

# **Impact of Youth Service Program Design on Youth Engagement, Communities and Organizations**

by

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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

Youth service and volunteerism support healthy development and financial prosperity for youth while providing solutions to community issues. Previous studies have highlighted that engaging youth in intergenerational collaboration is valuable for providing unique and innovative organizational solutions. Fostering intergenerational collaboration within organizations can lead to capacity building and increase the efficacy of their sustainability solutions. However, many organizations and programs overlook potential contributions that youth could provide in enhancing the overall impact on communities and the organizations themselves. Furthermore, there is little understanding on how to improve intergenerational collaboration in organizations that host youth service programs. The purpose of this study is to explore youth (15 - 30 years) participation within social and environmental service projects in Canada. More specifically, this thesis will answer the following questions: (1) how does youth service program design affect youth engagement in youth service programs, in the context of intergenerational collaboration; (2) what are impacts of youth engagement in youth service programs on secondary organizations and communities; (3) What factors improve the impact of youth engagement in youth service programs on communities?

To explore these questions, a survey was created to evaluate established youth service programs. Organizations who host youth service programs and who participated in this study include Ocean Wise, Canadian Wildlife Federation and YMCA of Greater Toronto. Of the youth service program design strategies selected, youth who created meaningful projects, engaged in autonomy and youth empowerment significantly impacted the level of youth engagement. Other design strategies such as skill building, critical thinking, and mentorship did not show to have a significant relationship with youth engagement. Empirical evidence also suggests that youth participants may not be properly engaged within the youth service programs and thus won't benefit from youth engagement and intergenerational collaboration. Finally, overall youth engagement did not have a significant impact on organizations and communities. Empirical evidence also suggested that youth service programs inherently have a positive impact on communities and organizations regardless of how engaged youth participants were.

This thesis made contributions to the intergenerational theory, where further strategies were explored to support relationships. Additionally, it made contributions to the theory of knowledge sharing, where organizations play an important role in supporting youth and properly engaging in meaningful projects. Further research is needed in understanding how the relationship between youth participants and adults further influence the impact of youth service programs on communities and organizations.

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Last but certainly not least, I would like to thank my mom, dad, brother, partner, and dog. You have supported my dreams, pushed me to be great and showed me that happiness and laughter can be found during dark times.

I can honestly say I really enjoyed this journey. This opportunity has changed my life and for that I am very grateful to all that I met along this journey. I am excited to see where my future takes me!

## **Dedication**

This thesis is dedicated to the two most brilliant women in my life, my mother, Vesna Spasevski and my mentor, Leslie Adams. Both these women have had a hand shaping my life by setting me on a course dedicated to environmental stewardship and youth advocacy. I will never stop trying to better myself and the world around me. Thank you for everything you have done and taught me.

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## **1.0 Introduction**

Youth have created movements aimed to tackle fundamental societal issues such as climate change, LGBTQ2S+ rights and cultural inclusion (Allen-Handy, Thomas-El, & Sung, 2020). They often actively seek to improve societal norms through creating solutions that result in meaningful and beneficial contributions to address environmental and social needs. Within this thesis, meaningful is used to describe opportunities or relationships that are both profound and significant for participants. History has shown that youth are both engaged citizens and active changemakers regardless of barriers that they may face (Hientz et al., 2010; Ho, Clarke, & Dougherty, 2015; Lough, McBride, & Sherraden, 2009). The term “youth” is often loosely defined. Since studies within developmental psychology and neuroscience have demonstrated increasing need to support the healthy development of young people ages 10 to 30 years, who are often neglected in research (Fuhrmann, Knoll, & Blakemore, 2015; Telzer et al., 2018), in this master’s thesis, youth are defined as individuals within the age bracket of 15-30. This definition follows thorough reporting from Statistics Canada and research within developmental psychology, neuroscience, and peer-reviewed articles (Statistics Canada, 2019; Steinberg, 2014; Telzer et al., 2018).

Youth play a vital role in communities as many strive to achieve a positive social change despite their young age (Hientz et al., 2010). Compared to other age cohorts, youth are more likely to engage actively in meaningful opportunities that result in real and positive impacts on communities (Bourassa, 2018). Generally, a positive impact aims to improve components of the natural environment, societal welfare or the organizations themselves through activities and other influences (Government of Canada, 2018; Imperiale & Vanclay, 2016; Schonherr & Martinuzzi, 2019). In many cases, the Sustainable Development Goals are often used as a benchmark to which all countries and organizations strive to achieve a positive impact (SDSN Youth, 2018). The concept of sustainable development was first introduced in the Brundtland Report and has since developed into a social movement that enables global action to achieve goals and targets (Kates, Parris, & Leiserowitz, 2005).

Around the world, young people are encouraged to engage in intellectually stimulating environments that lead toward innovative thinking and skill development (Dougherty & Clarke,

2018; Jensen & Ellis Nutt, 2015). Such environments include participating in service programs and volunteer programs. Service programs in particular offer a unique opportunity that also encourages psychological and neurological health benefits and acceptance in communities. These opportunities also allow for rewards, incentives and educational opportunities for youth participants (Blakemore & Mills, 2014; Fuhrmann et al., 2015; Gazley, Littlepage, & Bennett, 2012).

Youth services programs are developed with the goal of providing meaningful civic engagement opportunities for youth that meet the community's needs. However, they often are both difficult to be defined and assessed as they are highly diverse in terms of activities, context, goals and objectives (Mattero & Campbell-Patton, 2009). A key component to youth service programs is the design. Service programs are designed to enhance benefits for youth and the host organization as well as to enhance social change in communities (Buzinde, Foroughi, & Godwyll, 2019; Keller, Perry, & Spencer, 2019). However, positive social change is not guaranteed. Youth service programs that integrate intergenerational collaboration into the program design can result in meaningful contributions that improve organizational ways of working (Weinreich, 2004).

### 1.1 Intergenerational theory

Intergenerational theory outlines the importance of equal opportunities for various age groups to work and collaborate together in various sectors of society (Griff, 1999). The inclusion of young people in various organizations can enhance capacity and overall environmental and social impact (Gazley et al., 2012). This thesis specifically focuses on intergenerational collaboration which outlines the specific relationship of younger generations and older generations working closely together to address social and environmental issues (Zeldin, Larson, Comino, & O'Connor, 2005). One method of encouraging intergenerational collaboration within organizations includes encouraging youth participation in decision-making and leadership opportunities. In addition, young people should build relationships with leaders and decision makers within organizations (Helferty, Clarke, & Kouri, 2009). Studies show that encouraging young people to build leadership skills directly correlates with increasing the overall impact of youth programs (Frerichs et al., 2015). There is little understanding in how to improve

intergenerational collaboration to support youth engagement in volunteer programs and initiatives in achieving social and environmental impact (Clarke & Dougherty, 2010; Griff, 1999). Additionally, encouraging creativity and decision making in youth can increase the meaningfulness of the impact while also understanding and meeting the needs of the community (René, 2011; Skinner, Speilman, & Caitlin, 2013). An additional method to support intergenerational collaboration includes youth mentorship opportunities as well as supporting youth leaders within schools (Helferty et al., 2009; Roehlkepartain, 2007).

Intergenerational collaboration is notably important for youth who identify as historically underrepresented and marginalised groups as it can assist in building representation and relationships (Blanchet-Cohen, Mack, & Cook, 2010). A key characteristic in supporting young people is identifying the strengths, weaknesses, and abilities while encouraging further physical development. For example, youth service programs and volunteerism help encourage innovative ideas and entrepreneurial skill building (Dougherty & Clarke, 2017; ESDC Innovation Lab, 2016).

Relationships between generations are successful when they are based upon respect, trust and understanding (Loe, 2013). Mentors and other leaders are needed to support and engage youth as it develops a sense of community and safety for the youth (Steinberg, 2007). Currently, relationships between youth and adults are based on guidance. An important concept in intergenerational collaboration is to shift this relationship to one based on shared and mutual power. Previous studies emphasized the benefits of intergenerational collaboration and involving youth in decision making process. However, many programs overlook potential contributions youth provide in enhancing the overall impact through decision making and critical thinking (Del Felice & Solheim, 2011). If engaged meaningfully, mentorship and other forms of intergenerational collaboration are an excellent tool in youth engagement that can result in positive outcomes (Seymour, 2017; Tanner & Arnett, 2009).

## 1.2 Youth engagement

Youth engagement can be generally described as an action of effectively involving young people to accomplish tasks, generate ideas outside of themselves (Armstrong & Manion, 2015).

Meaningful youth engagement is optimal for acting as a catalyst for social change while also

enhancing social justice development in youth (Armstrong & Manion, 2015; Iwasaki, 2016). Opportunities for youth engagement are often structured within school activities and volunteering opportunities where it results in health and development benefits (Armstrong & Manion, 2015).

Organizations often engage youth and use knowledge sharing mechanisms to increase organizational capacity and enhance quality of the project (Iwasaki, 2016; Srivastava, Bartol, & Locke, 2006). There are different types of programs recommended by researchers to successfully engage youth including; experiential learning, meaningful engagement opportunities, long-term and short-term commitment opportunities, advisory councils, and integrating diverse perspectives (Chen et al., 2019; Iwasaki, 2015). Youth engagement strategies help to develop various skills such as leadership and public speaking while also contributing to increasing community participation (Brennan, Barnett, & Baugh, 2007). Meaningful youth engagement opportunities for youth participants encourages community relationships with organizations and helps ensure that the overall goal of the project was achieved (Halsall & Forneris, 2018; Iwasaki, 2016). This study focuses on youth service programs as it addresses barriers commonly faced by Canadian youth. The impacts of these programs are generally described as positive on youth, organizations and communities within literature (Chen et al., 2019; Iwasaki, 2015).

### 1.3 Study rationale and research questions

This study aims to understand how organizations can effectively engage youth through intergenerational collaboration in Canadian youth service programs to make environmental and societal impacts on communities. More specifically, this thesis will look to answer the following questions:

- (1) How does youth service program design affect youth engagement in youth service programs, in the context of intergenerational collaboration?
- (2) What are impacts of youth engagement in youth service programs on organizations and communities?

(3) What factors improve the impact of youth engagement in youth service programs on communities?

Many studies demonstrate the benefits and drawbacks of intergenerational collaboration, little demonstrate the techniques that are the most effective and additional techniques that are currently under utilized (Clarke & Dougherty, 2010; Griff, 1999). The outcomes of this study will inform decision makers how to engage young people through intergenerational collaboration to make a positive impact of youth service programs on communities. Please note that secondary organizations refer to organizations who partner with this study's partner organizations for the purpose of working with young people to develop community projects.

#### 1.4 Contributions to theory and practice

The contribution of this research further expands on how intergenerational collaboration contributes to intergenerational theory while providing recommendations that incorporate concepts discussed to enhance overall impact on communities and organizations. In respect to theories, the findings do support both intergenerational theory and the theory of knowledge sharing. Youth within youth service programs were found to work with adults to create meaningful projects. Moreover, intergenerational collaboration breaks down hierarchal structures within organizations by enhancing communication. While creating projects, youth leveraged intergenerational collaboration within organizations and communities to allows for projects to be successful when implemented (Vieira & Sousa, 2016). Additionally, youth within youth service programs integrate knowledge learned and shared by staff and communities to determine the issue and goals while creating meaningful project.

Organizations who support youth within youth service programs are encouraged to support young people in creating meaningful projects or participating in the planning and development or community projects. Allowing youth to make decisions and become leaders encourages engagement throughout the duration of the project (Iwasaki, 2016). Unfortunately, it is unclear how intergenerational collaboration impacts communities, empirical evidence demonstrates that youth involvement does benefit secondary organizations in creating capacity. However, organizational decision makers and leaders are key to ensuring these opportunities as these projects can enhance the overall success of the youth service program and project. This study

also supports the integration of these strategies in the workplace as it can enhance overall engagement in young people while creating meaningful opportunities for growth.

### 1.5 Thesis overview

This thesis consists of six chapters; (1) introduction, (2) literature review, (3) methods, (4) results, (5) discussion and (6) conclusion. Chapter 2, the literature review explores youth participation within social and environmental organizations in Canada. The chapter begins by establishing definitions including youth volunteerism, youth service programs and achieving different levels of impact. It includes concepts on how to support intergenerational collaboration and relationships to enhance social and environmental impact on communities.

Chapter 3 provides an overview on the research design and analysis. This study employs quantitative analyses. This study uses a survey instrument directed towards environmental and/or social welfare focused organizations. Organizations who partnered in this research study include YMCA Canada, Oceanwise and the Canadian Wildlife Federation.

Chapter 4 reports the findings found in the quantitative analyses. Chapter 5 discusses the implications and how it contributes to research on youth engagement and intergenerational collaboration. Finally, Chapter 6 provides an overview of the thesis and outlines suggestions for future research.

## 2.0 Literature review

Much of current and past literature primarily focused on the importance of youth programs in influencing youth behaviour, psychology and development. Youth services and volunteerism programs provide various opportunities and benefits for both the organization, youth participants and communities (Taylor & Pancer, 2007). However, there are various challenges in measuring the success of the programs impact on communities as there are a variety of factors including program design and the use of intergenerational collaboration strategies (Dougherty, 2011; ESDC Innovation Lab, 2016).

Thus, the key objectives of this literature review are as follows:

- Define youth in Canada;
- Explore leading theories and concepts within intergenerational collaboration and youth engagement;
- Explore concepts in program design of youth service programs and youth engagement design strategies; and
- Explore relationships between youth engagement design strategies and their programs' impact on communities.

### 2.1 Youth

Youth are defined as the transition phase from childhood to adulthood. They are often grouped together through circumstances such as challenges that they may face, academic background and the transition period from child to adulthood. Unfortunately there is not set definition or age boundaries for youth as each definition of youth changes depending on the demographic, culture and context (Gazley et al., 2012; Tiessen & Heron, 2012). Across the literature, youth are often synonymously referred to as; young people, adolescence, teen, student or young adult (Blakemore & Mills, 2014; Cho & Purtell, 2019; Collins et al., 2020; Dougherty & Clarke, 2018; Gazley et al., 2012; Lindsay, 2016; Lough, McBride, & Sherraden, 2009). However, after examining the definitions for these synonyms, the age range and life experiences vastly differs.



Youth is also loosely defined by age. Various literature have identified that the term “youth” can apply to anyone as young as 9 years old and as old as 35 years old (Katzmarzyk, 2004; Sherar et al., 2007; Statistics Canada, 2018; UNESCO, 2013). However, it is hard to understand how the life experiences of someone as young as 9 can be similar to someone as old as 35. Therefore, a closer examination is needed in youth development to further tailor this definition. Within the field of developmental psychology and neuroscience, an emphasis is placed on individuals between the ages of 10-25 due to the importance of neurological development during this time (Steinberg, 2014). Similarly, heightened brain plasticity and malleability is also reported for individuals within this age group (Fuhrmann et al., 2015). However, some studies in this field demonstrate that maturity develops until when an individual is 30 years old (Telzer et al., 2018). Thus, the definition for youth can further tailored to those as young as 10 years old and those reaches the age of 30.

Within a Canadian context, Statistics Canada defines youth as those between the age of 15-34; however recent reports have constricted the range to the age of 15-30 years (Statistics Canada, 2019). Service and volunteer programs also face difficulties in defining youth as it depends on the organizations who host these programs. For example, the Canada Service Corps offer Canadian youth the opportunity to participate in service programs. How they define youth depends on the organizations involved. However, this can generally range from 15 to 30 (Canada Service Corps, 2020).

For the purpose of this study, youth will be described as individuals between the ages of 15-30. This definition is supported through research within developmental psychology and neuroscience, peer-reviewed articles, and reports. In addition, this definition is tailored to a Canadian context given how it is described by Statistics Canada and Canadian youth service programs. In the next section, further detail of youth development is provided outlining to key factors that aid in youth development.

### *2.1.1 Youth development*

Youth development and what enhances development has been a focus for researchers. Within this study, it is important to understand what contributes to healthy youth development in order to enhance impact and youth engagement. Research within youth development has placed an

increasing importance on individuals ages 10 to 25 years. This cohort demonstrates that there are a variety of unique traits such as heightened brain plasticity and malleability (Blakemore & Mills, 2014; Steinberg, 2014). Youth as young as 10 reach similar intellectual development markers as those who are 25 but are often dismissed due to social stigma and lack of experience. That said, generally by the age of 15 youth have the intellectual capacity of an adult (Epstein, 2010), although brain development typically continues to age 30 for emotional maturity, logical reasoning and psychosocial maturity (Steinberg, 2007).

Healthy brain development are enhanced when young people are exposed to various intellectually stimulating environments that focus on building knowledge and skills (Blakemore & Mills, 2014; Fuhrmann et al., 2015; Steinberg, 2014). When introduced into intellectually stimulating environments, young people are seen to possess traits that lead toward innovative and unique thinking (Dougherty & Clarke, 2018; Jensen & Ellis Nutt, 2015). Examples of an intellectually stimulating environments include volunteerism programs and service programs, because they are often designed to support youth development by providing them with opportunities for building skills of leadership, teamwork, presenting, and critical thinking (Anderson, Laguarda, & Williams, 2007; Corporation for National & Community Service, 2008).

Skill development is incredibly important as young people are able to adapt and respond efficiently to problems while also providing innovative solutions (Dougherty & Clarke, 2018; Khanna et al., 2014). To support skill development and other components of healthy development in youth, relationships with older generations are strongly encouraged (Zeldin, Larson, et al., 2005). Young people will often work with older generations to gain experience and necessary skills needed to transition to adulthood (Cho & Purtell, 2019). Studies have shown that intergenerational relationships not only fosters skill building opportunities and encourages leadership but also prevents mental health problems for young people (Keller et al., 2019; Raposa et al., 2019). This is crucial for many young people across the world as there are a wide variety of barriers youth may face (Brennan et al., 2007). Though this thesis is focused on supporting youth to enhance impact and engagement, it is important to note what enhances youth development as it contributes to youth's abilities to create impact.

### *2.1.2 Youth in Canada*

Over the past three decades, youth in Canada are seen to be more diverse than ever before. In a recent reports, 27% of youth in Canada are from a visible minority group while the number of Indigenous youths increased by 39% from 2006 to 2016 (Statistics Canada, 2019). In addition, youth in Canada are tremendously educated as over 50% of youth attend post-secondary institutions or enroll in apprenticeships (Statistics Canada, 2018). Though they demonstrate high skill level and education, Canadian youth face a diverse set of challenges that can prevent them from transitioning into adulthood. Primary barriers that prevent youth to develop into well-rounded adults include financial and emotional struggles (Cho & Purtell, 2019; Franke & Human Resources and Skills Development Canada, 2010). Financially, today's youth face an overall lower net wealth than previous generations. One reason for this trend is that the rate of inflation for tuition has quickly increased in the past 10 years (Statistics Canada, 2018; Steuerle et al., 2013). In addition, full-time employment for many students is difficult to obtain as the majority of available jobs are temporary or are highly competitive (Expert Panel on Youth Employment, 2017). Reports demonstrate that fewer youth can obtain permanent or full-time positions resulting in a lower net wealth (Statistics Canada, 2019).

Despite combination of various challenges, Canadian youth still demonstrate the ability to become active community members and volunteers that seek out meaningful and beneficial contributions (Walsh & Black, 2015). However, the high levels of social and civic engagement that youth strive to achieve are not always possible as youth require support in order to maximize impact on communities (Lindsay, 2016; Tiessen & Heron, 2012). Though it is the goal of youth to positively impact communities, the goal of this thesis is to understand whether an impact was achieved.

### *2.2 Youth engagement*

Youth engagement is critical for many young people and organizations within social movements. Youth strive to achieve higher levels of social engagement and often turn to organizations for additional support to achieve desired impact on communities (Lindsay, 2016; Tiessen & Heron, 2012). Alternatively, organizations will look to engage youth as benefits include capacity building and enhanced community relationships (Halsall & Forneris, 2018; Iwasaki, 2016).

Engaging youth at an organizational level leads to successful youth development (Schulman, 2006). Within this study, youth engagement is defined as actions or a combination of actions that effectively involves youth to accomplish tasks, generate ideas to help others (Armstrong & Manion, 2015). Opportunities for meaningful youth engagement acts as a catalyst for social change and justice while enhancing youth development (Armstrong & Manion, 2015; Iwasaki, 2016).

Youth engagement opportunities can be structured in school activities and volunteer programs. These opportunities allow for support to overcome barriers that youth continue to face like financial barriers and rising mental health issues (Armstrong & Manion, 2015; Expert Panel on Youth Employment, 2017). Meaningful youth engagement opportunities encourages community relationships and addresses social issues (Iwasaki, 2016). For this reason, many youth strive to participate in meaningful youth engagements to positively impact communities (Chen et al., 2019). Organizations that engage youth often aim to increase organizational capacity and enhancing quality of the project because youth can provide unique insights (Iwasaki, 2016). As a result, youth engagement is a primary focus for this thesis as more research is needed to understand common strategies used to support engagement and what enhances meaningful impact produced by youth.

### *2.2.1 Youth engagement strategies*

Early youth engagement literature focused on understanding emotional, behavioural and cognitive youth engagement strategies however, these strategies were seen as static concepts (Yonezawa, Jones, & Joselowsky, 2009). Youth engagement has since evolved into a dynamic idea where engagement is discussed as a combination of different strategies and approaches. Youth engagement strategies can generally be summarized into four categories including; participation, passion, youth voice and collective action as shown in Figure 1 (Witt & Caldwell, 2018). Each strategy plays an important role in how adults can successfully engage with youth to support youth development and the impact they hope to achieve. Within the context of this study, strategies described by Saito and Sullivan (2011) are classified as essential characteristics that other strategies should aim to achieve. Whereas strategies will be classified as activities decision-makers and leaders aim to provide to support youth. With these guidelines, high levels of youth

engagement successfully engages youth within all four essential characteristics of youth engagement (Saito & Sullivan, 2011).

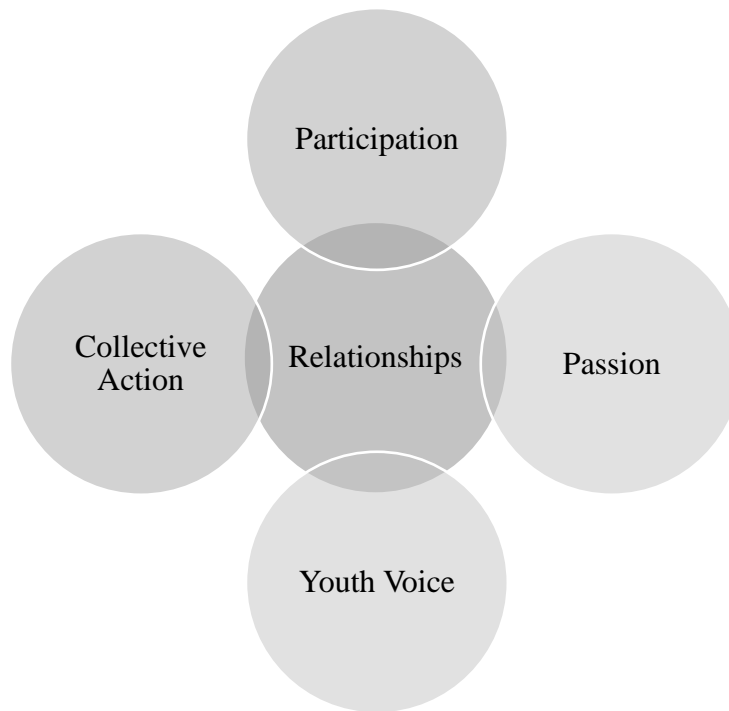


Figure 1: Youth engagement strategies (Adapted from Witt & Caldwell, 2018, p. 432).

Participation outlines the importance of allowing youth to build meaningful connections with community members and places (Saito & Sullivan, 2011). Creating opportunities for youth to participate in meaningful engagements supports successful civic engagement, enables skill-building and enhances academic achievements (Gazley et al., 2012; Saito & Sullivan, 2011). Additionally, encouraging youth to become passionate about what projects they are working on is successful in influencing youth development and social welfare (Saito & Sullivan, 2011; Weinreich, 2004). Passion helps motivate youth to achieve their goals, gain power, and enhance overall personal well-being (Witt & Caldwell, 2018).

In addition, encouraging youth to speak out and take leadership opportunities is another important component to youth engagement. However, it is not enough for youth to just speak out decision-makers in organizations must also listen to youth and take their opinions seriously (Witt & Caldwell, 2018). Giving opportunities to youth to speak freely is beneficial because it can enhance efficiency in the organization and skill-building in youth (Anyon et al., 2019; Maki &

Snyder, 2017; Saito & Sullivan, 2011). Finally, collective action refers to the shared decision-making power that adults and youth can share. The goal of collective action is to work together while achieving the goals of the project and to successfully improve social change (Franzen et al., 2009; Schulman, 2006). That being said, Saito & Sullivan (2011) state that a majority of organizations have moderate engagement levels by using two or three youth engagement essential characteristics. This provides context to understand what meaningful youth engagement is and what characteristics should be examined when evaluating similar programs.

Moreover, youth engagement strategies often vary in style and implementation. An important foundation in maintaining these engagement strategies is ensuring that youth and adults build strong and meaningful relationships. Researchers have identified that relationships are an important factor in enhancing youth engagement opportunities (Lawrence-Jacobson, 2006; Vieira & Sousa, 2016; Zeldin, Larson, et al., 2005). This is especially true for organizations that use intergenerational collaboration techniques to engage youth with the purpose of achieving goals and impacting communities (Maki & Snyder, 2017; Witt & Caldwell, 2018). However, organizations and other groups often face challenges in engaging youth (Joselowsky, 2007; Witt & Caldwell, 2018). Challenges that are commonly seen in literature can include creating environments where youth can freely participate, voice opinions, become passionate and collaborate effectively with decision-makers (Forenza, 2016; Joselowsky, 2007; Saito & Sullivan, 2011). Unfortunately, these challenges can result in youth disengagement as outlined by Joselowsky (2007), and youth potential contributions can thus be overlooked. To address certain intraorganizational youth engagement challenges, Forenza (2016) suggests that organizational decision-makers must address organizational empowerment. Organizational empowerment refers to how organizations can empower members to increase effectiveness for goal achievement. It should be noted that concepts within intraorganizational engagement can be applied to different youth engagement opportunities including volunteerism and service as the goal is to develop meaningful impact on communities, encourage healthy development in youth and build organizational capacity.

Researchers suggest organizations should examine and improve on organizational structure, social support, and leadership opportunities. Improving organizational structure refers to how an organization can enhance capacity to facilitate empowerment (Forenza, 2016). Maton (2008)

discuss those opportunities to enhance organization structure can include creating roles at different levels in the organization. Roles can achieve varying demands of the organization while encouraging skill development and inspiring youth to raise their voice and opinions to decision-makers. This is because roles can be created by organizations to specifically give an individual meaningful opportunity for learning, development and participation (Maton, 2008). An example of intraorganizational engagement is includes providing opportunities for leadership. Building intraorganizational leadership opportunities can help youth assume responsibilities and engage with stakeholders (Halsall & Forneris, 2018). This is especially important in helping youth gain a new perspective on the issue and help youth become passionate about the project goal and outcome (Forenza, 2016; Saito & Sullivan, 2011).

An alternative form of intraorganizational engagement is knowledge sharing and it is often discussed within management literature. Though it is not limited to youth engagement as the theory of knowledge sharing can be applied to any organizations or managerial teams that supports employee innovation (Khan & Khan, 2019). Knowledge sharing refers to the organization sharing important knowledge and information to their employees. Subsequently, the benefit of knowledge sharing includes increasing employee engagement and empowerment (Kim & Lee, 2006; Srivastava et al., 2006). Strategies on how to spread knowledge within an organization can include one-on-one interactions, mentoring, and organizational communication (Suppiah & Sandhu, 2011). Some challenges include hierarchal structure, communication flow, internal competitiveness and existing corporate structure (Riege, 2005). Though there is no current information on how the role knowledge sharing influences community projects and social change, the outcome of this master's thesis can hopefully further support the ideas within this field. As a result, readiness and number of organizational staff members will be used as a control variable for the first hypothesis. This is due to the critical role that organizations play in supporting youth participants within the program to achieve goals and create impact on communities (Halsall & Forneris, 2018; Witt & Caldwell, 2018). Additionally, youth engagement will be used as the variable to measure youth involvement within this study. This is because the original purpose of this study is to examine the role youth participants play within youth service programs to impact organizations and communities. Organizations play a critical role in supporting youth to create impact (Witt & Caldwell, 2018). Since this study looks to

examine this from the perspective of organizations, it is important to establish the role organizations played in supporting youth participants.

### 2.3 Intergenerational collaboration

Intergenerational collaboration stems from the theory that discusses the benefits of bringing multiple generations together in order to enhance social growth and learning within communities (Lawrence-Jacobson, 2006). It also highlights the importance for equal opportunity for various age groups to be systematically integrated in various sectors of society (Newman & Hatton-Yeo, 2008). Due to the technological advancements in today's society, the scope of multi-intergenerational collaboration were widened as the ability to collaborate has grown (Newman & Hatton-Yeo, 2008).

Certain intergenerational relationships have developed on an ongoing basis to center around social change and improving communities (Youth Speak Out Coalition & Zimmerman, 2007). Intergenerational community built programs offer value for both community elders and youth participants as it shows that everyone has the potential to contribute in shaping social norms (Lawrence-Jacobson, 2006). As a result, this a primary focus for this research. The knowledge about intergenerational collaboration still continues to grow as literature continues to examine successful implementation strategies.

#### *2.3.1 Types of intergenerational programs*

Though intergenerational relationships are common in families, those that involve non-related individuals are difficult to cultivate (Zeldin et al., 2005). Developing relationships tend to be time consuming and requires a lot of attention and communication. However, if given enough resources, adult and youth relationships can flourish (Raposa et al., 2019). As stated, it is important that all intergenerational relationships have a basis of trust and understanding, which can be nurtured through various activities such as informal encounters, transfer of experience, active solidarity, and home sharing (Vieira & Sousa, 2016).

Mentorship is an example of a strategy used to support intergenerational relationships. Mentorship encourages communication and enhances trust between participants (Helferty et al., 2009; Roehlkepartain, 2007). Intergenerational mentoring offers opportunity for older



generations to provide care and support for younger generation (DuBois et al., 2011). However, the effectiveness of mentorship relationships depends on the needs involved for the individuals. To build a strong mentor and mentee relationship, constant communication is needed. In turn, mentorship improve self-value, supports youth development and provides the opportunity to nurture meaningful intergenerational relationships (Glass et al., 2004; Yuan & Yarosh, 2019)

Within the literature, intergenerational collaboration and relationships are often discussed in tandem with one another as they both contribute to intergenerational theory. Intergenerational relationships can be cultivated through companionship as it is a form of active solidarity. In terms of intergenerational collaboration, active solidarity can refer to helping others in times of difficulty (Vieira & Sousa, 2016). This especially relevant in care centers where older adults look towards young people in support and care during their senior years. Other forms of active solidarity in intergenerational collaboration includes tutoring youth (Vieira & Sousa, 2016). Within this thesis, an emphasis will be placed on intergenerational collaboration as youth participants and leaders will work through community issues to develop solutions. Further discussions on the benefits and drawbacks of intergenerational collaboration will be discussed within the next section.

### *2.3.2 Benefits and drawbacks of intergenerational collaboration*

Intergenerational collaboration offers a wide variety of benefits as it positively impacts individuals, organizations, and communities. There are both immediate or long-term benefits gained from incorporating intergenerational collaboration into various sectors of society (Newman & Hatton-Yeo, 2008). In terms of youth, benefits often discussed in literature include mental and physical health benefits. For instance, service programs developed to highlight intergenerational collaboration encourages goal accomplishment and increases quality of life by lowering mental health issues and improving physical health (Barnett & Brennan, 2006; Telzer et al., 2018). Intergenerational collaboration also improves social skills and academic achievements. Research has found that students who participate in programs that highlight intergenerational collaboration achieve higher grades and communicate more efficiently (Newman & Hatton-Yeo, 2008). Relationships built between adults and young people encourage youth to build valuable skills such as leadership and help to address social isolation issues for

adults (Keller et al., 2019; Weinreich, 2004). Strong intergenerational relationships also encourage youth to continue to engage in activities that are meaningful to them (Cohen-Mansfield & Jensen, 2017). In addition, intergenerational collaboration encourages meaningful and beneficial community participation that plays an active role in improving social and environmental welfare. Organizations that incorporate intergenerational collaboration techniques increase the overall impact of the program and build capacity of the programs (Frerichs et al., 2015; Gazley et al., 2012; Sweeney & Bell, 2019).

It is important to note that intergenerational relationships do not spontaneously occur and communities and organizations that choose to integrate intergenerational collaboration can face challenges (Raposa et al., 2019). This is a notable drawback to intergenerational collaboration as organizational support is needed to facilitate the development of intergenerational relationships. This can include providing access to resources for young people, altering project structure to highlight intergenerational collaboration, and establishing clear and concise project goals to enable different generations to work together (Zeldin, Larson, et al., 2005).

Intergenerational collaboration has become increasingly difficult because of have limited interactions among different generations (Hagestad & Uhlenberg, 2005). This is a drawback to intergenerational collaboration as social norms and biology enforce age segregation in everyday life (Hausknecht, Neustaedter, & Kaufman, 2016), such as housing arrangements, recreational activities, education and workplace culture (Hagestad & Uhlenberg, 2005). Strong intergenerational relationships are crucial for social change and supporting youth development. Studies have demonstrated that intergenerational collaboration benefits allow members to create social change through political power (Blanchet-Cohen et al., 2010; Christens & Dolan, 2011). Both benefits and drawbacks to intergenerational collaboration can provide further context in this thesis on how youth are supported within organizations to create meaningful impact.

## 2.4 Youth & service

Service denotes to an organized period of engagement that maintains a focus on experience-based learning (Lakin & Mahoney, 2006). It offers unique opportunities through rewards, incentives and educational to positively contribute to local, national and the global community (Academica Group, 2016; Gazley et al., 2012). Youth actively participate in various service

programs because it provide an opportunity to engage with community members while improving the social and environmental welfare (Khanna et al., 2014). In addition they also provide participants with networking opportunities, improves their mental health and wellbeing, builds a sense of accomplishment, contributes to financial stability and helps them to secure future job placements (Alfes, Shantz, & Bailey, 2016; Bourassa, 2018; Dougherty, Clarke, & Alam, 2018). In Canada, more than 60% of youth between ages of 15-19 and 42% of individuals ages 20-34 participate in volunteering and service programs (Ho, 2013; Statistics Canada, 2018).

In literature, volunteerism and service are discussed in tandem with one another as activities and benefits are quite similar (Gazley et al., 2012). Yet, a key feature that differentiates between service programs from volunteerism is that service programs offers the possibility of compensating participation (Lough et al., 2009). Volunteerism is defined as a prosocial behaviour where participants work to achieve goals and fulfil tasks for organizations through unpaid labour (Einfeld & Collins, 2008; Walsh & Black, 2015). The types of compensation given to participants depend on the service-learning experience and program. Certain programs offer honorariums or course credits as compensation for youth participants (Einfeld & Collins, 2008).

Most service programs are developed to take place within high school and post-secondary school systems as it can enhance youth's academic performance, self-efficacy, leadership skills and job-experience (Astin et al., 2000). Service programs provide hands-on learning experience as participants engage and collaborate with peers and decision makers to create meaningful impact on communities. Meaningful collaboration and discussions are beneficial for both youth development and organizational capacity to achieve their goals (Astin et al., 2000; Brennan et al., 2007; Gazley et al., 2012). They are often successful in developing strategies that tackle fundamental societal and environmental issues within the community (Rutti et al., 2016). For this reason, youth service programs have become a focus for this study as it not only provides opportunity for youth to build skills and support development, but it also provides opportunity to create social and environmental change. Within this thesis, the impact of social and environmental issues were key issues aimed to address as within sustainability. This is due to the fact that positive contributions are tied closely together and cannot be explicitly separated.

### *2.4.1 Types of service*

Service programs provide opportunities for participants to address various social and environmental issues and to engage with communities (Lough et al., 2009). They provide benefits for both service providers and participants (Barnett & Brennan, 2006). Service learning programs are more generally seen in schools as they are often tied to the curriculum (Sutherland et al., 2006). It is composed of different activities and learning opportunities that benefits both the youth and the community (Academica Group, 2016). In addition, service learning can help youth to gain soft skills like interpersonal skills and leadership skills (Astin et al., 2000). Types of service programs that are commonly seen throughout literature are direct service learning and indirect service learning (Academica Group, 2016; Planty, Bozick, & Regnier, 2006).

Both direct and indirect service learning aim to address community issues and meet community needs that benefits both participants and service providers (Mak, Lau, & Wong, 2017). These service programs help to develop skills like leadership and to raise awareness in communities about community problems. Indirect service learning involves participants to support organizational functions (Sutherland et al., 2006), whereas direct service learning expects participants to personally interact with community members to design projects (Mattero & Campbell-Patton, 2009). Students primarily choose to participate in direct service learning programs because they provide more opportunities to make meaningful contributions to projects that they are passionate about (Jenkins & Sheehey, 2012). Direct service programs have a primary focus on participant-led community activities (Mak et al., 2017), which allows the participants to freely choose an activity that they are passionate about to undertake in the community (Sutherland et al., 2006).

Participants commonly partake in service programs through mandatory service or voluntary service (Hill & Den Dulk, 2013). Mandatory service programs are comprised of activities that participants are required to contribute (Dienhart et al., 2016). A common example of mandatory service includes compulsory volunteer hours needed to graduate high school (Planty et al., 2006). Benefits for participants in mandatory service include opportunities to develop skills, increase academic performance and participation in civic engagement (Dienhart et al., 2016). Drawbacks that are commonly discussed about mandatory service includes rigid structure and lack of

autonomy (Mohanty et al., 2019). There has been debated as to whether mandatory service will diminish a young person's desire to volunteer in the future. The motivation for youth to volunteer in the future can depend on other factors related to the participants and the opportunities provided by service programs (Dienhart et al., 2016; Taylor & Pancer, 2007).

Like mandatory service, voluntary service programs are also designed to encourage civic engagement while providing opportunity to improve skills (Powell & Bratovic, 2007; Stukas et al., 2016). However, voluntary service programs provides participants the opportunity choose what type of engagement to participate (Mattero & Campbell-Patton, 2009). Unlike other service programs in which participants can be compensated for their time, voluntary service programs do not compensate participants. This is a barrier to participation for many participants such as youth who come from a lower socio-economic background and require additional support and resources to participate (Statistics Canada, 2018).

#### *2.4.2 Youth service program design*

Well-designed youth service programs are beneficial to both participants and organizers (Jenkins & Sheehey, 2012). Unfortunately, there are limitations within the design of youth service programs which can impede the potential benefits they can offer. Limitations in youth service program design is not commonly discussed and many programs assume they are beneficial regardless of activities done by youth participants (Glass et al., 2004; Roth & Brooks-Gunn, 2003).

As described by Lakin & Mahoney (2006), youth service programs are generally comprised of three stages: skill building, planning, and implementation. Within each of these stages' organizations work to build youth engagement through design strategies. Youth engagement design strategies that are built throughout the program's structure aim to enhance benefits for youth as well as to encourage social and environmental change in communities (Buzinde et al., 2019; Keller et al., 2019). Below outline the three stages of youth service programs and the six prominent youth engagement design strategies. It is worth to note that there are no studies that specifically outline design strategies that support intergenerational collaboration.

As stated, the first stage is dedicated to help participants to build valuable skills and to understand everything they need to know in order to successfully complete their project. Concepts that are commonly explored are skills related to leadership, knowledge sharing, teamwork, and empathy (Glass et al., 2004; Lakin & Mahoney, 2006). Though skill building is identified as an entire stage, skill building can also be identified as a notable youth engagement design feature. Skill building encourages individuals to learn necessary skills to fulfill the objectives, improve performance and encourage productivity. Opportunities to build skills can be formally offered through workshops and training sessions and informally by learning from peers and colleagues (Lakin & Mahoney, 2006). For example, youth participants within youth service programs will work with and learn from staff members and decision makers throughout the project. This intergenerational collaboration component is a unique skill building opportunity as decision makers and staff members can pass on helpful knowledge and information to youth participants. Collaboration between adults and youth can support skill building while empowering youth within the organization (Zeldin, Camino, & Mook, 2005). I hypothesize that skill building in youth service programs positively supports youth engagement. This is hypothesized because skill building within youth service programs inherently incorporates intergenerational collaboration which allows youth to benefit from unique insight and knowledge.

*H<sub>1A</sub>: Youth service program design that incorporate skill building impacts youth engagement*

An additional youth engagement design strategy associated with stage one is empowerment. Youth empowerment involves shared decision making between leaders and youth participants. The benefit of shared decision making within youth service programs allows for motivation in participants and mobilisation for the project (Iwasaki, 2015). Youth empowerment also includes an intergenerational collaboration component. For example, youth participants in youth service programs are given more opportunities to speak freely and communicate to organizational leaders. These benefits organizations as youth can bring a unique perspective about the community issues. Alternatively, youth benefit from this opportunity as it allows knowledge to be shared through different levels in an organization's hierarchal structure (Kim & Lee, 2006;

Srivastava et al., 2006). Thus, I hypothesize that youth empowerment enhances youth engagement.

*H<sub>1B</sub>: Youth service program design that incorporate meaningful projects impacts youth engagement*

The second stage of youth service programs is the planning stage. The planning stage allows for participants to focus on a chosen social problem and develop action plans to address it. Depending on the youth service program, participants are normally given resources to allow their plans and projects to come to fruition (Lakin & Mahoney, 2006). In addition, programs allow participants to interact with communities and to consult on their plans (Glass et al., 2004). The goal of many youth service programs is to address issues and improve community welfare (Hoff, 2007). One youth engagement design feature often associated with this stage is allowing youth to participate in a meaningful project. Meaningful engagement for youth is critical for creating social change (Armstrong & Manion, 2015; Iwasaki, 2016). Creating meaningful engagement can be encouraged by creating opportunities for youth be passionate about what they are participating in. Passion is a key as youth engagement strategy outlined that helps motivate youth to achieve their goals and enhance overall personal well-being (Saito & Sullivan, 2011). For example, youth participants in youth service programs are given opportunities to participate in either pre-existing projects or create new ones that address community issues. Pre-existing projects have already been developed by staff members, but youth participants would engage to carry it out. Whereas, creating a new project allows both youth participants to address a community issue that is tailored to their perspectives and experiences. It is important to note that both opportunities allow for youth participate in a meaningful project however, participating in new projects allow for more engagement. Furthermore, participating in meaningful projects encourages intergenerational collaboration as both decision makers and youth participants must work closely to share ideas and carry out the project. As a result, I hypothesize that meaningful projects enhance youth engagement in programs.

*H<sub>1C</sub>: Youth service program design that incorporate meaningful projects impacts youth engagement*

Additionally, Buzinde et al. (2019) suggest that both autonomy and critical thinking are important strategies to be incorporated in service program design (Figure 1).

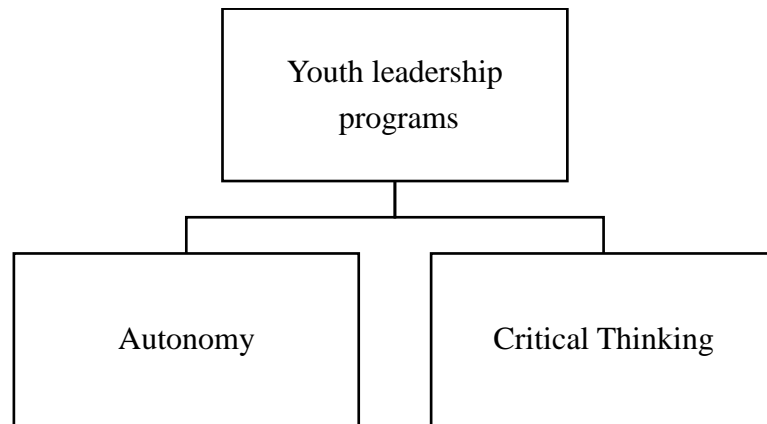


Figure 2: Design strategies for youth leadership programs (Adapted from Buzinde et al., 2019).

Autonomy refers to their ability to self-choose, be self-determined, self-motivated and thus encourages healthy development in young people (Khanna et al., 2014; Stukas, Snyder, & Clary, 2016). Within youth service programs, youth are encouraged to be autonomous through community projects by making decisions and becoming leaders within the project. This design feature also has an intergenerational collaboration component where trust and understanding must be built for staff members to welcome autonomous youth participation. However, if encouraged autonomy can enhance engagement as it provides youth opportunity for meaningful collaboration (Helferty et al., 2009). As a result, I hypothesize that youth engagement strategies that allow for autonomy, can increase youth engagement in programs (René, 2011; Skinner et al., 2013).

*H<sub>ID</sub>: Youth service program design that incorporate autonomy impacts youth engagement*

In addition, critical thinking is an additional strategy youth service programs should incorporate into their program design (Buzinde et al., 2019). Critical thinking refers to the combination of awareness and critical analysis which is known to enhance engagement and effective civic action to benefit communities (Keller et al., 2019). To encourage critical thinking in youth service programs, youth participants are given opportunities to challenge the status quo, be creative and experiment during their time in youth service programs. This promotes critical



thinking as it allows youth to enhance problem solving techniques while working to solve problems in communities. Critical thinking engagement strategy has an intergenerational collaboration component as youth participants can work directly with decision makers and community leaders to develop innovative solutions. This can benefit the organizations as the goals of the project are more tailored to the community (Astin et al., 2000; Brennan et al., 2007; Gazley et al., 2012). As a result, I hypothesize that youth engagement strategies that allow for critical thinking, can increase youth engagement in programs.

*H<sub>1E</sub>: Youth service program design that incorporate critical thinking impacts youth engagement*

The final youth engagement design feature that is commonly discussed throughout literature and found in the second stage is mentorship. Mentorship encourages youth engagement as it can contribute a youth's willingness to belong and to participate. This is partly due to the role of intergenerational collaboration where youth participants to work directly with a staff member to develop meaningful relationships. With the support of intergenerational relationships, youth service programs enhances leadership skills and enhances a young person's ability to address real-life social issues (Academica Group, 2016; Lindsay, 2016; Rhodes & Lowe, 2008). Additionally, mentorship is an additional strategy to enhance social change in youth service programs. This is important as youth more willingly to engage in the projects that produce a meaningful impact (Keller et al., 2019). As a result of the literature, I hypothesize that mentorship positively influences youth engagement in youth service programs.

*H<sub>1F</sub>: Youth service program design that incorporate mentorship impacts youth engagement*

The third stage and final stage involves implementing action plans into communities. Participants work to implement plans and carry out the service activity (Lakin & Mahoney, 2006). The design strategies most associated with the third stage build off of strategies in the first and second stage. A summary of effective youth engagement design strategies is summarized in Table 1, where the main types of design strategies that will be examined include skill building, youth empowerment, meaningful projects and contributions, autonomy, critical thinking, and

mentorship. These strategies will be used to examine the success of youth engagement within the context of intergenerational collaboration.

Table 1: Youth service program design: Youth engagement design strategies.

<b>Types of Youth Engagement Design Strategies</b>	<b>Explanation</b>	<b>Supporting Literature</b>
<b>Encouraging skill-building</b>	Skill building allows youth participants to develop and learn new skills that allow them to fulfil the objectives of the project and succeed in the future (Roth & Brooks-Gunn, 2003).	(Einfeld & Collins, 2008; Halsall & Forneris, 2018; Kaplan, 2008; Maki & Snyder, 2017; Meltzer & Saunders, 2020; Roth & Brooks-Gunn, 2003)
<b>Supporting youth empowerment</b>	Youth empowerment highlights the importance of shared decision making with youth. Empowering youth allows organizations to increase capacity and successfully integrate solutions into communities (Franzen et al., 2009; Lakin & Mahoney, 2006).	(Christens & Dolan, 2011b; Franks, 2012; Franzen et al., 2009; Lakin & Mahoney, 2006; Lawrence-Jacobson, 2006; To et al., 2020; Martínez et al., 2017)
<b>Providing opportunity to provide meaningful projects</b>	Providing the opportunity for meaningful contributions to communities allows youth to have a transformative role in improving community welfare (Franzen et al., 2009). Youth who work on projects that are meaningful to them positively influences their overall engagement and community contributions. (Saito & Sullivan, 2011; Weinreich, 2004).	(Armstrong & Manion, 2015; Astin et al., 2000; Brennan et al., 2007; Chen et al., 2019; Einfeld & Collins, 2008; Franzen et al., 2009; Gazley et al., 2012; Iwasaki, 2016)
<b>Providing autonomy</b>	Autonomy encourages youth to self-chose, be self-determined and self-motivated. Autonomy encourages community benefits including enhancing community relationships	(Buzinde et al., 2019; Deci & Ryan, 2012; Khanna et al., 2014; Maki & Snyder, 2017;

	and capacity (Buzinde et al., 2019; Deci & Ryan, 2012).	Seymour, 2017; Stukas et al., 2016)
<b>Encouraging critical thinking</b>	Critical thinking is a combination of awareness and critical analysis. It enhances engagement and action to benefit communities. It also promotes healthy development in youth as it allows program participant to focus on enhancing their own competencies (Buzinde et al., 2019; Paul & Elder, 2006).	(Astin et al., 2000; Brennan et al., 2007; Buzinde et al., 2019; Gazley et al., 2012; Paul & Elder, 2006; Seymour, 2017)
<b>Offering mentorship</b>	Mentorship is guidance offered to inexperienced individuals. Mentorship encourages building communication and enhancing trust between generations (Helferty et al., 2009; Roehlkepartain, 2007). Mentorship enhances leadership skills and enhances a young person’s ability to address real-life social issues (Academica Group, 2016; Lindsay, 2016; Rhodes & Lowe, 2008)	(Academica Group, 2016; Helferty et al., 2009; Keller et al., 2019; Lindsay, 2016; Meltzer & Saunders, 2020; Rhodes & Lowe, 2008; Roehlkepartain, 2007)

2.5 Impact

Youth are motivated to engage in service program opportunities when programs aim produce meaningful and significant level of impact on targeted communities. Previous literature suggests that encouraging young people to skills like leadership directly correlates with increasing the overall impact of the program (Clarke & Dougherty, 2010; Frerichs et al., 2015). In addition, encouraging creativity and decision making in youth can increase the meaningfulness of the impact while also understanding and meeting the needs of the community (René, 2011; Skinner et al., 2013). Though the impacts of volunteering and service programs on youth have been well-researched, little has been researched on the impacts of the activities done by service work (Clarke & Dougherty, 2010; Stepenuck & Green, 2015).

Impact is commonly defined as immediate or prolonged effect of an implemented strategy, technique, tool and activity (Franks, 2012; Rossini & Porter, 2018). It is commonly assessed for

its full range of consequences and benefits of the activity in both long-term and short-term viewpoints of expected and unexpected outcomes (Rossini & Porter, 2018). A positive impact is often defined as various influences and actions that aid the natural environment, societal needs, organizations or participants within the organizations (Government of Canada, 2018; Imperiale & Vanclay, 2016; Schonherr & Martinuzzi, 2019).

Researchers have made attempts to understand how to measure the impact of youth service programs. However, each attempt lacked the capability to fully encapsulate the true impact of the program (McLellan, MaCQueen, & Neidig, 2003). Many programs differ in objectives and cover a variety of topics such as education, objectives, environmental stewardship and social inclusion (Belfield, 2013). Currently there are a small number of tools that accurately measure and compare how an organizations achieve their primary goals in impacting communities (Belfield, 2013; McLellan & Youniss, 2003).

Within each type of assessment reporting, there are many challenges in terms of receiving an accurate report of how that activity is impacting the environmental or social goal of the project/organization as well as the costs associated in conducting a impact assessment (Eldøy & Myhrvold, 2016; Rossini & Porter, 2018). Within evaluation literature, community impact evaluations are preferred to examine the impact taking place on a system dominated by the presence of people. This impact evaluation differs from environmental or socioeconomic impact assessments as this looks to highlight the experiences and perspectives the individuals involved (Bottero et al., 2020; Meringolo, Volpi, & Chiodini, 2019). Once criticism to this evaluation is that it does not capture the full extent of relationship dynamics or the full extent of the impact (Meringolo et al., 2019).

Conducting environmental and social impact assessments are important as it may lead to improvements that strengthen the overall efficacy of the organization's impact on communities which is an additional focus for this research. Imperiale and Vanclay (2016) discuss that the impact assessments are crucial in evaluating whether implemented strategies and tools for impact are succeeding. To do so, both strategies and scales of impact need to be examined in order to fully understand how to improve impacts on communities, participants and organizations (Imperiale & Vanclay, 2016).

### *2.5.1 Youth service program & organizational impact*

Encouraging meaningful and healthy connections with organizations is a common theme throughout youth engagement literature as both organization and youth benefit. Service programs can be classified as a form of pedagogy that enables youth participants to engage with community members through design strategies to understand the needs that need to be addressed (Einfeld & Collins, 2008). Design strategies are commonly employed to enhance benefits for youth and organization (Buzinde et al., 2019; Keller et al., 2019). Organizations engage youth often aim to increase organizational capacity and enhancing quality of the project because youth can provide unique insights (Iwasaki, 2016). However, further research is needed to understand how youth engagement plays a role when enhancing the impact on organizations. As a result of the literature, I hypothesize that youth engagement has a positive impact on organizations that work with the youth participants in the youth service programs. This is hypothesized due to the fact the organizations who directly support youth engagement could inherently benefit from youth involvement and building capacity.

*H<sub>2A</sub>: Youth service program youth engagement have an impact on the organizations*

Moreover, youth are encouraged to participate in service programs as it can provide additional opportunities to develop skills such as leadership building, teamwork, presentation skills, and critical thinking (Anderson et al., 2007; Corporation for National & Community Service, 2008). In addition, they benefit the organizations that host youth service projects and initiatives. Youth service programs increase organizational ability and help achieve goals and objectives by enabling youth to engage in critical thinking and develop skills (R.A. Malatest & Associates Ltd., 2011; Roehlkepartain, 2007).

### *2.5.2 Strategies of impact*

The strategy used to create various impacts depend on the goal of the action/activity, where the impact can have intended or unintended effects (Gauthier, 2003). Strategies of impact can vary in depending on the goal and what stage the program is at (Franks, 2012). Within youth-led initiatives, Gauthier (2003) discusses three primary strategies that youth can take to enhance overall impact of their projects. These categories further expand when discussing the degrees to

which they are initiated. Initiatives that demonstrate a higher level of youth engagement are a result of efforts taken place to institutionalize youth engagements within the program (Hill & Den Dulk, 2013). Whereas, initiatives that demonstrate a lower level of youth engagement into their program allow for a larger number of participants to be included (Gauthier, 2003; Helferty & Clarke, 2009).

From the perspective of youth-led entrepreneurship, Clarke and Dougherty (2010) identified youth led social engagements that contribute to enabling social change. Clarke and Dougherty (2010) developed a matrix that was used to examine prominent strategies and impacts of youth-led projects. Prevalent types of strategies identified include socialization, influence, and power. Socialization is more commonly referred to as increasing the level of awareness within communities. Socialization occurs when youth are directly involved with organizations or through decision making (Helferty et al., 2009). Influence is defined as the encouragement of altering policy and/or behaviour to better reflect the goals of the project (Ho et al., 2015). Influence can occur through consultations (i.e., youth advisory councils) or through public protests (Clarke & Dougherty, 2010). Finally, power is recognized as a strategy of impact as it is defined as having direct control and access to make decisions and changes (Clarke & Dougherty, 2010). Many youth believe that to implement effective changes and impact communities, gaining power is an essential strategy that is needed (Llewellyn et al., 2007).

This matrix was further elaborated in Ho et al. (2015), where the authors discussed an additional strategy of partnership. Like socialization, partnership's key goal is to build relationships. However, partnerships is recognized more for internal dynamics within organizations (Apathy is Boring, 2013; Sanchez, 2017). Certain strategies such as awareness raising, influence and partnerships are more attainable for youth and youth-led organizations as power is not easily gained (Llewellyn et al., 2007).

Alternatively, within management literature, Stephan et al. (2016) address impact strategies focused on by organizations who aim to achieve positive social change. This study outlined two different strategies used to achieve impact including deep level strategies and surface level strategies (Stephan et al., 2016). Deep level strategies focus on working closely with the target groups in order to change social norms, attitudes and beliefs (Baptista et al., 2019; Stephan et al.,

2016). Key components to enabling and supporting deep level strategies within organizational practices includes ensuring intrinsic motivation, developing capabilities, and empowering structural opportunity and social capital. Studies show that deep level strategies are often successful in producing long-term outcomes as many projects work closely with target groups or communities to empower social change and improve social norms (Stephan et al., 2016).

Surface level strategies, on the other hand, vary more than deep levels strategies. Surface level impact strategies focus on combining extrinsic motivators and restructured decision-making environments to alter targets behaviour. This differs from deep level impact strategies as surface level strategies do not have the additional focus of addressing the target group's capability. Common surface level strategies include the use of fear as an extrinsic motivator and nudging through behavioural economics (Stephan et al., 2016; Sunstein, 2014). These strategies are similar to the community specific impact evaluation literature. For example, a study conducted by Fruedberg et al. (2018) aimed to address specific strategies for each scale of impact. This includes attitudes and behaviours. In this evaluation, the difference between attitude and behaviour is that behaviour involves an action where as attitude is an internal disposition (Freudberg et al., 2018). Strategies most evaluations choose to examine depend on what is being studied as well as the scale of impact.

### *2.5.3 Scales of impact*

An important aspect to understand the success of projects and their overall impact is understanding the scale of which it can be measured to (Sutherland et al., 2006). There are a wide variety of accepted methods of measuring the scale of impact. However, what scale to be used depends on the organization. Furthermore, the methods used to measure the scale of impact can evolve as the organization develops further and their goals change (Ebrahim & Rangan, 2014).

According to Van Dyke & Taylor (2018) there are four identifiable scales of social impact that social movements use to assess impact. This includes; individual, organizational, community and macro-structural (Van Dyke & Taylor, 2018). The identified scales give an understanding of what was accomplished not necessarily who was the intended target for the impact. For instance,

when an individual level of impact is achieved, the impact's outcomes increases the person's awareness and/or behaviour on the topic (Van Dyke & Taylor, 2018; Ho et al., 2015).

Alternatively, Clarke & Dougherty (2010) discussed scales of which impact in relation to the strategy of the project from the perspective of youth-led social entrepreneurship. Their study depicts three strategies of impact in relation to three different scales of impact. Within the study, impacts can be directed towards individuals, community based, within an organization as well as systematically. Individual impact refers to influencing individual people to create action where as a systematic impact refers to a change that has been institutionalized (Clarke & Dougherty, 2010). This is very similar to studies that focus on evaluation. Specifically, Fruedberg et al. (2018) uses a community impact evaluation tool to understand the impact gender equality interventions. Since most community impact evaluations focus at a particular scale, the scale categories seen throughout literature include individual and community-based levels (Freudberg et al., 2018).

Within the social innovation literature, Cajaiba-Santana (2014) discussed the scale of impact of social change motivated groups. This study identified three levels of social innovation that organizations can refer to when understanding the scale of their project. The three levels of social innovation include intra-social innovation, inter-social innovation and macro-social innovation (Cajaiba-Santana, 2014). Intra-social scales of impact refer to organizations who seek to impact specific groups, social norms, and conventions. Oftentimes, intra-social scales of impact require micro-analyses and actions that target specific groups or locations. Whereas inter-social scales of impact occur on a larger scale where activities often influence other groups. Inter-social scales of impact, can improve the success of programs as organizations can work together in the social change process (Baptista et al., 2019). Finally, macro-social innovation refers to large scale social movements and groups who chose to improve policy measures (Cajaiba-Santana, 2014; Unceta, Castro-Spila, & García-Fronti, 2016).

Finally, within management literature, Ebrahim & Rangan (2014), discusses the scale and scope of social change motivated organizations within management literature. This study uses four levels of impact including local, regional, national, and global scales. In addition, the scope of the impact is defined as the set of activities needed to operationalize the mission. Scope can be



categorized into two categories including outputs and outcomes. Outputs refer to the number of people who were given the opportunity to interact with the project. Whereas, outcomes refer to number of people who were meaningfully impacted by the project (Ebrahim & Rangan, 2014). As depicted in Figure 3, relationships between the scale of impact and the scope of the impact can be explicitly linked or implicitly linked. For example, the outputs of a project are explicitly link with the outcomes as organizations will aim to achieve specific goals (i.e., raising awareness, encouraging individual action, etc.). Whereas the impacts of the project are implicitly linked as the true effects of the project were not measured for due to project restraints such as monetary contributions made (Blanchet-Cohen et al., 2013; Ebrahim & Rangan, 2014).

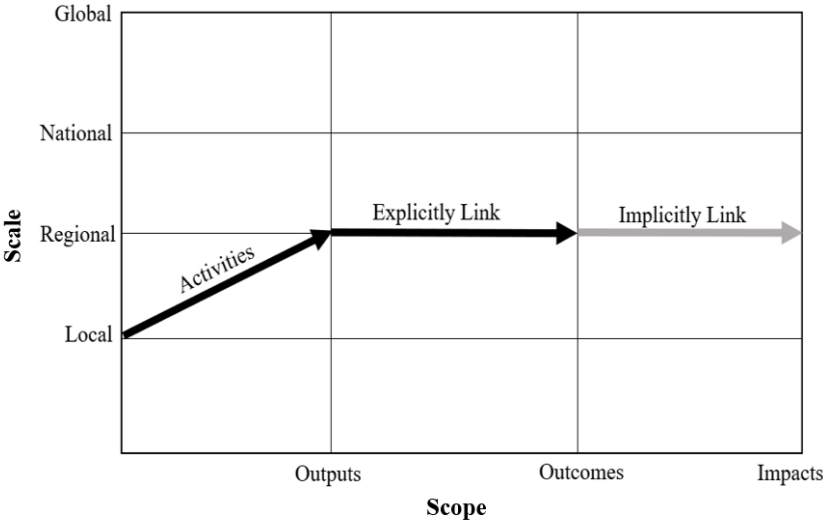


Figure 3: Scale and scope of social performance (Adapted from Ebrahim & Rangan, 2014).

As the primary focus of this study is to evaluate the efficacy of youth service programs, the scales of impact discussed by Ebrahim & Rangan (2014), will be a basis in which this study will assess impact of various organizations. These scales of impact were ultimately chosen as the goal of this thesis is to evaluate the organizational role in supporting youth within youth service programs to impact communities. In addition, programs and organizations are often limited in their ability reach various levels of impact due to the resources available. As a result, monetary contributions will be used to as a control variable as projects are often limited by monetary contributions when impact communities or organizations (Blanchet-Cohen et al., 2013; Ebrahim & Rangan, 2014).

## 2.6 Youth service program impact on communities

Youth service programs generally report a positive impact on communities and organizations as many influence citizens and political cultures that encourages social change (Halsall & Forneris, 2018). They are uniquely successful in impacting communities as they put focus on both human development in participants and in communities (Lough et al., 2009). In addition, programs involve people who yield power from different cultures, faiths and generations which enhances community impact. Youth service program design generally improves and strengthens communities' and organizational relationships and provides both short-term and long-term benefits through improved communication and goal achievements (Cencula Olberding & Hacker, 2016). From the perspective of organizations, studies show that groups who have incorporated intergenerational collaboration report an increase in the overall impact of the program and built capacity (Frerichs et al., 2015; Gazley et al., 2012; Sweeney & Bell, 2019). Communities benefit from social justice initiatives like youth service programs as it improves cooperation, exchange, understanding and diverse perspectives between communities and participating organizations (Seymour, 2017).

Beyond contributing to youth development, Meltzer & Saunders (2020) discuss that youth service program designs are unique as they impact community and participating groups positively through intergenerational relationships. Specifically, the design of youth service programs focus on both community development and participant development which aids in the success of the programs (Meltzer & Saunders, 2020). The youth advocacy approach outlined by Frerichs et al. (2015) also discusses that the social cognitive literature and the social network literature improves community relationships. This study highlights that building intergenerational relationships in communities reduces resistance to change in communities and improves the overall implementation of the youth's project goals and strategies (Frerichs et al., 2015).

### *2.6.1 Youth engagement design strategies impacting communities*

Good practices that focus on youth engagement in youth service programs are more likely to result in positive impacts on communities. Youth engagement design strategies that are incorporated into program design enhance benefits for youth and organizations while also

encouraging social change in communities (Buzinde et al., 2019; Keller et al., 2019). Though there is a limited understanding on how youth engagement design strategies impact communities, individuals and the environment, some studies do discuss some of the benefits (Halsall & Forneris, 2018; Lakin & Mahoney, 2006). Primary youth engagement design strategies incorporated into service program design include autonomy, critical thinking, mentorship and youth empowerment (Buzinde et al., 2019; Meltzer & Saunders, 2020). Autonomy is associated with independent thinking and decision-making, are seen as necessary to advance community welfare and benefits. Similarly, programs that incorporate critical thinking into service program design discuss the benefit in creating new innovation solutions to tackle community issues (Buzinde et al., 2019; Lakin & Mahoney, 2006). Additionally, programs that incorporate mentorship in to design structures builds community capacity (Raposa et al., 2019). This is due to the fact that mentorship encourages successful partnerships between participants and community members. As a result, youth service program participants are more likely to enhance community projects for communities. However, there is little understanding in how youth engagement within youth service programs supports the impact on communities. As a result of the literature, I hypothesize that youth engagement in youth service programs has a positive impact on communities.

*H<sub>2B</sub>: Youth engagement in youth service programs have an impact on communities*

Furthermore, youth engagement design strategies are rarely discussed in terms of time required to enhance impacts on communities. As an example, studies that outline mentorship strategies discuss the many benefits for both mentor and mentee. They note that relationships developed depend on the individuals involved however require constant communication (Rhodes & Lowe, 2008). These studies rarely discuss the duration required to support youth in order to enhance benefits on communities. Raposa et al. (2019) suggested that time commitment in mentoring is a factor that needs to be considered. Where a lot of time offers opportunity for youth to learn but may become problematic for mentors. However studies have concluded this relationship needs to be explored to understand what is an effective mentoring time commitment (Raposa et al., 2019). As a result, I hypothesize that impact of youth engagement in youth service programs on communities is strengthen by time dedicated in engaging youth.

*H<sub>3</sub>: The impact of youth engagement on youth service programs impact on communities is positive when moderated by time dedicated in engaging youth*

## 2.7 Summary

As discussed, there is a need to understand how to support youth in order to enhance impact on communities through youth service programs. Youth are motivated to engage in service program opportunities as it provides opportunity to have a significant impact. Service programs offer unique opportunities for participants, organization, and communities as it benefits from intergenerational collaboration commonly incorporated into youth service program design. These opportunities are commonly discussed as youth engagement interventions as summarized in Table 1. Though there are studies that examine the benefits of youth engagement interventions on youth development, few studies discuss and compare how youth engagement interventions can positively impact communities.

Little is known about the relationship between youth engagement strategies and impacts on communities. To address the gaps found in literature, this thesis will examine how youth service program designs incorporate youth engagement interventions to benefit communities. Specifically, the scales of impact discussed by Ebrahim & Rangan (2014) will be a basis to which how this thesis will assess impact.

### **3.0 Methodology**

This chapter details the methodology used to conduct this study and the tools used in the analysis. This study uses a mixed methodology comprised of a quantitative assessment to address the objectives of this study. As stated, the objectives of this study were to:

- Explore how organizations engage youth within youth service program design;
- Discuss how youth service program design can engage youth to positively impact communities and;
- Identify factors which improve organizational relationship with youth engagement.

The foundation for this research was developed in collaboration with specific organizations. Participating organizations sought to understand how to improve intergenerational collaboration and engagement techniques within youth service program design in order to enhance impacts on communities. Thus, the research methodology aims to evaluate current relationships and identify meaningful practices to enhance impact on communities. Partnered organizations collaborated in this study by providing feedback on the research instrument and by sending out the survey to their youth service project providers. The organizations participating in this study include YMCA Canada, Ocean Wise, and Canadian Wildlife Federation.

This chapter begins by discussing the research design of the study, data selection and analyses used. This chapter concludes by discussing the reliability and validity of the data collection and what limitations exist in the study.

#### **3.1 Research design**

The funders' objective of this study is to conduct program evaluations. While academically, the study aims to analyze the relationship between youth service program design and to understand the impacts programs have. This research used a deductive reasoning approach (Khaldi, 2017) to explore intergenerational collaboration and other theories which discuss youth leadership and the impact on local communities. As surveys can have biases, the use of a deductive reasoning approach aims to minimize biases that were likely to occur while also developing real-world applications (Khaldi, 2017). Using surveys aims accomplish this as youth service program organizers and decision-makers have the opportunity to discuss program design and answer

questions. This study is part of a larger project, which has received the ethics clearance from the University of Waterloo (see Appendix A).

### 3.2 Data selection

All partner organizations who participated in this study were chosen through a series of criteria (Blundell & Dias, 2000). The partner organizations for this study are all within Canada and have a focus on impacting their local communities through community-based projects. In addition, each organization involved has a willingness to participate and learn how to improve their youth service programs accordingly. All youth service programs developed by partner organizations were funded through the Canada Service Corps, where the goal is to have youth participants collaborate with local organizations. Additionally, all youth service programs within this study willingly participated and contracted The University of Waterloo's Youth & Innovation Project to proceed. The Youth and Innovation Project are working closely with the partner organizations to evaluate the youth service programs further in the hopes to improve intergenerational collaboration.

The structure of the youth service program allows youth to get involved with a local organization and develop a project addresses a local issue. Before then, the partner organizations place youth participants in cohorts once they have joined their youth service program. Cohorts then work with local organizations to plan and/or implement a project. Cohort size is normally determined by the organization. In addition, the theme of the project normally revolves around social or environmental causes. Partner organizations that are currently involved on this project include YMCA Canada, Ocean Wise, and the Canadian Wildlife Federation. Afterwards, the partner organization will match the cohorts to a secondary organization. In this study, the secondary organizations are surveyed as they worked together with the youth participants to deliver the projects. For an organization to qualify to fill out a survey, they must have interacted with the youth participant for at least 5 hours.

The first youth service program that participated in this study is the *YMCA Community Action Network* (YCAN), a youth service program created by YMCA Canada. YCAN offers opportunities for youth ages 15 – 30 to gain skills and help meeting specific needs of the communities the youth are apart of while also creating meaningful engagement with

communities. The YCAN program communities include Barrie, Prince George, Vancouver, Edmonton, Calgary, Saint John (NB), London, Toronto, Winnipeg, Montreal, Quebec City, Northeastern Ontario, Moncton, Charlottetown, Saskatoon, St. John's, and Halifax. YCAN runs ongoing cohorts that allows groups of participants to work together and develop solutions to improve their communities. YCAN currently has 143 active youth participants and works with 6 secondary organizations who were invited to participate in this study (The YMCA of Greater Toronto, 2018).

The second program that participated in the study was *Ocean Bridge*, a youth service program developed by Ocean Wise. Though based in British Columbia, the primary objective for the program is to connect youth ages 18 – 30 across Canada in the hopes of enhancing ocean health and literacy in Canada. Each year, *Ocean Bridge* offers 40 youth the opportunity to engage with communities by co-developing and implementing service projects. *Ocean Bridge* runs various types of cohorts including; Pacific Cohort, Great Lakes Cohort, Atlantic Cohort, St. Lawrence Cohort, Direct Action Cohort and YouthToSea Cohort (Ocean Wise, n.d.). The cohorts do vary in goal and structure. For example, the Pacific Cohort, Great Lakes Cohort, Atlantic Cohort St. Lawrence Cohort, and YouthToSea Cohort allow participants to work as a team in order to deliver a service project with a partnered organization, whereas the Direct Action Cohort allows youth to work individually with partnered organizations to deliver a service project. Due to the ongoing impacts of COVID-19, the cohorts were reorganized where a portion of the time with the cohorts were dedicated to online engagements. *Ocean Bridge* currently has 271 active youth participants and works with 20 secondary organizations who were invited to participate in the study. Please note that the number of secondary organizations invited to participate in the study is an estimated as the true number has yet to be reported by the host organization. This estimate is based off of the size of the program and the data collection period.

The third and final program that participated in this research study are the two programs hosted by the Canadian Wildlife Federation including the *WILD Outside* program and the *Canadian Conservation Corps*. The *WILD Outside* program targets youth ages 15-18 while the *Canadian Conservation Corps* targets those ages 18-30. The goal of each of these programs is to positively impact their own communities by developing meaningful conservation projects. The *WILD Outside* has a total of 495 active youth participants and works with 30 secondary organizations.

Participants were surveyed once they completed 40 hours of service out of the total 120 hours of service they were expected to finish. The *Canada Conservation Corps* has a total of 245 active participants and works with 42 secondary organizations who participated in the study. Both these programs run on an on-going basis throughout the year and takes place around the country.

A summary of each program is provided in table 2. This includes cohort description; number of active participants and the number of secondary organizations being surveyed.

Table 2: Summary of youth service program cohorts.

<b>Youth Service Programs</b>	<b>Cohorts/Learning Journeys</b>	<b>Number of Youth Involved</b>	<b>Number of Organizations Surveyed</b>	<b>Number of responses received</b>
YMCA: <i>YCAN</i>	Ongoing cohorts	143	6	5
Ocean Wise: <i>Ocean Bridge</i>	Learning Journey	153	41	11
	Direct Action	20	9	7
	Ontario	40	19	14
Canadian Wildlife Federation: <i>WILD Outside</i>	Ongoing cohorts	495	30	21
Canadian Wildlife Federation: <i>Canada Conservation Corps</i>	Ongoing cohorts	245	42	19
<b>Total Number</b>		1096	147	77

### 3.3 Data collection

The survey comprised of both open- and closed- ended questions (Story & Tait, Alan, 2019) in order to help further the understanding of partnered organizations' youth service program design, youth engagement and overall impacts of the programs. The survey was specifically directed towards decision makers and other individuals who have the power to alter program design and work with youth participants. The survey consisted of five parts (see Appendix B). Part one asks



questions related to the project details including project objectives, level participation from youth participants, project size, and available funds for the project. Part two asks' questions related to the sustainable development goals. Specifically, it asks the level of awareness the organization has, goals and objectives targeted through the project. Part three asks' questions related to the impact of the project including questions relating to the type of impact, involvement from community members, and project success. Part four asks' questions related to intergenerational collaboration within the project and organization. Questions asked related to mentorship, leadership opportunities, and independence. Finally, part five asks participants to reflect on the experience of participating in the youth service program. The survey includes two additional sections. This includes the Indigenous participation disclaimer and demographic information.

The online survey instrument was hosted on Qualtrics Survey Software. All partnered organizations received a survey packet that included the anonymous survey link, email sample template and ethics information letter (see Appendix C and Appendix D). Additionally, training sessions were scheduled with the staff of the partnered organizations. The purpose of the training session was to help describe the purpose of the project, the survey process and answer questions in the hopes to increase willingness to participate. Partner organizations who host the youth service programs were responsible for distributing survey to secondary organizations. Within the service program design, secondary organizations work with youth participants and communities directly, Secondary organizations can include local non-governmental organizations, businesses, etc.

The survey collection period for this entire project began on September 24<sup>th</sup>, 2020 and are expected to conclude in the Spring of 2022. For the purpose of this thesis, the collection period concluded May 3<sup>rd</sup>, 2021. 147 secondary organizations who were invited to participate in this survey. As of May 3<sup>rd</sup>, 2021, 77 secondary organizations responded. Of the 77, 24 secondary organizations were not qualified to complete the survey as they have indicated they did not work at least 5 hours with the youth participants. Table 2 outlines the breakdown for how many responses were received per organizations.

### 3.4 Data analysis

This research study used a quantitative data analysis and utilizes data from the survey responses. Though the purpose of the quantitative portion of the study is to provide highlight a statistical correlation between variables, the qualitative portion of the study provides a deeper context that discusses questions in the survey to aid in understanding the research questions (Flick, von Kardorff, & Steinke, 2004). This survey was sent out to 147 secondary organizations. Since population size is unknown, an estimate was be calculated using the parameters previously set out during this thesis. Currently, the population is estimated to be 147 as it is limited to host organizations who are funded by the Canada Service Corps and willingly contracted the University of Waterloo's Youth & Innovation Project for a program evaluation. The sample size also equals 147, the confidence level equals 95% and the margin of error calculated to be 10%.

The quantitative analysis employs the statistical software SPSS to run a descriptive statistics analysis using data collected from survey responses. Following the literature review, ten hypotheses were created to propose a possible explanation. Hypotheses can be rejected if the P value  $> 0.05$  (95% confidence interval) which indicates that the results are not significant. Regarding hypotheses 1<sub>A-F</sub>, the study aims to test the design features in youth service programs that encourage more meaningful engagement from the youth. This denotes to how successful organizations were implementing design strategies to positively support youth engagement. Hypotheses 2<sub>A-B</sub> the study aims to examine the relationship between youth engagement interventions in relation to the impact on organizations and communities. Higher quality relationships denote to how engaged participants are with program decision makers and whether or not youth participants ideas were incorporated into the project. Finally, hypotheses 3<sub>A-B</sub> aims to examine factors that enhance organizational relationship with youth in relation to the success of the project. This refers to youth engagement design features and the amount of time spent with youth to collaborate.

#### 3.4.1 Variables

The hypotheses and independent variables were previously outlined in the literature review. Research questions and corresponding variables and hypotheses are summarized in Table 3. Please note that the survey questions used for analysis are shown in brackets and are listed below

the variable. It is listed by “section title: question number, sub-question.” In regard to research question one, there are six hypotheses. The independent variables were measured by surveying youth service organizational participants and asking particular questions related to youth engagement design features. The dependent variables were measured by examining the level of youth engagement. Saito & Sullivan (2011) discuss that high levels of meaningful youth engagement are a result of the combination for four main youth engagement strategies including participation, passion, youth voice and collective action. Within the survey, the level of meaningful youth engagement was measured by how involved the youth were in creating and implementing the project. This is reflective of the four rings of youth engagement defined by Witt & Caldwell (2018).

To examine hypotheses 1<sub>A, B-F</sub>, an Ordinal Logistic Regression was used based on the assumptions that both independent and dependent variables are ordinal, that there is no multicollinearity and there are proportional odds. Whereas hypothesis 1<sub>C</sub> will be evaluated using a multinomial logistic regression as both independent and dependent variables are ordinal, independent observations, no multicollinearity, and no outliers. In addition, the control variables used in the analysis include both organizational readiness and number of staff members and volunteers who supported youth participants. This is based off of research that described the critical role staff members and leaders in organizations play when supporting youth participants in youth service programs (Halsall & Forneris, 2018; Witt & Caldwell, 2018). The outcome of the test hopes to understand whether youth engagement is impacted by youth engagement design strategies, specifically, skill building, meaningful projects, youth empowerment, autonomy, critical thinking, and mentorship.

Table 3: Research analysis breakdown including variables and questions used in analysis.

<b>Research Questions</b>	<b>Hypothesis</b>	<b>Independent Variables</b>	<b>Dependent Variables</b>	<b>Control &amp; Moderator</b>
How does youth service program design affect youth engagement in youth service programs, in the	H <sub>1A</sub> : <i>Youth service program design that incorporate skill building impacts youth engagement</i>	Youth engagement design feature: skill building  (Project details: 11)	Level of youth engagement  (Project details: 6)	Control: Number of staff/volunteers who worked with youth, and organizational readiness

context of intergenerational collaboration?	H <sub>1B</sub> : <i>Youth service program design that incorporate meaningful projects impacts youth engagement</i>	Youth engagement design feature: Meaningful projects  (Project details: 5)	Level of youth engagement  (Project details: 6)	
	H <sub>1C</sub> : <i>Youth service program design that incorporate youth empowerment impacts youth engagement</i>	Youth engagement design feature: Youth Empowerment  (Intergenerational collaboration: 5)	Level of youth engagement  (Project details: 6)	Control: Number of staff/volunteers who worked with youth, and organizational readiness  (Project details: 10, Project details: 3)
	H <sub>1D</sub> : <i>Youth service program design that incorporate autonomy impacts youth engagement</i>	Youth engagement design feature: Autonomy  (Intergenerational collaboration: 4a, 4b, 4c)	Level of youth engagement  (Project details: 6)	Control: Number of staff/volunteers who worked with youth, and organizational readiness  (Project details: 10, Project details: 3)
	H <sub>1E</sub> : <i>Youth service program design that incorporate critical thinking impacts youth engagement</i>	Youth engagement design feature: Critical thinking  (Intergenerational collaboration: 4d, 4e)	Level of youth engagement  (Project details: 6)	Control: Number of staff/volunteers who worked with youth, and organizational readiness  (Project details: 10, Project details: 3)
	H <sub>1F</sub> : <i>Youth service program design that incorporate mentorship impacts youth engagement</i>	Youth engagement design feature: Mentorship  (Intergenerational)	Level of youth engagement  (Project details: 6)	Control: Number of staff/volunteers who worked with youth, and organizational readiness

		collaboration: 2)		(Project details: 10, Project details: 3)
What is the impact of youth engagement in youth service programs?	H <sub>2A</sub> : <i>Youth service program youth engagement have an impact on the organizations</i>	Youth engagement  (Project details: 6).	Level of impact on the secondary organization  (Impact: 6)	Control: Monetary contributions to project  (Project details: 14)
	H <sub>2B</sub> : <i>Youth engagement in youth service programs have an impact on communities</i>	Youth engagement  (Project details: 6)	Level of impact on communities  (Impact: 5, where X <sub>a</sub> =1, X <sub>b-g</sub> =0; X <sub>b</sub> =1, X <sub>a,c-g</sub> =0; X <sub>c</sub> =1, X <sub>a,b,d-g</sub> =0; X <sub>d</sub> =1, X <sub>a-c,e-g</sub> =0; X <sub>e</sub> =1, X <sub>a-c, f-g</sub> =0)	Control: Number of staff/volunteers who worked with youth, and organizational readiness  (Project details: 10, Project details: 3)
What factors improve the impact of youth engagement in youth service programs on communities?	H <sub>3</sub> : <i>The impact of youth engagement on youth service programs impact on communities is positive when moderated by time dedicated in engaging youth</i>	Youth engagement  (Project details: 6)	Level of impact on communities  (Impact: 5, where X <sub>a</sub> =1, X <sub>b-g</sub> =0; X <sub>b</sub> =1, X <sub>a,c-g</sub> =0; X <sub>c</sub> =1, X <sub>a,b,d-g</sub> =0; X <sub>d</sub> =1, X <sub>a-c,e-g</sub> =0; X <sub>e</sub> =1, X <sub>a-c, f-g</sub> =0)	Control: Number of staff/volunteers who worked with youth, and organizational readiness  (Project details: 10, Project details: 3)  Moderator: Time engaging with youth  (Intergenerational collaboration: 3)

Research question two tests the varying levels of youth engagement as outlined through research question one against the level of impact on individual, organizations/communities, and the environment. The scales of impact discussed by Ebrahim & Rangan (2014) was the basis to assess the impact level and were only used when the project was successful in obtaining that goal. The four levels of impact include local, regional, national, and global scales. Since the primary goal of the study is to evaluate local community projects, impact was be grouped into

three categories local: secondary organization, local community, regional/national/international community. In addition, to the levels of impact, the outputs and outcomes were also discussed in order to understand how successful the project was. This was done by survey responses that specifically ask if the project was successful in impacting community. An ordinal logistic regression was used to examine hypothesis 2<sub>A</sub> based on the assumptions both independent and dependent variables are ordinal, that there is no multicollinearity and there are proportional odds. Additionally, a generalized linear model was used to examine hypothesis 2<sub>B</sub>. This is based on the assumption that the independent variables are binary, dependent variables are ordinal and there are independent observations. The survey responses for variables from the survey to evaluate hypothesis 2<sub>B</sub> were recoded from categorical data into dummy variables. Recoded variables include Impact: Impact 5b = 1, all other options equal 0; Impact 5c = 1, all other options equal 0, Impact 5d = 1 all other options equal 0; and Impact 5e = 1 all other options equal 0. Additionally, monetary contributions to the project will be used as a control variable. This is due to literature that discussed that funding is a limitation for many projects when achieving various levels of impact (Blanchet-Cohen et al., 2013; Ebrahim & Rangan, 2014)..

Finally, research question three examines factors that influence youth engagement impact on communities. This question also employs the use of moderator variables. The independent and dependent variables was be measured similarly to research question two, moderators variables was be analyzed through a multiple regression model and was further describe the relationship (Baron & Kenny, 1986). Within this study, moderator variables include design strategies previously outlined through the literature and time dedicated to engaging youth. Design strategies includes providing autonomy, encouraging critical thinking, offering mentorship, supporting youth empowerment, encouraging skill-building, and providing opportunity to work on projects that are meaningful. This was be done by using the Bootstrap Method to evaluate moderator variables in respect to research question three. The Bootstrap Method is a non-parametric resampling test that can help determine the effect of mediation and moderation variables with certainty (Hadi & Abdullah, 2016). Unlike the Sobel Test, the Bootstrap Method does not rely on the assumption of normality (Hayes, 2009). In addition, the Bootstrap method is more rigorous and powerful in evaluating the indirect effect of the variables (Zhao, Lynch, & Chen, 2010).

### 3.5 Reliability and validity

The methodologies in this thesis were chosen ensure reliability and validity. Reliability refers to the consistency and stability of the methods of measurement which can yield consistent results. The Cronbach alpha coefficient was used to verify if the methodologies of the study are reliable (Taherdoost, 2018). Validity refers to the accuracy to measure what is intended to be measured. Validity within surveys, content, face, and construct validity are examined within the surveys. Content validity refers to the how relevant the instruments used within the study are relevant to the targeted construct or in other terms, how generalizable the methodologies are (Dikko, 2016). While face validity refers to the extent that the survey tool appears related to the purpose of the study. Finally, construct validity refers to how well the concept translated into a operating reality (Taherdoost, 2018).

Both content and face validity are verified through this study by working with partnered organizations. Partnered organizations have been given opportunities to collaborate and provide feedback to further inform on survey instruments. Additionally, the survey instruments were reviewed by the Youth & Innovation Project's Youth Advisory Council to ensure that questions asked within the study accurately reflect youth perspective. Construct validity are verified through a factor analysis to understand if the factors are correlated (Taherdoost, 2018).

### 3.6 Limitations

Though there are many benefits in employing the use of online surveys within a study such as ensured anonymity and ease of access however, one limitation of using online surveys is the response rate (Lefever, Dal, & Matthíasdóttir, 2007). Studies that use surveying techniques run the risk of not meeting the minimum number of surveys needed to run a statistical analysis (Comley, 2001; Lefever et al., 2007). Online surveys have reportedly yielded response rates as low as 15% (Comley, 2001). Low response rates can be due to factors including that participants interests and lack of personalization (Lefever et al., 2007). Within the surveys, sample bias can occur depending on the participant experiences within the programs (Comley, 2001). Further limitations of using an online survey can be due to users' access to technology and online technical issues (Lefever et al., 2007). In addition, surveys do not often convey emotions and feelings accurately which can be misinterpreted (Comley, 2001). To minimize these limitations

in survey collection, enough time were allotted to allow participants to respond to the survey and collect the data. In addition, emails were sent out to remind survey participants to submit the surveys.

An additional limitation within the survey is the differences between the partnered organizations. Though the organizations are similar in that they were created to have similar objectives, each organization allows youth to work with different groups and members of their community. Thus, these variables within the study could be too dissimilar that they impact the outcome of the study. Since this study employs a regression analysis, the variables can be compared to determine whether or not there is a significant difference between the study groups. After further analyses, partner organizations have no significant difference. Another limitation to consider is the generalizability of the results. Since the population is expected to be large given the parameters, the likelihood that all relationships are analyzed is minimized. Since the full population cannot be surveyed at the time of this study, each participating organization has allowed for all secondary organizations to be surveyed. Though this does not fully minimize the margin of error, it allows us to survey as many secondary organizations that we have access to.

External limitations to the study include the impact of the COVID-19 pandemic. The original purpose of this research was to evaluate the youth service programs. However, in December 2019, a global outbreak occurred that severely impacted the health and well-being of everyone throughout the world (Ciotti et al., 2020). It is important to note that the survey instrument was created before the pandemic unfolded. As a result, survey responses may be reflective of the moment organizations perspective within the COVID-19 pandemic. Further research is needed to understand the COVID-19 pandemic is influenced youth engagement and the effectiveness of youth service programs on communities and organizations.

It is also important to note that this research is limited by the author's position of privilege and social location. Researchers often study relationships that are from a different position in society and often won't fully understand barriers and challenges even after examining literature and conducting the study. As a result, privilege and social location influence different aspects and methodologies of the study (McCorkel & Myers, 2003). For this reason, this author acknowledges that her own social location and position of privilege have unintentionally



influenced the study. Though this is a limitation, measures were taken in developing survey instruments by consulting the Youth & Innovation Project's Youth Advisory Council. Future studies and researchers are encouraged to acknowledge their own social locations and positionalities within their studies.

## 4.0 Results

This chapter begins by discussing the results from quantitative analysis aimed to address research question one. This is followed by a subsection presenting the results research analysis aimed to address research question two. Finally, the third subsection discusses the results from the Bootstrap analysis aimed to address research question three.

As stated, the research questions of this thesis are as follows:

- (1) How does youth service program design affect youth engagement in youth service programs, in the context of intergenerational collaboration?
- (2) What are impacts of youth engagement in youth service programs on secondary organizations and communities?
- (3) What factors improve the impact of youth engagement in youth service programs on communities?

### 4.1 Impact of youth engagement design strategies on youth engagement

#### 4.1.1 Skill building

An Ordinal Logistic Regression was conducted to examine if youth engagement was impacted by a skill building youth engagement design strategy. Figure 4 shows that secondary organizations spent 40 hours or more with youth participants in skill building opportunities also were also involved within the youth service program. However, the graph also demonstrates that regardless of how much time youth participants spent in skill building opportunities with secondary organizations, youth were not at all involved or not very involved within the youth service program. Skill building was found not to significantly contribute to overall youth engagement within youth service programs where  $p > 0.05$ . The summary of variables can be found in Table 5. As a result, regardless of how much time is spent with the young person developing skills, it does not impact the overall engagement. Thus, the null hypothesis cannot be rejected.

Moreover, since only one predictor variable was used, it did not violate the multicollinearity assumption of the Ordinal Logistic Regression. Additionally, the assumptions of proportional odds have not been violated as p-value is shown to be insignificant ( $p=0.944$ ). Finally, the goodness of fit was reported that the model chosen is a good representation of the data. The output from SPSS summarizing goodness of fit and additional information can be found in Table 4.

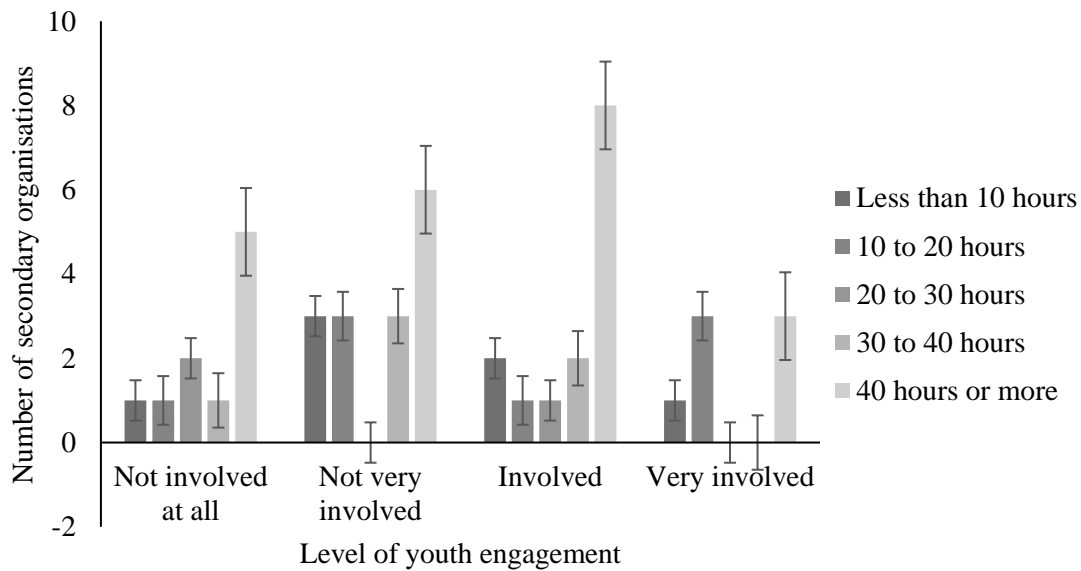


Figure 4: Impact of a skill building design strategy on the level of youth engagement. Dependent variable shows the number of secondary organizations who participated in this study and the independent variable shows the level of youth engagement identified. The legend depicts the amount of time dedicated to collaborating with staff members and allowing for opportunities to build skills (N=53).

Table 4: Ordinal logistic regression SPSS output: Skill building

Parameters	Estimate	Std. Error	Wald	df	Sig.
Number of staff or volunteers (Control)	.181	.257	.497	1	.481
Organizational readiness (control)	.985	.654	2.266	1	.132

<i>10 to 20 hours</i>	-20.750	.000	.	1	.
<i>30 to 40 hours</i>	.834	1.004	.689	1	.406
<i>40 to 50 hours</i>	-1.560	1.382	1.273	1	.259
<i>50 hours or more</i>	-.697	1.316	.280	1	.597
<i>Less than 10 hours</i>	.281	.882	.101	1	.750
<b>Model Fitting</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	76.011		8.858	7	.263
<b>Goodness of Fit</b>					
			<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>			72.357	68	.336
<i>Deviance</i>			65.392	68	.567
<b>Test of Parallel Lines</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	69.262		6.749	14	.944

#### 4.1.2 Meaningful projects

An Ordinal Logistic Regression was conducted to examine if youth engagement was impacted by a meaningful project youth engagement design strategy. As shown in figure 5, higher numbers of young participants joined existing projects, however this resulted in lower levels of engagement within the youth service program. Whereas youth participants who created a new project were found to have higher levels of engagement. As a result of the statistical analysis, meaningful projects were found to significantly contribute to overall youth engagement within youth service programs where  $p=0.010$ . Youth participants who joined existing projects were found to be less engaged when they joined pre-existing projects (estimate=-2.088,  $WX^2=6.677$ ,  $p=0.010$ ). In other words, youth were observed by organizations to be not very or not at all engaged when they joined pre-existing projects. The summary of variables can be found in in Table 5. Thus, the null hypothesis can be rejected.

Moreover, since only one predictor variable was used, it did not violate the multicollinearity assumption of the Ordinal Logistic Regression. The assumptions of proportional odds have not been violated as p-value is shown to be insignificant ( $p=0.337$ ). Additionally, the goodness of fit was reported that the model chosen is a good representation of the data. The output from SPSS summarizing goodness of fit and additional information can be found in Table 5.

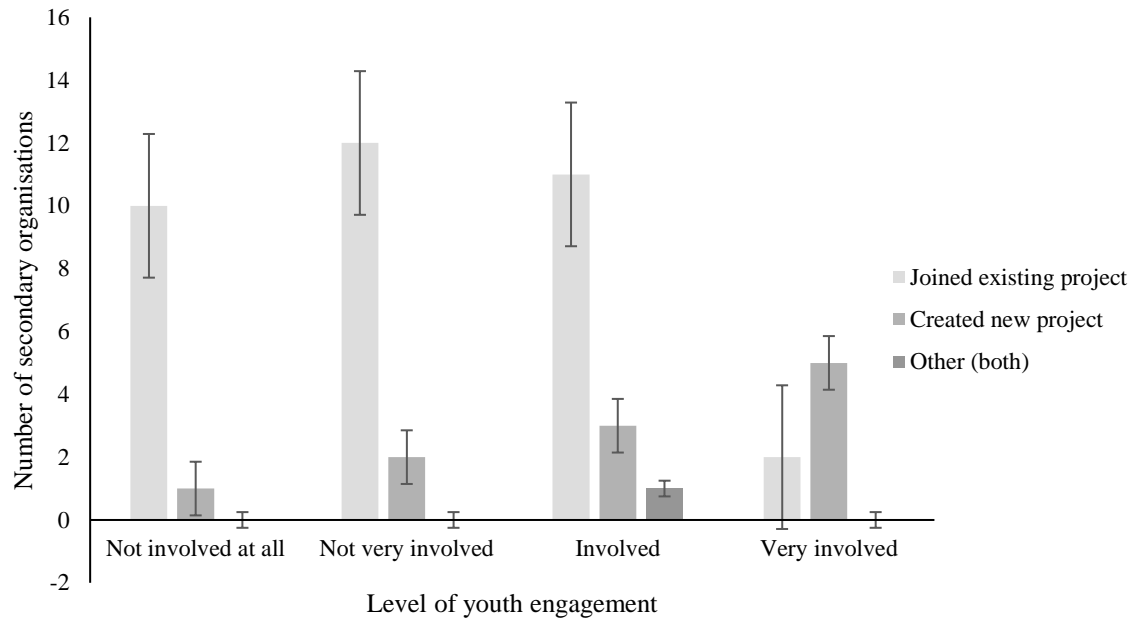


Figure 5: The impact of participating in meaningful projects on youth engagement. Dependent variable shows the number of secondary organizations who participated in this study and the independent variable shows the level of youth engagement identified. The legend depicts whether the youth participants created or joined existing projects. If survey participants selected other, they explained that participants both created and joined existing projects (N=53).

Table 5: Ordinal logistic regression SPSS output: Meaningful projects

<b>Parameters</b>					
	<i>Estimate</i>	<i>Std. Error</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>
<i>Number of staff or volunteers (Control)</i>	-.063	.268	.054	1	.816
<i>Organizational readiness (control)</i>	.722	.647	1.246	1	.264
<i>Joined existing project</i>	-2.088	.808	6.677	1	.010
<i>Created a new project</i>	-2.225	2.029	1.203	1	.273
<b>Model Fitting</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	59.885		8.947	4	.062
<b>Goodness of Fit</b>					
			<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>			53.080	41	.098
<i>Deviance</i>			42.388	41	.411

<b>Test of Parallel Lines</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	53.110	6.774	8	.561

#### 4.1.3 Youth empowerment

A Multinomial Logistic Regression was conducted to examine if youth engagement was impacted by a youth empowerment youth engagement design strategy. Youth empowerment was found to significantly contribute to overall youth engagement within youth service programs. In particular, youth participants shared ideas with staff and leadership significantly impacted youth engagement ( $p=0.010$ ). This relationship neither positively nor negatively impacted overall youth engagement as the statistical output only demonstrated the overall impact. Whereas youth participants who shared ideas with the board of directors, community leaders and elected officials showed to not significantly impact youth engagement. It is important to note that when examining the statistical parameter outputs the statistical coefficients were insignificant.

As show in figure 6, young participants experienced overall lower level of engagement. In terms of youth empowerment through sharing knowledge, youth participants were found to commonly share knowledge to staff members and decision makers from the secondary organizations. Whereas youth participants shared the least with elected officials and community leaders. As a result, regardless the opportunities for youth empowerment, it does not impact the overall engagement and the null hypothesis cannot be rejected.

This test did not violate the multicollinearity assumption where a summary of relationships can be found in table 6, where the Pearson Correlation between staff members, board of directors, community leaders and elected officials were below 0.8. Additionally, the assumptions of proportional odds have not been violated as p-value is shown to be insignificant ( $p=0.160$ ). Finally, the goodness of fit was reported that the model chosen is a good representation of the data (Pearson test  $X^2=39.254$ ,  $p=0.504$ ; Deviance test  $X^2=39.892$ ,  $p=0.475$ ); refer to table 7 for SPSS statistical output.



Figure 6: The impact of youth empowerment by sharing ideas on youth engagement. Dependent variable shows the number of secondary organizations who participated in this study and the independent variable shows the level of youth engagement identified. The legend depicts who youth participants were sharing ideas with (N=53)

Table 6: Pearson correlation between predictor variables; Staff members, board of directors, community leaders and elected officials.

		Staff members	Board of directors	Community leaders	Elected officials
Staff members	Pearson Correlation	1	.274*	.295*	.106
	Sig. (2-tailed)		.049	.034	.453
	N	52	52	52	52
Board of directors	Pearson Correlation	.274	1	.402	.388
	Sig. (2-tailed)	.049		.003	.005
	N	52	52	52	52
Community leaders	Pearson Correlation	.295	.402	1	.270
	Sig. (2-tailed)	.034	.003		.053
	N	52	52	52	52

Elected officials	Pearson Correlation	.106	.388	.270	1
	Sig. (2-tailed)	.453	.005	.053	
	N	52	52	52	52

Table 7: Multinomial logistic regression SPSS output: Youth empowerment

<b>Likelihood Ratio Tests</b>						
<i>Youth empowerment</i>		<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>	
<i>Number of staff or volunteers (control)</i>		79.466	5.952	4	.203	
<i>Organizational readiness (control)</i>		74.668	1.155	4	.886	
<i>Staff and leadership</i>		86.793	13.280	4	.010	
<i>Board of directors</i>		78.109	4.596	4	.331	
<i>Community leaders</i>		76.758	3.244	4	.518	
<i>Elected officials</i>		75.204	1.691	4	.792	
<b>Parameter Estimates</b>						
<i>Level of engagement</i>	<i>Youth empowerment</i>	<i>B</i>	<i>Std. Error</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>
<i>Not involved at all</i>	Number of staff or volunteers (control)	1.478	.836	3.124	1	.077
	Organizational readiness (control)	.806	1.633	.244	1	.621
	Staff and leadership	11.914	280.687	.002	1	.966
	Board of directors	2.981	643.290	.000	1	.996
	Community Leaders	12.221	428.778	.001	1	.977
	Elected Officials	-6.409	.000	.	1	.
<i>Not very involved</i>	Number of staff or volunteers (control)	.791	.604	1.711	1	.191
	Organizational readiness (control)	-.144	1.303	.012	1	.912
	Staff and leadership	-1.441	1.397	1.064	1	.302
	Board of directors	14.583	516.209	.001	1	.977
	Community Leaders	.285	2.117	.018	1	.893
	Elected Officials	5.862	.000	.	1	.
<i>Involved</i>	Number of staff or volunteers (control)	.406	.568	.511	1	.475
	Organizational readiness (control)	.318	1.286	.061	1	.805
	Staff and leadership	-1.982	1.368	2.098	1	.147
	Board of directors	1.216	2.204	.304	1	.581
	Community Leaders	1.100	2.005	.301	1	.583
	Elected Officials	17.569	.000	.	1	.



<i>Very involved</i>	Number of staff or volunteers (control)	.878	.597	2.167	1	.141	
	Organizational readiness (control)	.812	1.441	.318	1	.573	
	Staff and leadership	-3.217	1.664	3.738	1	.053	
	Board of directors	3.303	2.314	2.038	1	.153	
	Community Leaders	-.826	1.931	.183	1	.669	
	Elected Officials	17.948	.000	.	1	.	
<b>Model Fitting Information</b>							
				<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
				73.513	31.221	24	.148
<b>Goodness of Fit</b>							
				<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>	
<i>Pearson</i>				59.042	68	.772	
<i>Deviance</i>				57.498	68	.814	

#### 4.1.4 Autonomy

An Ordinal Logistic Regression was conducted to examine if youth engagement was impacted by an autonomy youth engagement design strategy. Autonomy was found not to significantly contribute to overall youth engagement within youth service programs where  $p > 0.05$ . Figure 7 demonstrates that youth participants were more commonly given opportunities to make decisions independently and to take on real responsibilities for the organization. However, overall youth engagement showed low involvement levels. As a result, regardless the opportunities for autonomy, components of an autonomy youth engagement design strategy do impact the overall engagement; refer to table 8 for the SPSS statistical output. Specifically, it was not significant that a youth's opportunity to make decisions independently impacted youth engagement ( $WX^2 = 0.773$ ,  $p = 0.379$ ). It was not significant that a youth's opportunity to take on responsibilities impacted youth engagement ( $WX^2 = 1.393$ ,  $p = 0.238$ ). However, there was significant impact on youth engagement when youth were opportunity to take risks impacted youth engagement ( $WX^2 = 4.008$ ,  $p = 0.045$ ). Meaning that the number of youth who were given opportunities to take risks were found to be not very involved or not involved at all in the youth service program design.

This test did not violate the multicollinearity assumption of the Ordinal Logistic Regression a summary of relationships can be found in table 9, where the Pearson Correlation between decision-making, risk and responsibilities were below 0.8. Additionally, the assumptions of

proportional odds have not been violated as p-value is shown to be insignificant ( $p=0.584$ ). Finally, the goodness of fit was reported that the model chosen is a good representation of the data (Pearson test  $X^2=30.383$ ,  $p=0.498$ ; Deviance test  $X^2=27.846$ ,  $p=0.629$ ); the SPSS output can be found in table 8.

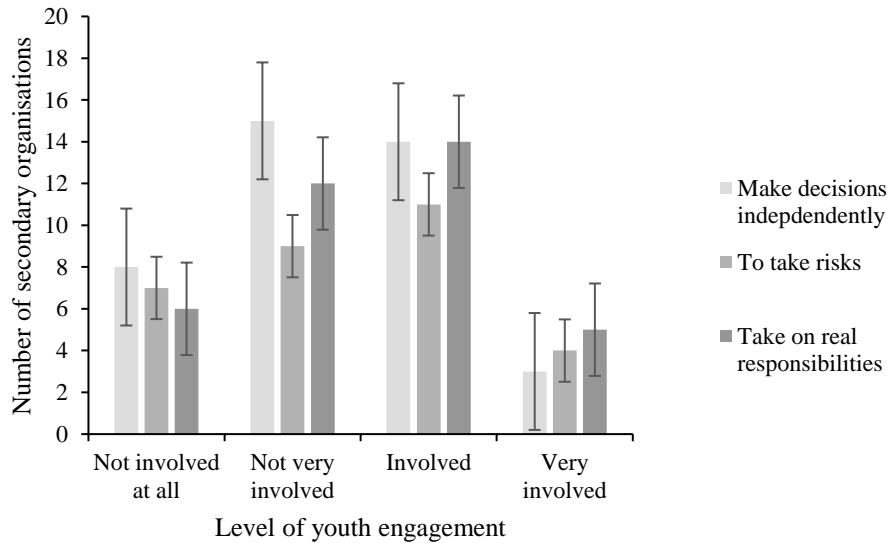


Figure 7: The impact of autonomy on youth engagement. Dependent variable shows the number of secondary organizations who participated in this study and the independent variable shows the level of youth engagement identified. The legend depicts the type ownership youth participants were given (i.e., to make decisions independently, take risks and take on real responsibility), (N=53).

Table 8: Ordinal logistic regression SPSS output: Autonomy

<b>Parameters</b>					
	<i>Estimate</i>	<i>Std. Error</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>
<i>Organizational readiness (control)</i>	.722	.431	2.810	1	.094
<i>Number of staff members (control)</i>	-.695	.861	.651	1	.420
<i>Independent decision-making</i>	1.979	2.252	.773	1	.379
<i>Take risks</i>	-2.313	1.155	4.008	1	.045
<i>Take on real responsibilities</i>	-1.856	1.573	1.393	1	.238
<b>Model Fitting</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>

	37.537	6.856	5	.232
<b>Goodness of Fit</b>				
		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>		30.383	31	.498
<i>Deviance</i>		27.846	31	.629
<b>Test of Parallel Lines</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	29.076	8.461	10	.584

Table 9: Pearson correlation between predictor variables; decision making, risk and responsibility.

		Decision Making	Risk	Responsibility
Decision-making	Pearson Correlation	1	.375*	-.041
	Sig. (2-tailed)		.032	.812
	N	39	33	36
Risk	Pearson Correlation	.375*	1	-.120
	Sig. (2-tailed)	.032		.507
	N	33	37	33
Responsibility	Pearson Correlation	-.041	-.120	1
	Sig. (2-tailed)	.812	.507	
	N	36	33	41

#### 4.1.5 Critical thinking

An Ordinal Logistic Regression was conducted to examine if youth engagement was impacted by a critical thinking youth engagement design strategy. Variables used to evaluate critical thinking was found not to significantly impact youth engagement within youth service programs where  $p > 0.05$ . Figure 8 demonstrates that youth participants were given more opportunities to be creative within the youth service programs. Though the graph does show that youth involvement is moderately high, there is an overall higher number of youth participants found to not be engaged. As a result of the statistical analysis, regardless the opportunities for critical thinking, it does not impact the overall engagement. Specifically, it was not significant that a youth's opportunity to challenge the status quo impacted youth engagement ( $WX^2 = 1.829$ ,  $p = 0.110$ ). It was not significant that a youth's opportunity to take experiment impacted youth engagement

( $WX^2=2.279$ ,  $p=0.131$ ). As a result of this test, the null hypothesis cannot be rejected (Table 10).

This test did not violate the multicollinearity assumption of the Ordinal Logistic Regression a summary of relationships can be found in table 11, where the Pearson Correlation between challenging the status quo and opportunity for experimenting were below 0.8. Additionally, the assumptions of proportional odds have not been violated as p-value is shown to be insignificant ( $p=0.206$ ). Finally, though goodness of fit was reported that the model chosen is a good representation of the data (Pearson test  $X^2=11.591$ ,  $p=0.639$ ; Deviance test  $X^2=14.135$ ,  $p=0.440$ ); the SPSS output can be found in table 10.

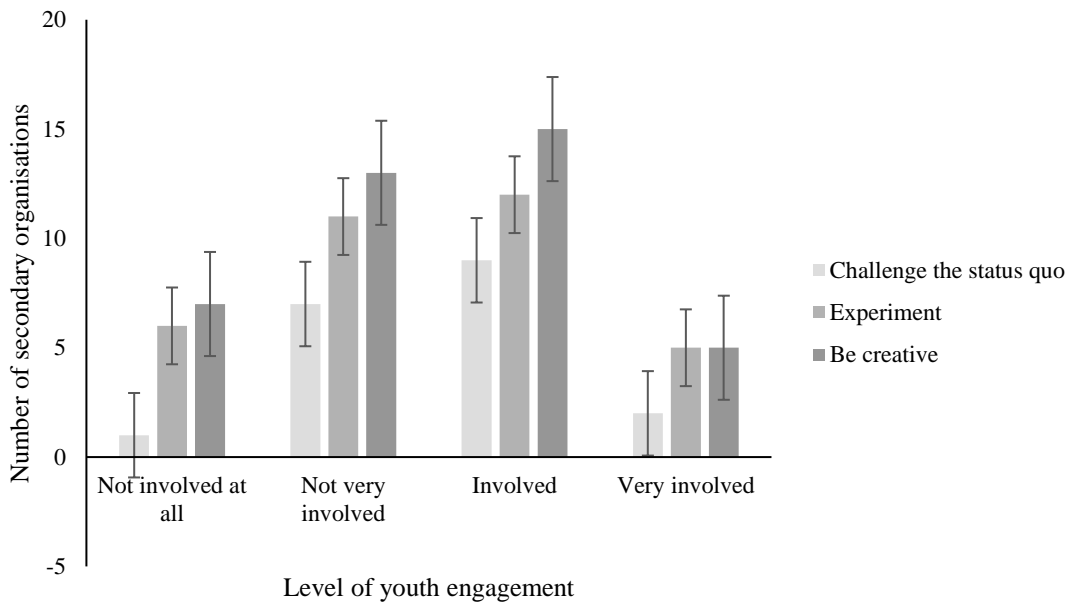


Figure 8: The impact of critical thinking on youth engagement. Dependent variable shows the number of secondary organizations who participated in this study and the independent variable shows the level of youth engagement identified. The legend depicts the opportunity for reasoning youth participants were given (i.e., challenge the status quo, experiment, and be creative), (N=53).

Table 10: Ordinal logistic regression SPSS output: Critical thinking

Parameters	Estimate	Std. Error	Wald	df	Sig.
------------	----------	------------	------	----	------

<i>Number of staff members (control)</i>	-.147	.449	.108	1	.743
<i>Organizational readiness</i>	.262	1.488	.031	1	.860
<i>Challenge status quo</i>	-2.927	1.829	2.560	1	.110
<i>To experiment</i>	4.024	2.666	2.279	1	.131
<b>Model Fitting</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	20.596		3.801	4	.434
<b>Goodness of Fit</b>					
			<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>			11.591	14	.639
<i>Deviance</i>			14.135	14	.440
<b>Test of Parallel Lines</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	9.674		10.922	8	.206

Table 11: Pearson correlation between predictor variables; challenge status quo and experiment.

		Challenge the status quo	Experiment
Challenge the status quo	Pearson Correlation	1	.671**
	Sig. (2-tailed)		.001
	N	24	22
Experiment	Pearson Correlation	.671**	1
	Sig. (2-tailed)	.001	
	N	22	37

#### 4.1.6 Mentorship

A Multinomial logistic regression was conducted to examine if youth engagement was impacted by a mentorship youth engagement design strategy. Figure 9 shows a higher number of youth participants were given more opportunities for mentorship. However, the graph demonstrates that youth who were given opportunities for mentorship did not impact their overall level of involvement as a higher number of youth participants were found not to be engaged. Mentorship was found not to significantly contribute to overall youth engagement within youth service programs where  $p=0.072$ . The summary of variables can be found in table 12. As a result, regardless of how much time is spent with the young person developing skills, it does not impact the overall engagement. This test concludes that the null hypothesis cannot be rejected. The SPSS output can be found in table 12.

Additionally, since only one predictor variable was used, it did not violate the multicollinearity assumption. Finally, the goodness of fit was reported that the model chosen is a good representation of the data (Pearson test  $X^2 = 68.223$ ,  $p = 0.218$ ; Deviance test  $X^2 = 57.127$ ,  $p = 0.581$ ). The output from SPSS summarizing goodness of fit and additional information can be found in table 12.

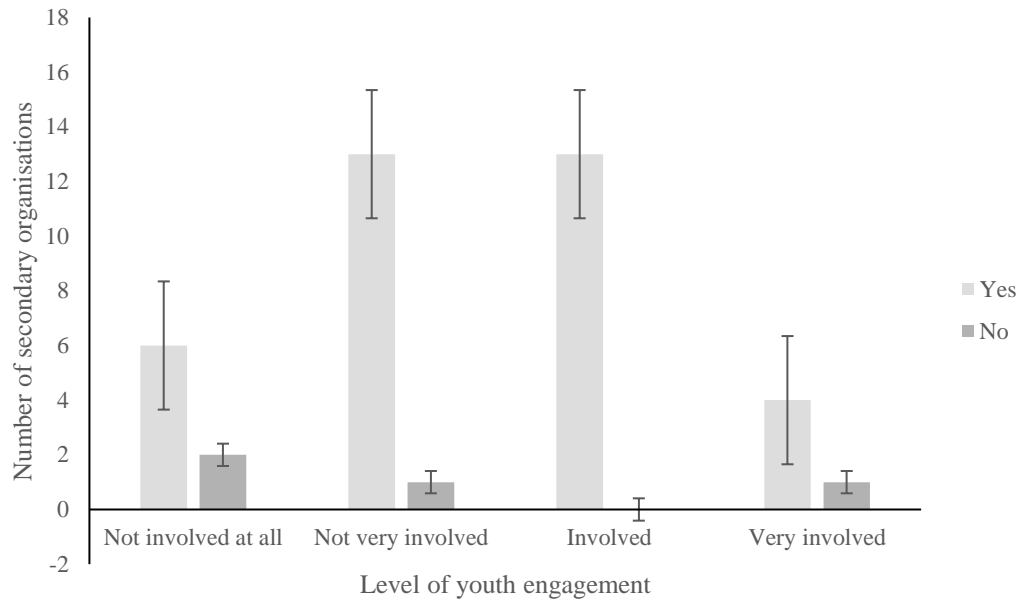


Figure 9: The impact of mentorship on youth engagement. Dependent variable shows the number of secondary organizations who participated in this study and the independent variable shows the level of youth engagement identified. The legend depicts the mentorship opportunity youth participants were given (N=53).

Table 12: Multinomial logistic regression SPSS output: Mentorship

<b>Likelihood Ratio Tests</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Number of staff or volunteers (control)</i>	79.583	1.404	4	.844
<i>Organizational readiness (control)</i>	79.634	1.455	4	.835
<i>Mentorship</i>	92.561	14.381	8	.072
<b>Model Fitting Information</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>

	78.179	17.848	16	.333
<b>Goodness of Fit</b>				
		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>		68.223	60	.218
<i>Deviance</i>		57.127	60	.581

#### 4.1.7 Youth engagement design strategy: confounding variables

A multinomial logistic model was conducted to examine if youth engagement design strategies influenced one another in impact youth engagement design strategy. As a result of the analysis, design strategies where  $p > 0.05$ . The summary of variables can be found in table 13 where variables accompanied with an asterisk were evaluated separately due to the model limitations. This demonstrates that the impact of youth service program design strategies accompanied together did not impact overall youth engagement. Additionally, this test did not violate the multicollinearity assumption. Finally, the goodness of fit was reported that the model chosen is a good representation of the data (Pearson test  $X^2 = .000$ ,  $p = 1.000$ ; Deviance test  $X^2 = .000$ ,  $p = 1.000$  for both models. The output from SPSS summarizing multicollinearity, goodness of fit and additional information can be found in table 13.

Table 13: Multinomial logistic regression SPSS output: Covariate variables

<b>Likelihood Ratio Tests</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Organizational readiness (control)</i>	2.773	2.773	2	.250
<i>Number of staff or volunteers (control)</i>	3.819	3.819	2	.148
<i>Skill building*</i>	15.992	15.992	12	0.192
<i>Meaningful projects*</i>	.000	.000	6	1.000
<i>Youth empowerment (staff members and leaders)</i>	3.819	3.819	2	.148
<i>Youth empowerment (board of directors)</i>	.000	.000	2	1.000
<i>Youth empowerment (community leaders)</i>	.000	.000	2	1.000
<i>Youth empowerment (elected officials)</i>	.000	.000	2	1.000
<i>Autonomy (think independently)</i>	.000	.000	2	1.000
<i>Autonomy (take risks)</i>	2.773	2.773	2	.250
<i>Autonomy (responsibilities)</i>	.000	.000	2	1.000
<i>Critical thinking (challenge status quo)</i>	2.773	2.773	2	.250
<i>Critical thinking (experiment)</i>	.000	.000	2	1.000
<i>Mentorship*</i>	.000	.000	3	1.000
<b>Model Fitting Information</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>

	.000	26.321	18	0.093
	.000*	56.625*	48*	.184*
<b>Goodness of Fit</b>				
		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>	.000		2	1.000
<i>Deviance</i>	.000		2	1.000

## 4.2 Impact of youth engagement on organizations and communities

### 4.2.1 Impact on secondary organizations

An Ordinal Logistic Regression was conducted to examine if youth engagement in youth service programs impacted secondary organizations. As shown in Figure 10, the data is left-skewed. Where regardless of the level of engagement, there is a positive impact on secondary organization capacity. For secondary organizations who responded, “definitely yes”, youth participants were found to be involved and very involved in the project. Whereas organizations who responded, “probably yes”, youth participants were found to be not involved or not very involved. The level of involved decreases as secondary organizations identified that capacity was not reached.

As a result of the statistical analysis, the level of youth engagement does not impact the capacity reached within the secondary organization; refer to table 13 for the SPSS statistical output. Therefore, the null hypothesis cannot be rejected.

This test did not violate the multicollinearity assumption of the Ordinal Logistic Regression as only one factor was analyzed. Additionally, the assumptions of proportional odds have not been violated as p-value is shown to be insignificant (p=0.089). Finally, though goodness of fit was reported that the model chosen is a good representation of the data (Pearson test  $X^2=97.405$ , p =0.025; Deviance test  $X^2=47.433$ , p =0.989).



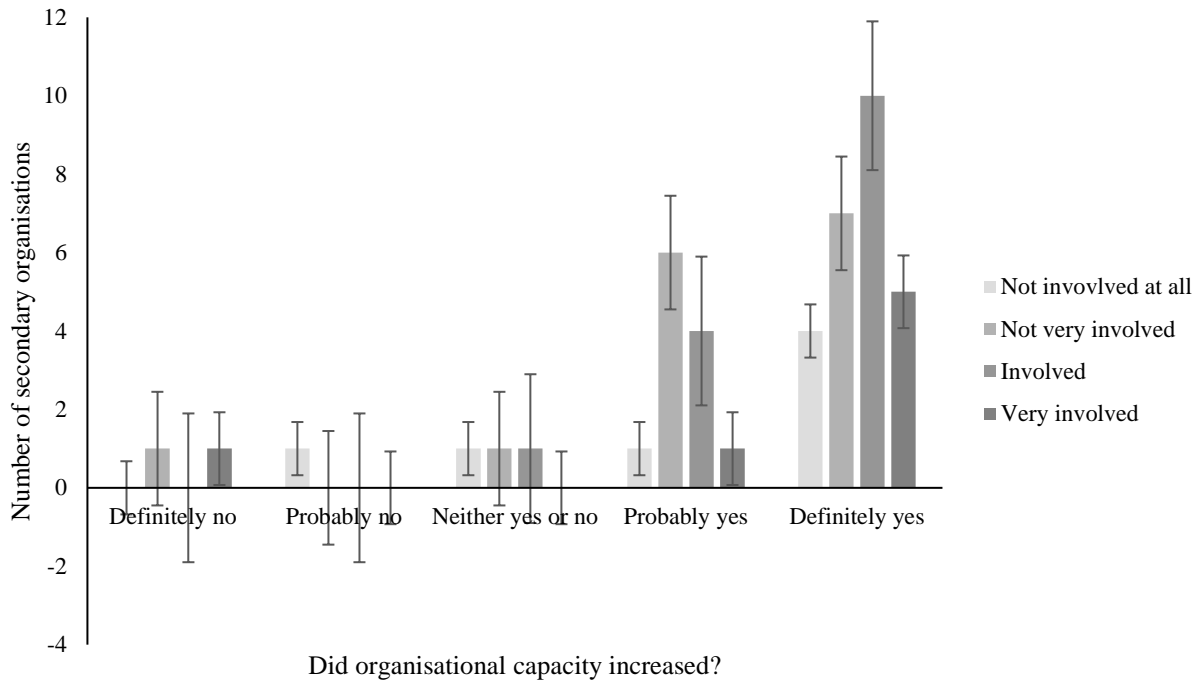


Figure 10: The impact of youth engagement on secondary organizations. Independent variable shows the number of secondary organizations who reached varying levels of capacity and the dependent variable shows the level of youth engagement identified. The legend depicts the level of youth engagement (N=53).

Table 14: Ordinal logistic regression SPSS output: Impact on organizations

<b>Parameters</b>					
	<i>Estimate</i>	<i>Std. Error</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>
<i>Monetary contributions (control)</i>	-.226	.182	1.540	1	.215
<i>Not involved at all</i>	.106	1.044	.010	1	.919
<i>Not very involved</i>	-.917	.966	.901	1	.343
<i>Involved</i>	-.062	.975	.004	1	.949
<i>Very involved</i>	0 <sup>a</sup>	.	.	0	.
<b>Model Fitting</b>					
	<i>-2 Log Likelihood</i>		<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	66.735		3.042	4	.551
<b>Goodness of Fit</b>					
			<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
<i>Pearson</i>			97.405	72	.025
<i>Deviance</i>			47.433	72	.989

<b>Test of Parallel Lines</b>				
	<i>-2 Log Likelihood</i>	<i>Chi-square</i>	<i>df</i>	<i>Sig.</i>
	47.756	18.978	12	.089

#### 4.2.2 *Impact on communities*

A Generalized Linear Model was conducted to examine how youth engagement impacted communities. There were five different community impact strategies which were tested. This included raising awareness, encouraging individual community members to take action, encouraging local community to take collective action, influencing decision-makers either in the organization or local community to think/act differently, and influencing decision-makers beyond the local community. Figure 11 demonstrates a right-skewed graph. Where raising awareness and encouraging individual action was the most common community impact achieved as a result of the youth service program. In terms of the level of involvement, higher number of youth participants were found to be not involved or not very involved in the youth service program.

As a result, there were not significant relationships detected from the Generalized Linear Model. More specifically, there was no significant relationship between raising awareness and youth engagement ( $X^2(4) = 2.584, p = 0.630$ ). No significant relationship was detected between encouraging individual community members to take action and youth engagement ( $X^2(4) = 2.908, p = 0.573$ ). No significant relationship was detected between encouraging local community members to take action and youth engagement ( $X^2(4) = 2.108, p = 0.716$ ). No significant relationship was detected between influencing organizational staff/local community leaders and youth engagement ( $X^2(4) = 3.594, p = 0.464$ ). Finally, there was no significant relationship between influencing decision makers beyond the local community and youth engagement ( $X^2(4) = 1.499, p = 0.827$ ). Thus, the null hypothesis cannot be rejected. The SPSS output can be found in table 14.

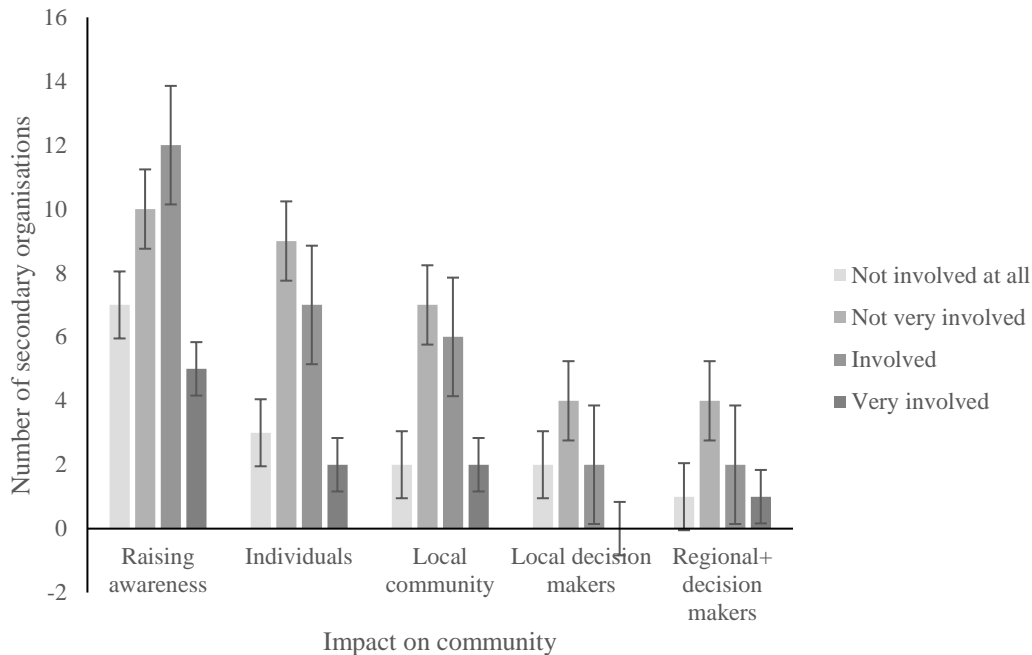


Figure 11: The impact of youth engagement on communities. Dependent variable shows the number of secondary organizations who reached varying levels of youth engagement. The legend depicts the level of youth engagement. The dependent variable shows the youth service program impact on the community. The impact on community measured in this study include raising awareness, encouraging individual action, encouraging local community action, influencing local decision makers, and influencing regional/national/international decision makers (N=53).

Table 15: Generalized linear model SPSS output: Impact on communities

<b>Independent variable: Raising awareness</b>					
<b>Parameter Estimates</b>					
	<i>B</i>	<i>Std. Error</i>	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Not involved at all</i>	1.386	1.3019	1.134	1	.287
<i>Not very involved</i>	.827	1.2339	.449	1	.503
<i>Involved</i>	.200	1.2792	.025	1	.875
<i>Very involved</i>	0	.	.	.	.
<i>Monetary contributions (control)</i>	-.192	.2230	.740	1	.390
<b>Test of Model Effects</b>					
			<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>

<i>Mentorship</i>	2.020	3	.568
<i>Monetary contributions (control)</i>	.740	1	.390

**Omnibus Test**

<i>Likelihood Ratio Chi-Square</i>	<i>df</i>	<i>Sig.</i>
2.584	4	.630

**Independent variable: Encouraged individual community members to take action**

**Parameter Estimates**

	<i>B</i>	<i>Std. Error</i>	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Not involved at all</i>	.084	1.1213	.006	1	.940
<i>Not very involved</i>	-1.056	1.0197	1.072	1	.301
<i>Involved</i>	-.674	1.0204	.437	1	.509
<i>Very involved</i>	0	.	.	.	.
<i>Monetary contributions (control)</i>	.083	.1961	.178	1	.673

**Test of Model Effects**

	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Mentorship</i>	2.067	3	.559
<i>Monetary contributions (control)</i>	.178	1	.673

**Omnibus Test**

<i>Likelihood Ratio Chi-Square</i>	<i>df</i>	<i>Sig.</i>
2.908	4	.573

**Independent variable: Encouraged local community to collectively take action**

**Parameter Estimates**

	<i>B</i>	<i>Std. Error</i>	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Not involved at all</i>	.649	1.1842	.301	1	.583
<i>Not very involved</i>	-.531	1.0151	.274	1	.601
<i>Involved</i>	-.283	1.0148	.078	1	.781
<i>Very involved</i>	0	.	.	.	.
<i>Monetary contributions (control)</i>	.052	.1991	.069	1	.792

**Test of Model Effects**

	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Mentorship</i>	1.523	3	.677
<i>Monetary contributions (control)</i>	.069	1	.792

**Omnibus Test**

<i>Likelihood Ratio Chi-Square</i>	<i>df</i>	<i>Sig.</i>
2.108	4	.716

**Independent variable: Influenced decision-makers at either our organization or in the local community to think or act differently regarding**

**Parameter Estimates**

	<i>B</i>	<i>Std. Error</i>	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Not involved at all</i>	22.951	32299.3994	.000	1	.999
<i>Not very involved</i>	-21.062	32299.3994	.000	1	.999
<i>Involved</i>	-21.637	32299.3994	.000	1	.999

<i>Very involved</i>	-20.702	32299.3994	.000	1	.999
<i>Monetary contributions (control)</i>	0 <sup>a</sup>	.	.	.	.

**Test of Model Effects**

	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Mentorship</i>	.948	3	.814
<i>Monetary contributions (control)</i>	.274	1	.601

**Omnibus Test**

	<i>Likelihood Ratio Chi-Square</i>	<i>df</i>	<i>Sig.</i>
	3.594	4	.464

**Independent variable: Participants influenced decision-makers beyond our local community, either regionally, nationally, or internationally to think or act differently**

**Parameter Estimates**

	<i>B</i>	<i>Std. Error</i>	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Not involved at all</i>	.528	1.5354	.118	1	.731
<i>Not very involved</i>	-.559	1.2495	.200	1	.655
<i>Involved</i>	.271	1.3347	.041	1	.839
<i>Very involved</i>	0 <sup>a</sup>	.	.	.	.
<i>Monetary contributions (control)</i>	.073	.2657	.076	1	.783

**Test of Model Effects**

	<i>Wald Chi-Square</i>	<i>df</i>	<i>Sig.</i>
<i>Mentorship</i>	1.150	3	.765
<i>Monetary contributions (control)</i>	.076	1	.783

**Omnibus Test**

	<i>Likelihood Ratio Chi-Square</i>	<i>df</i>	<i>Sig.</i>
	1.499	4	.827

4.4 Factors that improve youth engagement on communities, length of mentorship moderator

A Generalized Linear Model was conducted to further examine the relationship between youth engagement impact on communities. Figure 12 shows a right skewed distribution where youth participants were found to have longer opportunities for mentorship. Additionally, raising awareness and encouraging individual action and local community action was the most common community impact achieved as a result of the youth service program. However, youth engagement varied depending on the duration of mentorship. For youth participants who spent 0-10 hours, youth were found to be slightly more involved in the program. Whereas youth participants who spent 10 or more hours mentoring had overall lower levels of engagement. However, the test resulted in no significant relationship between youth engagement and community impact strategies (Raising awareness and youth engagement ( $X^2(4) = 2.584$ ,

p=0.630), encouraging individual community members to take action and youth engagement ( $X^2(4) = 2.908, p=0.573$ ), encouraging local community members to take action and youth engagement ( $X^2(4) = 2.108, p=0.716$ ), influencing organizational staff/local community leaders and youth engagement ( $X^2(4) = 3.594, p=0.464$ ), influencing decision makers beyond the local community and youth engagement ( $X^2(4) = 1.499, p=0.827$ ); refer to table 14 for SPSS statistical output).

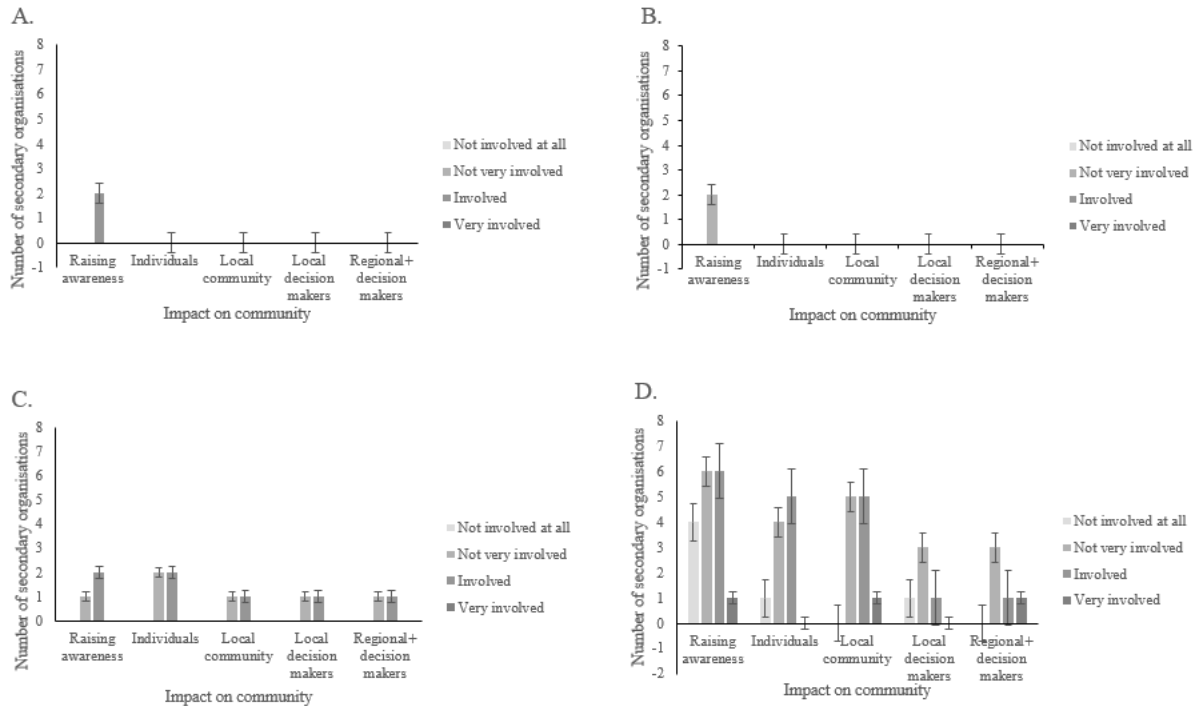


Figure 12: The impact of youth engagement on communities moderated by duration of mentoring (i.e., A. 0-2 hours, B. 2-5 hours, C. 5-10 hours, and D. 10+ hours). Dependent variable shows the number of secondary organizations who reached varying levels of youth engagement. The legend depicts the level of youth engagement. The dependent variable shows the youth service program impact on the community. The impact on community measured in this study include raising awareness, encouraging individual action, encouraging local community action, influencing local decision makers, and influencing regional/national/international decision makers. (N=53).

#### 4.5 Summary

The findings of the statistical analysis prove to be inconclusive. Research question one asks how intergenerational collaboration affect youth engagement in youth service programs. Youth engagement design strategies such as skill building, youth empowerment, meaningful projects, critical thinking, and mentorship don't provide significant opportunities for youth engagement in youth service programs. However, youth who take risks are shown to have a significant relationship with youth engagement.

Research question two aimed to understand the impact of youth engagement in youth service programs. However, the results demonstrated that youth engagement do not have an impact on secondary organizations and community impact. Finally, research question three aimed to understand factors that improve the relationship between youth engagement and the impact on communities. There was no significant relationship detected between dependent variables, independent variables, and moderator variables.

## 5.0 Discussion

The purpose of this study was to examine how organizations who host youth service programs can use intergenerational collaboration to engage and support youth while enhancing the social and environmental impact on communities. Previous research and studies highlighted the importance of youth service programs in impacting the youth participants. However, there was little focus in understanding how these programs impact the organizations and communities they service (Halsall & Forneris, 2018; Lakin & Mahoney, 2006). Additionally, the lack of tools available to evaluate youth service programs' impact on communities outlines additional difficulty in trying to understand how intergenerational collaboration contributes to the impact (Clarke & Dougherty, 2010; Griff, 1999).

Statistical analyses were used to evaluate research questions and hypotheses of the thesis. Though results aimed to understand research question one provides interesting insight for the youth engagement space, the outcome of the analyses was inconclusive in understanding the impact of youth service programs on communities and organizations.

This chapter is divided into three sections to further discuss and address the three research questions of this thesis. Each section outlines the outcomes of the analyses, discusses the implications, and provides reasoning for the results.

### 5.1 Impact of youth engagement design strategies on youth engagement

*(1) How does intergenerational collaboration affect youth engagement in youth service programs?*

Intergenerational collaboration derives from the intergenerational theory, where there are benefits that arise from multiple generations interacting together to enhance social growth and community learning (Lawrence-Jacobson, 2006). This theory highlights the critical need for equal opportunity between generations and the need to be integrated in all sectors of society (Newman & Hatton-Yeo, 2008). As discussed in the literature review, there are different strategies that arise when promoting the theory of intergenerational collaboration. Within the context of youth service programs, organizations will integrate youth engagement design strategies to support youth development, increase organizational capacity and to positively



impact communities (Iwasaki, 2016). Adults who hold leadership positions are also reportedly key to supporting engagement as they implement the youth engagement design strategies. However, there is little understanding if these design strategies are effective. Additionally, it is difficult to understand the role that intergenerational collaboration plays within youth engagement in youth service programs.

The literature review more specifically discussed several different youth engagement design strategies. These strategies are more commonly found to be integrated within the youth service programs and aim to enhance benefits and gain different abilities for young people involved (Iwasaki, 2016). The six common youth engagement design strategies found within management, youth development and community engagement literature included skill building, meaningful projects, youth empowerment, autonomy, critical thinking, and mentorship. Of the design strategies tested, skill building, critical thinking, and mentorship were found not to have a significant impact on the overall youth engagement in the youth service program. Whereas youth who took risks within projects, participated in meaningful projects and shared ideas with decision makers were found to have a significant impact on youth engagement. As a result of the statistical analysis, the design strategies that were found to not have a significant relationship is contradictory to what is discussed within youth and community engagement literature. In particular to skill building, meaningful projects, youth empowerment, autonomy, critical thinking, and mentorship, engagement strategies were found to be closely tied to youth development (Raposa et al., 2019). Youth engagement and development are often discussed in tandem with one another as accomplishing one is rarely done without accomplishing the other (Joselowsky, 2007). Though youth development was not the focus on the study, it does provide additional insight for youth engagement literature in further understanding the relationship between youth engagement and youth development. It is unusual that the relationships were found to be significant, a possible factor influencing the results is the intergenerational collaboration component.

The empirical results revealed that secondary organizations did engage youth participants through the youth engagement design strategies (Fig 4-9). Youth participants were given more than 40 hours with staff members in skill building opportunities, engaged in critical thinking opportunities and mentorship. However, regardless of how many opportunities youth participants

were given through the different youth engagement design strategies; youth were found not to be very engaged within the youth service program. This could be due to a variety of factors including the intention of youth service programs. These programs are traditionally established with projects and activities predetermined. This could restrict youth ability to being meaningfully engaged (Witt & Caldwell, 2018). Additionally, the analyses conducted to understand the accumulated impact of all design strategies on youth engagement, no significant relationship was detected. Youth service programs are designed to encourage youth development and may not meaningfully engage youth to encourage social and environmental change as described previously within the literature (Vieira & Sousa, 2016; Witt & Caldwell, 2018). Moreover, organizations indicated that they did not give youth as many opportunities to challenge the status quo in comparison to other critical thinking opportunities. This is important to note as if youth participants were restricted in the programs, their overall involvement in the project could be impacted negatively. Within this study, youth engagement was measured by understanding the level of involvement in the planning and design. The primary reason for this was to understand at what stage were youth expected to engage in the project and what level of ownership did they have. Within the literature, youth engagement is tied to participation, passion, youth voice and collective action (Witt & Caldwell, 2018).

As discussed previously, it is not enough to simply allow youth to speak up or discuss their passions, organizational leaders must provide a space for youth decision making and leadership. The empirical results demonstrate that perhaps youth are not effectively engaged through out the youth service programs in respect to the some of the youth engagement design strategies. The study surveyed staff members part of secondary organizations who worked a minimum of five hours with the youth participants. These organizations worked closely with the young people to deliver service projects to communities. The questions asked were specifically related to the staff member's perspective on how engaged the youth were during the project. Their opinions and perspectives are valued as they were engaging with the young people; however, it does require further research in examining the youth participant's experiences how responsive were organizations in interacting. For intergenerational collaboration to be successful, staff members must also be engaged in providing support and interacting with the young people (Vieira & Sousa, 2016). To further understand how intergenerational collaboration impacts engagement, further research is needed to understand the youth's perspective.

It is important to note that more youth participants who were given opportunities to be autonomous through taking risks were found to be less engaged throughout the program as further shown in Figure 8. It is generally accepted in youth development and community development literature that autonomy do have a positive impact on youth and communities (Buzinde et al., 2019; Maki & Snyder, 2017). However, this study provides a unique insight of how organizations play a role in supporting youth autonomy to positively impact youth engagement. The questions asked were related to whether or not youth were given opportunities to take risks, make decisions independently, and take on real responsibilities. Traditionally, projects and activities are planned ahead of time by adult staff members (Mohanty et al., 2019). Allowing youth to take risks and take more ownership over the tasks and activities required to be completed. As a result, youth participants are much more passionate and encouraged to complete the project successfully (Iwasaki, 2016; Schulman, 2006).

Youth who are given autonomy to take risks will often use intergenerational collaboration as a tool to work with staff members and communities to address complex societal and organizational goals and needs (Buzinde et al., 2019). This is important to note as leveraging intergenerational relationships within organizations and communities allows youth to become engaged and creative leaders. Though it is unclear how exactly intergenerational theory impacts communities, youth are more inclined to be engaged throughout the duration of the project as they are not only passionate about the issue but they have opportunity to meaningfully engage in the project and take risks (Buzinde et al., 2019; Maki & Snyder, 2017).

Additionally, youth who joined existing projects demonstrated that that they were not as effectively engaged throughout the program. Though it is generally accepted within the literature that participating in meaningful projects supports youth engagement, this study provides the unique insight in that simply providing opportunity in meaningful projects is not enough to fully support youth participants (Iwasaki, 2016). Within this study, the questions asked were related to whether or not the secondary organization gave youth participants opportunities to either create a new project or join an existing project. Traditionally, projects and activities are planned ahead of time by adult staff members (Del Felice & Solheim, 2011; Mohanty et al., 2019). This proved to be true as in Figure 5, youth participants were seen joining existing projects than creating their own which negatively correlated with overall youth engagement. This could be due to the fact

that youth were not fully engaged within the aspects of the project. Allowing youth to create projects gives them more responsibility and ownership over the tasks and activities required to be completed. As a result, youth participants are much more passionate and encouraged to complete the project successfully (Iwasaki, 2016; Schulman, 2006). Whereas, pre-existing projects may restrict youth passion, voice, participation and collective action as described within the literature (Ebrahim & Rangan, 2014). Moreover, youth who have the opportunity to work on meaningful projects will often use intergenerational collaboration as a tool to work with staff members and communities to address societal and organizational goals and needs (Saito & Sullivan, 2011; Weinreich, 2004). Similarly, youth will leverage intergenerational collaboration within organizations and communities as it allows for projects to be more widely accepted and successful when implemented (Vieira & Sousa, 2016).

Finally, youth who shared ideas with decision makers were found to have a significant relationship with youth engagement which is similarly shown in figure 6. Youth empowerment involves shared decision making between leaders and youth participants as it allows for increased motivation and mobilisation in the project (Iwasaki, 2015). Within this study, questions were asked on who youth participants shared ideas with (i.e., staff members, board of directors, community leaders, or elected officials). Youth participants were found to share ideas more with staff leaders than other groups of decision makers. A possible reason as to why is the intergenerational collaboration component. Over the duration of the program, youth participants built relationships with staff members. This allowed youth participants to speak freely and communicate openly with their ideas. This benefits staff members as youth can bring a unique perspective and new solutions about their project. This also helps address the challenges previously discussed about an organization's hierarchal structure as communication barriers decrease (Kim & Lee, 2006; Srivastava et al., 2006).

Additionally, these relationships do support findings within management literature that knowledge sharing can encourage intraorganizational engagement and young person engagement (Khan & Khan, 2019; Zaqout & Abbas, 2012). Sharing valuable information, lessons, and providing feedback for youth encourages high-level decision making and stimulates innovative thinking for youth. For youth participants within youth service programs, knowledge must be shared from staff and community members in order to create innovative solutions that address

complex community problems. With the knowledge attained, youth can tailor their projects and withstand challenges and uncertainty when addressing community issues. This is supported by youth development literature where effective engagement is only achieved when youth participants are meaningfully supported through autonomy-promoting environments (Buzinde et al., 2019). Knowledge sharing is a form of intraorganizational engagement that can support autonomy-promoted environments. However, it does face challenges due to hierarchal structure, communication flow, internal competitiveness and existing corporate structure (Riege, 2005). Within this study, youth participants were supported by staff members for certain youth engagement design strategies as they aimed to create a supportive environment where youth can become self-motivated leaders (Buzinde et al., 2019). As a result, these challenges were minimized due to the roll of knowledge sharing within the organization. Effective communication was key to create meaningful projects (Riege, 2005).

Furthermore, it is important to note that this youth engagement design feature is centered on organizations allowing autonomy-supported space for youth participants. If organizations hope to encourage young people in impacting communities, more freedom and responsibility are required when allowing young people to lead projects, take risks, and share ideas freely with decision makers. This is supported by literature related to education, where it is discussed that youth will often bring a new perspective into decision making processes and create unique solutions to complex problems. Within the literature, this unique ability allows for organizations to enhance their ability in achieving their goals (Helferty et al., 2009). This relationship should be further explored from the youth perspective as only organizational staff members were surveyed. Understanding the perspective from the youth participants could further explain how successful this designs strategy was in engaging youth.

It is important to note that the youth service programs who participated in this study were evaluated from September 2019 to April 2021. As result, these programs were influenced by the sudden and severe effect of the COVID-19 pandemic. Beginning in December 2019, the world experienced a global outbreak influencing the health and well-being of citizens around the world. Due to the high infestation rate and risk of mortality, all sectors of society were forced to limit human interactions and many operations were held virtually (Ciotti et al., 2020). During this study, host organizations updated youth service program structures to comply with government

restrictions. Many programs removed in-person activities to opt for online activities. Virtual opportunities both have advantages and disadvantages for engaging youth. Similar to in person activities, youth engagement is effective when adults are sufficiently engaged in supporting youth as they hold leadership positions who are key in supporting engagement design strategies (McConnell et al., 2013). Unfortunately, the full effects of the COVID-19 pandemic have yet to be studied however, researchers identified youth engagement during this time is critical for mental health and well-being as the pandemic has influenced every aspect of a young person's life (Spigaglia, 2020). At the time government restrictions were enabled, organizations across Canada had to update their operations very quickly. As a result, host and secondary organizations may not have been effectively engaging youth participants due to the sudden and severe impacts of the COVID-19 pandemic.

After analysing the common youth engagement strategies within youth service programs and examining the impact on youth engagement, further research is still needed to conclusively determine how intergenerational collaboration impacts youth engagement. Additional details about the relationship could be further revealed with additional data however, the number of responses received were small and may not accurately reflect the nature of the population. Moreover, the margin of error is higher than expected. As a result, potential biases exist within the interpretation of the data. Potential bias can include sampling bias, where the sample is not indicative of the true population. Additional bias can be due to unintentionally excluding participants who couldn't fill out the survey or inadequately reminding participants to fill out survey. Finally, there can be bias due to measurement error within the data where sufficient information was not provided to survey participants to fill out the survey. For example, this study is specifically using specific definitions for certain terms which could have gotten misinterpreted during the survey. Though certain relationships showed a strong correlation, many of the strategies commonly used to support development were difficult to quantify in terms of engagement. For further insight, both perspectives from organizations and youth participants need to be provided more to determine how youth were engaged and whether or not intergenerational collaboration played a role.

## 5.2 Impact of youth engagement on organizations and communities

*(2) What is the impact of youth engagement in youth service programs?*

Youth engagement is described as an action that effectively involves young people in accomplishing tasks, participating in projects, and generating ideas. Within literature, youth engagement is reported to have many benefits in supporting mental and physical health of young people and aiding in healthy social and cognitive development (Armstrong & Manion, 2015). Early studies described youth engagement as a static concept that focused on emotional, behavioural, and cognitive strategies. This has since developed in to a dynamic idea that includes passion, participation, youth voice and collective action (Witt & Caldwell, 2018; Yonezawa et al., 2009).

Though the benefits for youth is well documented, there are benefits that arise from encouraging youth engagement. As discussed in chapter 2, section 2.3.3, youth engagement is noted to be a tool used that can also positively influence organizations (Forenza, 2016). Within literature that address intraorganizational empowerment, it has been discussed that engagement opportunities that include youth can enhance the organization's capacity to reach its environmental and social impact goals (Gazley et al., 2012). Similarly, youth engagement is often described in having a positive impact on communities. Further discussed in chapter 2, section 2.6.1, design strategies and practices that encourage youth engagement also encourage meaningful social change in communities (Buzinde et al., 2019; Keller et al., 2019). Within community engagement literature, it is reported that meaningful youth engagement encourages community relationships and provides a catalyst for social justice and change (Halsall & Forneris, 2018; Iwasaki, 2016). Additionally, outcomes from encouraging youth engagement include successful project implementation and increase a community's willingness to respond to project implementation (Meltzer & Saunders, 2020). The positive impact on organizations and communities however are loosely described. There is no research that describes the relationship between youth engagement and organizations and communities. This is primarily due to the lack of resources and tools needed to evaluate the impact (Dougherty, 2011; ESDC Innovation Lab, 2016).

As a result of the analyses aimed understand the impact of youth engagement, both organizations and communities were not found to have a significant impact from the overall youth engagement in the youth service program. However, the empirical results differ. As shown in Figure 11, secondary organizations did identify that youth service programs did have a positive impact on their organization by increasing capacity. However, secondary organizations also identified that

youth participants did not play a significant role in achieving that impact when discussing their involvement. In Figure 12, raising awareness and encouraging individual action were identified as common community impacts achieved by the youth service programs. However, the level of youth engagement did not play a significant role in the impact achieved.

Youth involvement in project planning and design were used to understand level of engagement. Youth engagement is only successful when participation, passion, youth voice and collective action are considered and meaningfully acted upon (Witt & Caldwell, 2018). It is not enough to simply allow to provide youth opportunities and a space for growth. Older generations must meaningfully act upon and support youth participants in their engagement. The empirical results demonstrate that youth service programs inherently increase organizational capacity and have a positive role in impacting the community regardless of how engage the youth participants are. In respect to Ebrahim & Rangan (2014) classification of impact, youth service programs were found to act locally and were successful in targeting regional impacts (i.e., raising awareness and encouraging individual action).

This study gathered staff members perspective on how engaged youth were during the project and how they felt project succeeded in impacting organizations and communities. Questions asked were specifically related to how involved youth were in the projects, whether the staff felt youth contributed to building organizational capacity and the types of impact that were achieved.

In respect to the second research question of this thesis, the results do not indicate that there is an impact of youth engagement in youth service programs. In particular to the impact youth engagement has on organizations, the results don't necessarily contradict to what was found within the literature as the youth service programs do inherently increase organizational capacity. Specifically, capacity building is reported to benefit organizations ability to achieve their goals (Gazley et al., 2012). However, this study did not detect a link that youth engagement influences the relationship between the impact of youth service programs on the overall capacity of the secondary organization. A few factors could have influenced youth service programs impact on communities. One possible reason as to this outcome is the role of intergenerational collaboration. The empirical results demonstrate that organizational capacity did increase however it is clear that youth engagement did not demonstrate an impact within this study since



youth participants not being meaningfully engaged. Additionally, general statements about the positive impact on communities were described within the literature (Halsall & Forneris, 2018; Iwasaki, 2016). However, this does not necessarily contradict the results of this study as the empirical results demonstrated that youth participants may not be effectively engaged to influence the impact that was created.

As previously described within the literature, youth engagement is tied to intergenerational collaboration and oftentimes, youth will leverage relationships to create more a more meaningful impact (Vieira & Sousa, 2016). For this to work, staff members must provide opportunities for youth to become leaders and decision makers. If this is not, the benefits of intergenerational collaboration on organizations may not be experienced and reported within the survey (Iwasaki, 2016). This is further supported by youth development literature as regardless of opportunities given, leaders and decision makers must engage in meaningful intergenerational collaboration to effectively support youth engagement (Witt & Caldwell, 2018). As a result of the statistical and empirical analysis, youth participants may not be effectively engaged within the youth service program project to enhance the impacts on communities and secondary organizations. Surveying community members and youth can provide more a better understanding of the relationship between the participation of youth participants and the impact created on communities and secondary organizations. Including more perspectives can provide more insight into how youth engagement impacts organizations and communities. Secondary organizations staff members who were surveyed can only provide their perspective and insight on what was asked. Further details about the relationship dynamics between youth engagement and youth service programs could be further revealed with additional data however, the data may have been influenced by a sampling bias were the number of responses received may not accurately reflect the nature of the population. It is difficult to determine how youth felt their engagement impacted the targeted communities and organizations. Additional bias can be related to unintentionally excluding participants who could not fill out the survey. Lastly, there can be bias due to measurement where sufficient information was not provided to survey participants. This study uses specific definitions which could have gotten misinterpreted by participants during the survey.

An additional factor that should be noted is the influence of the COVID-19 pandemic on this study (Ciotti et al., 2020). Throughout this study, host organizations began to alter the design of

the youth service program to comply with government restrictions. As a result, this limited in-person activities. The full effects of the COVID-19 pandemic have yet to be studied. However, researchers have begun to identify that engaging youth during this time of uncertainty is critical for mental health and well-being as the pandemic has influenced every aspect of a person's life (Spigaglia, 2020). Youth participants within this study may not have played a crucial role in the effect of the youth service programs project as the COVID-19 pandemic may have limited their opportunity for meaningful engagement and interaction. This is beyond the control of the host and secondary organizations as many were forced to make changes to the youth service programs quickly to comply with government restrictions.

### 5.3 Factors influencing youth engagement on communities

*(3) What factors improve the impact of youth engagement in youth service programs on communities?*

As discussed in research question two, youth engagement is reported to have a positive impact on communities and act as a catalyst for positive social change (Halsall & Forneris, 2018; Iwasaki, 2016). Common positive impacts that are discussed including a communities willingness to adapt, and how successful the project was (Meltzer & Saunders, 2020). However, what is not discussed is the type of impact achieved and the success of the impact. As a result of the literature review and the results from this thesis, the relationship between youth engagement and the impact on communities is still not clearly understood. Moreover, factors influencing the relationship between youth engagement and impact on communities were not found to be discussed within the literature.

The purpose of research question three is to identify potential factors influencing this relationship. Questions asked were related to how engaged youth were in projects, engagement strategies, time spent and what were the types of impact that were achieved. One factor discussed within the literature is the relationship between mentoring and the time commitment spent mentoring (Raposa et al., 2019). Mentoring is in effective youth engagement design feature as it allows opportunity for intergenerational collaboration, knowledge sharing and opportunities for youth development (Kim & Lee, 2006; Raposa et al., 2019). Time was hypothesized as a moderating variable between youth engagement and the impact on communities. From the

empirical results, youth participants given longer opportunities for mentorship appeared to have more of an impact on communities in particular to raising awareness and encouraging individual action. However, further examining how engaged youth participants were showed that there was no apparent relationship. As a result of the analysis, there was no relationship identified between youth engagement, time or, the impact on communities.

Similarly, youth engagement design strategies were identified as potential factor that can influence the impact on communities. Previous studies alluded to the positive impact of youth engagement on communities, but there is little understanding in how engagement strategies influence the impact on communities. The design strategies previously identified include skill building, meaningful projects, youth empowerment, critical thinking, autonomy, and mentorship (Buzinde et al., 2019; Lakin & Mahoney, 2006). The results of the analysis show no relationship between each youth engagement design strategies, youth engagement and the impact on communities. In particular to youth who created meaningful projects, there was an impact identified on youth engagement. However, further testing showed that meaningful projects did not influence the impact on communities.

The empirical results demonstrated that raising awareness and encouraging individual action common community impacts achieved by the youth service programs (Fig 14-19). Secondary organizations did identify that youth service programs did have a positive impact on communities by either raising awareness, encouraging individual action, encouraging community action, encouraging local decision makers, and encouraging regional, national, and international decision makers. Youth engagement design strategies examined include skill building, meaningful projects, youth empowerment, autonomy, critical thinking, and mentorship. Notable relationships were previously discussed in section 5.2 where youth participants were given 40 hours or more to build skills and were empowered to share ideas with staff members and decision makers. Additionally, youth were given opportunities to be autonomous to take risks, make decisions, and take on real responsibilities. Youth were also engaged in critical thinking opportunities and mentorship.

From the empirical results, it is also clear that youth service programs inherently gave these opportunities to the young people which resulted in an impact on the community. However,

secondary organizations also identified that youth participants did not play a significant role in achieving that impact desired. Unfortunately, the number of responses received were small which may accurately reflect the nature of the population due to a sampling bias. Further details about the relationships between youth engagement, youth service programs and the impacts on community could be revealed with more data. Which can hopefully minimize additional biases in measurement and data collection previously discussed. Ebrahim & Rangan (2014) classification of impact revealed that youth service programs were found to act locally and were successful in targeting regional impacts (i.e., raising awareness and encouraging individual action).

Moreover, youth service programs within this study were influenced by the ongoing impacts of the COVID-19 pandemic. Since the beginning of the pandemic, all interactions with others were limited which resulted in many activities to be held virtually (Ciotti et al., 2020). During this study, host organizations updated youth service program structures to adhere to government restrictions by creating more online activities. The full effects of the COVID-19 pandemic have yet to be studied, however, researchers identified that properly engaging youth during this time is critical for mental health and well-being of young people (Spigaglia, 2020). As a result, youth participants may not have played a significant role in the effect of the youth service programs have on organizations and communities as they may have limited opportunities.

Ultimately, this thesis identified there was no relationship between youth engagement and the impact on communities and thus nothing influencing the relationship. However, the results may allude to the dynamic relationships that influence both youth engagement and community impact. Though previous studies have identified through a qualitative relationship however, in this study it was difficult to identify factors and additional relationships (Saito & Sullivan, 2011). This is supported by literature within youth development as regardless of opportunities given, leaders and decision makers who don't take active steps to meaningfully collaborate with youth won't benefit from both youth engagement and intergenerational collaboration (Witt & Caldwell, 2018; Youth Speak Out Coalition & Zimmerman, 2007). To understand the nuance of the relationships, discussing experiences and perspectives for youth, staff members and organizations are needed.

## 6. Conclusion

The purpose of this chapter is to discuss the overall contribution this thesis made to theory, outline recommended practices for organizations who host youth service programs or work with young people, discuss limitations for the study and conclude final thoughts.

### 6.1 Contribution to theory

Though previous studies highlighted the importance of youth service programs on youth development, the main objectives of this study were to examine how organizations can support young people within youth service programs as well as to understand the potential impacts of these programs. Additionally, there is a lack of tools and little focus in understanding youth service programs and the role of intergenerational collaboration (Halsall & Forneris, 2018; Lakin & Mahoney, 2006). The outcomes of this thesis contribute to different areas of study and theory. Areas of literature highlighted include contributions made within management literature and youth engagement literature.

As discussed previously, the theory of knowledge sharing is used as a form of intraorganizational engagement. Knowledge sharing refers to sharing information and wisdom to their employees, this is not limited to young people but can be applied to all employees. Past studies highlighted the importance of knowledge sharing to empower and engage employees (Khan & Khan, 2019). Within management literature, it is clear that there are challenges when employing knowledge sharing including barriers in communication flow, internal competitiveness, and existing hierarchal and corporate structure (Riege, 2005). Strategies that support knowledge sharing include one-on-one interactions, meetings and organizational communication (Suppiah & Sandhu, 2011).

The findings of the study do support knowledge sharing as a management tool to encourage youth engagement within organizations. Within the empirical results, youth participants were able to integrate knowledge learned and shared by staff and communities' members to determine the issue and goals when creating meaningful project. With the knowledge gathered, youth can adapt their projects and take risks to create a more significant and innovative solution to meaningful impact and communities (Buzinde et al., 2019). Providing opportunity for young

people to take risks, share ideas with decision makers and participate in meaningful projects offers an additional strategy in supporting knowledge sharing. Furthermore, the findings are not limited to enhancing youth engagement within youth service programs, the relationships observed can be further extended to how young people are supported within different levels of the workplace.

In respect to contributions made to youth engagement literature, intergenerational collaboration is a critical tool useful for engaging youth. Intergenerational theory discusses the importance and benefits of bringing different generations together to enhance social growth (Lawrence-Jacobson, 2006). Intergenerational collaboration is noted as tool in education to transfer knowledge and experiences to enhance community welfare and social growth (Hoff, 2007). It is noted that within youth engagement literature, intergenerational relationships are important for enhancing engagement opportunities for youth. This is also true for organizations who use intergenerational collaboration techniques to engage youth (Maki & Snyder, 2017; Witt & Caldwell, 2018).

The findings of this study support youth autonomy in taking risks, youth empowerment in sharing ideas with decision makers and participating in projects that meaningful engage youth to encourage youth engagement. This is important as youth within the programs leveraged intergenerational collaboration within organizations and communities to create innovative solutions that address complex community issues as discussed within past literature (Buzinde et al., 2019). Youth are more inclined to be engaged throughout the duration of the project that promotes autonomy, meaningful projects and shared decision making as it allows youth to become resilient leaders of change to support meaningful impact (Buzinde et al., 2019; Iwasaki, 2016). Unfortunately, it still remains unclear in how intergenerational collaboration impacts communities. The findings of the results also support youth engagement beyond youth service programs as any workplace looking to enhance engagement in young people can use meaningful opportunities as a tool.

## 6.2 Contribution to practices and recommendations

The practical objective of this research hopes to encourage decision makers and leaders to utilize young people within the workplace to enhance social and environmental impact on organizations and communities as well as overall level of engagement. Though it is unclear in how engagement

strategies impact organizations and communities, this research provides further understanding in how strategies that support the theory of knowledge sharing and intergenerational theory impacts youth engagement. Youth engagement strategies that provide youth opportunities to take risks which supports autonomy, share ideas which supports youth empowerment and participating in new projects improves overall engagement within the youth service program. Additionally, leaders should prioritize quality of engagements rather than quantity of engagements.

The outcomes of my research encourage organizations who host youth service programs or have interest in support youth engagement to allow youth the opportunity to takes risks and participate in the planning and design aspect of the project. Youth autonomy, empowerment and meaningful projects encourages passion, participation, collective action, youth voice, intergenerational collaboration and knowledge sharing between participants, staff members and community members. Decision makers and leaders are critical in creating autonomy promoted environments (Buzinde et al., 2019). Though there are barriers, allowing space to create and participate in these projects can enhance the overall success of the youth service program and project as current programs don't effectively engage with young people.

### 6.3 Suggestions for future research

One focus for this thesis is evaluating intergenerational youth engagement strategies and its impact on youth engagement in programs. This study specifically gathered the perspective of staff members in secondary organizations as adults play a significant role as they often provide opportunities for relationships to be built and to be successful. Organizations who qualified to fill out the survey have interacted with the youth participant for at least five hours. Several youth engagement design strategies were selected based off of previous literature which encouraged both intergenerational relationships and knowledge sharing. However, intergenerational relationships are notably difficult to build as it involves time, effort and building respect for both youth and adults involved (Lawrence-Jacobson, 2006). The amount of interaction time maybe an important factor in understanding the nuance between intergenerational relationships and promoting youth engagement. Since the results proved to be inconclusive for a majority of the youth engagement design strategies, future research is recommended to focus on how interaction time is valued when supporting youth engagement design strategies. Future research should also

focus on gathering youth perspective in how youth engagement strategies impact youth engagement. Both adults and youth play an important role in building intergenerational relationships. As a result, it is important to further explore the relationship to understand the dynamics and how they support youth engagement.

Another limitation discussed within the literature are the challenges in understanding the impact on communities and organizations. Challenges in evaluating impact due to overall difficulty the lack of tools (Halsall & Forneris, 2018; Lakin & Mahoney, 2006). Evaluating the impact of youth engagement has on communities and organizations and factors influencing this relationship was a focus of this thesis. However, there is still a lot to learn in understanding the different levels of impact achieved as this thesis did not further contribute to these discussions. As the study was aimed at understanding the role of organizations, certain relationship dynamics and perceived impacts were not gathered. Further research is recommended to focus on understanding the perspective community members and additional staff members. Outcomes could further clarify relationship dynamics between youth engagement and the impact on communities and organizations.

Finally, more details about the relationship (i.e., youth engagement strategies, impact on communities/organizations, and factors influencing relationships) are difficult to extract in a smaller sample size compared to a larger study. This can be due to a sampling bias where the sample is not indicative of the true population. This can be due to unintentionally excluding participants who could not complete the survey due to reasons like inadequate reminders or technological restraints. As a result, the number of responses received were small and may not accurately reflect the true nature of the population. Of the twelve national Canada Service Corps programs, three agreed to participate in the survey. Finally, there can be bias due to measurement error where sufficient information was not provided to participants to complete the survey. For example, this study is specifically using specific definitions for certain terms which could have gotten misinterpreted during the survey. In order to get a more accurate perception of the population, more organizations could be surveyed, or a longer survey collection period could have occurred. As it is may not always be feasible to include more organizations, a longer survey collection period is recommended to hopefully gain a better understanding into how design strategies could impact youth engagement.



## 6.4 Concluding thoughts

In conclusion, this study examined how organizations can use intergenerational collaboration to engage youth in youth service programs while enhancing social and environmental impacts on both communities and organizations. Several youth engagement design strategies incorporated into programs and were examined within this study. As a result of quantitative analyses, engaging youth in autonomy by taking risks, youth empowerment and participating in meaningful projects was the only youth engagement design strategy found to support youth engagement. Additionally, analyses were conducted to understand the relationship between youth engagement and the impact on communities and organizations. In respect to the empirical evidence, youth service programs currently don't properly engage youth participants in enhancing impact on community. However, further research is needed to explore relationship dynamics and the impact youth service programs have on communities and organizations as the response size collected was small and may not accurately reflect the true nature of the population. In addition, further research is needed to understand the impacts of COVID-19 on youth engagement and impact on communities and organizations.

This thesis made contributions to two major theories. In respect to intergenerational theory, further strategies were explored in supporting intergenerational relationships. Within management literature, the theory of knowledge sharing played an important role for staff members in properly supporting youth while engaging in meaningful projects.

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## Glossary

**Autonomy:** Encouraging individuals opportunities to self-choose, be self-determined, self-motivated and thus encourages healthy development in young people (Khanna et al., 2014; Stukas, Snyder, & Clary, 2016).

**Critical thinking:** A combination of awareness and critical analysis that enhances engagement and action to benefit communities (Buzinde et al., 2019; Paul & Elder, 2006).

**Empowerment:** Giving individuals shared decision making and are given opportunities to speak freely, communicate to organizational and community leaders while improving community welfare (Iwasaki, 2015).

**Impact:** An immediate or prolonged effect of an implemented strategy, technique, tool and activity (Franks, 2012; Rossini & Porter, 2018). A positive impact is often defined as various influences and actions that aid the natural environment, societal needs, organizations or participants within the organizations (Government of Canada, 2018; Imperiale & Vanclay, 2016; Schonherr & Martinuzzi, 2019).

**Scale of impact:** The level of reach that the action/activity created. This includes local, regional, national and global scales (Ebrahim & Rangan, 2014).

**Strategy of impact:** The strategy used to create various impacts depend on the goal of the action/activity, where the impact can have intended or unintended effects (Gauthier, 2003)

**Intergenerational theory:** A theory that discusses the benefits of bringing multiple generations together in order to enhance social growth and learning within communities (Lawrence-Jacobson, 2006).

**Knowledge sharing:** Transfer of knowledge and information to employees. Subsequently, the benefit of knowledge sharing includes increasing employee engagement and empowerment (Kim & Lee, 2006; Srivastava et al., 2006).

**Meaningful projects:** Giving opportunities for meaningfully engagement through projects individuals are personally passionate about (Armstrong & Manion, 2015; Iwasaki, 2016).

**Mentorship:** Guidance offered to in-experienced individuals that encourages building communication and enhancing trust between generations (Helferty et al., 2009; Roehlkepartain, 2007).

**Partner organization:** Organizations who host youth service programs and have partnered with the Youth & Innovation Project to evaluate their youth service programs.

**Secondary organization:** Organizations who partner with the partnered organizations to work with youth participants to deliver projects.

**Service:** A prosocial behaviour where participants work to achieve goals and fulfil tasks and offers participants compensation for their time (Lough et al., 2009).

**Skill building:** An opportunity for participants to learn necessary skills that allow them to fulfil the objectives of the project (Lakin & Mahoney, 2006).

**Volunteer:** A prosocial behaviour where participants work to achieve goals and fulfil tasks for organizations through unpaid labour (Einfeld & Collins, 2008; Walsh & Black, 2015).

**Youth:** individuals between the ages of 15-30; this definition is supported through research within developmental psychology, peer-reviewed articles, and reports.

**Youth engagement:** Actions or a combination of actions that effectively involves youth to accomplish tasks, generate ideas to help others (Armstrong & Manion, 2015).

**Youth service program:** A form of pedagogy that enables youth participants to engage with community members through design strategies to understand the needs that need to be addressed (Einfeld & Collins, 2008)

**Youth engagement design strategy:** Strategies built throughout the program's structure aim to enhance intergenerational collaboration benefits for youth as well as to encourage social change in communities (Buzinde et al., 2019; Keller et al., 2019).



## Appendix

### Appendix A. Ethics certificate

#### UNIVERSITY OF WATERLOO

##### Notification of Ethics Clearance to Conduct Research with Human Participants

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Principal Investigator: Amelia Clarke (School of Environment, Enterprise and Development)

Co-Investigator: Ilona De-Gosztonyi-Dougherty (School of Environment, Enterprise and Development)

File #: 40348

Title: Ocean Bridge Evaluation - Community Impact Component

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

**Initial Approval Date: 07/04/19 (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: 07/05/20 (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



Karen Pieters, Manager, Research Ethics, karen.pieters@uwaterloo.ca, 519-888-4567, ext. 30495

## Appendix B. Survey instrument

### Project details:

1. [INCLUDE IF RELEVANT] Which part of the [INSERT ORG NAME] youth service program did your organization participate in?
  - a. [INSERT OPTIONS HERE]
  - b. [INSERT OPTIONS HERE]
  - c. [INSERT OPTIONS HERE]
2. Please provide the reason(s) your organization decided to participate in the [INSERT ORG NAME] youth service program? TEXT BOX
3. How ready do you think your organization was to host the young participants?
  - a. Very ready
  - b. Somewhat ready
  - c. Not very ready
  - d. Not ready at all
4. In what ways did you feel ready, or not so ready to host the young participants? TEXT BOX
5. As part of [INSERT ORG NAME] youth service program did the young participants join an existing project your organization was already working on or did they create a new project that your organization collaborated with them on?
  - a. They joined an existing project.
  - b. They created a new project.
  - c. Other (please specify): TEXT BOX
6. Please indicate the level of involvement young participants had in the planning and design of the project:
  - a. Very involved: The young participants led the planning and design.
  - b. Involved: The planning and design was an equal partnership between our organization and the young participants.
  - c. Not very involved: Our organization did most of the planning and design and the young participants contributed a little bit.
  - d. Not involved at all: Our organization did all of the planning and design and the young participants just carried out the project.
7. If the young participants created their own project, did the goals of this project align with an issue that your organization or the local community had previously identified as a key priority? YES / NO/ Not Applicable
8. What were the main goals of the project you worked on with the young participants? TEXT BOX
9. Please specify the number of young participants your organization worked with over the course of this project:
  - a. 0-2
  - b. 3-5
  - c. 5-7
  - d. 7-10
  - e. 10 or more
10. How many staff or volunteers in your organization worked with the young participants over the course of this project?

- a. 0-2
  - b. 3-5
  - c. 5-7
  - d. 7-10
  - e. 10 or more
11. Please specify approximately how many hours your staff or volunteers (not including the young participants) dedicated to the project (total number for all staff and volunteers combined):
- a. Less than 10 hours
  - b. 10 to 20 hours
  - c. 30 to 40 hours
  - d. 40 to 50 hours
  - e. 50 hours or more
12. How did your organization contribute to the project? Please select all that apply [NOTE – Additional answers will be added to make this relevant for all organizations]:
- a. Provided training, presentation or a workshop to the young participants
  - b. Provided a venue for an event
  - c. Provided marketing support
  - d. Led a local cultural or ecological tour
  - e. Participated in an interview or provided relevant information to the young participants that assisted with their project
  - f. Provided in-kind contributions such as transport, food, accommodation for the project
  - g. Other (please specify): TEXT BOX
13. What was the approximate value of any in-kind contributions (not including staff time) that your organization made to the project?
- a. \$0
  - b. \$0 to less than \$500
  - c. \$500 to less than \$1000
  - d. \$1000 to less than \$5000
  - e. \$5000 or more
14. What was the approximate value of any monetary contributions that your organization made to the project?
- a. \$0
  - b. \$0 to less than \$500
  - c. \$500 to less than \$1000
  - d. \$1000 to less than \$5000
  - e. \$5000 or more

**Sustainable Development Goals:**

1. Please indicate the level of awareness your organization has of the Sustainable Development Goals.
- a. No awareness
  - b. Low awareness
  - c. Moderate awareness
  - d. High awareness

2. Does your organization work towards the Sustainable Development Goals? YES/NO
3. Which of the following goals did the project the young participants worked on aim to specifically address? Please select up to three of the most relevant goals:
  - a. GOAL 1: No Poverty
  - b. GOAL 2: Zero Hunger
  - c. GOAL 3: Good Health and Well-being
  - d. GOAL 4: Quality Education
  - e. GOAL 5: Gender Equality
  - f. GOAL 6: Clean Water and Sanitation
  - g. GOAL 7: Affordable and Clean Energy
  - h. GOAL 8: Decent Work and Economic Growth
  - i. GOAL 9: Industry, Innovation and Infrastructure
  - j. GOAL 10: Reduced Inequality
  - k. GOAL 11: Sustainable Cities and Communities
  - l. GOAL 12: Responsible Consumption and Production
  - m. GOAL 13: Climate Action
  - n. GOAL 14: Life Below Water
  - o. GOAL 15: Life on Land
  - p. GOAL 16: Peace and Justice Strong Institutions
  - q. GOAL 17: Partnerships to achieve the Goal
  - r. None of the above

**Impact:**

1. Of your organization's staff and volunteers who interacted with the young participants, were their views of the youth participant's contributions generally positive or negative?
  - a. Extremely positive
  - b. Somewhat positive
  - c. Neither positive nor negative
  - d. Somewhat negative
  - e. Extremely negative

Please explain (optional): TEXT BOX
2. Beyond your organization, how involved in the project was the local community?
  - a. Very involved
  - b. Somewhat involved
  - c. Not very involved
  - d. Not involved at all
3. Of the local community members who interacted with the young participants, were their views of the young participants positive or negative?
  - a. Extremely positive
  - b. Somewhat positive
  - c. Neither positive nor negative
  - d. Somewhat negative
  - e. Extremely negative

Please explain (optional): TEXT BOX
4. Prior to its launch, what kind of impact did the project aim to achieve? Please select all

that apply:

- a. It was aiming to raise awareness about [INSERT ISSUE].
  - b. It was aiming to encourage individual community members to take action on an [INSERT ISSUE] issue.
  - c. It was aiming to encourage the local community to collectively take action on an [INSERT ISSUE] issue.
  - d. It was aiming to influence decision-makers at either our organization or in the local community to think or act differently regarding [INSERT ISSUE].
  - e. It was aiming to influence decision-makers beyond our local community, either regionally, nationally or internationally to think or act differently regarding [INSERT ISSUE].
  - f. It was aiming to directly impact [INSERT ISSUE] and example of direct power].
  - g. Other (please specify): TEXT BOX
5. What kind of impact was the project successful in achieving? Please select all that apply:
- a. It was successful in raising awareness about [INSERT ISSUE].
  - b. It encouraged individual community members to take action on an [INSERT ISSUE] issue.
  - c. It encouraged the local community to collectively take action on an [INSERT ISSUE] issue.
  - d. The participants influenced decision-makers at either our organization or in the local community to think or act differently regarding [INSERT ISSUE].
  - e. The participants influenced decision-makers beyond our local community, either regionally, nationally or internationally to think or act differently regarding [INSERT ISSUE].
  - f. The participants directly impacted [INSERT ISSUE and example of direct power].
  - g. Other (please specify): TEXT BOX
6. Did this [INSERT ORG NAME] project increase your organization's capacity to reach its mission?
- a. Definitely yes
  - b. Probably yes
  - c. May or may not have
  - d. Probably no
  - e. Definitely no
- Please explain (optional): TEXT BOX
7. Did this [INSERT ORG NAME] project positively contribute to your local community?
- a. Definitely yes
  - b. Probably yes
  - c. May or may not have
  - d. Probably no
  - e. Definitely no
- Please explain (optional): TEXT BOX
8. Did this [INSERT ORG NAME] project positively contribute to [INSERT ISSUE]?
- a. Definitely yes

- b. Probably yes
- c. May or may not have
- d. Probably no
- e. Definitely no

Please explain (optional): TEXT BOX

9. How long do you think any positive impacts will last?
- a. Less than 6 months
  - b. More than 6 months, but less than one year
  - c. 1-3 years
  - d. 3 years or more
  - e. Not applicable
10. Did the project have any other positive impacts on your organization or on your community that were unrelated to [INSERT ISSUE] or unexpected? YES/NO/Unsure  
Please explain (optional): TEXT BOX

**Intergenerational collaboration:**

1. Did the young participants work directly with people of different ages as part of the [INSERT ORG NAME] project?
  - a. Yes
  - b. No
  - c. I don't know
2. Were the young participants supported by a mentor from your organization as part of the [INSERT ORG NAME] project?
  - a. Yes
  - b. No
  - c. Not applicable
3. If yes, how many hours (total number for all staff and volunteers combined) did you, or others in your organization spend mentoring the young participants?
  - a. 0-2 hours
  - b. 2-5 hours
  - c. 5-10 hours
  - d. 10+ hours
4. Were the young people given the opportunity as part of the [INSERT ORG NAME] project to:
  - a. To make decisions independently?
    - i. Yes
    - ii. No
    - iii. I don't know
    - iv. Not applicable
  - b. To take risks?
    - i. Yes
    - ii. No
    - iii. I don't know
    - iv. Not applicable
  - c. To take on real responsibilities that mattered to your organization?
    - i. Yes

- ii. No
  - iii. I don't know
  - iv. Not applicable
- d. To challenge the status quo
  - i. Yes
  - ii. No
  - iii. I don't know
  - iv. Not applicable
- e. To experiment
  - i. Yes
  - ii. No
  - iii. I don't know
  - iv. Not applicable
- f. To be creative
  - i. Yes
  - ii. No
  - iii. I don't know
  - iv. Not applicable
- 5. Did the young participants have the opportunity to share their ideas with the decision-makers as a part of the [INSERT ORG NAME] project? Please select all that apply:
  - a. They shared their ideas with the staff leadership of our organization
  - b. They shared their ideas with our board of directors
  - c. They shared their ideas with community leaders
  - d. They shared their ideas with elected officials
  - e. No, they did not share their ideas with any decision-makers
  - f. I don't know
- 6. If yes, how likely do you think that these decision-makers will:
  - a. Listen to the young people?
    - i. Very likely
    - ii. Somewhat likely
    - iii. Neither likely nor unlikely
    - iv. Somewhat unlikely
    - v. Very unlikely
  - b. Take their ideas seriously?
    - i. Very likely
    - ii. Somewhat likely
    - iii. Neither likely nor unlikely
    - iv. Somewhat unlikely
    - v. Very unlikely
  - c. Act on their suggestions?
    - i. Very likely
    - ii. Somewhat likely
    - iii. Neither likely nor unlikely
    - iv. Somewhat unlikely
    - v. Very unlikely

**Reflection questions:**

1. Please rate your experience with [INSERT ORG NAME] youth service program. It was:
  - a. Extremely positive
  - b. Somewhat positive
  - c. Neither positive nor negative
  - d. Somewhat negative
  - e. Extremely negative

Please explain (optional): TEXT BOX

7. To what extent did the [INSERT ORG NAME] youth service program add value to your organization or was it a drain on your staff time and resources?
  - a. Added a lot of value
  - b. Added some value
  - c. Neither added value nor was a drain on time and resources
  - d. Did not add value
  - e. It was a drain on our time and resources
8. What is the likelihood that your organization would participate in another similar youth service program like this in the future?
  - a. Very likely
  - b. Somewhat likely
  - c. Neither likely or unlikely
  - d. Somewhat unlikely
  - e. Very unlikely
9. Did participating in the [INSERT ORG NAME] youth service program encourage your organization to think about how it can better engage young people in your organization's work?
  - a. Yes
  - b. No
  - c. I don't know

**Indigenous participation disclaimer:**

This research recognizes the responsibility of Indigenous peoples to preserve and maintain their role as traditional guardians of these ecosystems through the maintenance of their cultures, spiritual beliefs and customary practices. This research respects the integrity, morality and spirituality of the culture, traditions and relationships of the Indigenous communities and aims to avoid the imposition of external conceptions and standards. We recognize that Indigenous communities have the right to exclude and/or keep any information concerning their culture, traditions or spiritual beliefs confidential. Further, we acknowledge the traditional rights of Indigenous peoples to control the way the information they provide is used and accessed.

Are you Indigenous or do you represent an Indigenous organization? YES/NO/Prefer not to disclose

If yes, is there anything that you would like us to consider when we are handling and processing your responses? TEXT BOX

Are you a member of another historically underrepresented group or are you part of an



organization that represents another historically underrepresented group? YES/NO/Prefer not to disclose

If yes, is there anything that you would like us to consider when we are handling and processing your responses? TEXT BOX

**Demographic information:**

1. What is your job title: TEXT BOX
2. What is the annual budget (approximate) of your organization?
  - a. Less than \$100,000
  - b. \$100,000 to less than \$500,000
  - c. \$500,000 to less than \$1,000,000
  - d. \$1,000,000 to less than \$5,000,000
  - e. More than \$5,000,000
3. How many staff does your organization employ?
  - a. 0-2
  - b. 3-5
  - c. 5-7
  - d. 7-10
  - e. 10 or more
4. What is your organization's type?
  - a. Non-profit or charity
  - b. For-profit
5. What is the mission of your organization? TEXT BOX  
Are there any other comments or information relevant to this study you wish to provide? TEXT BOX
6. Would you be willing to participate in a short follow up interview? YES / NO
7. If yes, please provide your name, email and phone number: TEXT BOX

**Thank you:**

Thank you for your participation in the [INSERT ORG NAME] Community Impact Evaluation. If you have any questions about participation in this research study or about the Youth & Innovation Project, please feel free to contact me by phone or email as listed below. Thank you for your assistance with this research study.

Ilona Dougherty Managing Director  
Youth & Innovation Research Project University of Waterloo  
[Ilona.dougherty@uwaterloo.ca](mailto:Ilona.dougherty@uwaterloo.ca) (514)951-1831  
<https://uwaterloo.ca/youth-and-innovation/>

## Appendix C. Email template

Hello,

You recently participated in the YouthtoSea program. As part of our reporting requirements with our funders we are sending you this questionnaire to complete about your experience with the program, this study is being conducted in collaboration with researchers from the Youth & Innovation Project at the University of Waterloo.

This survey should take around 20 minutes to complete. We are asking you to submit it by **Insert Deadline Here**.

You can find the survey here:

[https://uwaterloo.ca/1.qualtrics.com/jfe/form/SV\\_eb6ICZtDL7z9Uk6](https://uwaterloo.ca/1.qualtrics.com/jfe/form/SV_eb6ICZtDL7z9Uk6)

We have also attached the University of Waterloo University Ethics Document, which we encourage you to read before completing the questionnaire.

Please let me know if you have any questions.

Thank you for your time,

## Appendix D. Ethics information letter

Title of the study: Youth Service Programs - Community impact evaluation

February 16<sup>th</sup> 2021

Dear YouthtoSea participant,

I am writing to you from the Youth & Innovation Project at the University of Waterloo in Waterloo, Ontario.

My colleague Dr. Amelia Clarke and I are conducting a study that aims to evaluate the Ocean Wise youth service program. This evaluation will focus on the impact of the Ocean Wise youth service program on participating organizations, local communities and social and environmental issues. As part of this research study, we have been given your name by Ocean Wise because you were a participant in the Ocean Wise youth service program. We are asking all participants who took part in Ocean Wise youth service program to voluntarily complete a short online questionnaire. Neither participating in or decide not to participating in this survey will affect your relationship with Ocean Wise.

Participation in this research involves filling out a short online questionnaire, it should take you no longer than 20 mins via the online questionnaire. You will be completing the study by an online survey operated by Qualtrics. When information is transmitted or stored on the internet privacy cannot be guaranteed. There is always a risk your responses may be intercepted by a third party (e.g., government agencies, hackers). Qualtrics temporarily collects your ID and computer IP address to avoid duplicate responses in the dataset but will not collect information that could identify you personally. We will ask you to share your experience and perspectives on your participation in the Ocean Wise youth service program. Your responses will be collected and analyzed to create a summary report for Ocean Wise. Your responses will not be linked to your name anywhere in the report, and Ocean Wise will not have access to any data that would connect you to specific comments. The data collected in this study may be used in future academic publications or in studies that further explore the impact of youth service programs, the responses will not be linked to your name in any future publications. As a result, there is no risk associated with filling out this questionnaire. If you do not wish to participate, you can withdraw from this study anytime up until the data has been analyzed and the report submitted to Ocean Wise in spring 2021 and your responses will be deleted. You may also skip any questions in the questionnaire that you do not wish to answer. The information collected from this study will be kept for a period of at least seven years on a password protected computer.

At the end of the questionnaire you will be asked if you are interested in participating in a follow up interview. Participating in the follow up interview is voluntary. Neither participating in or decide not to participating in this survey will affect your relationship with Ocean Wise. Only a small number of those who agree to a follow up interview will be selected for an interview based on regional representation and diversity. Further

information will be provided for you about the interview should you be selected to participate.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE #40348). If you have questions for the Committee contact the Office of Research Ethics, at 1-519-888-4567 ext. 36005 or [ore-ceo@uwaterloo.ca](mailto:ore-ceo@uwaterloo.ca).

If you are an Indigenous person and/or representing an Indigenous organization, we would like to assure you that this research recognizes the responsibility of Indigenous peoples to preserve and maintain their role as traditional guardians of these ecosystems through the maintenance of their cultures, spiritual beliefs and customary practices. This research respects the integrity, morality and spirituality of the culture, traditions and relationships of the Indigenous communities and aims to avoid the imposition of external conceptions and standards. We recognize that the Indigenous communities have the right to exclude and/or keep any information concerning their culture, traditions or spiritual beliefs confidential. Further, we acknowledge the traditional rights of Indigenous peoples to control the way the information they provide is used and accessed. As such we have included space in the questionnaire for you to provide us with any comments that you would like us to consider when we handle and process your responses.

If you would like to participate please access the link for the survey here:  
[https://uwaterloo.ca1.qualtrics.com/jfe/form/SV\\_eb61CZtDL7z9Uk6](https://uwaterloo.ca1.qualtrics.com/jfe/form/SV_eb61CZtDL7z9Uk6)

If you have any questions about participation in this research study or the Youth and Innovation Project, please feel free to contact me by phone or email as listed below. Thank you for your assistance with this research study.

Sincerely,

Ilona Dougherty  
Managing Director  
Youth & Innovation Project  
University of Waterloo  
[ilona.dougherty@uwaterloo.ca](mailto:ilona.dougherty@uwaterloo.ca)  
(514)951-1831  
<https://uwaterloo.ca/youth-and-innovation/>