive procedures into qualitative research can represent an important step towards assuring conviction in qualitative research findings (Hyde, 2000). This paper initially conducts a deductive study, evaluating the PEYA program against the existing YEEP framework guidelines. As one of its goals, this paper aims to deduce whether or not the YEEP framework remains applicable for existing and evolving youth environmental engagement programs. It then takes this analysis to a next level by further analyzing the results in an inductive manner, to come to conclusions about the values of

Generation Z when involved in youth engagement programs. This research aims to both test the YEEP framework, as well as provide insightful contributions about Generation Z participation.

At present, there has not been a study that tests the YEEP framework, or any environmental engagement framework or program, against the specific wants and needs of Generation Z participants. This being said, this research could have taken many different shapes, depending on the desired style of results. However, one comparable research study has been done in the past (Reagan, 2015), and its framework was consulted when creating the outline for this thesis.

In Reagan's 2015 Masters thesis for the University of Waterloo, the author conducted an inaugural assessment of the YEEP framework, with case studies of two youth environmental engagement programs, the Sierra Youth Coalition and Reduce the Juice. Reagan simultaneously engaged both of these groups through peer-led workshops at the Ecology Action Centre (EAC). Reagan, using results from the YEEP and focus groups from the aforementioned groups, designed a new workshop program, Youth Action Club: Adventure Training and Creating Coolness (YAC: ATACC), with the help of the EAC and participating students. The new program was designed around the principles of the YEEP framework, and tested their effectiveness. In line with Reagan's thesis, this thesis also follows a qualitative framework, using primary data from direct interaction with participating students. In line with Reagan's thesis, this thesis also follows a qualitative framework, and looks to the guiding questions posed in the YEEP framework to control the interviews.

3.2 Methods

3.2.1 Thematic Literature Review

To begin this thesis, a thematic literature review was conducted to gain insight into existing literature and theses. According to Litchfield, literature reviews are an important element of qualitative research, as they summarize the existing research that has previously been conducted in the field, and puts the research at hand in context, and highlighting what will be added to the existing body of knowledge (Litchfield, 2008). The thematic literature review was an important preliminary stage of the research conducted prior to the qualitative case study. It was an

important element since Generation Z research is an emerging subject, and it was crucial to understand the existing hypotheses and conclusions before designing the structure of the case.

3.2.2 Case Study

This research conducted a case study of the Peel Environmental Youth Alliance (PEYA), a non-profit youth environmental engagement group run by the larger grassroots sustainability organization Ecosource. More specifically, this research conducts an instrumental case study. An instrumental case study, as defined by Stake (1995), is a research case used to learn about something. In this case, this research looks to learn about current Generation Z youth environmental engagement. Creswell (2013) defines a case study as a “bounded system,” or a study in which the confines of the research are clearly defined and articulated. In this situation, this case study is bounded by age, generation, as well as participation in the PEYA program. It has been noted that all studies can be described as being “bound” (Farquhar, 2019), despite being qualitative or quantitative, however, these confines remain important when analyzing and making generalizations after a case study is conducted.

Based out of the Province of Ontario, Ecosource is an environmental education organization that works with youth, adults, and families to promote community-based environmental change. Operating since 1979, they deliver interactive learning services related to the environment and urban agriculture, targeted specifically at schools, as well as the community at-large (Ecosource, 2018). Beyond PEYA, their offerings include classroom waste reduction programs for elementary and middle school classrooms, high school local food programs run by students, for students, multiple urban gardens that place community members as the main caretakers, and the Sustainable Peel- Education and Action for Change (SPEAC), which delivers sustainability and outdoor play workshops to schools and community groups. While they are based out of Mississauga, their programs cater to groups across the Region of Peel—a geographic boundary consisting of Mississauga and two neighbouring suburbs, Brampton and Caledon. The Region shares infrastructure related to public transportation, waste management, public health and emergency services, construction and housing policy, and school boards (“Programs, Services,” n.d.).

The organization's mission statement is "inspiring [the] community to be personally accountable for the environment through creative education" (Ecosource, 2018, para. 6). Some of their programs include community gardens, classroom waste reduction and gardening workshops, and various field trips and individual targeted community projects. EcoSource's on-going EE programs work to engage students and encourage them to participate in sustainability programs, and their growth and expansion has proved they have had some success. In some cases, their programs have even led to students getting involved in supplementary volunteer and competitive programs related to sustainable agriculture and waste management initiatives (Ecosource, 2018).

According to information shared in the interviews, the PEYA youth environmental engagement program consists of 11 high school-aged executive members who plan and coordinate events for teenagers and young adults within the community, as well as tens of general members who have the freedom to drop in and out of monthly meetings as they choose. The executive team is assisted by an adult program coordinator who works for Ecosource full-time. The program does not follow a hierarchical structure, with members of the executive team working on the same level as their peers. The program was developed around 15 years ago by community youth who saw a need for a regional environmental engagement program, and shortly after its inauguration, it was acquired by Ecosource. PEYA coordinates annual events, such as The Amazing Green Race, a public transit-centered race modeled around the reality television series *The Amazing Race*, and Ecobuzz, a conference that brings together sustainability professionals and interested high school students. The group hosts monthly general meetings that are open to executive members as well as community members and runs social media pages where general members are able to stay connected to the executives and find information about upcoming events.

3.3 Data Collection

To gather the primary data for this research, in-depth interviews of one hour or less were conducted with nine different participants. The participants were recruited through an open call for interviews from PEYA participants past and present. Emails and social media posts were circulated around the alumni and active communities in thanks to a contact at the program who was able to deploy this.

The interview questions (Appendix B) were designed around the suggested evaluation questions from the YEEP framework (Appendix A), as well as conclusions that were drawn from the literature. While the questions acted as a semi-structured interview guide, the interviews were open to take a natural course if participants felt more passionate about one set of questions than another. Participants were all asked the same baseline 14 questions, as well as additional questions that were based off their answers to the 14 questions, especially where additional clarification was needed, or where additional details were able to be shared, as expressed by the participant.

Of the participants, eight are, or were, active members of PEYA who have worked with the organization consistently at some point during the past five years. Seven interviewees fall within the age range of 16 to 23 years old, while one is above 24 years old. Of these eight participants, three participants have additionally worked with the organization in more administrative and mentoring volunteer roles, after having completed work with the program during their high school experience. One participant also contributed to the early implementation of the program, 13 years ago, and acted as a PEYA participant for multiple years. The ninth participant has worked with PEYA in more administrative roles over the last five years, but was never a participant directly with PEYA. Of these participants, seven fall into the age bracket of Generation Z, and two fall into the age bracket of Millennials, but they have both actively worked with Generation Z PEYA cohorts. While this research is most interested in the direct experiences and preferences of Generation Z actors, it was decided that it was also to include some perspectives of those who have worked with the group not just as students, but also as program administrators and mentors. Including the perspective of administration allows for the creation of a baseline of what the program is intended to be, compared to how it is experienced by student participants.

3.3.1 Rationale for Case Study Selection

When selecting the youth engagement program to use for the case study, it was important that the program reflected a certain set of values. In line with the YEEP framework's evaluation

criteria, the program was required to be an informal environmental education program that operated outside of the classroom (Riemer et al., 2014); to ensure the participants had enough exposure to the program to have had a meaningful experience, the program must be one that fostered in-person interactions with Generation Z youth with a high level of engagement; to ensure the program was reputable, it must be part of a well-established organization; to ensure the organization reflected the future of Canadian youth, it must reflect a high level of diversity in terms of race and gender; and to ensure the research could be conducted, the program had to be willing to participate in the research and help facilitate connections with participating youth.

Ecosource was selected for the research case study as they are a well-established organization that has been operating since 1979, engaging over 36,000 participants of all ages through their diverse program offerings (“Ecosource Annual Report,” 2017). They conduct effective programs, not just with youth, but also with more diverse age brackets, allowing them to grow from interactions with multi-generational stakeholders. Given that this research is grounded in Generational Theory (Strauss & Howe, 1992), it was important to work with an organization that works with more than one generational age bracket, and has been around for waves of youth and participants from generations that came before Generation Z, as this would be a better representation of the behaviour ebb and flow in cyclical generations.

In addition, Ecosource was selected for the case study due to its location in an Ontario city-suburb. According to research from 2016, Ontario has close to two million students enrolled in elementary, middle and high schools (Ontario Ministry of Education, Schools and School Boards, 2018). This total is higher than any other province, and greater than the number of university students enrolled in institutions across all of Canada (Statistics Canada, 2017b). Ontario’s public education curriculum has a large impact on Canada’s children and youth due to its mass level of influence.

The bulk of Ontario’s student population comes from Southern Ontario, specifically Toronto and the Greater Toronto Area (GTA) (Ontario Ministry of Education, Schools and School Boards, 2018) . The cities and suburbs that comprise Toronto and its surrounding area are home to a vast

diversity of citizens and high densities of families with young and teenaged children (City of Mississauga, 2017).

Ecosource's headquarters, and the site of the majority of their programming, is in Mississauga, Ontario, Canada, a large city-suburb located in the GTA, less than 30 kilometers west of the downtown core. According to a 2016 census, the suburb has a population of 721,599 people, making it the sixth largest city in the country, and the largest of Toronto's surrounding suburbs in the GTA. Mississauga has a high level of diversity among its citizens, and covers a wide range of socioeconomic backgrounds (City of Mississauga, 2017). With a population combining both multigenerational Canadian citizens, as well as notable populations of first and second generation immigrants, the city-suburb offers a unique understanding of urban dynamics that is valuable for the future of projected municipal growth in Canada, the predictions for which mirror the city's current population spectrum (Statistics Canada, 2015). The high level of diversity in the Region of Peel is important for this case study since recent research suggests that Generation Z as a whole, not just within population dense city centers, is the first generation in North American history to grow up without a majority of their peers being white or an individual race (Twenge, 2017). With this consideration, it is important to note that the participants that were involved in the interviews were of a high level of ethnic diversity, and represented multiple genders.

The case study on the PEYA program followed five steps:

Step 1: Determined the scope, goals, and research questions for the thesis. Conducted preliminary research related to youth engagement and Generation Z. Outlined research goals based on literature findings and YEEP framework.

Step 2: Selected an existing, successful youth engagement program for case study. Used sample questionnaire from the YEEP framework, as well as findings from the literature review, to create a semi-structured interview outline. Planned and conducted in-depth interviews with youth who are/were participants in the selected case study.

Step 3: Organized results from interviews based on consistent themes across the literature review. Compared themes to the YEEP framework categories. Analyzed relevance and accuracy of YEEP categories based on results (deductive).

Step 4: Further analyzed interview results by focusing on unique themes that stood out from the tested YEEP framework, beyond the literature review results. Used these themes to identify existing research gaps and contribute to growing research discourse on Generation Z engagement (inductive).

Step 5: After comparing the literature findings with the case study findings, identified gaps or areas of improvement for the YEEP framework in the context of Generation Z education and engagement, and summarized contributions to the literature.

3.3.2 YEEP framework structure

As discussed, this research aims to test the engagement structure proposed in the YEEP framework, and provide an analysis of the framework, as well as suggest possible improvements. Riemer et al. (2014) conducted a systemic literature review of existing research on environmental engagement, and crafted a list of five categories that account for a complete and effective youth environmental engagement program.

The results section of this research will be divided into the five categories outlined in the framework, and as designed based on the initial rationales shared and evaluated in the literature review: (1) the engagement activity/ program; (2) the engagement process; (3) initiating and sustaining factors; (4) mediators and moderators; and (5) outcomes. The results will be divided in this way in order to effectively analyze each element, as well as provide any insight that may come up in relation to each of these categories.

3.3.2.1 Engagement Activity/ Program

Researchers investigating youth engagement have studied a variety of programs and activities such as extracurricular groups, sports, volunteering, church groups, and political engagement. Since these groups make way for a diverse set of activities, Riemer et al. (2014) honed in on three shared aspects across styles: (1) objectives; (2) structure; and (3) quality.

‘Objectives’ refers to the projected or desired outcomes for an environmental program or activity. While the objectives of any given program can be diverse depending on access to resources, stakeholders, and size of the program, the YEEP framework outlines five primary, versatile objectives: (1) physical environmental improvements; (2) community education; (3) inquiry; (4) public issue analysis and advocacy for policy change; and (5) products or services contributing to community development.

‘Structure’ refers to the density of the activities, and the leadership structure. While most types of engagement are spread out over a longer period of time, some activities, such as retreats or summer programs, provide more concentrated amounts of engagement and experiences over a short period. Other programs offer more long-term involvement, such as organizations that encourage yearlong volunteer commitments, or consistent engagement with a steady group of participants. In addition to density, the leadership of a program is also critical to understanding structure. Research has suggested that young people prefer to deal with structures that impose less of hierarchy. Riemer et al. (2014) suggest that an effective program takes this into consideration in its design, so as to best please the participating youth.

‘Quality’ refers to the perception of participation being meaningful and impactful. Youth want to feel involved and respected, and want to understand that their efforts are making a positive contribution towards the program’s objectives. The authors explain that organizations that pay attention to building meaningful relationships with participants and take into consideration their feedback, are those that are most likely to be effective.

3.3.2.2 Engagement Process

Engagement is the process by which youth interact with the activity or program, and is described using three dimensions: (1) intensity; (2) breadth; and (3) duration.

While Engagement Activity/ Program- Structure references the intensity of an activity in terms of its frequency and duration, the authors explain that this term has other connotations as well. Rose-Krasnor (2009) outlines three elements of engagement: an effective element, or the emotional responses to an activity; a cognitive element, or knowledge of the activity; and a behavioural element, or actions related to participation. A participant that is highly engaged has a rich experience across all three elements, whereas passive participation may only target one of these elements. Intensity in this sense refers to the level of challenge and active engagement over the course of the program (Riemer et al., 2014).

Breadth refers to the diversity of different activities that youth have the opportunity to engage with. Busseri et al. (2006) have found that the diversity of activities is just as important as the frequency of activities, since it allows participants to explore a range of interests and opportunities (Riemer et al., 2014).

3.3.2.3 Initiating Factors and Sustaining Factors

Riemer et al. describe these factors as the facilitating factors and barriers that exist for an individual to become and stay involved with a youth engagement program, including individual factors, social factors, and system factors (Bronfenbrenner, 1992; Rose-Krasnor, 2009).

Individual sustaining factors can include personal interests, religious and moral values, and the perceived benefits of engagement (such as experience to use on resumes or when applying to universities, or in terms of initiating factors, the opportunity to make friends and meet potential partners) (Riemer et al., 2014).

Social sustaining factors can include income and education, both of which have been proved to have to have a direct link to level of willingness to participate in youth engagement programs. According to O'Neill (2007), access to strong education provides the confidence and independence to enable engagement, while low income can be a barrier to engagement because of limited access to resources (such as a vehicle for transportation to an event) or lack of time (due to the obligation of having a job to help provide for their family. (2007) An important social

initiating factor is having a supportive social milieu, such as family and friends who encourage engagement and socially responsible behaviour (Riemer et al., 2014).

System initiating factors includes overarching obligations imposed or requested by schools or governments, such as requirements for volunteer hours to graduate. Systems sustaining factors refer to the characteristics of the program itself, such as opportunities for novel learning experiences, the general enjoyment of the program, and the degree to which the program can become habitual through the internalization of civic responsibility (Riemer et al., 2014).

3.3.2.4 Mediators and Moderators

Mediators and moderators are factors that facilitate, interact with, or interfere with the direct engagement process and its outcomes (Riemer et al., 2014). At present, there is a lack of empirical research regarding mediators and moderators, but some proposed factors include youth emotionality, activity level, agreeableness, self-regulation, and communication abilities (Rose-Krasnor, 2009). There has been a call by multiple researchers for the further investigation of the mediators and moderators on youth environmental engagement. It has been stated that policies and programs should carefully consider their direct target youth population since one size program does not fit all (Kennelly, 2008; Mackinnon, Pitre, & Watling, 2007).

3.3.2.5 Outcomes of Engagement

Potential and possible outcomes are organized based on their impacts on an individual, social, system, and/or environmental level. The framework cites that an individual outcome can involve an improved sense of wellbeing, as well as lower likelihood to engage in dangerous behaviour such as crime, bullying, or alcohol and drug abuse. At the social level, outcomes can include the development of important social skills and improved social communication. At the system level, outcomes can include improved civic engagement, both at the time of participation, as well as later in life and through adulthood. Environmental outcomes include increased awareness of environmental issues throughout adulthood, as well as tangible differences in the community, such as new programs, infrastructure, and initiatives. Across each level, it has been noted that identity development is a key factor in fostering pro-environmental citizens long term. The

YEEP framework sites that people with a more inclusive sense of self-identity (one that may include a greater connection to other people and nature), tend to value others and the environment more in their choices (Riemer et al., 2014).

Each of these categories of the framework have been given a set of questions to be considered for program development and evaluation. These questions can be found in Appendix A of this research.

3.3.3 Data Coding

Once the interviews were complete, each recorded interview was transcribed, and names were anonymized. The data was then sorted into four different tables, each reflecting one of the four main categories of the YEEP framework. Each table was further divided based on the secondary categories of the framework. The interviews were broken down by individual quotes, and then sorted across the different tables and sub-categories, based on the context of the quote, and how they applied to the different categories, as well as the suggested evaluation questions for each of the categories (see Appendix A). Once all of the interviews had been divided across the different tables and categories, consistent and relevant themes were looked for across (1) The four different broad tables; (2) The different specific categories within each table; and (3) Across all of the tables collectively. The thematic similarities were looked at based on the interview responses as standalone data, such as looking for mentions of similar experiences, concerns, and comments; as well as thematic similarities based on the six new conclusions drawn from the earlier literature review.

Given the six findings from the literature review (Table 2.1), the data was scanned for consistent messaging related to: an extended psychosocial moratorium, use of digital technologies, skills building opportunities, community building—especially related to empathy and resilience, and opportunities to explore different interests and ideas. The participant data, were colour-coded based on these themes, as well as others that were consistent across the participant answers and were unique compared to the literature. Once these themes were identified, they were formatted into results that could be supported by raw data from two or more different participant

interviews, as well as supporting literature. After consulting the themes and data, it was clear that some results applied very clearly to specific YEEP categories, while others were able to apply to more than one with different context. The quotes were always looked at and framed in the context of their broader interviews.

3.3.4 Population Group

The data collection phase for this research involved nine semi-structured interviews with Generation Z, as well as Millennial past and present PEYA actors. Table 3.1, below, outlines details about each participant, indicating whether they are a current member, past member within the last two years, past member within the last four years, or a PEYA administrator. The distinction was made between members who were involved up to two years ago, and members who were involved up to four years ago as the youth group had a different full-time coordinator between these times, resulting in some different events, activities, and minor changes to the organizational structure. This research involves eight actors who were involved with the program four years ago or less, and one outlier who was initially involved over ten years, and maintained connection for several years after. This outlier was included in the research as they were an initial founder of the program, and they were also able to provide insight into the original aims of the environmental engagement program. Two participants with experience as PEYA administrators were included in the study as they were able to provide more long-term analyses of the PEYA program. Overall this study consults the opinions of seven Generation Z actors, and two Millennial actors who have experience working with at least one Generation Z PEYA cohort.

While this research focuses on Generation Z understandings, it is important to note that, in considering Howe and Strauss' (1992) generational theory, that the generations that come before and after a generation will influence the attitudes and behaviours of the generation being questioned. Due to Generation Z youth being a relatively new and emerging generation of young people, we must consider that past and present members of PEYA would have had the opportunity to work with late Millennial actors at the same level of their Generation Z peers. Since the definition of Generation Z includes those born as late as 1996, it must be considered

that if they began involvement with PEYA as early as grade 7 or grade 8, they would have been interacting with members who were born between 1991 and 1995, in addition to their Generation Z peers.

Table 3.1: Participant Details

Participant Code Longhand, Citation	Participant Description
Participant 1, p1	Current PEYA member, Generation Z
Participant 2, p2	Past PEYA member, last five years, Generation Z
Participant 3, p3	Past PEYA member, last five years, Generation Z
Participant 4, p4	Past PEYA member, last two years, Generation Z
Participant 5, p5	PEYA administrator, last two years, Millennial
Participant 6, p6	Current PEYA member, Generation Z
Participant 7, p7	Current PEYA member, Generation Z
Participant 8, p8	Past PEYA member, last five years, Generation Z
Participant 9, p9	Past PEYA member, past PEYA administrator, over 10 years ago, Millennial

3.4 Limitations

It has been argued that case studies have limitations in terms of the ability to provide generalizations, as well as their ability, from the context of the research, to provide objective results that are sensitive to the audiences being included (Merriam & Tisdell, 2016). However, despite common misconceptions about case studies not being able to provide adequate research for generalizations, Merriam & Tisdell (2016) explain that formal evaluation is often overvalued

as a source of scientific development, and that in order to fully understand a research question, context-dependent research should also be conducted. To ensure this research was context-dependent and able to provide some generalizations, this case study had specific restrictions as to who would be able to participate, from which program, and from which age bracket and geographical region. After conducting preliminary research on the program and on youth engagement as a whole, it was decided that only participants over the age of 16 would be allowed to participate in the research study. This was decided so as to ensure participants were able to give their unique consent. This limited the interview pool, as some present members of the PEYA program were unable to participate, and any Generation Z representation under 16 was excluded. A further limitation to the interviews occurred when outreach for participants, facilitated through an employee of Ecosource, was halted after a dissenting member of PEYA expressed discomfort in regards to academic research being conducted with youth. This limited the number of people who were available for the case study.

In regards to generalizations, and the above research, while this research has created a specific context-dependent study that is backed up with conclusions for existing literature, it is important to consider that these results are not meant to speak for all of Generation Z, especially considering that some Generation Z actors are still too young to be classified as “youth.” This is especially important to consider given the inclusion of select Millennial voices. However, as stated earlier, Millennial input was included to help frame the context of the interview responses, as well as due to generational theory indicating some overlap of generations throughout different timelines (Strauss & Howe, 1992; Strauss & Howe, 1997).

3.5 Reliability and Validity

As discussed in section 3.4, case studies have been viewed with a sceptical lens, but their limitations have often been disproved (Merriam & Tisdell, 2016). To ensure additional reliability and validity of the results from the literature though, the interview results are consistently coupled, whenever possible, with results drawn from the earlier thematic literature review. The addition of a preliminary thematic literature review also helps address another misconception about case studies, that they have limitation around testing a hypothesis, as they

are often seen as a means of early research and hypothesis development (Merriam & Tisdell, 2016). To ensure this was not the case, and to ensure the results would be reliable in testing the research question and research objectives of this thesis, the earlier literature review helped ground early youth engagement conclusions that provided the rationale for this research, allowing the case study results to not only begin to evaluate those initial rationales, but to also help create new rationales for testing. According to McNabb (2015), literature reviews are critical in identifying the gaps that currently exist in the literature, and help present the scope and theories in which the remaining sections of the research will be grounded. By combining the case study with a thematic literature review, it helps alleviate some of the perceived limitations of qualitative research, and ensure validity and reliability when testing the research question and objectives.

4. Results

To develop and analyze programs using the YEEP framework, Riemer et al. (2014) put together a table consisting of three columns: (1) Description, referring to the different styles as described in the methodology; (2) Considerations For Program Development, referring to the questions to ask when designing a program; and (3) Considerations For Evaluation, referring to the questions to ask when analyzing how effective an existing or built program is against the framework (Appendix B). The results of this thesis will be divided into the four categories of the framework, with each section answering the questions proposed in Appendix B, and contributing new information that was not directly asked in the initial framework, but is more directly related to the Generation Z behavioural observations from the literature review. As a reminder, the four categories of the framework are (1) Engagement Objectives; (2) Engagement Process; (3) Initiating and Sustaining Factors; (4) Mediators and Moderators; and (5) Outcomes of Engagement. Results from the interviews will be cited when necessary and relevant (Riemer et al., 2014).

The YEEP framework suggests several questions to ask when evaluating a youth program against the four different sections (Appendix A). This research consulted those questions as well as included additional questions that were more specific to the understanding of Generation Z attitudes and behaviour (Appendix B).

4.1 Engagement Objectives

The Engagement Objectives section consists of three secondary evaluation categories: Objectives, Structure, and Quality. According to the official Mission statement of PEYA, the program's objective is to create a network of students who wish to create environmental change in their schools and local communities. Across the board, the participating students agree that the program provides substantial opportunities for exploring different avenues of environmental change, allowing for participants to interpret environmentalism from the perspective of their own interests (P2, P3, P4, P6, P7). In addition, when it comes to networking, the majority of participants also agree that the program provides a several diverse experiences related to

networking and engaging with like-minded individuals, both within the direct organization and program, and across the broader Peel community. This idea of a “network,” and networking at large, is not only something that is acknowledged by participants, but it also has a high perceived value for participating students, as it has encouraged opportunities for them to develop professional skills, as well as explore new avenues for careers and connecting with established adults within the community (P1, P4, P5, P7, P8, P9).

In terms of innovation, I think it is extremely important. Times are always changing and the youth of today are always changing. One of our main things that [PEYA] struggled with throughout the years is that our program has run for 16 years, and it has been pretty steady over the last 16 years, which in one way is amazing—it’s amazing to be part of a program that already has its process, has been able to continue its work, we’re known in the community, people know who we are—but at the same time, running a 16-year-old program that was built for youth 16 years ago, but applying that to the youth of today, we have run into some issues. (P5)

In addition, when it comes to the program objectives, in relation to the above quote from P5, it also became clear throughout the interviews that one of the programs main goals moving forward, for both students and administrators, has been to create a scalable and adaptable program that could grow with different batches of students year to year (P2, P4, P5). While the YEEP framework views a program’s engagement objectives as the overarching goals for participants, it became clear that the indirect goals of the program and its future were just as important to the overall perceived structure of the program. Like the above quote, across the interviews, multiple participants explain that they see PEYA as something that is growing and evolving, and something they hope to see connect with other movements across Peel and around the GTA (P1, P2, P7, P9). After operating under a similar mission and vision for the past 16 years, PEYA has faced some stagnation, and the interviewed participants were aware of the challenges, as much as they were the benefits, that come with a long-standing program. Additionally, after completing the interviews and consulting answers to questions from across the four YEEP categories, it was clear that the students also have a high perceived value of creative freedom in the context of the program’s structure and quality (P2, P3, P4, P7).

In high school you're still growing, but having PEYA and this organization to go to, where you think of all these creative ideas to get involved with, it was fantastic, you really grow as a person, and you gain more confidence. (P3)

When it comes to the quality and objectives of the program, while PEYA has been able to provide opportunities for individual interest exploration, there remains some concern about the historical structural tendencies of the program, and the fact that some of their earlier creative freedom may have dwindled over the years:

We've had a lot of really ambitious ideas in the past, and we also know PEYA [at the beginning] was very different from what it is now. People did so much to bring PEYA together and now it's just like 'let's just plan these monthly events, and Ecobuzz, and the Amazing Green Race'... Yeah [it's gotten a little comfortable], but I think people have started to get ambitious again. (P4)

As addressed in the above quote from P4, today's PEYA participants are aware that some previous cohorts of the program may have been more engaged with the program structure, due to their early involvement with the program design, while others may have been happy to follow along with the existing structure once the program was already well-established in the community. However, given the enthusiasm for creativity by this group of participants, today's emerging youth may be the ones who are prepared to innovate and pursue ambitions where those before them may have been happy to follow tradition, and may also be ready to take on the traditional roles of program founders, and alter the program to better suit the needs of today's youth.

When it comes to the engagement objectives of PEYA, they provide insight about the necessary fluidity and potential for growth that youth programs should require. While encouraging a standardized structure across programs is one of the goals of the YEEP framework, another goal is effective and widespread engagement across a diverse cross-section of youth. In order to appeal to a diverse set of youth, the interviewed participants have made it clear that, when it

comes to this emerging group of young people, creative freedom is necessary to encourage those who may have some interest in the program, but are looking to get something unique and related to their existing interests through participation. However, this creative freedom should not come with a completely open structure, as the majority of the participants expressed their gratitude for the youth-adult program structure that allowed not just for creativity, but also substantial support, guidance, and the occasional reality check (P1, P2).

Based on these interviews, PEYA was able to provide students with a reliable structure, as well as engagement objectives and a strong program quality that were shaped by the interests and views of the participating students. The YEEP framework was successful in its framing of these three categories, however, if it wishes to progress as a guideline for future generations, its evaluation questions need to be reframed to target not just the adults in the youth-adult partnership, but also the youth who enjoy being actively engaged in the program design and growth, and development of the organization.

4.2 Engagement Process

Once they're in it, usually they're in it until the end of high school, and even through to university. Like for me, I'm still involved with them... There's a Facebook group for people who have already graduated but want to stay part of PEYA. There's a PEYA advisory council called PAC, they all come back during the retreats to give tips to the high school students. (P4)

When it comes to the Engagement Process category and how the objectives of the program's engagement are achieved, the YEEP framework outlines three secondary evaluation categories: Intensity, Breadth, and Duration.

In regards to the program intensity, the participants all expressed a positive association with the amount of work on their plates, often citing the value of the youth-adult partnership model that has made the workload of the program more manageable (P1, P4, P6, P7, P8). However, it was noted by multiple participants that location and location accessibility sometimes proved a challenge when it came to the intensity of the program, since further locations often required

greater time commitments and more planning ahead for both the PEYA members and the meeting attendees (P1, P3, P6, P7). Since PEYA covers a region consisting of more than one municipality, meetings and events can sometimes be difficult to access since they are regularly scheduled at different locations across the region. However, this challenge has been somewhat addressed thanks to the accessibility of and familiarity with technology for today's generation. Social media, social networking, email, and online meeting and conference software has helped make reaching out to students across the region more feasible, and has made planning around far-off locations less common and easier to maneuver (P1, P2, P3, P5, P7, P8).

When I started this work [in 2003], we were on dialup. I couldn't even download a document without it taking a minute and a half. When I wanted to connect with other young people, I had to pick up the phone. Now we have WhatsApp, some types of communication that I don't even understand... and then everybody has a phone with internet access with them at all times. I used to spend my money on the Bell payphones at school, because maybe I had to call Earth Day Canada by a certain time, and by the time I came from school, their offices would be closed. Do you know how much freedom they have in the palm of their hands through email? I had to go into the library at lunch and respond to emails, it is so much faster now. Technology today is the game changer, and we both know, they are much smarter with technology than any of us, they can do it better than even professionals. They have every tool at their fingertips. (P9)

As noted by P9, the earliest cohorts of PEYA were often put in positions that required a lot of in-person time commitment, leading to students dedicating additional time for transportation, meetings, and networking activities that, at the time, required using the phone or physical meeting spaces instead of email and social media. This time commitment sometimes detracted from time that could have been spent on schoolwork or socializing with peers outside of the program, making participants perceive the intensity as greater than it was. A contained use of technology, as moderated by the youth-adult supervisor, has helped alleviate the pressure of some of this commitment for today's cohort, and has still allowed for the program to operate effectively and involving all active members. Many participants even cited intentional social media posts as one of their most effective means of gaining new members and connecting with

interested students (P2, P3, P7, P8). Despite having less in-person contact and more digital media use than previous generations, the participants still unanimously noted that they have had a positive social experience and strong social interactions through PEYA (P3, P4, P6, P8, P9). This goes to show that technology can still be a tool for social skills building for today's generation, so long as it is used in a meaningful, moderated, and organized way. If the framework looks to better understand Generation Z and future emerging generations that will have grown up with technology, questions related to technology should be better integrated into the evaluation of intensity.

For the program breadth, as stated in the Engagement Objectives section, participants are given a strong level of creative freedom that has an all-around positive interpretation. This creative freedom has allowed for the hosting of a breadth of events including conferences, networking nights, nature hikes, cooking classes, educational seminars on various topics, and much more (P2, P3, P4, P6, P7). In addition, the program's mindset towards growth has also appeared to allow the breadth of the program to grow over the past few years, giving students the chance to question the traditional vision and mission of the program and make room for new ideas. P9, who was involved with the program during its early aughts, expressed concern for the program and a perceived "corporatization" of the youth-adult partnership that they felt could happen with the larger growth of the umbrella EcoSource organization. However, as also stated above, the program has faced some stagnation as certain activities, events, and approaches to planning have become stuck in tradition over the years, and because of this, the organization has welcomed potential changes for growth, and in recent years, they have returned to a structure that allows students to make bigger structural changes and suggestions. In allowing the modern cohorts to question some of the practices of the PEYA executives that came before them, not only does this allow for an increased breadth of ideas, it is also a means of making room for more alternative means of dissent. While only one participant actively brought up concerns about dissent styles and allowing for exploration beyond conventional structures of youth program activism (P9), multiple students expressed a desire for the program to grow and connect with other youth engagement programs operating within the GTA, as also stated in the Engagement Objectives section (P1, P2, P7, P9). In connecting with other groups that may have different objectives and engagement processes, allowing for a more diverse expression of dissent will be necessary as

students learn to connect with different groups and different movements, and how their existing connections, like their role within PEYA, can work with other youth groups in the region. As PEYA continues to grow and provide more unique opportunities for its students by making connections with diverse groups across the community, integrating and understanding these different styles of dissent could be important to the engagement process of the program, as well as encouraging risk and exploration across participants.

When it comes to the duration of the program, PEYA executives are only required to stay involved for the current school year, with room to continue to the next year if they run in the executive elections again. While students have the opportunity to leave after the year, the vast majority of the interviewees stayed connected to the program for more than one year (P1, P2, P3, P4, P8, P9), often extending their involvement past high school and through to their time in post-secondary (P4, P8, P9).

The organization helped me grow quite a bit and connect to a lot of people I wouldn't have had the opportunity to connect with otherwise. And throughout high school the people and the programs we ran made an impact on me. So I wanted to continue to be a part of that, meet some of the younger executives and help give back to them. (P8)

Students involved in PEYA have stayed committed past the end of high school, in part thanks to the organization helping them create meaningful social relationships, as well as explore personal interests with intention and support, as they transition into a period closer to adulthood. In order for the YEEP framework to effectively target and engage Generation Z youth, some room needs to examine the Engagement Process in the context of technology being used for productivity purposes, how a breadth in terms of styles of dissent can be made available to participating youth, and, in terms of duration, how do both the youth and adult program planners see themselves and their students growing with and out of the program.

4.3 Initiating and Sustaining Factors

The third category of the YEEP framework is the Initiating and Sustaining Factors, referring to the program qualities that initiate engagement and sustain it over the duration of the program.

The Initiating and Sustaining Factors category has three secondary evaluation categories: Individual Factors, Social Factors, and Systems Factors.

When it comes to the individual initiating and sustaining factors, unanimously, students got involved in the program because they had a previous interest in environmental change. In addition, students were also overwhelmingly interested in involvement because they felt it would provide good exposure to professional experiences that would improve their resumes, university applications, and ability to conduct schoolwork in a successful manner (P1, P3, P4, P5, P8, P9; in this context, P5 and P9 are speaking less to their own draw to the program and more to their observations of students over the years). Multiple participants shared that they were particularly drawn to PEYA for the opportunity to explore leadership roles (P1, P4, P8) and, as mentioned earlier, to network with professionals and like-minded students in the area (P1, P4, P5, P7, P8, P9). The program was able to provide them with valuable skills that were not accessible to them elsewhere, and as they realized this was a good opportunity to develop these skills, many of the students chose to stay involved for more than one year (P1, P2, P3, P4, P8, P9).

Although PEYA seems to be very primarily focused on environmental change, the hidden aspect is the fact that you get leadership and teamwork experience, regardless of being an exec or not... Like, I learned so much from PEYA, from the things we do on how things work, so it's not just the environmental factor where we're trying to make a difference here, or we do make a difference, because we also teach youth and people how to work with a team that is most efficient. (P1)

In addition to noting this professional skills and networking draw from the PEYA executives themselves, since these same executives are also involved in the program design and how a general meeting looks, multiple students also noted strategies that worked not just to engage them initially, but also to engage the general PEYA members who change from meeting to meeting. These students noted that taking time to get to know and network with the general members was crucial to initiating and sustaining interest in the program (P1, P3, P4, P7, P9).

I've noticed something this year especially that is unique to PEYA. So what we did is for each activity we do, especially during general meetings which is when this is really

significant, is that the whole team subdivides into smaller teams of three to four people, and each team is in charge of running one part of the whole event. So while one team is up there talking and controlling the event, the rest of the execs mingle with the participants and be a participant. So this way it allows the execs to interact with the general members and bond and have networking experiences. I know this really worked for me before I was an exec, because I didn't feel excluded or inferior because I was able to talk to them like anyone else. (P1)

The value of personal connections continues to be a vital initiating and sustaining factor for the individual factors, as many students also expressed that one of the reasons they were inclined to stay in the group was due to the close friendships they made through participation, and the opportunity to continue socializing with people they connected with. The PEYA program brings together multiple schools and two different school boards, allowing students to interact with like-minded peers who they may not have been able to meet without connecting through the organization. In reference to the above quote on general member engagement, it indicates that the participating youth enjoy having a strong social connection in spaces that may be new or perceived as uninviting. In addition, multiple students also expressed that they got involved with the program after being directed to the group by a close friend (P3, P6, P7) or family member (P1, P2), creating that social connection early on in the engagement process.

I remember the reason why I liked it so much was because there was a sense of belonging. For me it was a time where I knew about all these environmental issues and I was passionate about it, but I didn't really know what to do with it, where to take it, or what was the next step. So finding and discovering PEYA was an amazing way for me to find another outlet. And there were so many people who were like-minded, and we had the same goals, and we worked towards those goals, and I felt like I was involved, and it was great. (P3)

In terms of social factors, two participants site their parents as the initiating factor in their involvement (P1, P2), while multiple students site their friends' encouragement as initiating factors (P3, P6, P7, P8). This indicates that having a supportive social system is important to

maintaining engagement in an environmental program. One student in particular explicitly explained that their parents' support made the final difference in their participation (P6). Because they lived further away from the popular meeting spots for the program, this participant often relied on their parents driving them to and from the location, often requiring taking time out of their days to make this happen. They explained that while their parents were happy to know their child was involved with a fulfilling program, their parents also noted that sometimes it was just too much to take time out of their weekends to drive around the region, since they had other commitments and children to attend to. Related to the role of parental support, both P6 and P9 addressed the reality that for many students who participate in these programs, not only does the support of their parents matter, but so does the support of their peers. Both P9 and P6 indicated that students who were not involved in the program would occasionally make fun of the students that were involved in environmental action, using terms like "treehugger" to mock their work. This being said, ensuring the environment within the program is safe, supportive, and gives students the opportunity to discuss some of these concerns and challenges without judgement is crucial to maintaining engagement over multiple years.

In terms of systems factors, none of the participants initially became involved because of an outside obligation or imposed system such as fulfilling mandatory volunteer hours or completing work related to a course or project. However, some participants chose to stay involved because of a genuine enjoyment of the program that came from the feeling of making a difference and seeing a difference in their community.

"I thought that PEYA was definitely the starting off route for my interests in the environment. So I wanted to stay and gain more knowledge about the environment, and gain more perspective, but I also wanted to take what I learned and let other people know about what's happening. Because I know when I was starting off, I was very clueless and I didn't know that there was this much impact with what we were doing, and it was having such an impact on the environment. So I wanted to help educate people, especially the youth, because we are the next generation to make real change. So I wanted to take that forward, and that's why I decided to stay. (P2)

Making a difference in the community and networking with different organizations across the region are tied together for many of the students. After having overwhelmingly positive experiences with the program, the majority of participants expressed that they would like to see the program grow and reach more students, and often see their continued involvement as a means for progressing and expanding the reach of PEYA's larger environmental mission (P1, P2, P3, P7, P8, P9).

Overall, the primary initiating factors were previous interest in environmental change, opportunity for career exploration, networking and potential for professional skills building, as well as the formation of strong social ties and friendships, and the ability to spread helpful information and make a difference in the world. The YEEP framework already does a good job at addressing these different factors, except, and related to the results from previous sections, the fact that when a program is designed by youth for their peers, there needs to be an intentional effort to engage their observations about participants. From these results, it is clear that the participating PEYA executives are aware of what maintains engagement not just for them, but for their peers as well. Because the structure of the program has allowed for participants to change business as usual, this has given the opportunity to explore these observations and put them into practice.

4.4 Mediators and Moderators

The fourth category of the YEEP framework are the Mediators and Moderators that affect participation and level of engagement. This category addresses the external factors that play a role in encouraging or discouraging engagement across participating youth. This category has been the least tested and researched category, citing a few different potential mediators and moderators from individual studies unrelated to the YEEP framework itself. As addressed in the literature review, an external factor that has affected engagement levels is the accessibility of and controlled use of productivity technology, as well as individual access to correct and verified information.

As mentioned, the role that technology plays in an environmental engagement program is important for Generation Z. During the interviews, participants unanimously agreed that

technology was used for their program involvement and engagement, citing versions of social media, emails, and digital communications as necessary for program communication, meetings, and attracting new members. There is no doubt that Generation Z is more connected to technology and social media than any other generation, with every single participant citing social media and the Internet as important parts of participation, and it would be a poor decision to completely avoid addressing the role of technology in engagement programs beyond their face value, and more directly related to its behaviour and social implications. Technology has changed the way access is viewed for today's student, sometimes preventing the need for excessive transportation, as suggested in earlier results. A better integration of technology could also be an important means of addressing misinformation. Across the interviews, multiple participants noted that when they attempted to get more of their peers involved in either PEYA or environmental engagement programs at their schools, they were often met with a level of apathy related to a lack of knowledge on the subject (P3, P6, P7, P9). The participants noted that if someone does not have an existing interest in the environment, they may be less aware of environmental news, and therefore less educated on the subject and ready to get involved with an engagement program. P6 provided a lot of information about their high school's students, explaining how students were not willing to participate in events unless they got something out of it such as volunteer hours, an easy resume item, or some sort of prize, and that oftentimes, they did not see environmentalism as their responsibility.

There could be solutions to this, if we actually show them how our actions directly impact the environment. Because it's easy for us to say, like everything we throw out goes into a landfill, and landfills produce CO₂, and that goes into the atmosphere and it causes a lot of harm. But they actually won't understand it unless they see a landfill themselves. Because we're so separated from our actions, there aren't any visible landfills in our area, but I guess to make kids actually participate and worry about these issues, we have to show them visually. It can be really hard for people to believe these things are true, unless they watch a lot of videos and documentaries, and that can take a lot of time, especially for youth. The environment isn't their number one priority, they have a lot of other things to worry about, and that was one of the responses I always got,

like, ‘you know, the environment isn’t my number one problem, I have other problems to worry about, stop putting it in my face.’ (P6)

While the PEYA participants who were interviewed may have pre-existing understandings of environmental issues, the reality is that this group is a small sample of Generation Z youth, and when looking more broadly at the youth of today, many of them may not have any sort of avenue to explore their understanding of or questions about environmentalism, and at the end of the day, it becomes something they feel is not their responsibility. While the focus of this research is to understand Generation Z more specifically in the context of existing engagement programs and youth leaders, if programs like PEYA wish to grow and expand their reach to more students, a very real mediator/moderator for potential participants is a lack of information and understanding, and a consequential threat of misinformation if they try to understand these issues themselves using the internet, social media, and uninformed opinions around them.

To alleviate some of the challenges that come with these mediators and moderators affecting potential PEYA executives and general members, the program has developed a secondary offshoot program, the PEYA Champions. As described in Chapter 3, PEYA Champions are representatives of the program who bring some of the values and lessons from PEYA directly into their schools, in hopes of creating environmental clubs and events that can address climate change action and mitigation. For students who do not have the family and friend support to engage in a program like PEYA, having PEYA Champions that are more directly immersed in the culture of a school and who are likely to plan events and programs that are already at the school themselves, can help eliminate the need for additional transportation, as well as additional technology that is aimed at replacing the in-person experience. In addition, PEYA Champions are also able to become reputable touch-points for environmental information, and can help bring the supervised and revised information they learn and share through PEYA directly within their schools and classrooms. This program has been operating within PEYA for a few years, and throughout the interviews has been viewed as a relatively new and ongoing program (P1, P4, P5, P7). While this could be a proposed solution to help better alleviate the current mediator/moderators affecting PEYA participation, it is not suggested as a potential addition to the YEOP framework until it has been tested as a unique and separate program.

4.5 Outcomes of Engagement

I understand the value and the importance of young people getting involved, of youth getting involved, and because of how PEYA has helped shape who I am, I want more of this to happen in other places. I want more people to engage with youth and youth to work with adults in initiatives, it helps people grow. Especially nowadays where we really need to see more change, having the voice of youth would definitely have an impact when adults are slacking. We need to work together, come together, and do more of this. (P3)

The fifth and final section of the YEEP framework is the Outcomes of Engagement Category. Like the initiating factors, it is divided into three secondary evaluation categories: Individual Outcomes, Social Outcomes, and Systems Outcomes.

In terms of individual outcomes, the majority of participants in the program expressed that they gained valuable and unique skills in the program, and that PEYA made them more comfortable with professional skills like event planning, public speaking, networking, and communicating both in person and online (P1, P4, P5, P6, P7, P8, P9).

An additional individual outcome was an understanding of tangible means of environmental change, not just for the PEYA members themselves, but also possibly for the general members who would attend the meetings regularly or sporadically (P1, P2, P4, P6, P7).

Whenever people learn about PEYA they think it's some generic environmental organization that's always talking about why climate change is bad, but then when people come to our events they realize, 'oh, there's more than just talking about the environment all the time. You can tell me how to buy more sustainable groceries, where my clothing comes from, you can tell me ways to recycle differently.' So PEYA gives a lot of specific tips and a lot of specific ways to help out, it makes people feel like they're actually making a difference. (P7)

In addition, another individual outcome was that the majority of participants have chosen to pursue a post-secondary education related to environmentalism (P1, P2, P3, P6, P8, P9). While many of the students expressed having interest in environmental subjects before starting the program, and that had a strong effect on their post-secondary decisions, even those who did not choose to pursue a directly environmental career have acknowledged that, after their experience with PEYA, they will continue to try to integrate environmentalism into their lives (P4, P7).

In terms of social outcomes, the most prominent outcome was that the participating youth were able to develop meaningful friendships and consequential support systems. As stated earlier, participating youth site social interactions and friends as one of the main initiating and sustaining factors of the program. In addition, their development of friends and consequential necessary social skills, both in person and online, are a positive outcome of engagement. An outcome of engagement with PEYA is an increase in meaningful social interactions.

“We do practice empathy, not just with the people who come, but with the environment in general.” (P1).

Related to the social outcome, in terms of systems outcomes, multiple students expressed that they stayed involved with the program because they felt they made a difference and gained a meaningful experience while in the program (P1, P2, P4, P6, P7), and that they gained something meaningful from the program. While the students were unable to articulate directly what was meant by something meaningful, through their answers to various questions, multiple students indicated that during their participation in the program, it became increasingly important that they make space within their events for people who had different interests, were differently abled or from different backgrounds, or who were less inclined to participate in engagement programs. By making space for these conversations, they were able to see real changes in the program, and they felt that their efforts were being better met and progressed. In addition, some participants (P1, P4) also explained that they had the chance to think about the world outside of themselves, and outside of people in general, and the experience allowed them to better understand the environment and creatures around them. While it was not stated directly, this result indirectly

points to an increase in empathetic understanding and social awareness over the course of the program.

So we, PEYA members, found that personal connections were one of the more important things to get other members, and get them to come out again. And not only to get to know the organization, but to get to know the executive members personally as well, because we all have our own personal background stories and it's very interesting to get to know us as well. If it's more on the personal level, it really touches closer to the individual, so our executive members would try our best to reach out to newer members who weren't very familiar, and we would try to get to know them on a more personal level, see what interests they have, see if we could accommodate their interests, what made them come out to our meetings. I think that was a regular thing we did during our meetings, make sure we connected with members, not just giving out information—that kind of like was one way [to reach out] too—but we wanted it to go both ways. (P2)

Overall, an indirect outcome of engagement is a more nuanced understanding of society and environmental activism that allows for the growth of vital traits like communication, socializing, and empathy across Generation Z, while also encouraging the growth of an environmental engagement program. Youth environmental engagement programs can function as a catalyst for helping today's young people understand society in a more meaningful and connected way, allowing for the growth of empathetic understanding.

5. Discussion

To bring us back to the research questions of this thesis, what are the unique attributes of Generation Z youth, and how do these attributes modify existing understandings of youth engagement and environmental education? As well as, does the current YEEP framework cater to the unique attributes of Generation Z youth, and which elements of the framework can apply or be modified to suit this generation?

After consulting the literature, the five rationales for youth engagement, as defined by Riemer et al. (2014), were reformatted into six updated rationales (Table 2.1). The results from this literature were mirrored across the results from the nine youth interviews, and indicated areas of improvement and reassessment for the broader YEEP framework. Suggested considerations for the YEEP framework include: a better integration of program design and evaluation questions that factor in an extended psychosocial moratorium or period of youth, an acknowledgement of the modern nuanced usage of technology, a consideration of alternative styles of dissent and their connection to program growth and partnerships, a structure that involves the intentional development of empathy and social skills through independent leadership opportunities, and space for increased innovation and creativity through a participatory program design. The YEEP framework remains a good overarching guideline for Generation Z engagement, but there is room to improve. Alongside a discussion of the results from each section of the YEEP framework, this chapter explores relevant discussions related to the key takeaway from each section, where additional discussion could be provided. The takeaways, provided for three out of five sections where additional discussion was required, connects the results to the literature as well as suggests future research directions. The takeaway from each section has been given a separate subheading beneath the section discussion.

5.1 Engagement Objectives

When it comes to engagement objectives, the interviewed participants emphasized the importance of seeing PEYA grow and connect with other organizations, and creating a space that encourages growth, not just for environmental engagement, but also for the program at large, is seen as an important ongoing objective. PEYA participants would like to see the organization

begin to create its own network. This idea of networking is not just something that is acknowledged by participants, but is also highly valued for them as individuals, as it has encouraged opportunities for them to develop professional skills, as well as explore new avenues for careers and connecting with established adults within the community. This student emphasis on and enthusiasm for networking directly relates to the existing literature on Generation Z that suggests today's youth may be perceiving a greater need to begin developing their careers on their own (Schwieger & Ladwig, 2018). Additionally, after completing the interviews and consulting answers to questions from across the four YEEP categories, it was clear that the students also have a high perceived value of creative freedom in the context of the program's structure and quality. Both this result and the desire for change and growth directly relates to previous research as shared in Chapter 2 that defines today's youth as enjoying and thriving in an innovative and creative environment. The perceived quality of the program directly relates to students' ability to explore their individual interests within the broader context of the organization's environmental objectives. This also relates to the existing literature, as youth are undergoing a process of identity exploration and are drawn to avenues that allow them to explore unique and niche parts of their interest that may not be accessible subjects in classrooms or the home (Arnett, 2000). Given this enthusiasm for creativity by this group of participants, combined with their desire for growth and networking, today's emerging youth are prepared to innovate and pursue ambitions where those before them may have been happy to follow tradition. They are excited to alter and expand the program to better suit the needs of today's youth, and this passion for self-development harks back to the literature that found today's youth to be more open to entrepreneurial schools of thought and systems changes (Schwieger & Ladwig, 2018).

Both this result and the desire for change and growth directly relates to previous research as shared in Chapter 2 that defines today's youth as enjoying and thriving in an innovative and creative environment. The perceived quality of the program directly relates to students' ability to explore their individual interests within the broader context of the organization's environmental objectives. This also relates to the existing literature, as youth are undergoing a process of identity exploration and are drawn to avenues that allow them to explore unique and niche parts of their interest that may not be accessible subjects in classrooms or the home (Arnett, 2000).

In order to maintain a high degree of quality in the youth engagement program, and encourage well-rounded programs across third-party youth engagement programs, it is suggested that the YEEP framework adapt to make room for questions related to the creative freedom within a program, as well as the potential for growth and structural changes within the organization. When it comes to the quality and objectives of the program, while PEYA has been able to provide opportunities for individual interest exploration, there remains some concern about the historical structural tendencies of the program, and the fact that some of their earlier creative freedom may have dwindled over the years:

When it comes to the engagement objectives of PEYA, they provide insight about the necessary fluidity and potential for growth that youth programs should require. While encouraging a standardized structure across programs is one of the goals of the YEEP framework, another goal is effective and widespread engagement across a diverse cross-section of youth. In order to appeal to a diverse set of youth, the interviewed participants have made it clear that, when it comes to this emerging group of young people, creative freedom is necessary to encourage those who may have some interest in the program, but are looking to get something unique and related to their existing interests through participation. A standardized structure with today's emerging generations is one that is not too standardized at all, but instead allows room for creativity and going beyond a conventional structure, as well as challenging traditional formats, events, and engagement objectives. To address these new conclusions in the YEEP framework, questions need to be asked along the lines of, how are students actively engaged in the program structure? Are students given the opportunity to question the program structure and schedule? How do the youth work with the adult program supervisors, and is there a safe and welcoming space for students to bring up concerns and challenges?

5.1.1 Investigating a “by Youth, for Youth” Approach

PEYA, somewhat unbeknownst to the participating students, is combining its youth-adult partnership model with a youth-led, youth-designed, or “by youth, for youth” approach. By youth, for youth, a program design approach that is actively encouraged by UNESCO (UNESCO, 2019) and is similar to the design thinking or human-centered design approach, allows for young people to harness their innovation and creativity in a way that makes sense to

them, and share that design with their peers (Brown & Kätz, 2009; UNESCO, 2019). By integrating program design and evaluation questions that are inspired by a by youth, for youth mindset, the YEEP framework could have the ability to address two different sides of youth engagement: how a program is able to attract and engage youth leaders, and how youth leaders are able to attract and engage their peers. This program model allows for strong growth across the engagement model, allowing engagement to happen with young people in two different ways. This was always the goal of PEYA, as stated by a few interview participants, however, it has been amplified over the more recent years through programs like PEYA Champions, which multiple participants viewed as a potential means for improved program growth and outreach. This model also addresses some of the concerns raised in the literature review, and allows for the engagement program to provide for youth as much as it gains. However, there is still value in ensuring a stable youth-adult partnership, as also exhibited in the PEYA case study, when participants expressed the perceived value in that system. The YEEP framework can be a design that continues to provide broad guidelines for adults or organizations that wish to create effective youth engagement programs, but also one that actively makes space for youth voices, and directly integrates young people into their program development.

5.2 Engagement Process

When it comes to the Engagement Process of the PEYA program, especially in the context of Intensity, the majority of participants cited intentional social media posts as one of their most effective means of gaining new members and connecting with interested students. Despite having less in-person contact and more digital media use than previous generations, the participants still unanimously noted that they have had a positive social experience and strong social interactions through PEYA (P3, P4, P6, P8, P9). This contradicts research shared in the literature review that tended to correlate more social media interactions with poorer social skills, anxiety, and slacktivism (Lee & Hsieh, Apr 27, 2013; Rotman et al., May 7, 2011; Twenge, 2017). This goes to show that technology can still be a tool for social skills building for today's generation, so long as it is used in a meaningful, moderated, and organized way. All of this being said, the YEEP framework does not currently dedicate evaluation questions to understanding how to use technology in a meaningful and nuanced way. If the framework looks to better

understand Generation Z and future emerging generations that will have grown up with technology, questions related to technology should be better integrated into the evaluation of intensity.

The results also indicate that, in terms of Duration, when it comes to Generation Z and today's emerging adults, environmental engagement programs could benefit from allowing high school graduates to continue to work with incoming students due to their increased psychosocial moratorium and their perception of experiencing a longer duration of emerging adulthood. There is value in a program that allows its students to age with it, to stay connected, and to continue working with a program throughout the different and older stages of life. Today's youth are expected to develop the same skills that previous generations were building during their teens, despite experiencing a longer period of youth, and a slower overall experience with developing some of these conventional early adult skills. Allowing a slower transition away from high school and into post-secondary could help alleviate some of the stress that comes with building these skills, and could be especially valuable given the fact that today's students struggle with increased mental illness. Given that it has already been noted that students involved in PEYA have been able to create meaningful social relationships as well as explore personal interests with more intention and support, using the environmental engagement program as a means to stay connected to a sense of self as they transition into a period closer to adulthood could help make their extended psychosocial moratorium a time with more skills-building and positive mental health.

In order for the YEEP framework to effectively target and engage Generation Z youth, some room needs to be made to understand how secondary tools, like technology, are already being used for productivity purposes, and how these tools can help alleviate some of the challenges that come with heavy program intensity, or geographical confines. This result could look like the questions: what role does technology play in the program? Is the use of technology being mediated and supervised by an adult mentor? How can technology productivity tools be employed to make participation more accessible? Additionally, to allow for a more flexible duration of a program, the YEEP framework will also need to ask questions that encourage both the youth and adult program planners to look at how they see themselves and their students

growing with and out of the program. Engagement programs need to consider the fact that “youth” may no longer mean the typical age group of high school students, and when designing or evaluating a program, this needs to be considered. In the program design column, the YEPP framework already asks questions that pertain to this reality (i.e. How long should the youth stay involved at a minimum for the programme to be effective? If longer engagement is needed or desired, how will motivation be sustained?) (Riemer et al., 2014), however, from an evaluation perspective, there needs to be some follow-up questions. For instance, how long have youth chosen to stay part of the organization? Have participants expressed interest in staying involved past the typical membership period? Is there room for participants to stay involved? Is there a growth plan for the organization if it were to reach out to older students and alumni? In addition, programs should also ask, how does the program define the term “youth”? Until what age can participants continue to participate? Are alumni and older students given the opportunity to continue working with the organization as mentors?

5.3 Initiating and Sustaining Factors

As suggested in the literature, today’s emerging adults are experiencing the development of their adulthood at a slower pace (Arnett, 2000; Erikson, 1968; Twenge, 2017). This extended period has led to a later procurement of conventional professional skills like independence and communication. Unlike the literature that suggests today’s emerging generations have so far been unable to begin developing these skills at or around the same age as earlier generations (Arnett, 2015; O’Connor, M. et al., 2011; Turner, 2015; Twenge, 2017; Wiedmer, 2015), the students who sought out participation in PEYA are actively trying to build the skills that have become more challenging for them to grasp at a young age. This result shows that students who are interested in procuring these skills are coming to environmental engagement programs to build these skills.

In addition, the literature also indicated that Generation Z students are proving to be disenchanted with conventional means of education, but also desire stable careers and personal lives (Loveland, 2017; Twenge, 2017). The interviewed students felt they were not getting the skills they wanted from conventional classroom learning alone, and they were interested in this third party extracurricular partially to acquire a unique learning experience that had a higher

perceived value in terms of building practical professional skills. These results indicate that some of today's youth may have a desire to develop inter and intrapersonal skills around the same rate as past generations, and they are prepared to seek out these opportunities and get involved if it means gaining the skills they miss in the classroom, and better preparing themselves for successful careers and post-secondary experiences. The interviewed students felt they were not getting the skills they wanted from conventional classroom learning alone, and they were interested in this third party extracurricular partially to acquire a unique learning experience that had a higher perceived value in terms of building practical professional skills. These results indicate that some of today's youth may have a desire to develop inter and intrapersonal skills around the same rate as past generations, and they are prepared to seek out these opportunities and get involved if it means gaining the skills they miss in the classroom, and better preparing themselves for successful careers and post-secondary experiences.

To target Generation Z, programs should emphasize their social opportunities, making the space one for friendships and exploring empathy with different young people. The literature has suggested that Generation Z students are not allotted the same amount of time for in-person interactions as previous generations, and this has been correlated with their deteriorating mental health (Kardaras, 2016; Twenge, 2017). However, while this is just a correlation, and earlier results related to technology proved to also be just that, a correlation, it is still important to note that making friends and maintaining friends continues to be an important value for Generation Z, and is a strong enough value to continue participation in the program over multiple years. Despite being seen as less social and less well-adjusted to social situations, the Generation Z students involved in this study are still able to create strong social connections and still desire opportunities to make meaningful connections with other students.

In addition, the results indicated that a consistent Initiating and Sustaining Factor was familial support. This is already addressed in detail in the YEOP framework, but it is interesting to view this factor in the context of generations. Raised by predominantly Generation X parents, with exposure to both boomers and Millennials as friends, siblings, older family members, teachers, and neighbours (Boyle & Townsend, 2019), Generation Z young people have had a medley of generational influences that continue to affect them today. But most important in this context are their parents, and their parents' willingness to allow them to participate in extracurricular

activities, and help with the sometimes challenging steps that may come with these programs, including transportation, the purchases of any necessary supplies or tools, and an overall sense of support for their interests. While this is already discussed in the YEEP framework, there could be more research done on the role of parents from different generations, and how their interaction with their children may or may not be affected by their own upbringing, as well as various socioeconomic factors that are not addressed in the framework.

In order for the YEEP framework to more adequately address these new conclusions about skills-building and socialization in the context of Initiating and Sustaining Factors, there is a recommended addition of questions that speak more specifically to these traits. These questions could look like: are youth given the opportunity to explore diverse skills-building opportunities? Is there space for participants to provide feedback about which skills they wish to use and learn? Does the program provide room for socializing and exploring friendships beyond the completion of program objectives?

5.3.1 Desire for Skills-Building Opportunities

In consulting the six new conclusions from the literature review, as well as the results from the case study, it is clear that skills-building is an important part of Generation Z's inclination for engagement with environmental education programs.

As seen with PEYA, as well as in the literature, engagement programs can afford younger audiences the early privilege of seeing where they fit into society, what they can contribute, and how their imagined individual role can age with them into the future (Riemer et al., 2014). When it comes to Generation Z actors looking for opportunities to explore their identity, environmental engagement spaces that encourage different thinking styles and inclusion, could become more attractive and increasingly interesting options—so long as the programs themselves stay true to socio-ecological change. For instance, the majority of the participants expressed an explicit value of the PEYA program was its ability to provide learning experiences beyond environmental education, often providing opportunities to explore and develop their leadership, public speaking, communications, and social skills.

In addition to these tangible skills that came with engagement, in order for emerging adults to have fulfilling social experiences as they move towards adulthood, they also need to have access to healthy coping mechanisms that will aid in their self-awareness when entering the job market. While Generation Z may currently have higher levels of mental illness, and lower levels of empathy, it is not to say that their abilities to build these skills over time is completely non-existent, as proved in both the literature (Brailovskaia et al., 2018; Gunnell et al., 2018; Riess, 2017) and the case study. The results from the case study indicate that beyond the aforementioned tangible skills, youth were able to develop skills related to community building and exploring individual interests, allowing them the opportunity to build skills that are necessary for entering the future job market (Marr, 2019; Wang & Siau, 2019; World Economic Forum, 2018), as well as explore the innovation and creativity inherent to Generation Z (Dougherty & Clarke, 2018). Referencing the earlier section on resilience and community building, today's youth may be experiencing conventional resilience building later because of their extended childhoods (Erikson, 1968; Twenge, 2017), but they may also be experiencing a different type of resilience earlier due to their longer upbringing. Generation Z-specific resilience is a large research gap that has been identified by this study.

If today's youth are to continue to stay informed and educated, and use that education to encourage and get involved with community change and activism, environmental engagement programs may be able to encourage improved and more widespread engagement by marketing their programs as an avenue for crucial skills-building opportunities.

5.4 Mediators and Moderators

As addressed briefly in the Initiating and Sustaining factors, a meaningful use of technology is not only important for program structure and the dissemination of information, but it also plays another important role as a means of involvement for youth who are growing up with more strict rules about going out and getting involved. If an emerging adult's parents are not open to them leaving the house after school hours or on weekends, technology could help them stay involved and informed, and somewhat engaged in environmental change and activism. Technology has changed the way access is viewed for today's student, sometimes preventing the need for excessive transportation, and shaping the way students learn about engagement opportunities

(Mládková, 2017; Warschauer & Matuchniak, 2010). A meaningful use of technology is not only important for program structure and the dissemination of information, but it also plays another important role as a means of involvement for youth who are growing up with more strict rules about going out and getting involved. If an emerging adult's parents are not open to them leaving the house after school hours or on weekends, technology could help them stay involved and informed, and somewhat engaged in environmental change and activism. With commuting being a difficult task, even for adults (Sha, Li, Law, & Yip, 2019), technology, if used correctly, could have the ability to make remote engagement possible for those who not only live far away from meeting locations, but also those who are limited, by location, to the activities they are allowed to participate in afterschool and on weekends.

Related to the mediator/moderator of technology is the increased threat of misinformation that affects Generation Z young people (Mintz & Forbes, 2002; Wilner, 2018). Across the interviews, multiple participants noted that when they attempted to get more of their peers involved in either PEYA or environmental engagement programs at their schools, they were often met with a level of apathy related to a lack of knowledge on the subject (P3, P6, P7, P9). Today's youth are more anxious than teens of the past, and have other fears and worries taking up headspace (Gunnell et al., 2018; Patalay & Fitzsimons, 2016; Twenge, 2017). However, as climate change becomes a more urgent and pressing issue, they will need to be accurately educated about what is going on around them in order to build resilience (Anderson, 2012).

To best understand how the YEOP framework needs to integrate technology into its structure, it is suggested that it becomes a possible mediator and moderator within the framework. As discussed in the literature, technology has been connected to many of the mediators and moderators that were proposed as prospects in the YEOP framework itself, i.e. youth emotionality, activity level, agreeableness, self-regulation, and communication abilities (Rose-Krasnor, 2009). That being said, it needs to be given a close eye when understanding Generation Z, and the mediators and moderators is a good place to begin this conversation. As also mentioned earlier, PEYA is successful in its use of technology because there is some level of moderation thanks to the youth-adult partnership. The YEOP framework needs to encourage this degree of moderation if it also wishes to address the existing correlation of decreased mental

health, and the existing cause of increased misinformation. To begin to address this, the YEEP framework needs to make room for additional questions about a meaningful use of technology such as: how is technology used to address challenges beyond productivity? Are students given space to ask questions about the validity of conclusions they find through social media and online? How are students engaged with technology and is there a level of fact-checking and supervision involved? Is the amount of technology use balanced with the amount of in-person interactions?

While only two participants noted this challenge, it is worth noting that since the literature has indicated Generation Z as being more susceptible and targeted by problems like cyberbullying (Brailovskaia et al., 2018; Hinduja & Patchin, 2019), as well as less emotional resilience (Kardaras, 2016; Twenge, 2017), this type of disapproval can be a big factor in limiting a person's involvement with these programs. That being said, ensuring the environment within the program is safe, supportive, and gives students the opportunity to discuss some of these concerns and challenges without judgement is crucial to maintaining engagement over multiple years.

5.5 Outcomes of Engagement

Related to the results on Initiating and Sustaining Factors, participant development of friends and consequential necessary social skills, both in person and online, are a positive outcome of engagement. An outcome of engagement with PEYA is an increase in meaningful social interactions which is linked to the development of crucial life skills like communication, independence, and empathy (D'Ambrosio et al., 2009; Kardaras, 2016; Riess, 2017; Salmon, 2003).

During the interviews it was noted by one participant that engagement programs sometime call for youth to grow up before their time. While this may have been a challenge and concern in the past, this could be something positive for Generation Z as it helps speed up their psychosocial moratorium and encourages a different way of progressing the social skills they tend to lack throughout their early youth. While Generation Z students have often been shown to be lacking in these areas, the environmental engagement program was able to give them opportunities to

explore these skills. Environmental engagement programs could benefit from advertising their experiences and services as realistic career preparation, so long as they build a model that suits the innovative needs of Generation Z.

While it was rarely ever stated directly, but implied across various interviews, the results point to an increase in empathetic understanding and social awareness over the course of the program. This result is particularly relevant to the supporting literature for several reasons. This supports existing research that indicates Generation Z as being more open-minded (Mitchell, 2008; Pandit, 2015; Twenge, 2017), while also somewhat contradicting research that sites Generation Z as exhibiting less empathy (Twenge, 2017). Broadly, this indicates that environmental engagement programs could be a means for growing this trait across youth from this emerging generation. If more youth are to interact with these programs in an impactful and engaged way, there needs to be a greater emphasis on the emotional understanding of the participating youth. PEYA has been able to operate on a youth-adult partnership with strong by youth for youth program design tendencies. Through this approach, the organization has been able to grow and evolve with the participating Generation Z students.

To ensure that this specific type of skills-building is mirrored across youth engagement programs, the YEEP framework needs to meet this character development with its own empathetic understanding from the side of the program administrator or youth-adult partner. This could look like the integration of questions like: how will the emotional intelligence of participating youth be affected by participating in this program? Are participants encouraged to engage with peers who have different perspectives and backgrounds? Are youth given the option to speak openly about their feelings and address areas of concern?

5.5.1 A Catalyst for Empathy and Resilience

In analyzing the nine interviews, engaged youth tend to subvert the negative stereotypes that have been affiliated with Generation Z and Millennials, and have instead managed to continue to harness the traits that have been conventionally connected to effective youth engagement from past generations, when given the opportunity to work with the tools and styles with which they

are most comfortable. With visible empathy, enthusiasm for community growth, and a desire to explore niche environmental interests alongside like-minded peers in both digital and in-person environments, participants in the PEYA program, despite being part of a generation that has appeared to lack some of these traits, hold onto these values with force and intention. The results from the interviews indicate that the experiences that initiated and sustained interest in the program, often related to skills-building and independent and creative planning, were also often those that led to the positive social outcomes across participants. With the PEYA program as an indication, when youth are given the opportunity to innovate, create, and build their own systems, that is when they are able to grow their skills related to empathy, resilience, and community building. Generation Z craves opportunities to create and innovate, to better prepare themselves for post-secondary and the workforce, and to explore technology and different approaches to change and dissent. If the YEEP framework wishes to be applied to this group of young people, as well as age with future generations that come after Generation Z, it needs to better factor in design and evaluation questions that encourage youth to give feedback, and turn that feedback into tangible changes for the organization. Youth engagement programs have the power to be catalysts for positive growth for Generation Z actors, allowing them the opportunity to grow their essential skills for the future, while also encouraging increased mobilization and information.

Perhaps one of the reasons why today's youth have struggled with building empathy, resilience, and participating in risk is related to the fact that today's systems have not been able to grow alongside their unique attitudes and behaviour, making it difficult for them to grow in the conventional ways that society has become accustomed to. Youth engagement programs, when aware of Generation Z desires and needs, can function as catalytic spaces for growing and developing empathy and innovation. Understanding a Generation Z approach to systems and systems changes is an additional research gap identified by this study.

5.6 An Additional Consideration: Urban-Suburban Youth Generalizations

An early concern in conducting this case study with a group of Generation Z youth from an urban-suburban region was that it would be difficult to replicate the results across Canadian and North American demographics that exist in more rural or less urban surroundings. However, after consulting the results, it seems clear that the conclusions from both the literature review as well as the participant interviews do not seem to be specific to urban settings, and should be replicable across different municipalities and communities, despite the level of urbanization.

The participating youth in the case study did not often credit their geographic location with their access to the program, and instead actually indicated that the inclusion of multiple municipalities led to challenges with transit and commutability—challenges that are consistent across both rural and urban communities (Foth, Manaugh, & El-Geneidy, 2013; Huddart-Kennedy, Beckley, McFarlane, & Nadeau, 2009). In addition, even if there is concern about replicability in rural settings, a growing reality is that with the spread of industrialization across the Western world, some social values have also often become more widespread, including public education, making educational values more commonplace than in the past (Carl, 2009).

6. Conclusion

6.1 Contributions to Theory

6.1.1 Youth Engagement Rationales

When the YEEP framework was developed in 2014, Reimer et al. explained that youth are strong and important targets for social change for five primary reasons: (1) They are experiencing a transitional period in life that fosters identity exploration and development; (2) Youth have often been at the forefront of social movements across the globe; (3) Young people serve as good messengers to their peers as well as different groups of people such as parents and family members; (4) They are exposed to a variety of educational material through coursework and modern technologies like the Internet and social media; and (5) Young people are more likely to take risks since, in most cases, their jobs and livelihoods are not threatened by choices made in their personal lives.

After consulting the newer literature, the five rationales for engaging youth, as defined by Reimer et al., were reformatted into six rationales as follows: (1) They are experiencing an extended transitional period in life that fosters identity exploration and development, stretching from elementary school into their late twenties and early adulthood; (2) Youth are at the forefront of social movements across the globe, and are able to use digital tools to participate in diverse styles of dissent; (3) Young people can serve as good messengers to their peers as well as different groups of people such as parents and family members, so long as they are equipped with the necessary tools to build strong individual resilience and empathy; (4) Young people are creative and innovative, and are exposed to high amounts of peer-reviewed information and new ideas through formal education and smart interactions with the Internet; (5) Young people are experimental and innovative, and need opportunities that allow them to take risks and move towards more resilience and less protection; (6) Young people have a desire and need for new skills-building opportunities, including communications skills, empathetic understanding, and exploring innovative and tools to explore innovative and alternative careers.

6.1.2 Updates to the YEEP to Reflect Generation Z

In addition, the results from the six updated rationales from the literature were reflected in the results from the nine youth interviews, and indicated areas of improvement and reassessment for the broader YEEP framework. After collecting the responses for the interviews, sorting the raw data into the YEEP evaluation and design categories, and looking for themes across the data, a few considerations to improve the existing framework became clear. The suggested considerations include: a better integration of program design and evaluation questions that factor in an extended psychosocial moratorium or period of youth, an acknowledgement of the modern nuanced usage of technology, a consideration of alternative styles of dissent and their connection to program growth and partnerships, a structure that involves the intentional development of empathy and social skills through independent leadership opportunities, and space for increased innovation and creativity through a participatory program design. The YEEP framework remains a good overarching guideline for Generation Z engagement, but there is room to improve. These recommendations are discussed in more detail in section 6.2

6.2 Contributions to Practice and Suggested Improvements

After consulting the results from the literature and case study, it is clear that the YEEP framework has outlined categories that continue to function for Generation Z, albeit some design and assessment questions need to be integrated for improved engagement. Across the board, all of the categories and subcategories were validated, Table 6.1, and all of the categories require some sort of extension in terms of their design and evaluation questions. The design and assessment question updates are addressed across the different sections below, as well as in Table 6.2, featured at the bottom of the contributions. In addition, this research indicates that while the YEEP framework is mostly relevant for Generation Z, it is missing some crucial conclusions about today's generation, and is currently unable to grow and evolve with current and future generations, this requires the addition of two new sections alongside the existing five.

Table 6.1: Overview of the validations, extensions and new suggested categories for the YEEP framework

Framework Component	Considerations for Program Development	Considerations for Program Evaluation
<i>Engagement Activity/ Program</i> (Objectives, Structure, Quality)	Validated and extended.	Validated and extended.
<i>Engagement Process</i> (Intensity, Breadth, Duration)	Validated and extended.	Validated and extended.
<i>Initiating and Sustaining Factors</i> (Individual, Social, System)	Validated and extended.	Validated and extended.
<i>Mediators and Moderators</i> (Technological Changes and Advancements)	Validated, and extended with a completely new addition.	Validated, and extended with a completely new addition.
<i>Outcomes of Engagement</i> (Individual, Social, System)	Validated and extended.	Validated and extended.
<i>Audience</i> (Age, Generation, Values)	Completely new addition.	Completely new addition.

6.2.1 Engagement Objectives

In terms of the Engagement Objectives, participants consistently had a high perceived value of the creation of a network for exploring career paths, new skills, and opportunities for personal and professional development. This student emphasis on and enthusiasm for networking directly relates to the existing literature on Generation Z that suggests today’s youth may be perceiving a greater need to begin developing their careers on their own, due to a lack of faith in the existing education system and subsequent available careers (Schwieger & Ladwig, 2018). It also became clear throughout the interviews that one of the programs main goals moving forward, for both students and administrators, has been to create a scalable and adaptable program that could grow with different batches of students year to year, in order to prevent stagnation of content and delivery. While the YEEP framework views a program’s Engagement Objectives as the

overarching goals for participants, it became clear that the indirect goals of the program and its future were just as important to the overall perceived structure of the program.

6.2.2 Engagement Process

The results from the interviews suggest a greater inclusion of program design and evaluation questions that include the direct opinions and inputs of students, as opposed to the interpretation of the wants and needs of students. The results also indicate that the current secondary Engagement Process category, Breadth, needs to also encourage a more open approach to both activity structure and dissent styles, allowing the participating youth to choose select program foci, how they wish to interact with that foci, and encouraging them to think outside the box of the structured program. This approach is supported by the literature that indicates their inclination towards innovation (Dougherty & Clarke, 2018), ability to assess and participate in risk (O'Brien et al., 2018), and the additional results from the interviews that point to a desire to connect with more diverse groups and movements related to the engagement program at hand. In comparing the results to the literature, up until recent years, PEYA's structure catered to one specific style of dissent: dutiful dissent. However, exposing today's youth to various forms of dissent, alongside a breadth of information is important when addressing modern educational concerns like misinformation, as well as ensuring students understand the roles they can play in larger social change movements like the ongoing School Strikes for Climate Change (Crnogorcevic, 2018). Diverse approaches to dissent are also valuable in helping students understand different types of social and environmental change, with each style of dissent providing opportunities for different types of skills building (O'Brien et al., 2018).

In addition, the secondary category of Intensity, could consider the role of productivity technology and how it helps make participation more accessible for a variety of students. This result is supported by the literature that indicates Generation Z as being tech-savvy and tech-inclined (Mládková, 2017; Schwieger & Ladwig, 2018; Young, 2018). Also related to the Engagement Process, for the Duration category, the program design and evaluation also needs to make room for conversations about the definition of youth, what age that is seen as, and if participants are given the opportunity to grow with the program past their teenage involvement.

This result is supported by the literature that indicate an extended psychosocial moratorium (Erikson, 1968; Twenge, 2017).

6.2.3 Initiating and Sustaining Factors

In terms of Initiating and Sustaining factors, for the most part, the YEEP framework asks a strong set of design and evaluation questions, but it is suggested that there is an inclusion of questions related to student perspectives on program growth, change, and development. PEYA students have been able to facilitate an improved change across the program breadth and the reach of the program, and that was thanks to recent inclusions of more participant-led innovation and direction. Entrepreneurial and innovative Generation Z students (Dougherty & Clarke, 2018; Frunzaru & Cismaru, 2018) appear to thrive in environments where they are able to adjust the systems to suit their needs, as well as create open spaces that appeal to both them and their peers in an inclusive manner (Mueller & Mullenbach, 2018; Pandit, 2015). In addition, the majority of participants expressed a positive association with using social media and technology with garnering support and finding new members, as well as maintaining communication and connection across members. This contradicts research shared in the literature review that tended to correlate more social media interactions with poorer social skills, anxiety, and slacktivism (Lee & Hsieh, Apr 27, 2013; Rotman et al., May 7, 2011; Twenge, 2017). This goes to show that technology can still be a tool for social skills building for today's generation, so long as it is used in a meaningful, moderated, and organized way.

Another important finding, is that participants were also drawn to the program to acquire new skills that they were not finding elsewhere. As suggested in the literature, today's emerging adults are experiencing the development of their adulthood at a slower pace (Arnett, 2000; Erikson, 1968; Twenge, 2017). This extended period has led to a later procurement of conventional professional skills like independence and communication. Unlike the literature that suggests today's emerging generations have so far been unable to begin developing these skills at or around the same age as earlier generations (Arnett, 2015; O'Connor, M. et al., 2011; Turner, 2015; Twenge, 2017; Wiedmer, 2015), the students who sought out participation in PEYA are actively trying to build the skills that have become more challenging for them to grasp at a young

age. This result indicates that students who are interested in procuring these skills are coming to environmental engagement programs to build these skills.

In addition, while only two participants indicated a challenge with alienation and bullying from peers based on environmental engagement, it is worth noting that since the literature has indicated Generation Z as being more susceptible and targeted by problems like cyberbullying (Brailovskaia et al., 2018; Hinduja & Patchin, 2019), as well as less emotional resilience (Kardaras, 2016; Twenge, 2017), this type of disapproval can be a big factor in limiting a person's involvement with these programs. That being said, ensuring the environment within the program is safe, supportive, and gives students the opportunity to discuss some of these concerns and challenges without judgement is crucial to maintaining engagement over multiple years.

6.2.4 Mediators and Moderators

For the program Mediators and Moderators, it is suggested that the YEEP framework make more room to understand the role of technology in the lives of Generation Z students, and how, as discussed from participant findings earlier, technology can help make participation more frequent and accessible to a variety of students. With commuting being a difficult task, even for adults (Sha, Li, Law, & Yip, 2019), technology, if used correctly, could have the ability to make remote engagement possible for those who not only live far away from meeting locations, but also those who are limited, by location, to the activities they are allowed to participate in afterschool and on weekends. This is supported not only by the interview results that indicate a frequent usage of technology, but also the literature that points to Generation Z being tech-savvy and regularly plugged in (Mládková, 2017; Schwieger & Ladwig, 2018; Young, 2018). In addition, there needs to be an inclusion of questions related to how participants come to understand the reputability of information, especially when they are creating program designs themselves, as well as in the context of enticing more students to participate who may have been exposed to scientifically incorrect information about environmentalism. Technology, like generations and their subsequent youth engagement programs, is an ever-evolving field and toolkit. The participant interviews suggested a degree of misinformation around environmentalism, and this was also reflected in the results from the literature, which pointed to

broad instances of misinformation among youth (Kata, 2009; Mintz & Forbes, 2002; Wilner, 2018). In order to fully understand how technology acts as a mediator and a moderator, not just for Generation Z engagement, but also the engagement of future generations who may be connected to technology to an even greater degree, this factor needs to be better integrated into the broader YEEP framework, not just for Generation Z, but for all subsequent engagement programs.

As discussed in the literature, technology has been connected to many of the mediators and moderators that were proposed as prospects in the YEEP framework itself, i.e. youth emotionality, activity level, agreeableness, self-regulation, and communication abilities (Rose-Krasnor, 2009). PEYA is successful in its use of technology because there is some level of moderation thanks to the youth-adult partnership. The YEEP framework needs to encourage this degree of moderation if it also wishes to address the existing correlation of decreased mental health, and the existing cause of increased misinformation. Today's youth are more anxious than teens of the past, and have other fears and worries taking up headspace (Gunnell et al., 2018; Patalay & Fitzsimons, 2016; Twenge, 2017). However, as climate change becomes a more urgent and pressing issue, they will need to be educated about what is going on around them in order to build resilience (Anderson, 2012). Individual access to reputable information is a mediator/moderator that affects the likelihood of participation in the program, and the consequential growth of an environmental engagement program. Based on the results from this research, it is suggested that the current flexible category of Mediators and Moderators make room for Technology as a concrete and consistent secondary category.

In the context of flexible mediators and moderators, it is also suggested that more research be done to understand how secondary peer-to-peer programs operating within larger youth engagement structures, like the PEYA Champions program, can also help foster change in terms of program accessibility and misinformation, by bringing the program content directly to school communities, instead of through an informal engagement program.

6.2.5 Outcomes of Engagement

For the Outcomes of Engagement, it is clear that youth have been able to grow important professional and social skills through engagement, such as improved communication, empathy, and a more nuanced understanding of society. Today’s youth are perceived as having poorer social skills, and are known to have fewer in-person social interactions which may be a cause of their poor mental health, and is also a cause of their challenges with resilience, empathy, and ability to adapt to different and challenging social situations (Twenge, 2017). An outcome of engagement with PEYA is an increase in meaningful social interactions which is linked to the development of crucial life skills like communication, independence, and empathy (D’Ambrosio et al., 2009; Kardaras, 2016; Riess, 2017; Salmon, 2003). If the YEEP framework hopes to see this type of growth and change in program participants, the framework needs to encourage the adult supervisors and program partners to greet participants with that same empathy and understanding, so as to give youth the opportunity and capacity to learn these skills themselves (Riess, 2017). If more youth are to interact with engagement programs in a meaningful way, there needs to be a greater emphasis on the emotional understanding of the participating youth. PEYA has been able to operate on a youth-adult partnership with strong by youth for youth program design tendencies. Through this approach, the organization has been able to grow and evolve with the participating Generation Z students.

Table 6.2: Integration of suggested Generation Z design and evaluation questions, in the context of existing YEEP categories.

Framework Component	Description*	Considerations for Program Development	Considerations for Program Evaluation
<i>Engagement Activity/ Program</i>			
Objectives	---	How will students be actively engaged in the program design?	How have students been given the option to contribute to the program design and objectives?
Structure	---		

<p>Quality</p> <p><i>Engagement Process</i></p> <p>Intensity</p>	<p>---</p> <p>---</p> <p>---</p>	<p>Will participants be given the opportunity to question the program structure and schedule?</p> <p>How do the youth work with the adult program supervisors?</p> <p>Is there a safe and welcoming space for students to bring up concerns and challenges?</p> <p>What role will technology play in program productivity?</p> <p>Is the use of technology being mediated and supervised by an adult mentor?</p> <p>Will technology be employed to make participation more accessible?</p> <p>Will participating youth be given the opportunity to connect with and experiment with different styles of dissent (i.e. campaigns, events, protests, letter-writing, etc.)?</p>	<p>Have students suggested changes to the program structure?</p> <p>Has the program adult supervisor developed a meaningful connection with participants?</p> <p>Have participants felt comfortable bringing up concerns or ideas with your staff?</p> <p>Has technology been used as a productivity tool?</p> <p>Was participant use of technology moderated?</p> <p>Has technology been used to improve accessibility?</p> <p>Have participants been actively involved in a variety of styles of programming?</p> <p>Have they been engaged across different levels of environmental action?</p>
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<p>Duration</p>	<p>---</p>	<p>Are participants given the opportunity to explore their creative interests and ideas?</p> <p>How long are youth intended to be part of the program?</p> <p>Will there be room for participants to stay involved after their time with the program ends?</p> <p>Is there a growth plan for the organization if it were to reach out to older students and alumni?</p> <p>Will alumni and older students be given the opportunity to continue working with the organization as mentors?</p>	<p>Have participants suggested and acted on different and new interests?</p> <p>Have participants been satisfied with the length of the program?</p> <p>Have participants expressed interest in staying involved past the typical membership period?</p> <p>Have program alumni been involved in current program design?</p> <p>Have participants worked with any mentors from past cohorts?</p>
<p><i>Initiating and Sustaining Factors</i></p> <p>Individual</p>	<p>---</p>	<p>In addition to environmental awareness, what skills building activities will be offered to participants?</p> <p>---</p>	<p>Do students leave the program with new and valuable skills?</p>

<p>Social System</p>	<p>---</p>	<p>Will students be given the opportunity to work directly with their peers both inside and outside the program?</p>	<p>---</p> <p>Have students provided any insights about how to better target their peers, and, were these insights integrated into the program?</p>
<p><i>Mediators and Moderators</i></p> <p>Technology</p>	<p>As technology and digital media evolves to become a more important part of everyday life, programs will need to work within an ever-changing technological system.</p>	<p>How is technology used to address challenges beyond productivity?</p> <p>Are students given space to ask questions about the validity of conclusions they find through social media and online?</p> <p>How are students engaged with technology and is there a level of fact-checking and supervision involved?</p> <p>Will the amount of technology use be balanced with the amount of in-person interactions?</p> <p>Will participants be encouraged to explore careers and</p>	<p>Have participants been using technology for purposes other than productivity? Has this use been positive for students?</p> <p>Have participants given the option to explore challenges around misinformation and finding valid sources?</p> <p>Has the program's adult supervisor been available to help with fact-checking?</p> <p>Have participants been given an equivalent amount of in-person interaction compared to their use of technology and social media?</p>

<i>Outcomes of Engagement</i>		interests related to the program?	
Individual	---	---	
Social	---	Are participants encouraged to engage with peers who have different perspectives and backgrounds?	Have participants sought out further involvement with environmentalism?
System	---	Are youth given the option to speak openly about their feelings and address areas of concern?	--- Has the emotional intelligence of participating youth been affected by participating in this program? Have participants given the opportunity to share their concerns about the environment, the program, and their peers?

*The “Description” category has been removed for the majority of categories as it repeats the details from the existing framework (Appendix A).

6.2.6 Additional YEEP Framework Program Design Updates and New Categories

In addition to the literature and interview results outlined above, it is also suggested that if the YEEP framework wishes to grow with youth, not just through Generation z, but even more sustainably as the generations change, there should be an addition of a new primary category called “Audience” that addresses the age, generation, and desired timeline of engagement of the participants (Table 6.3). If programs wish to better integrate Generation Z into their work, they need to be explicitly questioning who their audience is, and that needs to continue as Generation

Z grows out of being today’s dominant youth, including years beyond the immediate future and 2030.

Table 6.3: Suggested details for the new Audience section of the program design and evaluation section of the YEEP framework.

Framework Component	Description	Considerations for Program Development	Considerations for Program Evaluation
<i>Audience</i>			
Age	Youth can refer to individuals from a variety of age brackets, and programs can target youth of a variety of ages, including elementary and middle school-aged, high school-aged, or older.	What age group is your target? Is there flexibility in your target age group?	What age group does your program mostly attract? What draws in this age group?
Generation(s)	Youth can belong to one or more different generation, depending on your desired age group. Generations of youth change over time and will affect program structures and plans.	Which generation(s) do you want to interact with (i.e. Millennials, Generation Z, etc.)? What types of movements (environmental, social or other) have these generations been involved with?	Which generation(s) tend to interact with your program the program? Have participants been involved in any related or ongoing movements outside your program? Has this involvement affected their interests during program involvement?
Values	Youth can have different sets of values and interests depending on age group and generation. Programs can target one or many of these values, directly or indirectly.	What stage in life are your participants approaching? What skills might they want to learn or interact with?	Do participants understand what engagement will mean after they finish working with your program? Have your participants

		What movements or subjects are of interest to them?	expressed interest in certain skills building? Are participants given the opportunity to explore their unique interests with your program and with others?
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This research has shown that, despite being a modern and mostly relevant framework, the YEEP framework does not fully address the unique attitudes and behaviours of today’s evolving youth. In order to continue targeting the dominant youth generation, whether that be today’s Generation Z teenagers, tomorrow’s Alpha Gen youth, or future groups that have yet to emerge as contributing members of society, a primary Audience category would allow today’s youth engagement programs to grow with different generations and continue to effectively engage the dominant groups of young people. In order for future programs to use the YEEP framework to target the dominant youth group of the time, without having to complete further preliminary academic case studies on generation-specific attitudes and behaviours, this category will allow programs to develop, grow, and reassess their strategies as youth change and age. For the Audience category, the suggested secondary categories are: Age, Generation, Values. These secondary categories will give program designers the chance to look deeper into who they are targeting, and what this group of youth may desire or need from an informal environmental engagement program.

Factoring in all of these considerations, it is clear that the existing YEEP framework does a good job in outline the broad categories of Engagement Objectives, Engagement Process, Initiating and Sustaining Factors, and Outcomes of Engagement, but in order to better target today’s and future generations, it needs to adjust the way it looks at Mediators and Moderators, and integrate an Audience category that will allow the framework to grow with future generations. With these considerations, a Generation Z YEEP framework would look more like Figure 6.1, below.

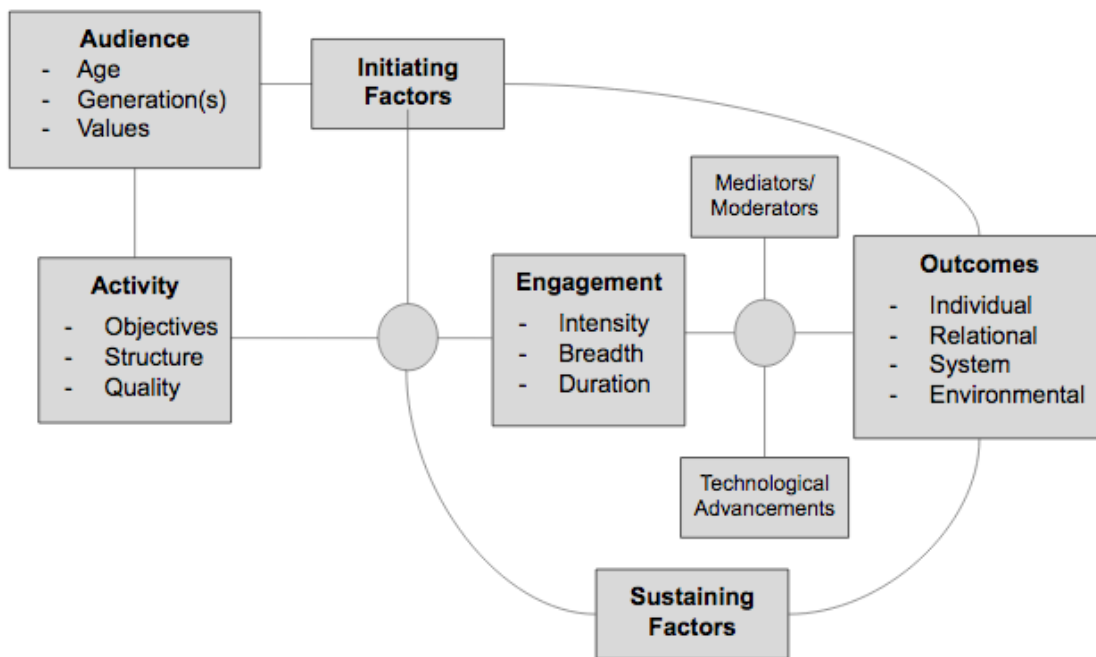


Figure 6.1: The YEEP framework with considerations from the current research, in the context of generation-specific engagement.

The updated YEEP framework factors in the consideration of an Audience-specific framework, as well as the reality that technology plays a strong role as both a mediator and moderator for participation. While additional suggestions were made for Generation Z-specific engagement, these suggestions fell under the existing categories and instead are best-applied as adjusted and additional evaluation questions. The YEEP redesign in Figure 6.1 is not just for Generation Z inclusion, but rather for any future generations that are to come next, and these suggested program design and evaluation questions for the new Audience category can be seen in Table 6.3. These questions were designed around the questions asked when analyzing Generation Z behaviours against the existing conclusions used as rationale for the YEEP framework. The Generation Z-specific questions that came from this research can be viewed in Table 6.2, below. Table 6.2 includes all questions that would fit in the context of the greater YEEP framework according to the results from the PEYA interviews and preliminary literature review. This set of questions is designed for new or existing programs that may wish to develop or grow programs that better appeal to and target today's youth.

6.2.7 Additional Practical Contributions

In addition to these findings and contributions, this research also presents additional practical contributions to youth engagement as a whole, not just in the context of the YEEP framework. Through the compiled literature as well as the secondary data evaluation, this research provides conclusions that can be used beyond YEEP's targeted informal environmental engagement programs, and can be used for the design and evaluation of formal environmental engagement programs that operate in schools and classrooms. These results can also apply to the design and evaluation of programs related to other youth socioecological engagement and social movements. Due to the nature of the literature and research addressing generalized conclusions on youth engagement, it makes these results applicable to any engagement program interacting with Generation Z youth, not just engagement programs operating within the YEEP framework.

6.3 Limitations and Suggestions for Future Research

Due to the smaller sample size used for the case study interviews, the interviews alone are not meant to provide grand generalizations about Generation Z as a whole, and instead focuses on Generation Z youth, and Generation Z youth leaders as seen with PEYA, more specifically. Instead, this research has began the testing of the conclusions drawn from the literature, and presents a call for increased testing against successful environmental engagement programs, especially those that interact with current Generation Z youth, and younger Generation Z actors who are currently still considered children. In particular, this research calls for testing of the suggested Generation Z program changes to the YEEP framework, alongside the initial YEEP framework itself. While the literature presented in this research provides a more holistic understanding of Generation Z, the empirical data collection focuses more on Generation Z youth leaders, and began to evaluate the conclusions from the literature against previous literature and frameworks on youth engagement. The reality is that Generation Z is still a growing and evolving generation that is still working through a period of youth and that is still working to build youth environmental leadership. This research is only able to address those that are currently able to provide individual commentary on their experience, as well as consult literature on youth that were or are currently of age to participate in research.

In terms of future directions, after consulting the results, it is clear that a pre-existing interest in environmentalism continues to be an important Initiating and Sustaining Factor. For future research, it would be interesting to see if, as the threat of climate change becomes more visible and more urgent, if more students will have an innate interest in environmental activism. Thousands of students across Canada are gaining interest in the School Strike for Climate Change movement (Crnogorcevic, 2018), and if youth environmental engagement programs were to harness that momentum by engaging in more diverse styles of dissent, could this be one potential means of gaining more meaningful interest in the program? Also, as addressed in the discussion, research gaps have been identified in terms of Generation Z-specific resilience, and how a different upbringing and different timeline of youth can contribute to a different style of resilience building, as well as Generation Z understandings of systems, systems changes, and their vision for the spaces that are currently used for environmental education and engagement. In identifying these gaps, it is clear that further research should be done in these fields, especially if we wish to better understand this generation of young people, as well as further explore the results from this study.

Another call for research is in the context of the length and detail of the YEEP framework. At present, the framework spans several pages and table columns, and uses some terms and wording that are repeated, or go unexplained. If the YEEP framework would like to continue to grow and evolve with different generations, an analysis of the length of the framework, and the perception of that length, should be conducted. How much work are engagement leaders able to do to design and evaluate their programs? And, would a more concise framework be better disseminated, especially in the context of youth-led programs and younger audiences accessing the YEEP framework?

6.4 Concluding Summary

As stated through the literature review, and the six updated rationales from Table 2.1, youth are no longer seen as an individualized and separate group of society, but one that will be required to give and take from the different generations that come before and after them, especially when it comes to opportunities for diverse skills-building. The rationale for their engagement with

environmental programs can no longer be based on just what they can give to the social change movement, but also what the social change movement can give to them—an approach that could be more enticing to this generation that is generally less empathetic, more online, and seeking new opportunities away from conventional careers (Campbell, 2018; Piat, 2019; Schwieger & Ladwig, 2018; Twenge, 2017; Young, 2018). This more holistic approach to youth attitudes and behaviours is important for environmental engagement programs, as they have as much to offer to the participating youth as the youth have to offer to the growth of the environmental movement. As outlined by Riemer et al. (2014), youth environmental engagement programs have always been able to offer a skills output to participants, however, as youth are now entering the existing workforce with a different set of skills, the approach to skills-building will need to look different. Youth environmental engagement programs could be a means for helping Generation Z young people develop the conventional and essential skills at a rate that is similar to past generations, as seen in the case study results, as well as help today's young people find the alternative systems for which they tend to have preference.

In following the fourfold generational theory of Howe and Strauss (1992, 1997), Generation Z is a systems-changing generation is here to make changes at the start of a new generational cycle post-Crisis. However, in consulting the research, these changes, in an environmental education and engagement context, can only happen so long as our youth program designs can adapt to let them explore their creative and innovative interests. In order to see Generation Z's environmental engagement improve, existing spaces need to give them the freedom to change the system to work within the confines of today's grim climate reality, while still working with their unique behaviours and upbringing. While frameworks like the YEEP are important to ensure a certain standard and quality of program design, this research has indicated that these guidelines will need to be adapted to effectively work with new and ever-changing generations and systems of society.

In terms of PEYA as an individual program, it is recommended that they keep doing what they are doing and moving in the direction of these suggested changes inspired by their work. The program provides an example of a successful informal environmental engagement program that

is increasingly reflecting the values and needs of Generation Z youth, while still satisfying the current YEEP framework and fulfilling a standardized level of quality.

In 2018, the United Nations IPCC announced that the global community had 12 years to stop the rapid growth of climate change and avoid increased threats of drought, flooding, and extreme heat, affecting millions of people (IPCC, 2018). During this 12-year timeframe, millions of children, teenagers, and adolescents will come of age as voters and members of the workforce, and Generation Z will be the change makers during these pivotal years of climate change adaptation. As society moves towards changes that will reflect the challenges of increased visible climate change, it is important that informal youth groups are able to support their participants, and encourage alternative and innovative approaches to solutions design. The first step to making this happen is adapting the existing frameworks to work with the generations of today, so that they can grow with the generations of tomorrow.

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Appendix A: YEEP Framework Development and Evaluation Questions (Adapted)

Based on “A model for developing and assessing youth-based environmental engagement programmes” (Riemer et al., 2014)

Framework Component	Description	Considerations for Development	Considerations for Evaluation
1) Engagement Activity <i>Objectives</i>	Program focus can be on the participants (e.g. learn about nature) or engage the participants in activities that target change in a social context (e.g. organize community events)	Will the focus be on the participants or a social context? What types of activities have been shown to be effective for your selected focus?	What are the objectives of the program? What are specific targets of the objectives, and how are they being assessed? Is participation being tracked?
<i>Structure</i>	Programs can be short and intensive, or spread over time. Youth involvement can involve being just a participant, or also owning and operating the program.	Will initial engagement lead to other activities? Or will engagement be more sustained? Do you want to reach many youth with a short program, or fewer youth with a longer program? What resources will be made available based on your structure? How much power will the youth have? Can they make decisions? What will be the nature of the youth-adult partnership? Will youth feel ownership over the program?	What types of changes can be expected among participants, given the timeline? What is the social diffusion? What is the leadership structure? How does the structure effect youth engagement and the nature of the program?
<i>Quality</i>	Programs are different depending on how they integrate best practices like power sharing, goal setting, and providing role	What are best practices for engagement? In what cultural context were these best practices tested? Do the	Could a formal evaluation help increase program quality? What quality indicators exist for the program?

	models, support, and opportunities for growth.	fit with the current cultural context? What indicators will you test to maintain quality?	What measures of quality do the current organizers use? Are some program elements considered more important than others? Is the quality linked to the outcome?
2) Engagement Process			
<i>Intensity</i>	Is engagement frequent, random, or just once. Are youth being engaged cognitively, spiritually, behaviourally, or some combination of the above.	What is the desired intensity? What will the youth commit to? Do youth commit more or less depending on time of year? Are there program components that depend on level of engagement?	How long do youth feel they need to be engaged to feel accomplished?
<i>Breadth</i>	Programs can have one type of activity, or many.	What types of activities are needed to meet the objectives? Should one activity be given more weight? How many different activities could realistically be offered?	Are all activities seen as critical, or is there a perceived level of importance?
<i>Duration</i>	Participants can stay for just one event, or for a longer period of time. Participants can devote different amounts of time.	How long do youth need to be involved to have a good experience? If engagement is longer, what will be the motivation? How is loyalty formed? Can youth take on more or less time-consuming roles?	What is the duration? How long do youth need to be involved for impact?
3) Initiating and Sustaining Factors			
<i>Individual</i>			

	<p>Youth will stay involved for different reasons i.e. religious, moral, previous experience, etc.</p>	<p>Who will the program attract? Does the program target youth who already have motivation? Will individual beliefs be used to target? Will the program reach diverse youth interests?</p>	<p>How would the participating youth be described? Are some youth more engaged? Is the program better for some youth than others?</p>
<i>Social</i>	<p>Family and peer role models can be highly influential. Positive relationships keep youth engaged.</p>	<p>Does the program provide role models? Is there active recruitment? Will social media be used? How are conflicts dealt with?</p>	<p>How is the social atmosphere perceived? How did people learn about the program?</p>
<i>System</i>	<p>Programs can be part of a school or academic requirement, or can be connected to a larger, socio-environmental purpose.</p>	<p>Is the program linked to a larger purpose? Will the program be linked to a school program?</p>	<p>Does individual motivation make a difference?</p>
4) Outcomes of Engagement <i>Individual</i>	<p>Participation in programs can impact student success and self-confidence.</p>	<p>What does the program hope will be an outcome? Are there any specific activities linked to specific desired outcomes?</p>	<p>What are the program's outcomes? How can outcomes be measured?</p>
<i>Social</i>	<p>Programs can also lead to the development of important social skills.</p>	<p>Same questions as above.</p>	<p>Same questions as above.</p>
<i>System</i>	<p>Programs can also lead to specific social outcomes, like improved civic engagement.</p>	<p>Same questions as above.</p>	<p>Same questions as above.</p>

Appendix B: Interview Questions

How did you learn about PEYA?

How long have you been involved?

What is the membership of PEYA like? How long do members stay part of the team?

How would you describe your current and/or past role on the team?

What is something you did with PEYA that you were proud of?

How does PEYA work to engage community members and students who are not already involved in environmental engagement?

Do you have an opportunity to work with students and participants with different interests and backgrounds than you? What do you do to relate to them?

How did you come up with these strategies? Have your strategies been successful?

How does PEYA use technology to work with others? Is it important to you to be able to use technology to work with others?

Have certain people been easier to engage than others? Why do you think that was?

What have you tried to engage those who are more resistant to getting involved?

What is something you think environmental researchers should know about reaching out to youth and engaging young people in social movements?

Is having creative freedom an important part of PEYA?

How does PEYA design programs to ensure they reach your targeted audience?

How would you like to see PEYA, and its membership and offerings, grow over the next few years?

Does working with PEYA affect your day-to-day habits/ has it had an effect on your plans for the future? OR Did working with PEYA as a teen influence your later education and career decisions?

Is there anything else you would like to say that I did not ask?

Appendix C: ORE Clearance Certificate

UNIVERSITY OF WATERLOO

Notification of Ethics Clearance to Conduct Research with Human Participants

Principal Investigator: Jennifer Lynes Murray (Environment and Resource Studies)

Student investigator: Amanda Watkins (Environment and Resource Studies)

File #: 40040

Title: Youth Engagement and Design Thinking as Instigators of Sustainable Community Change in Urban Centers

The Human Research Ethics Committee is pleased to inform you this study has been reviewed and given ethics clearance.

Initial Approval Date: 11/09/18 (m/d/y)

University of Waterloo Research Ethics Committees are composed in accordance with, and carry out their functions and operate in a manner consistent with, the institution's guidelines for research with human participants, the Tri-Council Policy Statement for the Ethical Conduct for Research Involving Humans (TCPS, 2nd edition), International Conference on Harmonization: Good Clinical Practice (ICH-GCP), the Ontario Personal Health Information Protection Act (PHIPA), the applicable laws and regulations of the province of Ontario. Both Committees are registered with the U.S. Department of Health and Human Services under the Federal Wide Assurance, FWA00021410, and IRB registration number IRB00002419 (HREC) and IRB00007409 (CREC).

This study is to be conducted in accordance with the submitted application and the most recently approved versions of all supporting materials.

Expiry Date: 11/10/19 (m/d/y)

Multi-year research must be renewed at least once every 12 months unless a more frequent review has otherwise been specified. Studies will only be renewed if the renewal report is received and approved before the expiry date. Failure to submit renewal reports will result in the investigators being notified ethics clearance has been suspended and Research Finance being notified the ethics clearance is no longer valid.

Level of review: Delegated Review

Signed on behalf of the Human Research Ethics Committee



Erin Van Der Meulen, Research Ethics Advisor, ervandermeulen@uwaterloo.ca, 519-888-4567 x37046

This above named study is to be conducted in accordance with the submitted application and the most recently approved versions of all supporting materials.

Documents reviewed and received ethics clearance for use in the study and/or received for information:

file: tcps2_core_certificate.pdf

file: OutreachEmail-AmandaWatkins-082118.pdf