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Finding Solutions for the *Trent Vegetable Gardens*: A Literature
Review and Qualitative Interviews To Find Education and Outreach
Strategies On Campus Gardens

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Finding Solutions for the *Trent Vegetable Gardens*: A Literature Review and Qualitative Interviews To Find Education and Outreach Strategies On Campus Gardens

Students on campuses all over North America are becoming increasingly interested in knowing where and how their food is sourced. Trends show that students no longer want to take a passive role in food sourcing (Sayre & Clark, 2011). Instead, students are actively pushing for experiential learning in field, rooftop and community gardens.

This trend can be attributed to a multitude of factors. Firstly, it has its roots in the resistance around our current dominant industrial food system. In a time period where popular culture is presenting novels such as Michael Pollan's *The Omnivore Dilemma* as well as other texts and documentaries, interests and critical thinking around food are growing (Sayre & Clark, 2011). Thus, students, professors and faculty are responding to these trends. Contributing to this is the educational environment found in universities. Economists Iris Vermeir and Wim Verbeke, state that those people with "high involvement have more positive attitudes and are more willing to purchase sustainable products" (2006). As institutions provide themselves as spaces for critical thought and engagement, students become directly involved in these lifestyle changes.

Despite these trends, the campus garden movement is relatively new in North America. In the 2011 collection of essays called *Fields of Learning: The Student Farm Movement In North America*, editors Laura Sayre and Sean Clark describe the student farm movement as rapidly expanding. In this text, it is stated that although fifteen to twenty years ago the campus garden movement was relatively unheard of, student demands and awareness are increasingly driving sustainable campus food system changes (2011). In addition, the 2011 College Sustainability Report Card noted that 70 percent of campuses across Canada and the United States have incorporated either community gardens or farms (2011). This number continues to grow.

An integral part of these campus gardens are the ways in which they contribute to the overall learning experience at universities. In Peggy F. Bartlett's article titled *Campus Sustainable Food Projects: Critique and Engagement* she states that "campus sustainable food projects can build a common language and political capacity" (2011).). In saying this,

everyone has to consume food and become connected through the act of eating. This creates critical and engaging environments around campus food systems. This can provide an ideal environment for educational purposes. An example of this is the *Trent Vegetable Gardens* in Peterborough, Ontario who provide educational programming for classrooms, students and community members.

However, there can be barriers to creating a successful experiential learning environment. It is often a struggle for gardens to create inclusive educational programming. Another difficulty is communication and outreach to encourage stakeholder engagement. To better understand the approaches for education and outreach on campus gardens, it is necessary to see what kinds of programming are currently being implemented. This paper will discuss a literature review and interviews with other campus gardens to outline some of the funding, education and outreach strategies utilized by other campuses gardens.

Host Organization

The Trent Vegetable Gardens are a collective of rooftop, field and community gardens on Trent Universities Symons Campus in Peterborough, Ontario. . The TVG's present mission statement is to:

“practice small scale sustainable agriculture as a way to reconnect people to the source of their food. By engaging students and community members in experiential learning and knowledge creation we participate in food sovereignty.” (Trent Vegetable Gardens, n.d.)

It has also acted to catalyze community local food awareness and movements on Trent University's campus. A large part of these accomplishments can be attributed to the educational aspect of the gardens as well as its role in contributing to the education and awareness on campus around sustainable and ecological agriculture practices.

The gardens currently utilize a variety of education and outreach strategies. This includes a variety of educational workshops, research opportunities, volunteering and student worker opportunities. Currently, the main outreach strategies are social media platforms such as Facebook and Twitter, emails and food donations. Social media platforms are the most utilized as they provide a quick, accessible and relevant source of

advertisement. In addition to this, the TVG's connection to The Seasoned Spoon Café, has provided an opportunity for a much deeper connection to the campus community.

The Issue

To expand the Trent Vegetable Gardens (TVG) impact on campus sustainability, education and outreach is necessary. The gardens aim to provide a place “where a community of empowered people are engaged in a resilient, sustainable food system.” (Trent Vegetable Gardens, n.d.). Although the organization has contributed to the education around sustainable food practices within the community, there still continues to be many barriers to creating consistent and effective educational programming and outreach strategies.

These barriers can be found in a multitude of forms. Currently the issue is that the gardens are finding inconsistencies in the participation of both Trent University and community members in their programs. They are finding it difficult to draw audience members during the spring and summer months when the campus is less active. In addition, The TVG's current funding source includes a student levy of approximately \$2.70 from each full-time undergraduate student (recently this has been raised an extra \$2). They also rely on funding from the Trent Work Study Program to pay for their student workers. Some grant money is also received depending on the year. This funding does not leave a sufficient amount of money for education and outreach staff. Without a sufficient, consistent form of funding and the staff needed to run workshops it creates difficulties in creating a successful program.

Although funding is an issue, there are still many lessons that can be taken from the kinds of education and outreach programming at other campus gardens. In many cases, experiential learning can be inexpensive, yet effective as a learning strategy. This research project will aim to answer the following question:

- *What types of funding, education and outreach programming are similar garden projects or organizations employing?*
- *What challenges and successes with education and outreach have campus gardens experienced?*

- *What kind of outreach strategies do these gardens use to draw participants into their gardens and garden programming?*
- *What are some of the successful strategies at other post-secondary gardens that can be applied to the TVG?*
- *Have other gardens developed any tools for evaluating their education and outreach programming?*

The lessons learned by answering these questions through a literature review and interviews will contribute to understanding what forms of education and outreach are being utilized and work well at other campus gardens.

Methodology

Literature Review

For the literature review, a sample of 32 Canadian universities and their campus gardens were researched. The list of university gardens was acquired through the Meal Exchange Network's Campus Garden Working Group. These gardens were comprised of organizations that stretched from the Maritimes to British Columbia. Through this, a wide variety of gardens were researched for their funding, education and outreach strategies as seen in Appendix A. Research was primarily collected through campus websites, garden websites and a variety of social media platforms. These 32 universities were then analyzed for their funding, education and outreach programs.

Interviews

For this section of the project, the managers and coordinators of four different gardens were chosen for interviewing purposes. A full list of the questions asked is displayed at the end of this document in Appendix B. The questions focused on themes around funding, education and outreach strategies. These questions only provide an outline of what was asked, as interviews were only semi-standardized in style. Interviews were approximately 20 to 30 minutes in length and were conducted both in person and through telephone conversations. The gardens chosen for interviews were the Guelph Centre for Urban Organic Farming at Guelph University (GCUOF), Rye's HomeGrown at Ryerson University, McGill University's Macdonald Student-Run Ecological Garden (MSEG)

and The Acadia Community Farm at Acadia University. For more information about each organizations location, funding, education and outreach strategies see Appendix A.

Results/ Analysis

Literature Review

Campus gardens have not only acted to provide a local food source to the community, they are also highly influential to the learning environments and experiences at universities. Based on the methodology, the following results were compiled. This section will present these findings and provide a discussion and analysis of the strategies utilized at other campus gardens.

Campus Gardens Funding Sources

Table 1: Funding strategies overview of campus gardens

Funding Methods	Number of Gardens	Percentage (%)
Unknown	11	34
Donations/University Groups and Programs	8	25
Grants	5	16
Internal Funds	5	16
Market/Produce Sales/CSA/Community Plot Rentals	5	16
Student Levy	4	13
Campus Food Provider	3	9
Student Work Program/Canada Summer Jobs	3	9
Seed/ Investment money	1	3
Community Events	1	3
Research	1	3
Private Funding	1	3
Other	1	3

Campus gardens are funded using a variety of different strategies. By collecting data using online resources, there were many main themes in the funding sources. This is represented in Table 1. *It should also be noted that none of these funding strategies are mutually exclusive. All of the gardens researched utilize multiple forms of funding to acquire the resources needed to run their gardens.* This will be discussed further in greater detail.

In regards to this, the sources of funding for gardens were not always stated on websites or social media. This is why 34 percent of the funding methods were unknown for

gardens. This could be because trends show that gardens rely on multiple sources of funding or that funding sources could also change from year to year.

Donations

The most popular funding methods used by gardens were donations and funding from various university groups and programs. In most cases, clubs or programming related to student societies, unions and sustainability were most likely to provide money to campus gardens. These groups provide a majority of the funding as they become representative of the changes students want to see on their campus. From this, we can infer that if students advocated for more sustainable food choices and sources of agricultural education, university groups and student unions provide the funding needed to create that change.

Internal and External Funding

However, campus gardens are often not incorporated into the universities funding themselves. Instead, data shows that they are primarily funded from outside sources. These sources are those that are not providing funding directly supplied by the university. In some cases however, the institution provides some funding. Table 1 shows that approximately 16 percent of the sample gardens were provided with some sort of funding from internal sources. In this context, this means funding directly from the university itself.

Grants

In addition to internal funds from the university, a common funding strategy includes those funds retrieved through grants. In many cases, campus gardens are never exclusively funded through internal funding but grants act as an additional to this resource. This could be because the internal funding provided does not offer the sufficient funds needed to run the gardens. In reality, a consistent lump sum of funds from the institutions themselves would create a more stable environment to create consistent education and outreach programming.

Innovative Funding Sources

There are also multiple kinds of funding strategies employed by gardens that are highly innovative and creative. These kinds of funding were noticeable as they created ways in which gardens could self-sustain their own funding. For instance, many gardens employed Community Shared Agriculture (CSA) programs (Rye's Homegrown, UBC Farm and Mount Allison Farm) and farmer's markets stands or vegetable sales (City Farm School, McGill Student-run Ecological Garden) as a way to create sustainable sources of funding. Another creative source of funding is the sales from community events. Through the selling of produce or community events profits can be directly put into campus garden inputs such as education and outreach programming.

For instance, as found in the Appendix A, the Guelph Centre for Urban Organic Farming's Garden2Table event allows students to teach children about local food through cooking and gardening demonstrations (2016). This creates funding for the garden that also becomes embedded in the education and outreach strategy itself. Other examples of this kind of funding are through seed sales, community and harvest feasts and various other garden events.

Campus Gardens Education Strategies

Volunteerism

The research shows that campus gardens act as creative spaces that offer a diversity of educational programming. Volunteering was by far the most popular form of education programming. In fact, volunteers act as a large component of any campus garden structure. This is due to the fact that stakeholder engagement is necessary to all campus garden educational programs.

Mandate-Based Education Programming

It is important to remember that gardens employ a variety of education strategies that vary dependent on the organizations initial uses and mandate. For instance, while all gardens relied heavily on volunteers, institutions that primarily focused on the community garden model employed volunteering as their primary education strategy. Other gardens were primarily used for university programming. As seen in Appendix A, the McGill-

MacDonald campus' McGill Student-run Ecological Garden (MSEG) provides a variety of paid and unpaid internships, work-share employee positions and placements for a variety of different programs. These programs provide students with an intensive study of ecological agriculture and provide them with credit.

Table 2: Educational programming found on campus gardens

Educational Programming	Number of Gardens	Percentage
Volunteering	26	81
Workshops	18	56
Work parties/Harvest festivals	10	31
Internships/Student Workers	9	28
Children's Programming/School Groups	6	19
Garden Tours	5	16
Classroom/Curriculum Based/Placement/Research	5	16
Unknown	4	13
Community Shared Agriculture/Veggie Boxes	4	13
Campus Café/ Dining Connection	4	13
Other	2	6

Educational Workshops

Another popular educational strategy is the use of workshops. As shown in Table 2, 56 percent of all gardens sampled utilized this as a tool. Popular workshop topics include ecological gardening practices including seed starting, soil amendments, integrated farming practices as well as canning workshops. Workshop ideas were widespread. The topics chosen are demonstrative of the knowledge of garden coordinators. Popularity of educational workshops could also be representative of the university environment as they provide an accessible and effective form of education. However, it must be noted that this number is subject to change because not all gardens provided a comprehensive review of their programming on websites and social media. If anything, more gardens utilize this educational method, as it is adaptable to various garden types.

Community Shared Agriculture

There were also many other innovative forms of education programming utilized on campus gardens. An example of this includes the use of Community Shared Agriculture

(CSA). Many gardens are now employing this as an option to both supply funding to their organization and provide education. For instance, Rye's Homegrown of Ryerson University uses various different forms of this program. They have options to pay a share into the CSA program or there is an opportunity to participate in a work-share program. Both of these options provide varying degrees of education. Arguably, the work-share contributes more to the overall education around ecological gardening and local food as well as providing assistance in running the gardens themselves. This could be a potential option for the TVG to explore.

Children's Programming

Another trend in the data is the many educational programs that are being implemented around youth and children. Approximately 19 percent of gardens studied incorporated children's education into their organizations programs. Many examples can be found in Appendix A. For instance, the University of Northern British Columbia provides daycare plots (2013). Concordia University's City Farm School also holds a partnership with Before and After School Enrichment (BASE) to provide children with knowledge around growing their own food (2016). As stated above, the GCUOF hosts the Garden2Table program as well as many school groups to teach children about organic farming practices and local food. These programs not only provide funding for these gardens but they also provide educational program and outreach.

Other Education Strategies

The *Other* section of Table 2 provides an area where alternative forms of education can be included. An example of an innovative form of educational programming can be seen at Brock University's Development Integrate Grow (D.I.G.) Brock Community Garden. As one of their educational events, they created a gARTen show. This acts as both an education and outreach strategy and it provides a community event that contributes to the education around the gardens and art (2015).

Campus Gardens Outreach Strategies

Internet and Social Media

A variety of different outreach strategies are utilized by campus gardens. The diversity of strategies being utilized by campuses shows the innovation and passion of the coordinators and volunteers. Most popular is the use of both social media platforms and websites. As shown in Table 3, approximately 59 percent of the gardens researched use social media and 56 percent use websites as an outreach strategy. In addition, newsletters and emails are used approximately 13 percent of the time. These methods work well as they reach a wide audience and are also a relatively quick form of garden updates

Table 3: Outreach strategies found on campus gardens

Outreach Strategy	Number of Gardens	Percentage (%)
Social Media	19	59
Website	18	56
Community Events	9	28
Market/Produce Stand/Sales	8	25
Donations/Funding	6	19
Newsletter	4	13
Meetings	3	9
Unknown	2	6
Tabling	1	3
Posters/Flyers/Pamphlets	1	3
Other	1	3

Creative and Interactive Outreach

While Internet outreach strategies are most popular, there continues to be many forms of creative outreach that are worth noting. Posters and tabling were seen to be the least popular form of outreach. This could be because they are time consuming. The data also shows many interactive forms of outreach that have been used for marketing and educational purposes. For instance, McGill MacDonald campus employs “you pick days” where community members and students can pick their own produce from the gardens and take it home (2016). The University of Alberta’s Green and Gold Community Garden hosts market hours twice weekly during the growing season. All proceeds from this then go to the Tubahumurize Association in Rwanda (2016). With regard to marketing, gardens have been promoting a logo design challenge. The TVG could benefit from this, as they do not currently have a consistent logo.

Sales

Another effective outreach strategy utilized by many gardens is through the sales of their plants and vegetables. Approximately 25 percent of sample campus gardens utilize a farmers market or produce stand to sell their vegetables. This provides a more accessible connection for community members to the campus gardens. The GCUOF hosts a yearly community plant sale (Scroggins, 2016). These kinds of outreach strategies also have the ability to bring in funding to the gardens.

Donations

Diverse outreach strategies often come in the form of the donations. While it is a simple strategy, providing volunteers with vegetables offers an incentive to participate in the organizations work-parties or volunteer days. Many gardens also grow food for local food banks and charities. At the First Nations University of Canada's Shared Garden, gardeners are asked to share 20 percent of their yield with the university students. Another example is at Brock University's D.I.G. Brock Community Garden where the organization hosts a seed giveaway (2015). A more involved version of this are the ways in which gardens fund or participate in student projects. The garden is promoted by allowing students to do research.

Community Events

Community events also provide a great source of marketing and outreach. For instance, the University of Calgary's community garden hosts Iron Chef Competitions. Teams of community members are given one hour to create a dish using garden produce. This occurs once a month when the garden can provide produce. The benefit is that community members are actively picking the produce for their dishes. (UCalgary Community Garden, 2016) This creates a fun, interactive and competitive source of outreach for the gardens. Other community events found in the data include harvest events, feasts, meet and greets and garden tours. All of these details can be found in Appendix A.

Interviews

Funding Strategies

This section of the report considers funding because it is a major resource and concern for campus gardens. Gardens were asked how they received funding. In addition, qualitative information was also collected to find the issues each garden found with the way in which they retrieved funding to support their programming. This section will outline some of the struggles and lessons garden coordinators found with funding. Here are the main themes:

Funding Inconsistencies

Inconsistencies in funding create a lot of stress for gardens and their programming. Without a reliable funding source gardens have difficulties creating programming that is consistent. All participants felt that inconsistencies in funding created challenges for their gardens. The Acadia Community Farm's director discussed this issue:

“It's challenging every year to find funds to support the farm... It is challenging to rely on largely external funding every year. Summer job grants through Service Canada or co-op programs are not guaranteed, so every year is a new year and we have to piece together our budget from a variety of different sources.” (Noiles, 2016).

In many cases, these issues did not allow the resources for gardens to fund separate staff for education and outreach. The exception was Rye's HomeGrown. It was also the only garden to receive some dedicated funding from the university itself.

Insufficient Funding

One of the main issues for gardens was that in addition to funding inconsistencies, there was also a need for more of it. The manager of the GCUOF discussed one of the many struggles of funding as, “There's not enough [funding], for starters. Anybody that grows food would answer that.” She also stated that the primary issue with keeping the educational programming alive is the funding of staff to run workshops. She described the necessity to have people to coordinate volunteers, provide things such as potable water and other things that keep the farm running (Scroggins, 2016). While none of these garden's goals are to make a profit, the MSEG and Rye's HomeGrown staff discussed that all of the resources they are receiving have to go back into their existing programming (Pham and McCormick, 2016). This does not leave room for the creation of new programs. Education

and outreach programming relies on a consistently run garden and funding to provide for the inputs to the garden. This includes the funding for staff to run and create the programming. With more reliable funding, gardens would have the chance to grow their community impact.

University Funding

All of the gardens provided some degree of information surrounding their needs for funding. While Rye's HomeGrown receives a small amount of funding from the university, they still have to rely on grant money. The outreach coordinator discussed the struggle of relying on grant money:

“Every year we have to apply again and actively seek out all of the grants. We never really know how much we are getting funded by the university.” (Pham, 2016)

All gardens received very little to no funding from the university itself. Despite this, gardens provide educational programming to classrooms that are paid for through the university. The MSEG provides internship opportunities for students but they do not receive any of the funding from tuition fees (McCormick, 2016).

Funding Self-Sufficiency

Participants also discussed the possibility of funding self-sufficiency. Rye's HomeGrown, Outreach Coordinator stated that, “In a perfect world, we would have enough funding to be able to sustain ourselves” (Pham, 2016). This represents the views of many gardens. The MSEG is close to being economically self-sufficient through their market sales and Community Shared Agriculture (CSA) programming. This allows for the gardens to have much more control over how much funding they are receiving and where it is being spent.

Education and Outreach Programming

This section will outline some of the themes in the participant's responses in regards to education and outreach. These will be discussed in concerns to the challenges and

successes that gardens have faced with their programming. In addition to this, there will be a discussion around the ways in which campus gardens assess their programs.

Challenges with Programming Seasonality

In populations where universities are not as active in the spring and summer months, community engagement becomes a real difficulty. Due to the nature of food production, many participants noted seasonal based programming as a challenge. The Acadia Community Farm director stated that it is “a challenge engaging students during the spring and summer months so we have really tried to shift our production and programming into the fall as much as possible.” (Noiles, 2016). By shifting their programming and production they can better engage the community when it is most present.

Infrastructure

Another difficulty of garden coordinators discussed was infrastructure. The GCUOG manager discussed how they simply do not have the infrastructure to support workshops:

“To meet health and safety standards the farm needs proper bathroom and washing area's. We started in the bush. We have no amenities. There's no running water, no electricity. All of this has been quite a challenge when you want to teach and have hundreds of people come through” (Scroggins, 2016).

While they provide many other educational opportunities through their gardens, these factors create challenges for the gardens to have workshops running.

Accessibility

Relating to this is the physical accessibility associated with each of the farms. When asked if their gardens were accessible, all of the participants noted that the nature of farming- rough surfaces, heavy lifting, increment weather, bending over, and kneeling- does not always allow for an accessible environment. This creates barriers to inclusion. Options to address this issue will be discussed in the next section.

Adaptability

Another consistent challenge discussed by participants was the struggle associated with dealing with the dynamic environment of a school. Participants discussed the changing environment in concern to funding and flux in school populations and interests. This makes the garden's success very dependent on outside factors and difficult to predict and produce consistent programming.

Successful Education Strategies

Educational Programming Variety

All gardens designed their educational programming so that it could be applicable to a spectrum of learning capabilities and desires. At Rye's HomeGrown, the programming offered varying degrees of education. For instance, they offer volunteer programs, workshops as well as a community shared agriculture (CSA) program. The CSA program comes in two forms. The first is that the participants are able to pay for a food box for 25 dollars a week during the growing season. The second is a work-share CSA and allows people to dedicate three hours a week to work in the garden. The Outreach Coordinator thought that this program was particularly successful. She said that participants, at "the end of the day, get a basket of food that they helped grow themselves." (Pham, 2016). This program provides a chance for community members and students to decide their own involvement level. Many gardens also combat accessibility challenges by promoting a variety of different workshops and educational programs for different skill levels.

Financial Accessibility

With regards to financial accessibility, all gardens discussed how they tried to make pricing as accessible as possible. The majority of the workshops and events utilized were free to the community. For those that did charge a fee, gardens provided either sliding scale pricing for their events or considered different pricing for those in need.

Children's Programming

Another popular educational strategy was the implementation of children's programming. The Garden2Table has offered a successful form of educational programming for the GCUOF. The manager of the farm states that this program allows children in grades 4 and 7 to "come in the spring and plant, and then are able to harvest it in the fall. They go through the process of working on the farm for a day" (Scroggins, 2016). After this, everyone cooks and eats together. By partnering with elementary schools annually, gardens are able to design a consistent program.

Course and Student Programming

Another successful educational strategy discussed by many gardens is programming through university courses. The MSEG provides both programming tied to curriculum and internships. The coordinator discussed the internship program as most successful because it provides students with an intensive look at all aspects of ecological agriculture. The Acadia Community Farm director stated that they "develop a lot of programming based on what learning outcomes are in the classroom, depending on the different courses and disciplines" (Noiles, 2016). This allows for gardens to create partnerships with the schools to maintain consistent programming.

Program Development

Gardens primarily developed programming through coordinators or staff. In addition, many of the gardens discussed the importance of everyone contributing in the development of programs. The GCUOF manager stated that programming is created "through all of us. Anybody that has worked, volunteered or studied here, university professors and faculty. We develop the programs as we go. It is a work in progress" (Scroggins, 2016). In addition to this, there was a focus on program development through knowledge passed down from previous coordinators.

Successful Outreach Strategies

Word of Mouth

As stated in the literature review, social media provides the most common tool for marketing and outreach. However, word of mouth is also a successful tool that is undocumented. Garden coordinators frequently discussed that a lot of outreach is through both social media and word of mouth. Rye's HomeGrown outreach coordinator stated that they "try to give people the most informed knowledge so they can pass it on to other people so that more come in." (Pham, 2016). While this is an underestimated tool, networking is used by gardens to create awareness around their programming.

Market Stands

Market stands create a great space for outreach for organizations. Both Rye's HomeGrown and the GCUOG utilized this method as a way to educate people around campus food production and their organizations programs. The GCUOF manager stated that, "we can talk a lot about the different forms of marketing, but it is the selling of our food that works the best." (Scroggins, 2016). Through the act of buying and eating local food, many gardens said that community members can taste and feel the difference and that draws them to become involved in the organization.

Compensation

Many of the gardens discussed the importance of compensation. Monetary compensation is not often possible but at the end of an educational session, or a growing season, there is often much produce left over. Providing volunteers with the opportunity to take home vegetables or perhaps seeds from the garden can be a greatly appreciated form of compensation. The GCUOF manager also discussed the importance of providing credit to students for their work in the gardens during courses.

Demographic/Audience Targeting

Most gardens did not target specific audiences. Instead, they preferred to provide programming that is accessible to a variety of different demographics. However, there were some interesting strategies used to create accessible educational programs. For example, Rye's HomeGrown developed a night shift volunteer time and will be implementing a Sunday shift so that staff and people with full time jobs can still participate (Pham, 2016).

The Acadia Community Farm director discussed the outreach strategies as dependent on the kind of workshop. Popular workshops such as canning did not need as much marketing. For more specialized workshops, Acadia utilized a variety of marketing strategies such as social media, websites and posterings. This was also dependent on the time of year as student population decreases drastically in the spring and summer months (Noiles, 2016).

At the GCUOF, there are a lot of elderly people supporting the gardens. This is especially noticed at the student-run farmers markets during the fall. The coordinator stated that these people “know the taste of good food and they are the ones that can support us” (Scroggins, 2016). She discussed the need to provide proper parking so that the market stand is accessible.

Timing

In addition to target audiences, the Acadia Community Farm director discussed the importance of timing. The director stated that,

“Timing is really important, as well as having programs that will appeal to students when they are here on campus. In the summer we do more educational programming that will appeal to the broader community” (Noiles, 2016).

With regard to their programming, they stated that they would focus their energy on marketing to community members in the spring and summer months. By realizing how time affects the audiences, there can be more focus on the kinds of marketing strategies used.

Program Assessment

Participants were asked how they assessed the successes of their educational programs. Rye’s HomeGrown outreach coordinator stated that, “in order to create a successful program you have to be able to sit down and look critically at the program and what worked and what didn’t work.” (Pham, 2016). By creating ways to gain feedback from program participants you can tweak the program so that it can be more successful the next time the program is offered.

There are a variety of different ways that gardens receive program feedback. This is dependent on the garden's educational focus. The most common tool was talking to people during workshops and analyzing success through participant turnout. Programs that focused more on partnerships with classes relied primarily on class evaluations and feedback from professors or teachers. There was also the use of board and staff meetings to discuss the success of programs as a group. Other gardens utilized questionnaires and surveys that would be filled out at the end of the program.

Many gardens not only utilized assessment at the end of their programming but also created workshops from preliminary discussions with their members. For instance, The Acadia Community Farm created workshops by reviewing community plot holder's interests at the beginning of the season. This helped to better ensure participation in events.

Discussion/ Conclusions

Research Limitations

However, because of the nature of the research, some limitations in the data should be noted. In regards to the literature review, dependent on the kind of programming, the type of audience for programming was not accessible. Many of the websites and social media representations of each campus garden provided information for previous programs but were not currently active. This could have to do with the fact that research for this project was done during the off-season for many gardens.

In addition, the Campus Garden Working Group's list of campus gardens does not provide a complete list of all campus gardens within Canada. While it includes the majority of university gardens there are still some missing. It also does not include campus gardens at community colleges in Canada. This could create limitations in understanding the full breadth of programs currently in existence.

While during the interviews, there was an attempt to create a subjective understanding of these garden's education and outreach practices the participant sample size was relatively small. By utilizing a larger sample size there could be a better understanding of the diversity of programs. In addition, some of the goals presented by the gardens can be seen as incompatible to one another. Primarily this is in the form of funding types. This is due to the fact that each garden works within the confines of separate

institutions, agreements and goals. This can show that individual gardens can provide important lessons that can be applied to the TVG but there needs to be a specific application that applies to their own environment and mandate.

For future studies, the TVG should focus attention and analysis on it's own programming and try to create programs that reflect these issues. Due to the fact that funding is necessary to the success of gardens, a deeper study around this should be taken. For future research, some of the questions around this topic could be -What are some of the successes with funding you have received? How were these achieved? These areas could provide a better understanding of how inputs to the gardens affect their successes with education and outreach.

Recommendations

Although there are some limitations to the research, utilizing information found through social media, websites and interviews still provides a chance to compile enough information to see trends in the types of outreach and educational programming available. From these trends, many lessons can be taken away. As stated above, campus gardens implement educational strategies that are dependent on the context of their gardens. Just as the examples of McGill's Macdonald Campus and many community gardens, a strategy that could be utilized by the TVG would be to create educational programming that works with their current audiences needs in regards to their mandate.

Some lessons that should be taken away from the literature are:

- 1) use the resources available (i.e. facilities, audience, products),
- 2) use a mandate to design programs and
- 3) listen to what garden users in the community want.

There are also many lessons that can be taken away from the interviews with the campus garden coordinators. Each garden provides a different set of circumstances in which they create their education and outreach strategies. However, this provides a better understanding of what works and what does not. Here is a list of lessons that can be taken away from some the examples presented by the interviewees:

- Target audiences based on the time of year and community availability.

- Provide a variety of educational programs and prices for different skill levels and audience types to create accessible programming.
- Provide some compensation or take-away to volunteers or from event and workshops.
- Start with your partnerships and your existing population and create workshops that appeal to them.
- Create partnerships with community members, schools and the institution.

When asking each garden staff for further advice, there was great feedback. The GCUOF's farm manager stated to "keep networking, building capacity and sharing knowledge."(February, 2016). Additional quotes that were of interest can be found at the end of this paper. By utilizing lessons from the literature and interviews, strategies to produce successful programs can be more easily achieved.

Appendix A

Working Inventory of Campus Gardens Funding, Education and Outreach Strategies In Canada

This inventory represents those gardens within the Meal Exchange Network's, Campus Garden Working Group list of gardens. Information was retrieved utilizing participation from those members in the Meal Exchange closed Facebook group, social media platforms as well as garden and campus websites. Information retrieved from those gardens that did not fill out their section may not be up to date, as some gardens were not operating during the time that data was compiled. Through this research, many other campus gardens were found. While this chart does not provide information for all campus gardens in Canada it represents a large portion of the university campus gardens active.

Institution	City/ Province	Organization Name	Funding	Education Strategies	Outreach Strategies	References
Maritimes						
Acadia University	Wolfville, NS	Acadia Farm, Community Farm, and Community Garden	Donations, grants, campus food services	Educational workshops, work parties, volunteering	Social Media, Website, events during planting season, potlucks	(The Acadia Community Farm, 2011) (Noiles, 2016)
Dalhousie	Halifax, NS	Dalhousie Community Garden	<i>Originally funded by start-up grant from Sustainability Office of the Student Union. Now funded by students levy 3 semesters a year, 50</i>	<i>Work parties, educational workshops (canning, indoor gardening)</i>	<i>Social media, open meetings, open events during planting seasons.</i>	<i>Meal Exchange Network</i>

			<i>cents per full time student.</i>			
Dalhousie (Agricultural Campus)	Truro, NS	Chef's Garden	<i>Funded by Chartwells - dining company on campus</i>	<i>Campus dining connection, a "living classroom", educational programming</i>	<i>Social media, website</i>	<i>Meal exchange Network</i>
Mount St Vincent University	Halifax, NS	The Mount Community Garden	<i>The garden is generally funded by internal funds and the Student Work Program (a school program that provided students with financial need to work on campus, for the wages for the garden coordinator). This program was discontinued last summer, and internal funding was granted for both the garden and the coordinator.</i>	<i>The coordinator is responsible for coordinating workshop that held by plot holders at the garden, or coordinating with Meal Exchange MSVU to co-hold workshops (farming panel, seed biodiversity)</i>	<i>Social Media, Posters, Bookmarks, Website, events during the time when a coordinator is employed, participate in events held by the school (HealthExpo, Social Responsibility Working Group, Orientation week)</i>	<i>Meal Exchange Network</i>
Mount Allison University	Sackville, NB	Mt. A Farm	<i>Funded by campus dining services</i>	<i>Volunteer opportunities, "Veggie boxes"- Community Shared Agriculture (CSA) program</i>	<i>Social media (twitter), website, produce stand at the Sackville Farmers Market</i>	<i>(Mount Allison Farm Twitter, 2015) (Mount Allison Farm Facebook, 2015)</i> http://www.mtafarm.net

						http://mtafarm.blogspot.ca
Quebec						
Concordia University (Loyola Campus)	Montreal, QC	City Farm School	<i>Mainly self-financing. We raise funds fees from our students for the education they receive and through the sale of plants and veggies. We have received Funds and been sponsored by many Concordia University groups and programs: Concordia Greenhouse Project, Concordia Council on Student Life, Sustainable Action Fund, Concordia University Vice President of Services. We have also received funding from other funding bodies including Equiterre, Aqperre, Fulbright Canada Eco-leadership program, TD friends</i>	Volunteer opportunities, three different Full season internship programs (market gardener internship, medicinal herbs internship, school yard gardener internship), educational workshops workshop series (Ecological Beekeeping, SPIN farming, Micro-greens) Conferences (Jean Martin Fortier, Curtis Stone)	<i>Social media (website, Facebook), Farm market stand, Harvest Party, annual seedling sale</i>	<i>Meal Exchange Network</i>

			<i>of the Environment and the Fondation du Grand Montreal</i>			
McGill- MacDonald Campus	Ste-Anne de Bellevue, QC	McGill Student-run Ecological Garden (MSEG)	<i>Funded by McGill's Sustainability Project's Fund in pilot years; now operates self-sufficiently through market sales and 75 member CSA program + yearly donation from Dean of Agriculture Science</i>	<i>Employs 6-7 full-time student interns each season; hosts on-farm volunteers, 'work-share' employees; workshops; practicum placement for dietetics students, and collaborates with Farm2School program</i>	<i>Social media, website, events during season, 'you-pick' days, collaborates with other student-run local food projects to spread awareness, participates in student-run farmers' market on campus in summer/fall</i>	<i>Meal Exchange Network</i>
Bishops University	Lennoxville, QC	Bishop's University Community Garden	N/A	N/A	N/A	
Ontario						
Brock University	St. Catharines, ON	D.I.G. (Develop.Integrate.Grow) Brock Community Garden	N/A	volunteer opportunities (weekly gardening times open to public), educational workshops,, gARTen show (garden art show)	Social media (Facebook, Twitter, pages on websites), seed giveaways, Garden Opening ShinDIG (meet and greet, food, seed swap, gardening), farmers market	(Dig-Brock Community Garden, n.d.) (Brock Dig Facebook, 2016) (Dig

					stand	
University of Guelph	Guelph, ON	Guelph Centre for Urban Organic Farming	Garden2Table, Alumni (40 thousand a year), research, market sales, University Student Union	Embedded in curriculum courses, school groups, tours, volunteer programs, interns (spring, fall and summer)	Social media (Facebook, Twitter, Instagram), website, farmers market stand, community plant sale, promoted/ partnership with the Guelph Wellness Centre	(Scroggins, 2016), (Guelph Centre for Urban Organic Farming, n.d.)
Ryerson University	Toronto, ON	Ryes Home Grown	Funding from Ryerson University and grants, produce sales	Educational Workshops (Ecological gardening series), CSA both paid and work-share, volunteering, work parties/open houses	Social media driven (Facebook, Twitter, Instagram), website, Farmers markets, newsletters	(Pham, 2016)
University of Toronto	Toronto, ON	Multiple Projects: Hart House, Victoria Community Garden (Victoria University at U of T), Dig In! Demonstration Gardens & Food for all equity garden	Funding received through a multitude of school programs, groups and organizations	Volunteer opportunities, , incorporated into Hart House menus, served up by the Hot Yam! food collective and Harvest Noon	Social media, websites	(Dig In! UofT Campus Agriculture, 2015)
University of Toronto-Mississauga	Toronto, ON	McGrath Valley Garden	N/A	N/A	N/A	

McMaster University	Hamilton, ON	McMaster Teaching and Community Garden	Funded by grants: Scott's Miracle-Gro Grassroots Grant, McMaster Academic Science Fund, McMaster Student Life Enhancement Fund as well as one private donation	Educational workshops, garden festival, student internships, volunteer opportunities	Social media- Facebook, webpage	(McMaster Teaching & Community Garden, 2012).
Lakehead University	Thunder Bay, ON	Lakehead University Student Union Garden	N/A	Educational workshops, harvest party, volunteer opportunities	Social Media- Facebook, donation of proceeds from market stand go to food bank	(LUSU Gardens Facebook, 2016)
Trent University	Peterborough, ON	Trent Market Garden	<i>Student Levy, produce sales</i>	<i>Gardening workshops, garden tours,</i>	<i>Social media, newsletters, biweekly meetings, farmers stand</i>	<i>Meal Exchange Network</i>
Trent University	Peterborough, ON	Trent Vegetable Gardens	Student Levy, Trent Work Study Group, grants	Educational workshops, tours, volunteer opportunities, part of course curriculums, connection to campus cafe	Social media, website, food donations to Seasoned Spoon and Food Not Bombs, Tabling	(Bragg, 2016) http://trentgardens.org
University of Waterloo	Waterloo, ON	St. Paul's Community Garden and WPIRG Community Garden	+\$40K: <i>Faculty of Environment Endowment fund</i> \$500: <i>St. Paul's University College</i>	<i>Educational workshops, paid work opportunities</i> <i>- Unpaid volunteer opportunities</i> <i>- Connection to</i>	<i>Social media, website</i> <i>- Possible design challenge: logo/branding</i> <i>- Partnered with</i>	<i>Meal Exchange Network</i>

			<i>fund Plan to use these funds for first few years until we can generate enough revenue and come up with a self-sustaining business model through sales (market, workshops, seedlings, etc.)</i>	<i>campus cafeteria - Future: hoping to connect with profs about 'field' trips for courses - Future: hoping to create a network of gardens at elementary and high schools (we would mentor and provide the model)</i>	<i>a UW social start-up: The Edible Art Project - Future: hoping to create a network of gardens at elementary and high schools (we would mentor and provide the model)</i>	
University of Windsor	Windsor, ON	Community Garden Campus Project (CGCP)	N/A	Volunteer opportunities, student interns, work days with secondary schools,	Social media- Facebook, website, garden meetings, news letters	(University of Windsor, n.d.)
Prairies						
University of Manitoba	Winnipeg, MB	University of Manitoba Student Union Campus Garden	N/A	Educational workshops, volunteer opportunities, student coordinator job	Social media (Facebook, website), funds student projects, monthly meetings, emails, market stand, local feasts	(University of Manitoba Student Union, 2016),
University of Regina	Regina, SK	RPIRG Green Patch	Funding from Credit Canada, grants, some information missing	Student coordinator, educational workshops, volunteers	Website, harvest celebration, food donations to Carmichael	(Regina's Edible Campus, n.d.), (Regina Public Interest

				opportunities.	Outreach, food donations to volunteers,	Research Group, n.d.)
First Nations University of Canada	Regina, SK	First Nations University Shared Garden	N/A	Volunteer opportunities	Website, community gardeners share 20% of yield with the university students	(Regina's Edible Campus, n.d.)
University of Regina	Regina, SK	Le Potager (Institut Francais)	N/A	N/A	Website, faculty run gardens, food donations to Carmichael Outreach	(Regina's Edible Campus, n.d.)
University of Alberta	Edmonton, AB	Sustain SU Campus Community Garden	<i>Originally funded by Alberta Public Research Group (APIRG) and Student Extracurricular Activity Grant (SEA) by the Dean of Students. Now funded by Sustain SU's operating budget and APIRG</i>	<i>Educational workshops/sessions, volunteer opportunities, student garden assistant,</i>	<i>Social media (Facebook), website, newsletter</i>	<i>Meal Exchange Network</i>
University of Alberta	Edmonton, AB	Green and Gold Community Garden	Plants donated, other funding information not available	Community and volunteer driven	Social media (Facebook), website market hours twice weekly, all funds donated to Tubahumurize	(University of Alberta Students' Union, 2016), (Green & Gold Community Garden, 2016)

					Association in Rwanda	
University of Calgary	Calgary, AB	U of C Community Garden	N/A	volunteer opportunities, educational workshops,	Social media (website, Facebook), garden orientations, meet and greets, Iron Chef competitions	(UCalgary Community Garden, 2015), (University of Calgary, 2015)
British Columbia						
UBC	Vancouver, BC	UBC Farm	Private funding - Natures Path Foods, RBC, Real Estate Foundation of BC	Student research, guest lecturing for UBC, outdoor classroom activities, guided tours, Indigenous gardens and research, educational workshops, volunteering, CSA	Social media (Facebook, Twitter), website, student working group (Friends of the UBC Farm) Farmers markets	(Faculty of Land and Food Systems, n.d.), (ubcfarmingblog, 2013)
Okanagan College	Vernon, BC	Kalamalka Demonstration Garden and Community Farm	N/A	Volunteer opportunities	Social media (Facebook, Twitter, YouTube), website	(Okanagan College, n.d.)
University of Victoria	Victoria, BC	Uvic The Campus Community Garden	<i>Funded through student society, student fees, annual plot rentals</i>	<i>Weekly volunteer work party, monthly workshops, guided tour</i>	<i>Social media (Facebook), website, newsletter, events and</i>	<i>Meal Exchange Network</i>

					<i>workshops, tabling at Clubs Days</i>	
Simon Fraser University	Burnaby, BC	Sustainable SFU Learning Garden, Sustainable SFU Community Garden	N/A	Community engagement, used as an educational classroom, community garden volunteering opportunities	Pages on websites	(Simon Fraser University, 2013), (Shifting Grown, n.d.)
University of Northern BC	Prince George, BC	PGPIRG Sustainable Learning Garden	<i>PGPIRG funded through undergraduate student levy, Garden coordinators funded by Canada Summers jobs.</i>	<i>Work parties, class visits, daycare plot</i>	<i>Lunch time market stand, social media, posters, student newspaper, farmers markets</i>	<i>Meal Exchange Network</i>
Vancouver Island University	Nanaimo, BC	VIU Community Peace Garden	<i>Vancouver Island Students' Union (VIUSU) club funding</i>	<i>Work parties, workshops, volunteer opportunities</i>	<i>Public Facebook group, on-campus events (ex. club fairs)</i>	<i>Meal Exchange Network</i>
N/A= Not Available. Italicized text is information filled out by participants on the Meal Exchange Network closed Facebook group						

Appendix B

Additional Garden Coordinator Quotes

Here are some of the additional quotations not utilized but allow an interesting look into some of the outstanding quotes provided by the garden staff. Unfortunately, the McGill Campus Garden interview tape was partially corrupted but information from the interview was still used and paraphrased throughout this document. This Appendix will also include the interview questions at the bottom.

Additional Quotations

“Urban agriculture and being able to garden in the cities is a really great thing. To see the impact that it has and the interests that people have in it is really a lot of fun.” –Rye’s HomeGrown Outreach Coordinator, 2016

“Start with your captive audience. By asking our plot holders what their interests are, they are more likely to attend our events...Start with the people who are already engaged and build programs targeted to them and then broaden it from there.” -The Acadia Community Farm , 2016

“University support has been slow coming, though the farm is gaining momentum.”- The Guelph Centre for Urban Organic Agriculture, 2016

About the work-share community shared agriculture boxes: “ when the weather is really nice and people want to get outside. It’s a really enticing program because 3 hours isn’t a long time that you have to commit and in exchange you get a great basket of food. Every week you can come in and pick whatever you want.” – Rye’s HomeGrown Outreach Coordinator, 2016

“At the end of the day, the university really likes that [the garden] is here, but it hasn’t cost them a penny.” – The Guelph Centre for Urban Organic Agriculture, 2016

“In our small program, we have helped to increase knowledge and capacity around organic gardening, sustainable agriculture, permaculture and related topics such as food security. I think we’ve had an impact locally. People will look to us now for workshops.” -The Acadia Community Farm , 2016

“ I believe now that urban agriculture, food growing and sustainable living is becoming more popular and people are getting more interested in it. It’s becoming a lot easier to be able to talk about it because it’s something people are interested in.” –Rye’s HomeGrown Outreach Coordinator, 2016

“The farmers market is always a great place to do outreach because its right in the middle of campus and people, community members, students, staff just walk by and they’ll see” “a lot of people don’t actually know it’s grown on campus” –Rye’s HomeGrown Outreach Coordinator, 2016

Interview Questions

Education:

1. What education programs does your campus garden/farm offer? ? i.e. workshops, volunteer programs, courses?
2. (What do these programs provide the community with?)
3. Do you charge a fee for your programming?
4. How are your educational programs developed? Where do you get your ideas for educational programming?
5. Who is responsible for running this programming?
6. How are these programs funded? What are some of the ways that your organization receives funding in general?
7. Are there any difficulties or challenges with this kind of funding?
8. Which educational programs do you find have been the most successful?
9. What are some of the strategies you have found for creating successful workshops or programs?
10. What programs have you found least successful? Why do you think so?
11. Do you consider accessibility when you are developing your educational programs? If so, How? (With regard to entrance fees, or are your gardens physical accessible to everyone?)

Outreach:

12. What kind of outreach or marketing strategies do you utilize?
13. Of these, what strategies do you find most effective for getting people involved or engaged?
14. Do you target a specific audience, age group or community? What demographic most actively participates in your programming?

Overall:

15. Do you have staff specifically responsible for education and outreach program development? (I.e. do you have outreach staff ?).

16. Please list some of the challenges you have had with education and outreach strategies?
(Example: Funding, marketing, community involvement etc.)

17. How do you think your organizations education and outreach program have impacted this community?

18. Do you have any strategies for assessing your education and outreach programming?
(I.e. feedback, evaluation forms)

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