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An Inventory And Analysis Of Sustainable Food System Projects Implemented At Canadian Universities

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AN INVENTORY AND ANALYSIS OF SUSTAINABLE FOOD SYSTEM PROJECTS
IMPLEMENTED AT CANADIAN UNIVERSITIES

by

Ruvena Isobel Buslovich,
Bachelor in Environmental Studies with Honours, York University, 2009

A thesis

presented to Ryerson University
in partial fulfillment of the
requirements for the degree of
Master of Applied Science
in the Program of
Environmental Applied Science and Management
Toronto, Ontario, Canada, 2012

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Author's declaration

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Abstract

An inventory and analysis of sustainable food system projects implemented at Canadian universities

Ruvena Isobel Buslovich
Environmental Applied Science and Management, 2012
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The purpose of this project is to conduct an analysis of sustainable food system (SFS) projects implemented at Canadian universities. An inventory of SFS projects on Canadian university campuses was developed through a detailed content analysis of university websites. Gaps in the existing programs were explored through interviews with representatives from 40 of the 201 identified SFS projects. The interviews addressed project operations, definitions, motivations, approvals processes, challenges, lessons learned, project future, links to other projects, suggestions to other projects, and additional comments. These interviews found that even across different SFS project categories, there are strong common lessons and suggestions that can be applied to other existing or new projects, such as channeling passion into starting projects despite the obstacles faced, and building support networks. These results will help other SFS projects in their quest to address the environmental, social, and economic challenges faced by the parts of the food system: production, processing, access, distribution, consumption, and waste management.

Acknowledgements

This thesis would not exist without all those who participated in this study; I am immensely appreciative of the time and information shared by all interviewees. I would also like to thank my thesis supervisor, Dr. Cory Searcy, for his constant guidance over the past two years, and especially for his support of my research choices.

Dedication

This thesis is dedicated to all SFS projects: past, present, and future. Taking on an issue that affects all humans beings, one step at a time, is no small feat.

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List of Abbreviations

AUCC – Association of Universities and Colleges of Canada

AASHE – Association for the advancement of sustainability in higher education

GMO – Genetically modified organism

REB – Research Ethics Board

SD – Sustainable development

SFS – Sustainable food system

UBC – University of British Columbia

UN – United Nations

U of T – University of Toronto

WCED - World Commission on Environment and Development

1. Introduction

1.1 Overview

This thesis inventories and analyzes sustainable food system (SFS) projects on Canadian university campuses. A literature review was conducted to determine what each campus was doing to address food issues, and it was discovered that all the information was fairly disjointed and inconsistent. Some schools had numerous peer-reviewed papers detailing some of their projects, others simply had detailed websites or press releases, and others had little more than a brief mention of their projects in various parts of their websites or other documents. For anyone attempting to create or refine a project at their own university, this makes the process more difficult as gathering examples and lessons learned elsewhere may be somewhat time consuming, and getting in contact with study authors or project organizers can require a lot of persistence and schedule coordination that may not be available to either party involved.

Focusing on the motivations, challenges, and suggestions of universities with SFS projects is the main aim of this research. Exploring why universities should and are undertaking these activities in general, the motivations for specific projects, addressing challenges faced by organizers, and looking to the future of the projects themselves as well as how others can use this information for their own projects are among the central research questions at the heart of this study.

To answer these questions, a mixed-methods approach was used. A content analysis of the websites and sustainability reports of all Canadian universities was used to identify SFS projects. Interviews with university representatives were conducted in order to explore the motivations and challenges in implementing and running these projects. This then gave way to a set of analyses, which are expected to help other institutions overcome the challenges experienced by others as well as to help unite the groups partaking in SFS project activities.

1.2 Problem statement

Issues surrounding the food system vary widely. There are concerns with environmental degradation, distribution inequalities, and inefficient waste disposal, among others. There are many different alternatives for trying to address the matter, such as moving to urban food production, food co-ops, community supported agriculture, and so on, with each option having its own place to make a difference. The idea of a SFS project is an interesting one, with a lot of potential for variation and

customizability. Based on the literature review and the perceived issues facing the food system, there are several gaps that have been identified.

Much of the work on SFS projects at universities focuses on initiatives overseas or in the United States. There is some Canadian content, but it is generally very site-specific. It would be quite useful to have a central Canadian resource piece on these initiatives for reference. Currently, when a post-secondary institution wants to start up a program, they would have to do the research themselves and it might take up more effort than they are willing to put in.

Most of the literature reviewed on SFS projects is missing some of the motivations of the institution as well as the challenges. Knowing the patterns and commonalities of all the various programs could potentially make it easier for those starting projects in the future. Addressing these points collectively may also help in being able to solve problems and make changes on a broader scale.

1.3 Purpose and research objectives

The purpose of this research is to conduct an analysis of sustainable food system (SFS) projects implemented at Canadian universities and create a usable reference for participants in SFS projects on Canadian university campuses. The objectives of this thesis are:

- 1) to outline a strong case for including food-related projects in sustainability planning at universities,
- 2) to determine which universities have SFS related projects and to inventory these projects, and
- 3) to explore and analyze the various components of the SFS projects and report on their shared findings.

These objectives will help address the central research question, to be elaborated upon in section 4, of how SFS projects exist on Canadian university campuses.

1.4 Scope

The scope of the projects evaluated in this research was limited to those at Canadian universities who are members of the Association of Universities and Colleges of Canada (AUCC). The AUCC is a membership organization providing university presidents with a unified voice and a forum for collective action, and has done so since 1911 (AUCC, 2011). By only choosing institutions with membership in this organization, this allows the research focus to be on universities that have made a commitment to always review and improve the experience they provide to their students, as per AUCC

membership requirements. This choice was made for two main reasons: first, to set a boundary on a specific group of comparable institutions, and second, to try and ensure that as many SFS projects as possible in this sector would be found and included.

The projects themselves, referred to as SFS (sustainable food system) projects throughout this thesis, fall under a fairly broad definition. As long as the project was not exclusively course-based and addressed the improvement of one of the areas of the food system, to be discussed in detail in section 2.3, in an attempt to make it more sustainable, it was included. This decision was made in order to identify and include as many projects as possible, but at the same time so as to simplify the analysis and not to cross over into other areas, such as the topic of academic sustainability. For more detail on the process of defining SFS projects, please refer to section 2.3.

1.5 Organization of the thesis

The remainder of this thesis is divided into 6 sections. Section 2 is the literature review, which provides the context for this research in terms of discussing the food system, sustainability, the idea of a sustainable food system, the role of the university, and the concept of a SFS project. This section also outlines the motivations for this research and lists the guiding questions for this study. Section 3 relays the mixed methods used: content analysis and research interviews, and provides a detailed explanation of the steps of this process. Section 4 is the results and discussion of the work undertaken, which includes the findings of the previously mentioned content analysis and interviews. Section 5 contains the conclusions of this research. Section 6 - Appendices contains all the important tables and other information that could not be put into the body of the thesis. Finally, section 7 is the reference section, with a listing of all works referred to in this paper.

2. Literature review

This literature review aims to provide the context for the research activities carried out. There are several concepts that both help to understand the issues as well as help to make the case for universities to address them. The first overarching theme is sustainability. The second umbrella concept is the food system, which includes a discussion on the various parts of the system, problems in the system, as well as what constitutes a sustainable food system. The third concept is a more in-depth definition of a SFS project. The final broad topic of this literature review is about the role of the university in this discussion.

2.1 Sustainability

An important concept that provides a large part of the context for this study is sustainability and sustainable development. Not being an exclusively environmental term, either concept can readily be found in countless government and company vision statements, non-governmental organization reports, and in the literature of a vast variety of fields.

The term “sustainability” has fairly old roots, possibly first being used in Germany by Georg Grunburger (a professor of mathematics and co-director of the Bavarian Royal School of Forestry in Munich) in the late 1700’s in writings and practices dealing with forestry (Holzl, 2010). However, the idea of sustainability, albeit without the use of that word, has been traced back to the early 18th century. The most influential origin of the concept, drawn upon by Adam Smith, Thomas Malthus, and others, comes from Richard Cantillon – one of the first economic theorists (Lumley and Armstrong, 2004). His French work, the ‘Land Theory of Value’ published in 1725, acknowledged that “the multiplication of animals has no other bounds than the greater or less means remaining for their subsistence,” which in other words means that life on earth has limits to live within – one of the facets of living sustainably (Lumley and Armstrong, 2004). The Oxford dictionary defines the word “sustainable” as: “able to be maintained at a certain rate or level; conserving an ecological balance by avoiding depletion of natural resources; and able to be upheld or defended” (Oxford Dictionaries, n.d.).

Other literature emphasizes that sustainability is an ideal towards which we strive, and that it is not an endpoint (Ukaga et al., 2010). Sustainability is multi-faceted, and requires a participatory and holistic approach to planning (Ukaga et al., 2010). Ideally, economic, socio-cultural, and ecological approaches would be included (Rogers, 2008). Sustainability is a desirable way to thrive because of these intended ways of thinking (Wilson et al., 2010).

Sustainable development, on the other hand, is a slightly more recent term (though it has the same conceptual roots as sustainability, as explained earlier). The most widely-used definition of the term is found in the 1987 U.N. World Commission on Environment and Development (WCED) document, *Our Common Future*. The report states that “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). The report goes further in defining this concept, with a more detailed explanation about what sustainable development should include in order to achieve the maximum benefit for everyone. Needs are defined as essential basic needs, such as food, shelter, clothing, and

employment (WCED, 1987). In order to have sustainable development, these needs must first be met for all of the world's population. Living standards that go beyond the minimum essentials, such as in the lives that many North Americans have, are not sustainable unless global consumption patterns share the same regard for what sustainability means and requires (WCED, 1987). Further to this, the report points at resource exploitation as an activity that would impact the ability of future generations to meet their basic needs (WCED 1987). An interesting observation is made in terms of how to realize resource exploitation: "Different limits hold for the use of energy, materials, water, and land. Many of these will manifest themselves in the form of rising costs and diminishing returns, rather than in the form of any sudden loss of a resource base (WCED, 1987)."

However, sustainable development is somewhat of an oxymoron. Something that is sustainable is supposed to be maintained at a certain rate or level, and development traditionally requires moving forward and growth, so how is sustainable development possible? We know what it is supposed to be, but what do we do to get there (Holzl, 2010)? Other literature tries to address this issue, and points out that sustainable development involves re-thinking current systems and the ways in which they interact, as everything is interconnected and requires a unified and concrete vision across the board in order to achieve sustainable outcomes (Ukuga et al., 2010). All the priorities of a sustainable community have to involve long-term plans so that the quality of life for everyone can be maintained (Ukuga et al., 2010).

From the ideas presented for both sustainability and sustainable development, it seems as though the point is to be able to perpetually continue a given activity indefinitely, ideally while wisely using and conserving resources. Sustainability seems to be a necessary condition for the continued existence of humans, as otherwise we will exceed our limits.

2.2 The food system

The food system – or rather a more sustainable food system – is central to this research. The food system is the set of activities involved in getting food from the source to the table and back, ranging from production to distribution, along with the interactions that influence these activities and the outcomes of these activities (Kaufman, 2004; Ericksen, 2008). These activities include production, processing, access, distribution, consumption, and waste management. A sustainable food system, to be further discussed in section 2.2.3, is where all the aspects of the food system are in sync with their ecological, social, and economic impacts.

2.2.1 Parts of the food system

Figure 1: The food system (City of Vancouver, 2011)

As Figure 1, above, demonstrates, the parts of the food form a continuous loop. Each activity is linked to the next. Below are brief summaries of each area of the food system.

Put simply, food production is the growing of the things humans eat. The yield of this step heavily relies on the conditions of a given piece of land and other inputs such as water, additional nutrients, sunlight, and the activities of the surrounding ecosystem. Food processing involves multiple steps. It includes the harvest and any cleaning of food items, as well as any cutting, pre-cooking, freezing, and so on. Today, this step can also refer to what food product manufacturers do to raw produce to turn them into other products. Food access refers to the level of availability of a diverse offering of food products, ranging from fresh fruit and vegetables to dairy, grains, and meats and meat alternatives, ideally so that people are able to feed themselves and not solely have to rely on limited, pre-prepared, and often corporately processed options (Block et al., 2012).

Distribution is a very interesting part of the food system. It involves the method in which food gets from the producers to the consumers. This can be via community supported agriculture, farmer's markets, independent grocery stores, national supermarket chains, and so on. The consumption phase is when and how the food actually gets eaten. Finally, waste management is what happens after food has

been consumed. As an organic waste, food scraps can be turned into compost. If done properly, this compost feeds right back into the next production phase for another cycle.

2.2.2 Issues

Currently, the conventional food system as a whole is not sustainable as many parts of the world face access and distribution problems and the majority of food production ignores the environment. The social part of the food problem will be discussed first, followed by the economic, and then the environmental issues. Though these issues are being addressed somewhat separately, in reality there is no separation as all of the concerns are deeply interconnected.

a) Social

Over the past century, developments in research have led to surges in food production and now humans exploit over 40% of the net primary productivity captured by photosynthesis, while the remaining millions of world species have to share the rest (Baldwin, 2009). Theoretically, there should be enough good food for everyone. However, it is estimated that there are over 1 billion hungry people on earth (Lawrence, 2010). In addition to that, global food prices rose 15% just between October 2010 and January 2011, putting about 44 million more people in poverty (World Bank, 2011). Some of the factors in this situation involve the corporatization of agriculture, energy costs, government policy (including subsidies and the elimination of land speculation bans), city planning (zoning laws), and trade incentives (such as free trade agreements that make it cheaper for many countries to import food rather than grow it themselves) (Mittal, 2009; Lawrence, 2010).

The obesity epidemic can also be tied into this concept, as the types of food available and the skills and education relating to the food system have an influence. Much of the growth in obesity and chronic disease is now also occurring in developing countries undergoing a nutrition transition, where consumption of foods high in fats and sugars is rising (Okane, 2011).

The term that encompasses these issues is generally known as food security. An early definition of food security refers to the growing and production phase of agriculture, where the focus was on ensuring enough food being grown to feed the world's population (Shaw, 2007). A more modern definition of food security is: "...when all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (World Food Summit, 1996). Koc et al. (1999) break this down into the 4 A's of food

security: availability, accessibility, acceptability, and adequacy. A 5th A, agency, was later added to address the policies and processes that contribute to the security of the system.

In Canada, the more modern definition is particularly the case. As a large food exporter, the expectation is that the system should be working. However, this past May the United Nations Special Rapporteur on the right to food made his first visit and wrote his first report on a developed country: Canada (Schmidt, 2012). Diana Bronson, executive director of Food Secure Canada, maintained that this visit took place because with over 2 million people with insufficient food access, Canada's food system is broken (Schmidt, 2012).

b) Economic

In addition to these social issues, there is a significant economic aspect to the concerns with the conventional food system. One issue surrounds support of local food initiatives. It is estimated that over \$6.3 billion worth of imported food could have instead been locally grown in Canada, avoiding duplication and putting the funds into our own economy (Blay-Palmer, 2011). Small farmers are often the most hurt by the current system, as large agri-business often offers products at a larger scale and much lower price point (Feenstra, 2002). This can also be related to the types of food production that receives more government subsidies than others, which varies by country.

As briefly mentioned earlier, the conventional food system sees a lot of money go to multi-national corporations as the food market is a fiercely competitive one. It can be argued that this can be detrimental to the overall economy to force such dependencies onto farmers and food consumers worldwide, as well as to have specific regions heavily reliant on producing limited varieties of a food product. If something were to happen to a main food producer, be it a company or a region, this could have impacts on any place that imports from them, creating instabilities in the food system. The current food system has weakened the personal relationships between farmers, and between farmers and food processors and retailers, so much so that "to survive financially, farmers have had to sacrifice long-term sustainability for higher productivity because they are competing on world markets..." (Okane, 2011, pp.270).

Another economic aspect of the food system is related to waste. About \$27 billion worth of food is wasted annually in Canada (Blay-Palmer, 2011). This is money that could be spent elsewhere, and food that could benefit many people. As explained by several participants in the interviews conducted through this research, many charities and food banks would be happy to get small, regular amounts of

fresh produce for patrons (Project 1 – food bank; Project 2 – food bank; Project 32 – food bank), which could possibly make a dent in that waste number. There are, of course, limitations to where and how perishable produce can be sent. However, this highlights a disconnect between production, distribution, and access of food.

c) Environmental

While there has likely never been a time where there has been equal access to food for all humans, there has also never been this much of a strain on our system. There is a connection between the social, economic, and environmental aspect of food security and the sustainable food system. One of the umbrella environmental issues in conventional food production is the use of pesticides and herbicides. They are generally used as a convenience of farming, killing plant and animal pests and in some cases preventing soil erosion (Baldwin, 2009). However, the use of these natural and synthetic chemicals has resulted in resistant organisms, which has in turn required new pesticides and genetically modified crops that are not affected by the pests and the sprays (Baldwin, 2009). The genetically modified crops then lead to the necessity of monoculture crops to avoid cross-contamination, but then these monoculture crops are likely to erode the nutrients available in the soil. As well, half of the global usable land is used by intensive agriculture, but through land degradation, there is now a steady decline in arable land (Okane, 2011). Soil erosion, acidity, and salinity, are all contributors to this decline (Okane, 2011). These soil issues also impact the water, as high use of fertilizers and pesticides and increased sediment and salt loads significantly reduce water quality (Okane, 2011).

This issue, starting out in the environmental realm, then crosses back over to the social side as GMOs and pesticides have an impact on the livelihoods of farmers, as with the widely publicized documentation on Monsanto activities, as well as the health of human beings due to both these pesticides, GMOs, and practices employed by factory farms (such as the feeding of corn and other grains to livestock instead of grass, the use of rendered materials, antimicrobial agents, and an emphasis on longer shelf life) (Pawlick, 2006; Baldwin, 2009).

It is also thought that the conventional food system has a role to play in the changing climate. According to Intergovernmental Panel on Climate Change estimates, agriculture contributes about 10–12% of human-generated greenhouse gas emissions globally (Smith et al., 2007). In addition to the contribution of the production and processing parts themselves, the distribution of food and how far it is transported also has an impact on emissions. The type of transportation can have a greater impact

than the distance, as emissions generated from food transported by boat are nearly four times lower than the carbon emissions from food transported in large trucks (Saunders et al., 2006). There is certainly much to think about when considering the local aspect of sustainable food systems.

The environmental costs of food are rarely included in food prices, which leaves the problems for future generations to come (Okane, 2011). This exclusion of “externalities” also contributes to the distancing of the food consumer from where their food comes from and how (Rojas et al., 2011), and has an impact on all three of the social, economic, and environmental issues discussed in this section.

2.2.3 A sustainable food system

All of the issues above lead to this discussion of a sustainable food system. As briefly mentioned earlier, a sustainable food system still contains the same parts as listed in Figure 1 and described in section 2.3.1. The difference between the conventional food system and a sustainable one lies in the interactions between the different areas. Each step of a sustainable food system would consider the environmental, social, and economic aspects of its own operations, as well as how that relates to those aspects of the other parts of the food system. The figure below, though basic, tries to illustrate this concept.

Figure 2: The sustainable food system (Garrett and Feenstra, 1999)

While a truly sustainable food system may be hard to achieve, the importance of addressing the need for such a system is high. With the projected continued growth of the human population, if we would like to avoid a devastating crash of our species then every aspect of the food system must be better cared for. The changing climate presents a further challenge to the sustainability journey, as patterns of production can be impacted by increases in temperatures and greater frequency of extreme

events in areas that have not experienced them before (Clapp and Cohen, 2009). Small sustainable food system projects, basically anything that truly contributes to the goal of a sustainable food system, are helpful in finding for solutions to the current state of the food system as well as planning for the future (Miller, 2008).

To get here, there are a few related concepts that have taken root. Food sovereignty is basically the idea that people have the right to have a say in what they eat, and how this food is grown, processed, and distributed. It is the “right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems” (Forum for food sovereignty, 2007). A major step towards this is food citizenship, which is about being active in supporting a better food system. It can be further defined as “the practice of engaging in food-related behaviours that support, rather than threaten, the development of a democratic, socially and economically just, and environmentally sustainable food system” (Wilkins, 2005). These behaviours can range from buying in-season produce, asking supermarkets to stock local in-season produce, having backyard food gardens, and so on.

2.3 What is a sustainable food system (SFS) project?

The most common term in this thesis is the SFS project, which has been defined as “projects that attempt to integrate the environmental, economic, and social health of their food systems...” (Feenstra, 2002). The first three terms have been grouped together to emphasize that the projects address the idea of a sustainable food system, and are not just sustainable projects involved with an aspect of the food system. While the sustainability of the projects themselves is an important aspect to their overall success over time, the more prominent project characterization in this research deals with the focus of the projects on improving a part of the food system.

The use of the term was decided upon after a preliminary round of research into the activities surrounding food on university campuses. Several projects provided inspiration. One of the first projects researched was at the University of British Columbia (UBC). The university took on a mission of educating the younger generations with enough ecological, social, and economic sustainability background in order to better equip them for the rest of society (Rojas et al., 2007). Ensuring a sustainable food supply is one of several large-scale programs being explored because, as mentioned earlier, food issues link to various areas of concern. A collaborative activity, the University of British Columbia Food Systems project officially commenced in 2002, and sought to meet several goals:

conducting a food system sustainability assessment, identifying barriers to food sustainability, creating a shared vision for guiding principles surrounding food, developing a transition model, developing recommendations to improve the food system, implementing measures to facilitate the transition, and allowing students to apply principles learned to a real-life project of their choice (Rojas et al., 2007).

Another project that influenced the broadening of this term for this thesis started at the University of Toronto (U of T), when the school partnered with sustainable food sourcing company Local Food Plus. As of August 2006, U of T has required its corporate caterers, Aramark, to use local and sustainable farm products for a small but increasing portion of meals (Friedmann, 2007). The contract between the school and the food providers requires an increasing percentage of local food sourced every year, and there are incentives provided for the companies to reach the targets (Friedmann, 2007). This initiative is a great indicator of what a shift in university policy may cause.

The third project involved in making the decision was the Edible Campus project, initiated in 2007 at McGill University in Montreal. It sought to go beyond just addressing university food needs. It was a partnership between McGill University and several NGOs to test urban gardening to address food insecurity for the greater Montreal community (Bhatt et al., 2009). The study found that a diverse number of edible plants could be grown in small corners of the university property, and even on unused rooftops, and the first harvest was enough to meet 30% of the daily needs for the kitchen of one of the partner NGOs that provided food for the mobility impaired (Bhatt et al., 2009). The project was a unique demonstration of striving to effect social change as well as environmental change, which is an important aspect of sustainability. Related to this is the McGill Food Systems Project, which developed a model used at other campuses, and aims to involve students in the solutions to changing university food systems (McGill Food Systems Project, n.d.).

These three projects, while addressing slightly varied parts of the food system, all had the following in common: 1) they were created and run within some part of the university system, 2) their expected benefits were not geared exclusively towards the university community, but included other stakeholders, and 3) they either directly or indirectly integrate the environmental, social, and economic health of their food systems, as defined by Feenstra (2002).

Earlier research by Barlett (2011) argues that “campus food projects can begin as incubators, pioneering new nodes in an alternative food chain for local regions...” (p.102). University campus food initiatives can go beyond demonstration projects and public education to have significant political and

economic impact on the various aspects of the food system. According to Barlett (2011), who has conducted most of the existing analytical comparisons of North American campus food projects, there are four common components of these projects: dining-service innovations, academic and co-curricular programs, direct-marketing opportunities, and hands-on experiences in community gardens and campus farms. Often, at least two types of these projects exist on a single campus. As well, these initiatives are often touted as part of general institutional sustainability commitments, but they may also address narrower concerns that a particular school is active in researching. The University of California Santa Barbara, University of New Hampshire, Yale, Stanford, and University of California Davis were some of the main schools mentioned in this study.

2.4 The role of the university

A concept mentioned in one of the papers reviewed for this research really stood out. It stated that “anything pertaining to sustainability is fundamentally about education” (Aber et al., 2009). As mentioned an earlier definition, the idea of sustainability is a paradigm shift to integrating the social, economic, and environmental concerns into how things are done so that the conditions are such that activities can potentially continue indefinitely. Universities are generally the places people turn to for answers to these kinds of questions. Also, many universities have courses dealing with the environment, sustainability and stewardship. They might even have sustainability offices. It follows that something pressing enough to create a program, class, or department for a particular area of research, should then be practiced and passed on to staff, students, and the greater community.

Universities are a very large part of their communities in terms of employment, land, and overall footprint, so it is almost an obligation to address sustainability. They make up the policies, procedures, laws, and other agreements that shape society, and they often make choices that reflect norms, values, and interests (Ishii-Eiteman, 2009). Truly sustainable university campuses believe in, and take action on, operational, academic (in terms of the subject matter being taught), research, and external community sustainability (Cortese, 2003). Being a role model and practicing the lessons being imparted to students is a rational step to take.

2.5 Motivations for research

Everyone has to eat, everywhere in the world, so why should this research be focused here on SFS projects at universities? First, food and food systems have economic clout, corporate connections, and emotional resonance with identity (Barlett, 2011). Like most environmental issues, food also lives in

the social and environmental realms of concern. Universities, collectively, are big customers with a potential for serious influence in both their purchasing and their overall behaviour. As international role models, making moves on the issue of sustainable food systems can have an impact on other institutions within the university's sphere of interaction.

Second, food insecurity happens in and around universities, and food system problems also manifest themselves in a similar fashion. Food at universities may travel over 700,000 miles (Babich et al., 2010). As well, a large percentage of university students experience food insecurity; one Australian study found that half of its study respondents had experienced it at some point during their university career (Hughes et al., 2011). Similarly, a Canadian study found that students living away from home or receiving financial assistance are more at risk for being subjected to food insecurity (Meldrum and Willows, 2006). This should be of concern to university campuses since, as a study by Hughes et al. (2011) suggests, there is a general consensus that access to an education provides a springboard to a rewarding and prosperous life by improving human and social capital. Thus food insecurity in this context potentially undermines the socioeconomic purpose of education (Hughes et al., 2011). For a post-secondary institution to avoid addressing the food system would be a disregard for its stakeholders as well as its obligations to society.

The third motivation for this research relates to the role of a university, discussed in section 2.5. As partially public centres of communities, with large impacts as well as the capacity for research and problem solving, these institutions have both great obligations and opportunities. One such opportunity is to create the right kind of space to discuss sustainable food systems. Feenstra (2002) lists 4 kinds of space, in addition to a tangible physical space, necessary for a more sustainable food system: social, political, intellectual, and economic. Providing opportunities for people to interact, involvement in some kind of policymaking or community organizing, the ability to articulate and then implement and evaluate a vision, and connecting with the local economy are part of what these spaces need to achieve (Feenstra, 2002). Universities are generally more than capable of delivering on all these requirements. Similarly, some experts feel that "a sustainable food system must reside in the public domain—a public system in public hands for the public good..." (Sumner, 2011), which also aligns with the previous idea.

Finally, food can be linked to multiple groups and other sustainability projects, particularly those occurring at university campuses. As previously discussed, the food system encompasses production, processing, access, distribution, consumption, and waste management. Universities with agricultural programs or environmental programs with a food-related component can address the production stage

with their own experiential learning courses and activities. Universities that have on-campus food outlets, either student or corporately run, can work on processing, access, and distribution by making more conscious decisions for meals and catering choices. Schools with waste management policies can add food waste to their list of projects, as if separation is already taking place adding another stream may not be difficult. Addressing food issues can even have an impact on campus GHG emissions, depending on where food previously came from and what would have normally happened to food waste prior to any changes. Any campus with a sustainability policy, or even just a commitment to equity for members of the university's community, can justify the inclusion of food projects.

2.6 Research questions

As this study seeks to be of use to educational institutions both with active and upcoming SFS projects, outlining the research questions helps to focus the rest of this thesis.

2.6.1 Central question

The question that guides this research is:

To what extent do SFS projects exist on Canadian university campuses?

2.6.2 Sub-questions

There are numerous sub-questions that are critical in fully developing the answer to the central research question. These are:

- 1) Why is it important for a university to partake in SFS projects?
- 2) Which institutions have SFS projects?
- 3) What are the motivations and challenges faced by these projects?
- 4) What can current SFS projects suggest to their peers for improvement, or to new SFS projects?
- 5) What can be different in the future for these and new SFS projects?

3. Methods

A mixed-methods approach was taken for this research. The qualitative research approach, well suited to relatively unexplored problems according to Flick (2009), was the central method used, as this research is primarily focused on interviews with representatives from SFS projects at Canadian universities. A preliminary content analysis, generally a quantitative method, was conducted first to determine the sample of 69 institutions with SFS projects. This was done using manual keyword

searches of university websites. A more detailed qualitative program analysis was then conducted to better inform the subsequent research interviews, also utilizing keyword searches of project websites and documents. The interviews filled in the large gaps of information, providing insight into the motivations, challenges, and general operations of SFS projects. Analysis of the interview notes drew out the commonalities across all different project types. A synopsis of the research method is illustrated in Figure 3 below.

Figure 3: Synopsis of the research methods used in this thesis

3.1 Content Analysis

3.1.1 Explanation

Content analysis is “a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use” (Krippendorff, 2004). According to one of the leading authorities on the subject, Krippendorff (2004), contemporary content analysis has three distinguishing characteristics: 1) it is an empirically grounded method that is exploratory in process and predictive or inferential in intent, 2) content analysis transcends traditional notions of symbols, contents, and intents, and 3) it has been forced to develop a methodology of its own that enables researchers to plan, execute, communicate, reproduce, and evaluate their analyses whatever the particular results.

Prior definitions of content analysis are similar to this definition, but have some stipulations that many researchers now think are no longer required. One example of such is a definition by Berelson (in Krippendorff, 2004), where content analysis was defined as “a research technique for the objective, systematic, and quantitative description of the manifest content of communication”. It is now understood that content analysis, though generally a quantitative method, can be qualitative, as many texts (along with their related contexts and the research they are being used for) may not lend themselves to studies of a quantitative nature (Krippendorff, 2004).

Like many other research studies, this research employs content analysis in looking at qualitative data. While some of the outputs of this process were quantitative, all original data was purely textual in nature. The characteristics of a content analysis, mentioned earlier, were met by using a standard method to find, read, and record data, detailed in section 3.1.2, which would transcend traditional notions and symbols. As well, the process and purpose of the content analysis was exploratory in nature, as it was unknown before how many SFS projects were at Canadian universities or what they entailed.

3.1.2 Determining the preliminary sample

Divided into two parts, the first part of this analysis took on more of a screening role for the initial target sample for further analysis. All 95 members of the Association of Universities and Colleges of Canada (AUCC), listed in full in Appendix A, were investigated for the presence of a SFS program. This involved the systematic keyword searching of the institutions’ websites and a general internet search engine. The English key-words used were: community garden, food, food procurement, food project,

food bank, food services, sustainable food, sustainability (in conjunction with the school name when submitted to the general search engine). For French-language schools, the keywords used were: alimentaire durable, alimentaire, durabilité, développement durable, jardin, jardin communautaire, la banque alimentaire, and services alimentaires. The findings were compiled into a table. The output of this step was a smaller sample of post-secondary schools to further analyze, as well as a relatively accurate numeric conclusion of how many Canadian universities and colleges have SFS projects and how many of these projects exist. This, as well as the table itself, will be discussed further in the results section of this paper.

3.1.3 Detailed program analysis process

The more focused 69-school sample determined in the step above was then analyzed in terms of the types of projects being undertaken at each institution in conjunction with some of the interview steps, to be outlined below in section 3.2. Project websites or university documents were keyword searched for the following fields: the primary location for most project information, project motivations, the starting year of the initiative, the nature of the project's operations, goals, challenges, and connection to other sustainability initiatives (primarily on-campus). This was done not only to prepare for the confirmed research interviews, but to see what kind of information was being relayed to the public about the SFS projects. Findings were again compiled into a chart. A summary of the results of this analysis will be discussed later in section 4.1.

3.2 Research Interviews

3.2.1 Explanation

As previously mentioned, the main research path was conducting interviews. Interviews were chosen as a research method for this thesis as qualitative research interviews are generally an attempt to understand a given topic from the point of view of the person being interviewed (Kvale, 1996). This was seen as beneficial for this topic as the projects of interest rely heavily on the people involved in their creation and operations.

There are generally seven accepted stages of the interview process outlined by Kvale (1996). These are: thematizing, designing, interviewing, transcribing, analyzing, verifying, and reporting. The semi-structured interview lends itself well to these steps. It has a sequence of themes to be covered, as well as suggested questions, but there is openness to changes of sequence and questions in order to follow up (Kvale, 1996). Though all interviews have an asymmetry of power, where the interviewer asks

the questions and directs the event, it is recommended that the questions be provided to the participants prior to the conversation and that there be a debriefing afterwards to ensure clarity for both the researcher and the participant (Kvale, 1996). This is the process that was followed.

3.2.2 The interview process

Prior to conducting any interviews, a project proposal was submitted to the Ryerson Research Ethics Board (REB) for approval. This proposal outlined the types of questions to be asked, the purpose of the interviews, the expected sample, as well as the sample letter of invitation and the informed consent form. Upon approval, the invitations were sent out. When a positive response was received, the informed consent form was then forwarded along with options for a telephone interview time. The informed consent form, in Appendix E, provided potential participants with the research purpose, expected risks or discomforts (none), possible study benefits (none directly for the participants), and the costs associated with participating (none). The form then stated that participation was completely voluntary and participation could be withdrawn at any time, and that participant confidentiality would be maintained. A space to obtain employer consent, if required, was provided at the suggestion of the REB in order to address potential legal issues between participants and their employers. Also at the suggestion of the REB, the option to receive the interview notes back for verification was also given in case participants did not want to be contacted after the interviews. Similarly, the option for future contact was also provided to participants as at the time of sending out the interview invitations, soliciting feedback was a possibility.

The person targeted with the interview invitation was chosen based on the contact information available on the websites or documents used for the content analysis and subsequent SFS project inventory. They were usually project coordinators or in management roles for the project or an umbrella organization, such as a campus sustainability office. Negative responses received a prompt reply thanking contacts for taking the time to acknowledge the request. Potential participants who did not respond received at least two reminder emails, spaced apart by 3 weeks or more, in an attempt to increase the final sample size. Positive responses had interviews promptly scheduled, and followed the process below.

All interviews took place over the telephone. Participants had the confidentiality and voluntary nature clause read out to them before starting the interview to give a final opportunity to consent or withdraw participation. Detailed notes were taken throughout the interviews, as recording them may

have deterred participation. If interviewees requested their notes for review, those were usually sent the same day of the interview. Participants were encouraged to submit their verifications as soon as possible, but a deadline of mid-April 2012, providing each person ample review time, was given. Past this deadline date, any interviewees who had not taken the time to send back verified interviews were considered to approve of their interviews.

Participants were asked the following questions:

Table 1: Interview Questions

	Question
1.	In your own words, please describe your project.
2.	Does your organization define a sustainable food system project? If yes, what is the definition and do you feel that you operate under it?
3.	What was the motivation behind the creation of this food system project?
4.	Was there an approvals process through university administration, and if so what was the reaction to the proposal of the project?
5.	What were the challenges in implementing the project?
6.	What are some of the prominent lessons learned from running the projects?
7.	Where are the projects headed?
8.	How strong is the link between this food system project program and other sustainability initiatives?
9.	What would you suggest to other universities trying to start similar projects?
10.	Do you have anything else to add?

4. Results and Discussion

Given the sample size for both the content analysis and interview portion of this research, there was a sizeable amount of information gathered. The following subsections will address the findings and discuss the results of both the content analyses and the research interviews.

4.1 Content Analysis

As previously mentioned, the first step in this research was a preliminary content analysis to determine the sample from which to continue the remainder of the research from. Of the 95 members of the AUCC, 69 of these institutions were found to have at least one activity that qualified as a SFS project as defined in section 2.4. The following table represents all schools found to have SFS projects along with how many projects each university was found to have. The complete inventory table, found

in Appendix C, includes two additional columns, listing the projects themselves, the project websites, and if the institution is a member of the AASHE. There were 201 SFS projects, or project components, identified. This number is believed to be less than the number of projects that actually exist; this potential discrepancy is due to one of the research limitations, availability of information, which will be discussed further in section 5.

Table 2: Summary listing of universities with SFS projects

Province	School	# of SFS projects
BC	Kwantlen Polytechnic University	5
	Royal Roads University	2
	Simon Fraser University	6
	Trinity Western University	1
	University of British Columbia	5
	University of Northern British Columbia	2
	University of the Fraser Valley	2
	University of Victoria	3
	Vancouver Island University	3
AB	Mount Royal University	3
	The King's University College	1
	The University of Lethbridge	2
	University of Alberta	3
	University of Calgary	4
SK	First Nations University of Canada	1
	St. Thomas More College	1
	University of Regina	3
	University of Saskatchewan	3
MB	Brandon University	2
	The University of Winnipeg	3
	University of Manitoba	1
ON	Algoma University	3
	Brock University	2
	Carleton University	5
	King's University College at The University of Western Ontario	1
	Lakehead University	3
	Laurentian University	3
	McMaster University	3
	Nipissing University	2
	OCAD University	4
	Queen's University	4
	Redeemer University College	1
	Ryerson University	5
	Saint Paul University	1
	St. Jeromes University	2
	The University of Western Ontario	4
	Trent University	5
	University of Guelph	6

Province	School	# of SFS projects
	University of Ontario Institute of Technology	1
	University of Ottawa	5
	University of Toronto	12
	University of Waterloo	6
	University of Windsor	4
	Victoria University (At UofT)	1
	Wilfrid Laurier University	2
	York University	4
QC	Bishop's university	2
	Concordia University	6
	McGill University	9
	Université de Montreal	1
	Université de Sherbrooke	2
	Université du Québec – École de technologie supérieure	1
	Université du Québec à Chicoutimi	2
	Université du Québec à Montréal	1
	Université du Québec à Rimouski	1
	Université du Québec en Abitibi-Témiscamingue	1
	Université Laval	3
NB	Mount Allison University	2
	St. Thomas University	2
	University of New Brunswick	3
NS	Acadia University	3
	Cape Breton University	2
	Dalhousie University	4
	Mount Saint Vincent University	2
	Nova Scotia Agricultural College	2
	NSCAD University (Nova Scotia College of Art and Design)	1
	Saint Mary's University	3
NFLD	Memorial University of Newfoundland	2
PEI	University of Prince Edward Island	1
	TOTAL	201

From this narrowed sample, 40 of the projects (the same as the interview sample to be discussed in section 4.2) found were further explored. It was thought to be important to see what kind of information was publicly available on the projects prior to the interviews. As mentioned earlier, the following fields were filled in a chart: the primary location for most project information, project motivations, the starting year of the initiative, the nature of the project's operations, goals, challenges, and connection to other sustainability initiatives (primarily on-campus).

The main finding of this analysis was that it was indeed necessary to speak to a project representative to get full information, as the resources available online generally did not provide all the information being searched for. Only 9 of the 40 programs evaluated listed challenges faced by the

project. As well, while most projects did include some information in terms of project motivation, start year, operations, goals, and some of the connections to other groups, the information was fairly limited. The table on the next page lists a summary of these findings. The place information was found is not included so as to maintain confidentiality, as these programs were part of the interview sample.

Table 3: Content analysis detailed program findings

Information searched for	Project motivations	Year project started	Program operations	Program goals	Program challenges	Connection to other campus SD initiatives
Answers	<ul style="list-style-type: none"> - Not listed: 13 - University action plan or sustainability goals: 7 - Demonstrate socio-environmental consciousness: 4 - To educate: 4 - To offer the campus community an alternative place to eat that is more inclusive: 3 - To provide an opportunity for people to interact and enjoy green space on campus: 2 - Provide a hands-on experience to complement the theoretical - Meeting student needs - To fundraise - To grow food for the food bank - To be recognized as a leader - To support and empower urban agriculture and grow food on campus - Nurturing communities through nurturing gardens - Support an interdisciplinary research program 	<ul style="list-style-type: none"> - Not listed: 18 - 1960's: 1 - 1990's: 1 - 2001: 1 - 2002: 2 - 2005: 1 - 2006: 3 - 2007: 2 - 2008: 1 - 2009: 5 - 2010: 4 - 2011: 1 	<ul style="list-style-type: none"> - Not listed: 1 - Staff/admin run: 18 - Student/volunteer run: 12 - Co-op or collective: 4 - Co-run: 3 - Externally run: 2 	<ul style="list-style-type: none"> - Not listed: 3 - Enhance awareness or education: 17 - Grow food on campus: 8 - Supporting local food on campus: 8 - Develop a sustainable university community: 8 - Opportunity for community interaction: 6 - Opportunity to learn new skills: 4 - To serve better food on campus: 4 - Support research: 4 - To meet campus waste and GHG reduction goals: 3 - Be political on campus: 3 - Distribute food and vouchers to those who need it: 2 - To fundraise - Promotion of healthy habits - Conservation of the environment 	<ul style="list-style-type: none"> - Not listed: 31 - Threat of development taking project space: 2 - Getting volunteers: 2 - Permits - Deciding on project types - Meeting/exceeding expectations - Funding - Soil analysis - Education/advertising 	<ul style="list-style-type: none"> - Not listed: 18 - Links to other campus food groups: 8 - Link to campus facilities: 7 - Link to student union: 5 - Linked to food service: 4 - Connection to research groups: 4 - Linked to other groups part of university sustainability strategic plan: 3 - connection to sustainability events: 2 - Sustainability Office: 2 - Partnership with health centre - Link to food bank

Table 3 above provides a summary of all the findings gathered in the detailed content analysis of the programs to be interviewed. It is clear that program challenges were not something most of the projects chose to discuss in their publicly available materials, but would be one of the most helpful things for readers to hear about and learn from. The 9 challenges listed above seem very basic and could benefit from expansion.

Similarly, though 22 of the projects listed some of their connections, the extent of their links to the other groups would also be of use to others viewing their materials in order to get inspiration or ideas. The results of the program operations were very interesting, with 18 of the 40 programs being run either by administrative direction or through staff members and the rest through student volunteers, co-run, externally, or via a cooperative structure. This gives the impression that many projects have strong administrative backing, which may very well be the case. The project motivations and program goals are related, though the lists seem incomplete given the scopes of the projects to cater to an entire university campus.

This analysis concluded that there was insufficient publicly available information for most of these projects, and that it was necessary to speak to representatives from the various SFS projects to get a better understanding of these, and more, ideas in order to be able to provide a useful document that other SFS projects could use. The interview section, below, meets this need.

4.2 Interviews

The interviews took place between January and April of 2012, and ranged from being 20 to 60 minutes in length. Participants were very open in what they chose to share, acknowledging that providing the information for others to learn from was important to them. The rest of this section is divided into two main subsections. The sample discussion will outline some numerical data about who was interviewed. The data results section is further divided into 10 subsections, to match the 10 interview questions, and then divided within those subsections to reflect the grouping of 9 different SFS project categories: community gardens, food service providers, independent cafés, composting projects, awareness projects, skill-building, farmer's markets, multidisciplinary participatory projects, and food banks.

4.2.1 Sample

As mentioned in the methods section, invitations were sent to representatives from all projects that had publicly available contact information. Some projects that were somewhat separate from each other were run by the same people, and thus only one invitation was sent for those. Of the 119 interview invitations sent out, 58 positive responses were received, 11 negative responses were given, and 50 contacts did not reply. Even though 58 respondents were interested in being part of the research, 18 stopped communicating for unknown reasons. Two reminders were sent to those participants throughout the process in hopes that they might participate. The number of interviews actually conducted totalled 40.

The 40 project participants interviewed contained a diverse representation of some different possible types of SFS projects. There were 11 interviewees from community garden projects, 8 representing food services, 7 from multi-disciplinary participatory projects, 3 food bank participants, 3 composting projects, 3 independent cafes, 2 farmer's markets, 2 awareness-based programs, and 1 skill-building project.

In terms of geographic distribution of these projects, 5 were at schools in British Columbia, 3 in Alberta, 2 in Saskatchewan, 4 in Manitoba, 17 in Ontario, 7 in Quebec, 1 in Nova Scotia, and 1 in Newfoundland. The high participation of Ontario projects is possibly related to the greater number of universities found in the province as compared to the rest of the country.

4.2.2 Data results

As mentioned earlier, the analysis of the interviews has been divided below by question, and further divided by project type. This makes it easier to draw patterns and conclusions.

4.2.2.1 Project description

Though all projects were researched prior to the interviews, all participants were requested to provide a brief summary of their project's activities. This was done to gain a better understanding of some of the concepts only briefly mentioned in the online documents reviewed, as well as to see how projects were communicated to the public. All participants provided answers to this question, and the breadth, depth, and mandates of each project differed in some way even to other projects in the same category. However, the main theme here was that SFS projects don't just live in the exclusive control of

students, staff, faculty, or administration. Though some individual projects are primarily run by one of these groups, all are involved in SFS projects.

The table below provides a summary of the findings, and the subsequent sub-sections provide more detail on the answers from each participant.

Table 4: Overview of project descriptions

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none"> - All gardens plant and harvest food - 6 are open to both university members and the greater community, 4 are for the whole university community, and 1 is exclusively for staff - 8 gardens have individual plots and some communal spaces, 3 are for communal gardening only - 2 of the gardens operate as collectives - Most of the gardens donate some of their produce - All of the gardens have an educational component
b) Food service providers	<ul style="list-style-type: none"> - All 8 food service providers have outlets open to the campus and greater communities - All 8 have projects related to local food sourcing - 1 provider donates excess food - 3 providers heavily focus on education and awareness of sustainable food options on campus - Most compost, and have taken a look at what they can do in terms of take-out trays and utensils
c) Independent cafés	<ul style="list-style-type: none"> - All 3 cafés are run as collectives/cooperatives - All 3 have an educational component to their work - All 3 focus on local, organic, mostly vegan or vegetarian and healthy food - 2 cafés also provide catering services
d) Composting	<ul style="list-style-type: none"> - All 3 of the composting projects collect both pre-and post-consumer organic waste - 1 of the projects has an on-site composter, and this is fed only pre-consumer waste - 2 of the projects send all their organic waste off-site - All of the projects are part of their campus sustainability plans
e) Awareness projects	<ul style="list-style-type: none"> - 1 is a faculty-inspired, funded, and staffed learning centre that focuses on how food gets from farm to plate - 1 is a student organization that addresses food issues through events
f) Skill-building	<ul style="list-style-type: none"> - Run by an outside organization, this project is exclusively for university students and is free
g) Farmer's markets	<ul style="list-style-type: none"> - 1 market is student run, 1 market is run by an outside company in partnership with the university - 1 market obtains the produce from local distributors, 1 market has the farmers themselves come to sell only produce they have grown
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - 3 of the multidisciplinary projects are student run - 4 of the projects have staff as the main leaders, but have heavy student involvement - 2 of the projects choose their initiatives out of student research - 1 project is primarily a research group - All projects have at least 3 concurrent programs in their repertoires, covering things like gardens, composting, greenhouses, and so on
i) Food banks	<ul style="list-style-type: none"> - All 3 food banks are ratified services of their universities - All 3 generally provide non-perishable food to those who need it

Project Category	Key Results
	- 2 of the food banks have a separate physical location, 1 does not

a) Community gardens

With 11 interviewees, the community/campus garden projects share the aspect of planting and harvesting food. However, the details of each project vary. The first community garden, started in 2008, has garden beds available to anyone who is interested at no cost; the only stipulation is that some of the vegetables grown must be given to the organizers for donation to students (Project 5 – community garden, 2012). The second garden operates as a non-hierarchical collective, with both students and non-students with varying degrees of gardening experience involved. Everyone works in any area of the garden, and food grown is donated to the non-dining-hall café on campus (Project 7 – community garden, 2012). The third garden is run by campus faculty with the goals of teaching students and the rest of the university community about sustainable food practices as well as to create a communal space. There are about 60 individual plots, with a long wait list every year (Project 12 – community garden, 2012). The fourth garden is a 10-plot membership-based community garden run by staff and open only to faculty and staff. The fee is \$40 a year to join, and many things are grown mainly for personal use. This garden has been the starting point for some graduate-level food-related work on campus (Project 14- community garden, 2012). The fifth garden, started in 2011, is a collective with a focus on addressing the ability to grow food in an urban context while still dealing with issues of food security. The gardening spaces are communal, and the food is mostly donated (Project 16 – community garden, 2012). The sixth garden is run primarily as a fundraising project for a charity overseas. This garden, started in 2009, has volunteers who grow the food in communal plots, and then all the vegetables are available for a pay-what-you-can donation by anyone who would like them (Project 20 – community garden). The seventh garden has plots open to anyone in the community, and in addition to encouraging organic and other ecological principles it also hosts workshops and educational talks (Project 24 – community garden, 2012). The eighth garden, opened in 2006, is a student-led project with 30 plots, taken by students, community members, and staff. Members grow their own food, and there are some workshops, but the main purpose of the garden is for people to have a way to feed themselves, and to have a community space around that idea (Project 26 – community garden). The ninth garden is composed of a network of urban agriculture projects on campus, and directly maintains 4 of the campus gardens by growing food and hosting various sustainable food and agriculture programming (Project 27 – community garden,

2012). The tenth garden is mainly an allotment style garden with 85 plots rented to students, faculty, staff, and groups on campus. There are communal beds, too, where food is grown for food banks and volunteers, and this garden also hosts workshops and events (Project 30 – community garden, 2012). The eleventh garden has 3 sections for students, staff, faculty, and the greater community to work in. One section has individual allotments, another is for everyone to work, and the 3rd section is a permaculture design (Project 36 – community garden, 2012).

b) Food service providers

The eight food services providers interviewed were all undertaking very similar projects, with local food being a large focus of most (though each project does have a different definition of local). In addition to increasing the amount of local food sourced, the first school interviewed was also working on building a produce processing facility in order to be able to process all the local food, freeze it, and use it year-round. The local food, including honey, comes from the university grounds as well as from a supplier that sources food in the region around the university. This food service also partakes in various educational initiatives, such as talks and videos, to inform the campus community about food sustainability initiatives (Project 6 – food services, 2012). The second food service provider has also taken a look at more local food at the request of students, hosting monthly all-local food days and incorporating some new local products throughout the entire school year. This school has recently formed a partnership with LFP to have 3rd party certification on their efforts (Project 10 – food services). The third food service, run as a not-for-profit, does what it can within its constraints. It orders from the campus horticultural club when possible, from surrounding Hutterite communities, and other larger local suppliers. It also has switched to eco-friendly cleaning products in the kitchens, and provides biodegradable containers for take-out. Lastly, a big project with this food service relates to their leftover food, which is either given away to students or donated to food banks or soup kitchens instead of throwing it out (Project 18 – food services, 2012). The fourth food service interviewed had many projects to share. To encourage patrons to bring their own mugs, all outlets give a \$0.25 discount for this activity, and it is estimated that every year this saves 150,000 disposable cups. This campus is also free of bottled-water, and water stations are being installed. There is also an eco-tray program, where patrons buy a membership card that is exchanged for a reusable take-out tray, and the card is returned when the tray is returned for washing and storing. Next, all food outlets at this campus partake in pre-consumer composting, and most outlets have consumer receptacles for composting as well. The whole campus is Oceanwise, and about 80% of the locations have fully made the switch so far. In terms of local

food, this food service was the first university to sign up with LFP and 6 of its outlets are certified. This food service also partakes in many awareness activities, such as cooking classes and festivals (Project 28 – food services, 2012). The fifth food service provider also has a heavy focus on local food, with about 40% of fruits and vegetables on campus being local. Additionally, all baked goods come from bakeries in the area and pizza arrives daily from a local pizzeria – nothing is from a large wholesaler. Meats, poultry, and cage-free eggs are generally sourced in-province, and all seafood is certified Oceanwise (Project 31 – food services, 2012). The sixth food service representative said that the main focus of their sustainability projects is also in the realm of local food, which they define as food from within the province (Project 33 – food services). The seventh food service provider has been facilitating projects on its own, and started its process in 2007 by introducing multi-waste bins to increase composting and recycling, while labelling the waste slot with “landfill” to help the diversion rate. This food service also works on local food, with about 60% of products coming in being local and a sustainability clause in their purchasing RFPs. They serve only Oceanwise fish, as well, and are partnered with a local food co-op that provides many of the local and healthy options (Project 35 – food services, 2012). The eighth food services project also purchases local food whenever possible, and organic food is strived for in produce and required for all the fair-trade coffee and chocolate products on campus. Meats and poultry are antibiotic and hormone free, and seafood is always Oceanwise certified. As well, take-out containers are compostable and there is a composting process in place (Project 37 – food services, 2012).

c) Independent cafés

The three non-dining-hall cafés all share the traits of being collectives/cooperatives, focusing on local, organic, mostly vegan or vegetarian and healthy food, and providing other services in addition to their regular offerings. The first café is open 5 days a week, and estimates that it serves about 200 meals a day (Project 9 – non-dining-hall café, 2012). The second café serves local organic food and also runs education activities, such as a new demonstrational root cellar on campus to show how one can support the regional food system (Project 19 – non-dining-hall café). The third café has two operations, one a daily café and the other a weekly lunch serving elsewhere on campus (which has a pay-what-you-can price once a month) (Project 29 – non-dining-hall café, 2012). The first and third cafés also provide catering services.

d) Composting

The three university-initiated composting projects interviewed were all based on the same premise of collecting organic waste, but each one goes through this process differently, with different inputs and results. The first project has had a small on-site composter since 2010 that is only fed pre-consumer organic waste, about 10 tonnes worth over the year, from campus kitchens, as well as a collection program for post-consumer organic waste that is sent to an external composting agency (Project 4 – composting, 2012). The second project has been collecting both pre and post-consumer organic waste to send to the city's municipal organic waste collection since 2006. They originally were collecting some food waste for on-site composting, but realized that a volume of 400 tonnes would be too much to handle and instead waited for that free municipal program to start (Project 23 – composting, 2012). The third project, started in 2007, also collects pre- and post-consumer waste from around campus and the cafeterias and sends it to a large composter run by an outside company. This is part of this campus' sustainability plan (Project 38 – composting, 2012).

e) Awareness projects

The two awareness projects interviewed were very different from one another. One is a faculty-inspired and well-funded learning centre with a focus on agriculture and how food gets from the farms to the plate, complete with hands-on exhibits as well as meeting space (Project 25 – awareness, 2012). This is a project that very much addresses the production part of the food system. The other is a student-run group trying to promote sustainability awareness in terms of social, economic, and environmental issues as they relate to food through events (Project 34 – awareness, 2012). This drastic difference in the projects shows the various angles that awareness of the parts of the more sustainable food system can take.

f) Skill-building

The one skills-oriented project interviewed provided a very brief summary. That project is currently exclusively to impart cooking skills for students at two university campuses, encouraging them via learning to stop eating out of boxes, through a 10-week course. While the description does not explicitly say it, this project addresses the processing, access, and consumption parts of the food system. It does so by showing those previously unable to feed themselves from raw ingredients how they can successfully do so, in hopes of reducing their reliance on corporately pre-packaged meals and increasing their independence (Project 22 – skills, 2012).

g) Farmer's markets

The two campus farmer's market projects interviewed for this thesis have fairly different operational structures. The first one is a branded market through Farmers Markets Ontario, where the only farmers allowed to come to the market are local, verified, producers who can only sell what they grow (Project 15 – farmer's market, 2012). The second market is considered a club, and is student-run. It has 25 volunteer members who help run a weekly market on campus that sells local produce obtained from a local distributor along with organic local bread products (Project 39 – farmer's market, 2012). Both directly address the distribution part of the food system, and with their choice of products and their locations also indirectly address production and access.

h) Multidisciplinary participatory projects

The seven multidisciplinary participatory projects are all comprised of numerous smaller projects housed under one group, and thus each one is different from the other. The first multi-project has about 7 activities it looks after: a tea garden, aquaponics, seedlings, vermicomposting, a greenhouse, educational programming, and a farm school. All the projects are coordinated by 1 paid person, along with some volunteers (Project 3 – multidisciplinary project, 2012). The second project is a student-run initiative whose goal is to create a food system on campus that they can be proud of. The group works with students, staff, and professors on research projects that can be implemented on campus for this purpose. This project also undertakes educational and awareness activities in conjunction with other food groups on campus (Project 8 – multidisciplinary project, 2012). The third multidisciplinary project deals with some of the food services options, a fresh produce stand on campus, and a community garden (Project 11 – multidisciplinary project, 2012). The fourth project is mainly a research centre that tries to bridge the gap between the university and the outside community in terms of food security, and it has a number of projects housed within the centre (Project 13 – multidisciplinary project, 2012). The fifth multidisciplinary project started out as an organization interested in increasing accessibility to local and sustainable food on campus. It has since grown to include a food-box program and a farmer's market type project, and is now run by student volunteers (Project 17 – multidisciplinary project, 2012). The sixth project, created over 10 years ago, is designed to enhance sustainability on campus via 10 partner projects through the campus sustainability office. Often, these activities are integrated into courses, and if they are viable are considered for campus-wide implementation. This gives students with expertise the opportunity to work on real applied campus sustainability initiatives (Project 21 – multidisciplinary project, 2012). The seventh multidisciplinary project incorporates

sustainability in food services, organics collection, a farmer's market, and a food garden – most of which are student run (Project 40 – multidisciplinary project, 2012).

i) Food banks

The three food banks interviewed are different from all of the projects above in that the distribution and accessibility parts of the food system are the primary focus. In terms of their project descriptions, all are part of their respective university's student union services and all generally provide non-perishable food to those who come in asking for it, albeit in slightly different ways. The first food bank relies on donations from staff, students, and faculty throughout the year, as well as a large haul around Halloween with a popular trick-or-eat initiative. They do have some finances available to purchase food, and try to include some fresh produce when possible for the families who come in. This bank lets participants choose their items (Project 1 – food bank, 2012). The second food bank does not have a physical food bank location. One of the current student union vice presidents created a system to collect canned goods and other non perishables in his office, and any time a student comes in for a food voucher or emergency loan, they are encouraged to take home a set of items as they clearly have a need (Project 2 – food bank, 2012). The third food bank gets their food from a city-run food bank that redistributes food to smaller centres. They, too, are a confidential service that provides non-perishable food to anyone in need (Project 32 – food bank, 2012).

j) Summary

As mentioned earlier, all 40 projects were made up of very different parts. Despite having several categories with multiple projects, there was still variation within those categories. However, there were some themes that emerged. All the gardens grew food and had a community aspect to them. All food services had projects that addressed the idea of local food. All three independent non-dining hall cafés were operated as collectives/co-operatives. All three of the composting projects address both pre-and post-consumer organic waste in some way. The awareness projects have a heavy focus on education and what their message means. The skill-building project works independently of the school but caters exclusively to the students. The farmer's markets have similar goals, but are run very differently with one being more corporate and the other a student initiative. The multidisciplinary participatory projects all had multiple initiatives being run, and each one has a different mix of student and staff involvement. Finally, though the food banks all too slightly different approaches to getting food to those in need, they are all services of their student unions. These commonalities and differences

show that there is room for a multitude of SFS projects at universities, and that there is no one type of project that can exist and succeed.

4.2.2.2 SFS project definition

Many of the projects reviewed did not explicitly reference their place in the food system. For this reason, the second question asked of interviewees was if their organization had a definition of a SFS project, what that definition was, and if they felt that they were operating under that definition. The majority of projects had no working definition of the term, but offered up their ideas on what that term could mean to their project and if they felt they fit under it. It is clear that the use of this term is still in early stages. The table below summarizes these answers.

Table 5: Overview of key SFS project definitions

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none"> - None of the projects used or defined the term SFS project in their documents, but all were familiar with the term - All gardens felt that their involvement of the greater community and teaching self-sufficiency skills were part of making them SFS projects - 3 gardens cited their environmentally sound practices as reasons they fit under the SFS project umbrella - 5 gardens felt that they addressed important socio-political aspects of the food system, such as food sovereignty and citizenship when it comes to access to food, which made them SFS projects
b) Food service providers	<ul style="list-style-type: none"> - 2 food services defined what a sustainable food service provider would look like, which is related to a SFS project definition - The rest of the providers offered up definitions of sustainability - None of the participants chose to confirm themselves as SFS projects because of the absence of an approved definition
c) Independent cafés	<ul style="list-style-type: none"> - None of the cafés had an explicit definition of the term - All 3 felt they were SFS projects because of how they address the social, economic, and environmental issues in the food system
d) Composting	<ul style="list-style-type: none"> - None of the composting projects had a definition of the term - 2 of the projects felt that because they addressed the waste management, or last step in the loop of the food system, they certainly qualified as an SFS project - 1 of the projects mentioned that the term may be soon defined in university policy
e) Awareness projects	<ul style="list-style-type: none"> - Neither awareness project defines the term - Both felt they were SFS projects - 1 project felt that because they educate on all the parts of the food system, including the environmental issues associated with them, they qualify - 1 project felt that because through their events they try to make choices that are positive for the social, economic, and environmental aspects, and try to educate on that topic, they qualify
f) Skill-building	<ul style="list-style-type: none"> - The skills-based project did not have a definition of the term - This project feels that it does operate with the intention of making the food system more sustainable by incorporating the idea of local food and taking charge of

Project Category	Key Results
	feeding yourself as part of the course material
g) Farmer's markets	<ul style="list-style-type: none"> - Neither farmer's market had a definition for SFS project - Both feel that they do contribute to a sustainable food system through the kind of products they offer - One market felt that it would be more of a SFS project if it were independent and required no assistance for funding or programming
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - None of the multidisciplinary participatory projects define SFS project - Most instead define the term sustainable food system, and do believe they fit as a SFS project
i) Food banks	<ul style="list-style-type: none"> - None of the food banks defined a SFS project - 2 of the food banks felt they did have goals that aligned with a SFS project, mainly in terms of wanting to provide better access to those in need - 1 of these projects also aspired to incorporate fresh, local, food and partnerships with farmers to better address the environmental aspect of production and distribution - The third food bank did not identify with the term

a) Community gardens

Though none of the eleven gardens interviewed used the term SFS project in their work, all had some related definitions and felt that they fit in under the concept. The first garden felt that seed saving was an important part of being a SFS project (Project 5 – community garden, 2012). The second garden comes from a more political approach to the topic by bringing the power of food production back into people's hands. It feels that by offering workshops and having the space to have people practice what they learn is part of a SFS project (Project 7 – community garden, 2012). The third garden feels it is a SFS project because it tries to teach students that gardening is easy, and that it can be done at home, providing a skill set to a new generation (Project 12 – community garden, 2012). The fourth garden feels that is one small part of a greater SFS project that will soon be undertaken on campus, and that the lack of a definition has been a driver for the work happening (Project 14 – community garden, 2012). The fifth garden felt that it needs to address every step in the food cycle in order to be a SFS project, and that they are not quite there yet but are striving to be. However, because they involve the community, as a sustainable system should, this garden believes it does fit under the SFS project label (Project 16 – community garden, 2012). The sixth garden feels that it is very much a SFS project, as it is the summer supply of vegetables for all the volunteers and those who regularly come by. As well, because of the use of compost, donated seeds, organic gardening practices, and where the money later goes the garden has improved the soil, general environment, and social situation of others (Project 20 – community garden, 2012). The seventh garden defines its mandate around sustainability in terms of chemical and

manufactured herbicides and pesticides in the garden, which cannot be used. However, this garden does also try to have more sustainable procurement and encourages sustainability in other areas of member's lives (Project 24 – community garden, 2012). The eighth garden project feels it is a SFS project because it does a lot to educate people how to grow their own food so that when they move on, they have those skills for the future. As well, one of the garden sites has a lot of people walk past on a daily basis, which allows for more awareness building with non-gardening students and staff (Project 26 – community garden, 2012). The ninth garden would define itself as a SFS project because it believes in organic agriculture, supporting small-scale farming, food security, and food sovereignty – all principles of sustainability (Project 27 – community garden, 2012). The tenth garden representative defines a SFS project as something that helps to remove the barriers to accessing more sustainable food options, such as reducing environmental impact and making it more accessible socially. This garden's mandate does have it written in that it will provide educational opportunities for sustainable agriculture, gardening, and food security, certainly making it a SFS project (Project 30 – community garden, 2012). The eleventh garden's mission is to feed the community and help build a community in every aspect, which it believes falls under what a SFS project is. In addition to educating people, urban agriculture helps to address threats to the food system (Project 36 – community garden, 2012).

b) Food service providers

Of the eight food services interviewed, only two had a written definition of what a sustainable food service would be (which is related enough to a SFS project). However, the rest had very interesting contributions to make about the term and where their projects sit. The first food service answered that their university does not even really define sustainability because it means so many things to different people. His operation also stays away from making policies as then they have to be followed to the letter, which might not always be feasible (Project 6 – food services, 2012). The second food service representative mentioned that sustainability is for the long term, and from an environmental standpoint it is something that can continue. For this organizer, it does not make sense to serve out-of-province produce when those same items can be grown and sourced in-province, and bringing those beliefs into work defines his projects (Project 10 – food services, 2012). The third food service would eventually like to propose a definition of sorts along with a food service sustainability plan to the university as the organizer recognizes that this would be important for continuity should she leave the school (Project 18 – food services). The fourth food service does not define SFS project, but defines sustainability (in terms of food) as “minimizing footprint and increasing a commitment to the environment.” They always look

for projects that can be applied across campus and different service providers to ensure that happens (Project 28 – food services, 2012). The fifth food service representative stated that though there is not an official policy, program or definition, the sustainability initiatives are just what they do and are incorporated into business as usual (Project 31 – food services, 2012). The sixth food service provided a definition of “introducing local food into the community...” as their definition of a SFS project (Project 33 – food services, 2012). Similarly, the seventh food service has an established mission statement for themselves and for their purchasing: “...committed to creating, producing and enhancing a sustainable culture for the life legacy of the community...” and “leaving a lighter footprint for tomorrow” (Project 35 – food services, 2012). The eighth food service interviewed answered that “a sustainable food service should promote and support the development of a corporate culture that embraces creativity and innovation reflected in the economic, environmental, social, and cultural policies of the company...” (Project 37 – food services, 2012).

c) Independent cafés

None of the three non-dining-hall cafés specifically utilized the term SFS project, but all agree that they fit in that category. The first café does not even define sustainability, but believes that it is a part of what they do as their focus is vegan meals and trying to be more environmentally friendly overall (Project 9 – non-dining-hall café, 2012). The second interviewee is interested in the sustainability of a vibrant regional food system, which includes a fair bit of the economic side of the concept in addition to the ecological, thus working towards a sustainable food system (Project 19 – non-dining-hall café, 2012). The third project does define sustainability, which for their organization mainly involves the ethical sourcing of food for the ecological and economical components, and volunteerism as the social aspect (Project 29 – non-dining-hall café, 2012).

d) Composting

The three composting projects did not have definitions of a SFS project written in to any part of their organizations. The first initiative believes that composting is part of a sustainable food system instead of throwing out food, but that it is difficult to measure the environmental gain or impact of such a program on campus (Project 4 – composting, 2012). The second composting initiative mentioned that the project tries to address a problem that students see, as many students on campus do believe that composting is part of sustainability (Project 23 – composting, 2012). The third composting representative brought up that the student association on campus was looking at establishing a

committee to further discuss a food policy or broad food initiative where such a definition could be created (Project 38 – composting, 2012).

e) Awareness projects

Neither of the awareness projects had definitions of a SFS project, but both felt that their project programming qualified under their understandings of the terms. The learning centre tries to incorporate a look at farming as a whole system. There is discussion about the good parts of agriculture, making food for lots of people, but the issues of sustainability and agriculture's effect on the environment – particularly water, effects of by-products, and the effects of fertilizers – are also highlighted (Project 25 – awareness, 2012). The student group prefers to try and address the social, environmental, and economic areas of food system awareness. It supports local, fair trade, and organic produce, not only promoting their use but incorporating such products into their events. As well, the food provided at their events is generally vegetarian. The participants from this project felt that their most important focus was on accessibility for all students on campus to be able to identify with their program and not have any barriers to participate (Project 34 – 2012).

f) Skill-building

The skills-based project did not have a definition of the term, but recognizes that it does operate with the intention of making the food system more sustainable by incorporating the idea of local food and a trip to a farmer's market as part of the course material (Project 22 – skills, 2012). While this does not directly address food production or distribution, the hope of the project is to get participants to think about these parts of the system within the context of consumption.

g) Farmer's markets

Neither of the farmer's markets has a definition for a SFS project in their documents or operations. However, both projects do make it clear that they are trying to contribute to a more sustainable food system. The first market chooses to focus exclusively on local farmers in order to support them and ensure shoppers have access to local food (Project 15 – farmer's market). The second market added a different angle to the term, and said that once they can promote a sustainable food system independently, without university funding, they will consider themselves a true SFS project (Project 39 – farmer's market).

h) Multidisciplinary participatory projects

Of the seven multidisciplinary projects, none define the term SFS project in their documents. However, most of them have some working definition of a sustainable food system and do believe that they fit under the SFS project term. The first project has talked about sustainable agriculture and a sustainable food system, but has not defined it as a collective. However, the organizer thinks that they fit under that term, especially because of some of the projects that address multiple parts of the food system and any person can help with any step of the processes (Project 3 – multidisciplinary project, 2012). For the second project, sustainability is “working together and feeling good to create a better future.” Everyone has to be involved in finding solutions, and this is a priority for the project (Project 8 – multidisciplinary project, 2012). In the third multidisciplinary program, each project defines sustainability in different ways and addresses different parts of the system. The food service aspect focuses on having barrier-free service, and thus offers food for everyone. The farmer’s market focuses on local, but if it or organic is unavailable, because the goal is to provide access to fresh food non-local food may be sold instead (with prominent signage). Similarly, the garden will both donate food and sell it on campus. All of these activities fall under a SFS project, but are not necessarily defined that way (Project 11 – multidisciplinary project, 2012). The fourth project talks more about food security and aspects of sustainable food systems, and is trying to define the components of a sustainable food system. While not all projects of this centre directly contribute to a sustainable food system, the idea is about building capacity and creating opportunity to engage in the issues (Project 13 – multidisciplinary project, 2012). The fifth project has a wide spectrum of activities that contribute to a sustainable food system. It addresses distribution by connecting farmers to students, and through education and advocacy events. A community garden is on the horizon, and will grow food for food services and serve as an outdoor classroom. The harvest box program not only provides students with local and organic food, but does it for free for those who frequent the food bank, addressing access as well (Project 17 – multidisciplinary project, 2012). The sixth project knows that it cannot achieve a fully sustainable food system, but that it can certainly work towards it with all its activities (Project 21 – multidisciplinary project, 2012). The seventh multidisciplinary project feels that a SFS project is related to all its initiatives, but has yet to sit down and define what it means in its context (Project 40 – multidisciplinary project, 2012).

i) Food banks

Unsurprisingly, none of the food banks had a definition of a SFS project. However, the first two food banks identified that they certainly had goals that align with a sustainable food system. The first food bank also felt that though its current system helped give disadvantaged people access to food, their model is not sustainable. The current organizer would like to see cooperation with farmers to get local, fresh, food and add a community dimension to the space, instead of relying on processed corporate goods (Project 1 – food bank, 2012). The third food bank simply stated that “...the goal is just to provide food to those in need...” (Project 32 – food bank, 2012).

j) Summary

None of the 40 participants interviewed defined the term SFS project within the realm of their respective projects. However, many defined sustainability or agreed that they fit the concept of a SFS. The community gardens, independent cafés, and multidisciplinary projects had the strongest conviction in their roles, linking parts of the food system and concepts such as food security and food sovereignty in their answers. This indicated that there is a potential to increase the use of the term so as to help create links between projects that might not have thought they were related, such as food banks and university food services sustainability initiatives.

4.2.2.3 Motivations

The third question asked participants about the motivations behind the creation of their respective projects. It was believed by the researcher that the reasons for starting the project impact the process and organization of the project, as well as influence its future path. As will be evident from the information below, most projects across all categories felt the need to address some sort of gap on campus, as well as the desire to bring the community together. The answers are first summarized in the table below.

Table 6: Overview of project motivations

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none">- All 11 gardens wanted give the campus community the opportunity to connect with the earth and grow something- 4 of the gardens were also motivated by the concepts of food security and sustainability- 3 gardens were also motivated by the desire to create teaching links between gardens, courses, and life skills

Project Category	Key Results
b) Food service providers	<ul style="list-style-type: none"> - 3 of the food service providers were motivated to change due to student pressure and demand - 4 of the providers mentioned a passionate management team that felt that sustainability initiatives were the right thing to do - 1 participant cited a desire to make healthier choices available to students, and to bring the community together
c) Independent cafés	<ul style="list-style-type: none"> - All 3 cafés wanted to provide students on campus with another more accessible choice of food source on campus
d) Composting	<ul style="list-style-type: none"> - All 3 composting projects were created because of a larger university sustainability plan and campus community pressures to have composting available
e) Awareness projects	<ul style="list-style-type: none"> - 1 awareness project was created due to faculty wanting a place to educate the public, and attract researchers - 1 awareness project was created to fill an educational gap on campus concerning food and associated concerns
f) Skill-building	<ul style="list-style-type: none"> - The founder of the skills project wanted to provide young students with the tools to fix their food habits earlier in life
g) Farmer's markets	<ul style="list-style-type: none"> - 1 farmer's market was created because the school administration approached the company for the partnership - 1 farmer's market was created because the organizer was inspired by a course on food systems to re-start the defunct project on campus
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - Student demand was behind the creation of most multidisciplinary projects - Filling a gap in campus programming and making a difference in the campus community was also mentioned by most of these projects
i) Food banks	<ul style="list-style-type: none"> - All 3 food banks shared the common motivation of wanting to provide access to food for students who need financial assistance

a) Community gardens

Each of the eleven garden projects had different motivations for starting, but one common motivation was to give the campus community the opportunity to connect with the earth and grow something. The first garden also felt that because there was a lot of green space around the university, it would be a great way to use it and create something that would benefit the students (Project 5 – community garden, 2012). For the second garden, the main motivation was that the original group of students wanted to take back control over the growing of their food, and show others that is possible and share the skills to make it happen (Project 7 – community garden, 2012). The third garden came out of the motivations of two professors on campus who had previously been involved in community gardens and wanted to make teaching links and have a similar atmosphere at their new campus (Project 12 – community garden, 2012). The fourth garden was started because staff felt that they should have the opportunity to grow something, especially at a campus that is a national historic site and supports horticultural and agricultural activities (Project 14 – community garden, 2012). For the fifth garden, the

motivation was to have access on campus to affordable healthy food that is culturally appropriate. It seemed like a good way to fill a gap on campus and collectively work on the complex issues of the food system and food security (Project 16 – community garden). The sixth garden was started by a professor at the school who was an avid gardener who wanted to garden and help a cause at the same time. The garden was built to grow food to raise money for a centre that provides counselling and assistance in Rwanda (Project 20 – community garden, 2012). The seventh garden was driven by a student desire to have a community garden on campus (Project 24 – community garden, 2012). The eighth project, too, was driven by students on campus who wanted to address food security (Project 26 – community garden, 2012). The ninth garden was created by students who felt that having a hub for campus agriculture would be create a stronger project than various individual groups on campus working separately (Project 27 – community garden, 2012). The tenth project was started by environmental studies students who wanted to ensure there was an opportunity to have a hands-on learning experience of the concepts often learned in class (Project 30 – community garden, 2012). The eleventh garden was started by a committee at the university that sought to make the campus more environmentally sustainable, and the garden came up as one of the ideas (Project 36 – community garden, 2012). These answers were fairly consistent with research on the purpose of most community gardens and their role in connecting people to the earth and related issues (Turner, 2011).

b) Food service providers

All the food services projects experienced different motivations for their work. The first food service provider had a passionate purchasing director who expanded on the existing local purchasing program, and other activities. In addition to wanting to improve the programs, the educational aspect arose from a desire to transparently tell others what they were doing (Project 6 – food services, 2012). The second food service representative cited student pressure from a food sustainability group on campus as a driver for many of his department's activities (Project 10 – food services, 2012). The third food service interviewed was motivated to start the program by a combination of factors. Student knowledge and questions inspired some of the changes, travel and seeing different conditions in other parts of the world were an another influence, and a drive to set the food service department apart from the others was the third factor (Project 18 – food services, 2012). For the fourth food service project, "it was just the right thing to do" for the director, and every year a new project is added to the repertoire (Project 28 – food services, 2012). The fifth food service department also felt it was the right thing to do, with the senior staff seeing the "green light" later in life (Project 31 – food services, 2012). The sixth

food service originally wanted just to improve the nutritional value of food served to students, but then it became about supporting the community and going back to basics instead of promoting pre-processed foods (Project 33 – food services, 2012). The seventh project was primarily consumer driven, changing their practices due to demand. However, the director also wanted to be in the driver's seat on food sustainability issues and be a leader and direct campus policies instead of reading and being influenced by others (Project 35 – food services, 2012). The eighth food service believed that a student's decision to attend an institution of higher learning was a choice that takes into account more than the academic opportunities offered. Good food created in a kitchen where respect for the product and for each employee is evident, could influence a student's experience (Project 37 – food services, 2012).

c) Independent cafés

The three non-dining-hall cafés all shared the motivation of wanting to provide students on campus with another more accessible choice of food source on campus. The first café was created in a time where a larger corporation had a monopoly on the campus after closing down earlier student-run cafés. The idea was to provide accessible meals to students with different diets, such as vegan, hallal, and kosher (Project 9 – non-dining-hall café, 2012). The second café started out as a food issues research group that was motivated to create a café as the belief was that enough people on a university campus would be engaged with food issues. As well, there was limited choice on campus for food to eat (Project 19 – non-dining-hall café, 2012). The third café was started because a group of students wanted to see the community come together and cook, and the current group extended that purpose to be having that type of food accessible every day (Project 29 – non-dining-hall café, 2012).

d) Composting

All three composting projects interviewed were generally created because of a larger university sustainability plan and campus community pressures. The first project had pressure from students and members of the university community for an on-campus composting unit, and since the sustainability action plan called for a related project this method of organics collection was chosen for the purpose of awareness and outreach. The university hopes to have some student research projects to it soon (Project 4- composting, 2012). In addition to being part of a university-mandated waste reduction plan, the second composting project also was implemented to the level it is currently at due to student requests for such a program and the availability of organic waste collection by the surrounding municipality (Project 23 – composting, 2012). The third project also had the motivation of setting up

their waste diversion activities as “part of the educational experience of students on campus...” (Project 38 – composting, 2012). Even though composting is one of the smallest impacts of what the campus can do in terms of sustainability, it has some of the most visibility and helps students see that the way they eat and dispose of things has consequences.

e) Awareness projects

As expected from their varied descriptions, the two awareness-based projects also had slightly different motivations behind their creation. The education centre was proposed by faculty who wanted an outlet for showcasing the school’s work, along with a way to educate the public on the ins and outs of the various types of agriculture. In addition to this educational goal, the centre aims to attract future researchers interested in some of the topics covered in the centre to the university (Project 25 – awareness, 2012). The student-run group was created to fill a gap on campus. Students wanted a place to get more information on sustainable food, where and how to get it, and how choices can have an impact (Project 34 – awareness, 2012)

f) Skill-building

The skills-based project was born out of its founder’s personal inspiration. From his own transition from an unhealthy out-of-the-box eater as a student to a more conscious cook as he matured, he wanted to provide young students with the tools to fix their habits earlier in life (Project 22 – skills, 2012). This personal connection to the project has impacted course content and the style employed to get the message across, and has contributed to the future of the project, to be discussed in a later question.

g) Farmer’s markets

The motivations behind the creation of each farmer’s market interviewed were different. For the first market, the university itself had reached out to contact the organization to form a partnership (Project 15 – farmer’s market, 2012). For the second market, the current organizer was inspired by a course on food systems to re-start the farmer’s market on campus (Project 39 – farmer’s market).

h) Multidisciplinary participatory projects

Students are behind the reasoning for almost all the multidisciplinary projects being created. The first project was created because not only was there a large demand for that type of programming,

but because there were a few abandoned spaces on campus that students wanted to save (Project 3 – multidisciplinary project, 2012). The purpose behind the second project was to create a community gathering place on campus and fill a gap in campus programming (Project 8 – multidisciplinary project, 2012). For the third project, the motivation was to encourage the purchase of local food, provide access to healthy food, support local farmers, provide opportunities for local engagement, and to educate about sustainable consumption in terms of both students and the greater community (Project 11 – multidisciplinary project, 2012). The fourth project initially started to serve as a support system and hub to bring people and projects together, and evolved to be a meeting space and resource centre for various food projects (Project 13 – multidisciplinary project, 2012). The fifth project was primarily student motivated, with the original organizers wanting to fill a gap on campus (Project 17 – multidisciplinary project, 2012). There was a gap, too, for the sixth project, but another driver was that some of the food providers on campus wanted to improve their offerings which allowed for the collaborative change. As well, at this school campuses are seen as a microcosm of the broader systems they are embedded in and thus changes on campus will impact the surrounding systems (Project 21 – multidisciplinary project, 2012). The seventh project maintains that there was no specific motivation, but that it just made sense for students to be exposed to local and organic food and be linked to that culture (Project 40 – multidisciplinary project, 2012).

i) Food banks

All three food banks shared the common motivation of wanting to provide access to food for students who need financial assistance. Two of the food banks went a step further and noted that a gap was identified, and it was the goal of the program to be created in order to fill that void. Links to the food system were not made in the answers the three projects provided to this question.

j) Summary

Most projects across all categories were created because the founders felt the need to address some sort of gap on campus, and there was a related desire to bring the community together on the issues surrounding the food system on campus. All the gardens primarily wanted to create the opportunity to connect with the earth and grow something, in addition to providing another educational platform and addressing food sustainability. Half the food services cited their projects as being inspired by management wanting to make a positive change, and not very much about customer demand. All 3 cafés wanted to provide students on campus with another more accessible choice of food sources. The

composting projects were created because of a larger university sustainability plan combined with a demand for such a program. Both awareness programs were created to fill an educational gap, but one was more for the purposes of attracting researchers and the other was just to help students and the campus community. The founder of the skills project wanted to provide young students with the tools to fix their food habits earlier in life. The farmer's markets were created for different reasons; one was created out of the desire of university administration to have one, and the other was created because a student on campus wanted to re-engage in the activity and food discussion. Student demand and filling gaps in campus programming were the motivations behind the multidisciplinary participatory projects. All the food banks shared the common motivation of wanting to provide access to food for students in need. These motivations do indicate a strong pattern on Canadian university campuses of people engaged enough with social and environmental issues to act on their desires to change the system, thus provides hope for the future of addressing problems.

4.2.2.4 Approvals process

The fourth question of the interviews sought to understand what kind of process, if any, had to be undertaken through university administration in order to start the project. Along with this, participants were asked to relay the reaction or thoughts of administration to the proposal of the project. This question was asked in an attempt to determine the institutional atmosphere surrounding SFS projects. The answers to this question were varied, as schools have different processes and attitudes. The overall theme of the answers seemed to be that there was a lot of positive energy and support towards the projects, but that there were often obstacles to be faced through either an administrative process, or a negative response from other departments that had to be involved in granting approval for the programs. If the projects went through the student union first instead of the general administration, there was generally a quicker rate of success in getting projects approved and funding attached. The table below summarizes participant answers.

Table 7: Overview of project approvals process

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none"> - 8 of the community gardens had to go through some level of administrative approval, 1 garden was unsure of the approvals process, 1 garden only had informal talks with administration to set-up the garden - 1 garden had a unique situation where the university itself set up the garden - 8 gardens had a lot of support and not much resistance - 1 garden encountered a significant resistance from administration - 1 garden was approved, but not permanently, which casts confusion over the

Project Category	Key Results
	level of support
b) Food service providers	- All the food services projects had a small intra-departmental approvals process, as most of them are self-financed and self-directed, with room to make independent choices as long as the budget is balanced
c) Independent cafés	- 2 of the cafés chose to go through the campus student union for approval, which has helped with positive support - 1 of the cafés had to overcome an exclusivity contract that the university had with the food service provider; the result was a strict and detailed 3-way contract, but there is still positive support on campus
d) Composting	- As all three composting projects interviewed were partially created as a result of university sustainability plans, reactions were generally positive for all
e) Awareness projects	- 1 awareness project had a lengthy consultation process due to the construction involved, but ultimately had a positive approvals process and support - 1 awareness project went through the campus student union, and met with very positive support and prompt funding
f) Skill-building	- As this project is run externally, there was no approvals process but the campus student union is supportive in promotion
g) Farmer's markets	- Both markets had easy approvals processes and high university support
h) Multidisciplinary participatory projects	- 2 of the multidisciplinary projects had to go through formal approval, and were met with positive reactions - 3 of the projects did not have approval for their creation because of a positive atmosphere on campus, but various initiatives to need to go through approval - 1 project was unsure of the process, but knows that the support was and remains positive - 1 project was created through the allocation of funds for a research chair in the area of food, so support was strong enough to push the application through the lengthy process
i) Food banks	- All three food banks only had to get approval from their campus student unions, and became student union services. There were no obstacles and support was and is high.

a) Community gardens

As all the gardens utilize university land, they all also had approvals processes to follow. The first garden had to go through both the university administration and the government, as it is the landowner, for approval. The reaction of the university administration was positive, but there was some resistance from the government (Project 5 – community garden, 2012). The second garden had to get approval from the building director of the space they wanted, as well as getting approval from the grounds people. There were “many hoops to jump through,” but in the end the reaction was positive (Project 7 – community garden, 2012). The third project wrote a letter of intent to university administration, and the support there was great as the idea came from two professors. However, there was also an approvals process from the managers of the available space, as it was parkland. This was trickier and only 50% of

the land requested was granted (Project 12 – community garden, 2012). The fourth garden only had 4 people on the campus executive to convince, and while it was tough the garden was approved (Project 14 – community garden, 2012). The fifth garden had to go through campus facilities to get site approval, but overall the administration was very supportive and continues to participate in the project (Project 16 – community garden, 2012). For the sixth garden, there was no official approvals process but rather just meetings with administration (Project 20 – community garden, 2012). The seventh garden encountered a lot of resistance from the university due to an earlier student-run project that ended poorly. The approvals process was very stringent, with a requirement to have 3 continuing staff members employed at all times, and no official commitment as to how long the garden can exist (Project 24 – community garden, 2012). The eighth garden representative was unsure of the details of the initial approvals process, but they were approached by the university itself to expand, providing a very accommodating and friendly atmosphere for the project (Project 26 – community garden, 2012). The ninth garden had a unique situation, as administration was involved in the initial set-up of the project. Approvals are submitted to the campus planning department for things like new garden plots (Project 27 – community garden, 2012). The tenth project went through administration for approval, and got a 15 year land use agreement. This agreement was up for renewal recently, and though the garden was approved and moved to a larger site, it was not made a permanent site, which made the type of support available confusing (Project 30 – community garden, 2012). The eleventh garden had a very supportive administration who were open to the idea as the lot proposed was vacant and the project would not cost them any money. The administration donated the land for the garden, and has since provided various services to help the garden, such as hauling compost, roto-tilling, delivering food scraps from food services for composting, and doing soil and food tests (Project 36 – community garden, 2012).

b) Food service providers

Almost all the food services projects had a small intra-departmental approvals process, as most of them are self-financed and self-directed, with lots of room to make independent choices as long as the budget is balanced at the end of the day. The first food service added that the department and the school administration in general was and continues to be supportive of the projects (Project 6 – food services, 2012). The second representative also mentioned the overwhelming support from around campus, including administrators and other staff that give great suggestions that improve the project and save more money (Project 10 – food services, 2012). The third food service organizer did not even have an internal approvals process to follow, rather just the budget leeway. The results by the efforts

made administration proud and supportive of the organizers choices (Project 18 – food services, 2012), The fourth food service provider did, and still does, have a slightly more complex approval process, but it mainly involves other food groups. Any initiative starts with an advisory committee, then to the director to work out the budget, and then the network of all food outlets on campus discusses how the projects can be implemented across the board. The original concept of the projects did not have any approvals process, and the campus supports the initiatives (Project 28 – food services, 2012). The fifth and sixth interviewees did not have anything new to add to the common finding. The seventh project wanted to highlight that though there was administrative support, there was no financial support when the project started because it was not part of the school’s mandate at the time (Project 35 – food services, 2012). The eighth project had a little more input from administration, as they sit on the board of group that oversees food services, but the overall reaction was positive (Project 37 – food services, 2012).

c) Independent cafés

The three non-dining-hall cafés had different approvals processes and different campus reactions to their creations. The first café began as a research working group, and most of the approvals conversation was done under the student union in order to be able to get space on campus and a student fee levy for funding. There was some resistance at first, but that has since subsided (Project 9 – non-dining-hall café, 2012). The second café was supported by staff and students, but had to deal with an exclusivity contract with the main service provider on campus. This resulted in a 3-way contract between the university, the café, and the service provider which outlines the ways that the café can operate on campus. Though this café is restricted from catering or being on the student meal plan, there is an understanding that it has a large educational component and this has provided a positive general atmosphere (Project 19 – non-dining-hall café, 2012). The third café, similar to the first, also initially went through the student unions on campus and obtained a levy. There is overall great support from administration and even campus food services (Project 29 – non-dining-hall-café, 2012).

d) Composting

As all three composting projects interviewed were partially created as a result of university sustainability plans, reactions were generally positive for all. The third composting project could not add any elaboration as the current organizer joined the university after its creation and has no record of the approvals process (Project 38 – composting, 2012). The first project was implemented through the department of building management, which has the ability to make large decisions, like purchasing a

composting unit. The approvals process for the purchase was quick due to the sustainability plan in place (Project 4 – composting, 2012). Similarly, the second composting project had a quick approvals process because of that university's sustainability plan. It had been written in to the facility services contract that composting would occur when possible, so once the conditions were right, with student pressure and municipal organics collection, it was easy to move forward (Project 23 – composting, 2012).

e) Awareness projects

Both institutionalized, the awareness projects had to go through some degree of university bureaucracy but ultimately had support. The education centre was allowed to have faculty raise money to build it, but did have to go through a lengthy consultation and design process of about 6 years before the centre was actually built (Project 25- awareness, 2012). The student-run program chose to go through their campus student union, like many other projects discussed in this section, and their initiative passed a council vote and promptly received funding (Project 34 – awareness, 2012). Both projects are positively viewed, and get media exposure without even knowing. Administration and various other groups on campus see these projects in a positive light.

f) Skill-building

While the skills-based project is geared towards students on particular campuses, there was no approvals process as the activities and office are all off-campus. The student unions of the schools help with program promotion, and are very willing to do so (Project 22 – skills, 2012). The project founder cites the flexibility, availability, and pleasant attitudes of student union representatives as reasons why this is the route taken, and will likely continue to be taken even as the program expands.

g) Farmer's markets

The processes for each of the two farmer's markets interviewed shared the commonality of an easy approval. The first market did not have a lengthy approvals process because the university administration itself was the initiator of the project. However, there was an associated research process for selecting the best site on campus for the market, and meetings with campus stakeholders were held to discuss the details of market type, time, understanding of shoppers, and so on (Project 15 – farmer's market, 2012). The second market also had a fairly easy approvals process, as it had been a club in the

past so standard student club procedures were followed. The atmosphere was supportive, and funding was also provided easily (Project 39 – farmer’s market, 2012).

h) Multidisciplinary participatory projects

The answers to this question varied greatly for the multidisciplinary projects, mainly because of the different component in each as well as the university atmospheres. The first project mainly gained approval through applying for funding from a large campus strategic fund, and that was indicative of the great support on campus (Project 3 – multidisciplinary project, 2012). The second project did not need approval as it started during a shift in the university’s operations. There was support from all the areas the project wanted to tackle, and it was recognized as being a key group to facilitate student life and learning outside the classroom (Project 8 – multidisciplinary project, 2012). The third project had a very positive reaction to its proposal for approval because the campus has a strong culture of collaboration and everyone who would be impacted by the initiative was involved and thought it would be beneficial (Project 11 – multidisciplinary project, 2012). For the fourth project, the process was a little bit different as the centre was created out of a research chair position and the approval of the application shows that there was enough support to move the application through the system (Project 13 – multidisciplinary project, 2012). The current organizer of the fifth project was unsure of the exact original approvals process, but the reaction of the university has been very positive and supportive, and the project has passed a referendum through the student union, which has gained it even more support (Project 17 – multidisciplinary project, 2012). The sixth project did not have anything official signed for its creation, but the reaction was positive. All food system stakeholders were part of the discussion, and are partners that meet annually (Project 21 – multidisciplinary project, 2012). For the seventh project, the various initiatives go through the standard proposal forms to the student union but other than that the support from all departments is high, as long as the activities follow policy (Project 40 – multidisciplinary project, 2012).

i) Food banks

Somewhat different than all the projects above, the campus food banks all gave the same answer to this question. All three food banks only had to get approval from their campus student unions, as they are deemed student union services. There were no obstacles, as all three student unions involved seemed to see value in the projects and passed them easily. The reactions to all proposals were positive, and support is ongoing.

j) Summary

As schools have different processes and attitudes, the question about the approvals process varied. The overall theme of the answers seemed to be that there was a lot of positive energy and support towards the projects, but that there were often obstacles to be faced through either an administrative process, or a negative response from other departments that had to be involved in granting approval for the programs. If the projects went through the student union first instead of the general administration, there was generally a quicker rate of success in getting projects approved and funding attached. Interesting to note is that all the food services interviewed have full control over their operations, and can make changes and decisions as they see fit as long as budgets are met, potentially making it easier to have SFS projects coming out of food service providers and outlets. These results suggest that existing university departments may be good partners to support, house, or partner with various SFS projects due to the possibility that they may have more decision-making capacity than independent projects would.

4.2.2.5 Challenges

The fifth question participants were asked dealt with the challenges encountered in trying to getting the various SFS projects off the ground. Participants were also encouraged to discuss current challenges if that felt more relevant to their stories. Challenges often highlight areas that the organization needs to focus their attentions, but they can also point out possible institutional roadblocks that could benefit from collaborative problem-solving across all universities. Additionally, some challenges speak to the attitudes of the audiences the SFS projects try to cater to. A common theme across all project categories was difficulty in getting participation or volunteers, and the need to raise more awareness about the projects and the issues they try to address. The table below summarizes these themes.

Table 8: Overview of project challenges

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none">- All gardens experienced, and sometimes still experience, site-related challenges such as water availability, soil conditions, and getting tools to the garden site- Most gardens experience difficulty in getting committed participants and volunteers
b) Food service providers	<ul style="list-style-type: none">- All food service providers face the challenge of justifying the costs of their choices and balancing their budgets- 5 food services cite the availability of suppliers that can meet both demands

Project Category	Key Results
	<p>and other sustainability requirements as a big challenge, and that larger somewhat local suppliers are often chosen over smaller, and possibly more sustainable, ones</p> <ul style="list-style-type: none"> - 5 food services find staff and student education and awareness about why the projects they undertake are beneficial to be a challenge
c) Independent cafés	<ul style="list-style-type: none"> - All 3 cafés experience logistical challenges of funding, food sourcing, coordinating volunteers, and raising their profiles on campus - 2 of the cafés find the collective/cooperative structure to be difficult at times, often due to new member inexperience
d) Composting	<ul style="list-style-type: none"> - All 3 composting projects experience difficulty at the waste sorting stage - 1 composter found implementing safeguards to prevent airborne contamination a challenge initially - 1 composting project finds the increasing costs of composting, such as bags and getting the organics picked up, a challenge to justify based on the small returns
e) Awareness projects	<ul style="list-style-type: none"> - Both awareness projects face the challenge of advertising/marketing their projects - 1 project experienced building-related challenges - 1 project continues to struggle in defining sustainable food, which impacts project materials and food at events
f) Skill-building	<ul style="list-style-type: none"> - An ongoing challenge for the skills project relates to the commitment of student participants to attend all 10 weeks of the session (which has never happened)
g) Farmer's markets	<ul style="list-style-type: none"> - Both farmer's markets experience advertising challenges - 1 market has an ongoing challenge of ensuring that there will still be enough vendors and shoppers and trying to turn the market into a community space - 1 market had the initial challenges of volunteer participation and storage space, which have since been overcome
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - All 7 multidisciplinary projects experienced an initial funding challenge - Time, resources, risk, and participation are challenges for many of the projects - 1 project found an interesting challenge of environmental issues getting more complex, and thus making it harder for the project to address them in their work
i) Food banks	<ul style="list-style-type: none"> - All 3 food banks share the main challenge of maintaining a stock of enough food to distribute to patrons - 1 food bank experiences a limitation of space - 1 food bank feels that monitoring how much food people take is a challenge - 1 food bank finds that not knowing how to better meet the needs of patrons is an important challenge to try and overcome

a) Community gardens

Many of the challenges for the 11 gardens have to do with the garden sites themselves. For the first garden, the garden is not very close to any university building and thus water access is limited. As well, finding reliable student participants can be a challenge, thus this garden does hire a student to take care of it (Project 5 – community garden, 2012). The second garden has experienced challenges in

getting materials to the garden, as most students do not have cars to help with this process. In terms of administrative challenges, because a core group of students has graduated, finding committed students and passing on the knowledge has been difficult. Similarly, the research group that the garden is partnered with may cease to exist, which would impact meeting rooms, storage space, and advertising potential (Project 7 – community garden, 2012). For the third garden, a large challenge was that many people didn't believe in the project and there was a lot of resistance from facilities management. Also, during the planning process there was a need to motivate the committee to see the big picture instead of getting bogged down in details. Overall, the feeling was that even though there might be support for sustainability in theory, in practice getting projects implemented was like a different world (Project 12 – community garden, 2012). The fourth garden has the challenge of telling staff about the existence of the garden, as it is not advertised or part of any new-hire orientation. As well, there is difficulty in getting committed people to take care of the garden year-round (Project 14 – community garden, 2012). The fifth garden's main challenge thus far is connecting everyone and developing good partnerships with other groups on campus. It expects funding to be a challenge soon (Project 16 – community garden, 2012). For the sixth garden, the early challenge was getting enough volunteers to plant and maintain the garden. However, word has spread and now the main challenge is managing the demand for the produce. It is still a challenge to find enough volunteers that want to take on planning responsibilities in addition to simply gardening (Project 20 – community garden, 2012). The seventh garden's challenge was getting approval in the beginning. Building the physical garden space has also been a challenge, as no permanent structures are allowed. Choosing the space was also a challenge, as a large space was needed but a more central location would have been ideal (Project 24 – community garden, 2012). For the eighth garden, one challenge was moving twice, making it difficult for the plants and the plots. As well, the campus does not have the best soil so the growing conditions are fairly poor. In addition to this, there is a high turnover rate of plots which impacts the sense of community or the garden. Finally, this garden does experience vegetable theft and other light garden damage from people walking through (Project 26 – community garden, 2012). The ninth garden had to face the challenge of having all the logistical bases of the project worked out in order to demonstrate that projects wouldn't simply be started and abandoned. Volunteer support has also been an obstacle, as there sometimes are not enough for the planning side or for the gardening side of the operations. Like with the other programs, getting people to take leadership is difficult (Project 27 – community garden, 2012). The tenth garden finds that working with administration has been a challenge, as with the new site and getting a student fee levy there are many things that need to get approved. Any new structures have to get approval and

meet various requirements, and nothing too permanent is allowed. As well, volunteer support is still somewhat of a challenge for maintain the garden plots (Project 30 – community garden, 2012). For the eleventh garden, the main challenge has been finding committed volunteers, particularly through the summer. Another initial challenge was cleaning up the soil, as it was previously a construction site (Project 36 – community garden, 2012).

b) Food service providers

Though all the food service providers had similar freedoms in creating their projects, the challenges faced were not always exactly the same. Many projects faced cost-related challenges, as being able to justify spending money must be related to a tangible benefit. Similarly, product supply was a common challenge, as large universities need suppliers that can provide for large orders in a safe way. For the first food service interviewed, availability is one of the central challenges as environmental conditions from season to season have an impact on what is being sold and how much it costs. Though this food service has a major distributor, it also makes sure to buy from individual local farmers to try and overcome this challenge (Project 6 – food services, 2012). For the second food service, the price of organic and local food is a current project limitation. As well, raising awareness and getting staff and students understanding the importance of addressing the food issue has been hard (Project 10 – food services, 2012). The third food service, too, finds financial constraints to be a large challenge as there is a finite budget within which changes have to be made. With the organizer's passion, in the end the projects do work out with some tweaking. Another challenge is finding suppliers in the city that this university is in, as there are not many choices so if something happens with one, there are no alternatives for some local or organic products (Project 18 – food services, 2012). The fourth food service sees its challenges as little bumps in the road. Cost of the various projects they have in place is an issue because all the food outlets on campus have their own operating budgets and other constraints, so the cost of a project has to be fair for everyone in order to be implemented. As well, because the campus has upwards of 60, 000 people on any given day, it is tough to compete for awareness and attention with all the other events, projects, and messages being advertised on campus (Project 28 – food services, 2012). The fifth interviewee highlighted that supply is the largest challenge, as regular delivery and quality have to be guaranteed. This means that larger local suppliers are often chosen over smaller ones, and that the price is still higher than imported goods in order to ensure that the farmers can make a decent living (Project 31 – food services, 2012). The sixth food service cited awareness and public perception about local food as the largest challenge, as it makes all the other

steps of the project process harder. An initial challenge, in addition to getting buy-in from everyone who eats on campus, was that the cooking process had been de-skilled and those skills had to be reincorporated into the process. Another set of implementational challenges relate to the space available in the kitchen to store more fresh produce, and ensuring the food safety of produce that comes from smaller farmers by using a distributor that streamlines the process (Project 33 – food services, 2012). The seventh food service project said that the main initial challenge was that nobody on the team specialized in sustainability initiatives, which made some of the activities a struggle. The main ongoing challenge is education of the students on campus about the initiatives, and how to properly participate in some of them (such as waste sorting) as there is a new set of students every year. Another challenge is franchise agreements, as food services does work in conjunction with various other outlets and that may limit the degree of sustainability possible. This university, too, shares the challenge of food safety monitoring with smaller farms, and prefers to use larger distributors of local food (Project 35 – food services, 2012). The eighth food service program experienced some opposition to the raising of prices when changes were initially made. Though this has been overcome, there is still much student, faculty, and staff apathy to the commitments made. Training staff has also been a challenge, as there are often language and cultural barriers. Similar to all the other projects, this food service provider also has difficulty in securing local food sources that meet its needs and volume (Project 37 – food services).

c) Independent cafés

All three non-dining-hall cafés share similar logistical challenges of funding, food sourcing, coordinating volunteers, and raising their profiles on campus. The first café has 4 paid staff members, which is necessary for day-to-day operations but does introduce a set of power dynamics that this collective has to deal with. As well, getting enough committed volunteers to run the collective side of the café instead of just cooking is difficult. Obtaining the food for the café is also a challenge as it takes a long time and is not all from one place – volunteers have to go to farmer's markets for basic staple products, bulk providers for the larger items, and the supermarkets for their imperfect produce (Project 9 – non-dining-hall café, 2012). The main challenge of the second café is finding the balance between finding financially affordable produce and being able to pay farmers well all while running programs on a tight budget. Another challenge is the yearly student turnover, and any turnover elsewhere in the university as it results in needing more communication and outreach, which are difficult tasks in themselves (Project 19 – non-dining-hall-café, 2012). The third café's major challenge is operating within its collective/cooperative structure, as few people involved have ever been part of non-

hierarchical and consensus-based projects. This structure has also made it difficult to find committed people to take on more responsibility in the group (Project 29 – non-dining-hall café, 2012).

d) Composting

Despite similar university atmospheres, other factors have resulted in all three composting projects having slightly different sets of challenges, though all do experience some trouble at the sorting stage. For the first composting project, one challenge has been getting food service staff to separate meats out of the composting materials as those cannot yet be composted on-site. Another related challenge has been preventing airborne contamination, as the composter is inside and air-based fungi could make it out and into kitchens and other places. To address this, ventilation systems have been installed, bins are constantly washed, and air quality is monitored. The final challenge for this project has been finding a use for the composting end-product, as even with advertising not enough people come to collect it for free (Project 4 – composting, 2012). The second project still experiences some challenges in point-of-disposal sorting issues, and a lot of compostable materials end up in the garbage instead. Educating the campus community on this topic has been difficult. A final challenge this project experiences is that many items labelled as compostable are actually not, slowing down the whole sorting process (Project 23 – composting, 2012). For the third project, the main challenge is increasing costs. This particular institution is the least funded in its province, so the cost of compostable bags and signage are increasingly a struggle to justify given that the program does not bring down any disposal costs. This project also experiences difficulty on the user-side, with many compostable items being thrown into the recycling bins or the trash (Project 38 – composting, 2012).

e) Awareness projects

The two awareness projects share one major challenge: marketing their projects to get the word out about their existence. In addition to this, the education centre went through the expected challenges of building a new space – keeping costs in check, making design decisions, and choosing what kinds of displays would be most worthwhile (Project 25 – awareness, 2012). The student-run program continues to struggle in defining sustainable food, impacting their confidence in the materials they are trying to propagate along with the type of food they serve at their events (Project 34 – awareness, 2012).

f) Skill-building

The challenges faced by the skills-based project were initially related to the ability of the founder to coordinate schedules. However, the ongoing challenge relates to the commitment of student participants to attend all 10 weeks of the session. The program is completely free, and yet every participant that has participated in the program throughout its 3 sessions has missed at least one class, if not more. There are many volunteers from the food community that put their time into the program, and it is disheartening when participants miss out on important lessons (Project 22 – skills, 2012). This challenge points to a gap where participants would likely not want to pay for this program, and yet because the program is free they do not feel enough pressure to attend every class. The question here is how can this SFS project help to keep addressing the sustainable food system when its audience needs convincing?

g) Farmer's markets

Due to their different models, the two participating farmer's markets had and continue to have different challenges. The first market had an initial challenge of being able to evaluate if there would be enough shoppers, as well as if there would be enough farmers willing to participate in their strict model of only selling personally-grown produce (and nothing purchased from the Ontario food terminal). An ongoing challenge is ensuring that there will still be enough vendors and shoppers, as well as marketing to address those challenges. Additionally, the market seeks to provide a sense of community in the area with more events and local participation instead of just booths of produce, which has been tough (Project 15 – farmer's market, 2012). For the second market, volunteer participation was the biggest challenge at the start of the project. As well, there was initially no room or plan for food storage, so at the end of a market day all the food used to have to get donated to the school's food bank. Both of these challenges have been mostly overcome, with a group of core volunteers and an agreement with food services to use a small corner of their fridge for a box of leftover produce. An ongoing challenge has been advertising the market to the campus community (Project 39 – farmer's market, 2012).

h) Multidisciplinary participatory projects

One challenge that many of the multidisciplinary projects shared was that of being able to secure enough funding. The first project still experiences that problem, and believes it could do so much more work if it could actually pay people (Project 3 – multidisciplinary project, 2012). The second multidisciplinary project has overcome the funding challenge by getting enough to sustain coordinators,

and having the rest of the positions are volunteer-based (Project 8 – multidisciplinary project, 2012). For the third project, a major challenge has been working with food services because of the impact that the farmer's market might have on their sales, and because of the risk-agreement where the services would take all of the market's risk. Another challenge for this aspect of the project is meeting with the farmers. For the garden side of things, the main challenge has thus far been finding time and resources to write grants and to conduct community engagement, which has been helped by the hiring of interns (Project 11 – multidisciplinary project). The fourth project recently received a grant to alleviate its funding challenge, so the other main challenge here is deciding how to integrate the centre that houses all the projects with the projects themselves. The current space does not really incorporate very much in terms of sustainability or the vision of the projects, and having it fit better may enhance support and raise the university's profile (Project 13 – multidisciplinary project, 2012). One of the main obstacles for the fifth multidisciplinary project has been the transition from being run by employees to being completely student and volunteer run, as the employees had more sustainable food knowledge. As well, it has been difficult to engage people creatively in the project activities (Project 17 – multidisciplinary project, 2012). The sixth multidisciplinary program sees challenges as opportunities, and many projects get created from challenges in their system. However, one big challenge has been working with the franchises on campus to get them to take on some of the projects that student-run and independent outlets agree to. Another challenge is that environmental issues are getting more complex, as some compostable materials were found not to be composting on campus so everyone switched back to plastics as at least they can be recycled. Coordination of all the projects and people involved is also a challenge (Project 21 – multidisciplinary project, 2012). The main challenge for the seventh project is marketing and awareness to attract more student participation (Project 40 – multidisciplinary project, 2012).

i) Food banks

The three food banks interviewed all shared one common challenge: having enough food to distribute to patrons. As mentioned in an earlier section, these projects rely on donations, which can be sporadic or not at the times of greatest need. The first food bank also felt that an ongoing challenge is how to address the issue of some people taking too many items (Project 1 – food bank, 2012). The second food bank mentioned space as a significant challenge, as there is no separate physical space available currently for the food bank and it is crammed into the organizer's office (Project 2 – food bank, 2012). The third food bank mentioned a few interesting challenges. The first is that as a confidential

service, the food bank does not know the exact demographics or needs of those who use the service. They are trying to obtain statistical info via a survey, but it is difficult to convince people to participate (even though no names are requested and the survey will also be confidential). Another challenge is not being able to provide some more nutritional essentials, such as milk and vegetables, as there is no capacity to store those items. Lastly, the third food bank finds it challenging that because their food is distributed by weight, people often choose lots of lighter items instead of canned goods, often resulting in less healthy choices (Project 32 – food bank, 2012).

j) Summary

The fifth question participants were asked dealt with the challenges encountered in trying to getting the various SFS projects off the ground. Participants were also encouraged to discuss current challenges if that felt more relevant to their stories. A common theme across all project categories was difficulty in getting participation or volunteers, and the need to raise more awareness about the projects and the issues they try to address. Funding, too, was a challenge experienced by most categories, aside from food services. In addition to this, the community gardens all experienced site-related challenges, which are to be expected when directly interacting with nature. For the food service providers, justifying the changes to their budgets were of most concern. Though all the cafés experienced similar logistical and funding challenges, the two that found their collective/cooperative structure tough to implement present an important challenge to remember about group dynamics. These shared and other challenges point out that all types of projects will have challenges to overcome at some point in their histories, and that they are not alone in what they are experiencing. The theme of lack of awareness leading to issues with having enough volunteers and funding seems large enough to warrant further investigation as to why advertisements may not work for SFS projects, and why funding can be such an obstacle for them.

4.2.2.6 Prominent lessons

The sixth question of the interviews sought to bring out the personal aspect of the SFS project, in case it had not already manifested itself, and asked participants to draw on their experiences to summarize some of the most prominent lessons they have learned throughout their time with the programs. Though the answers were expected to vary, there were quite a few commonalities across all types of SFS projects. The importance of planning, collaboration, and having a good support network were mentioned by most projects. An overview of the lessons learned is summarized in the table below.

Table 9: Overview of prominent lessons learned

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none"> - All gardens learned a lot about people and relationships: networking and building relationships are essential to ensure continued support. Building a succession plan to pass knowledge on to new members is important. There are many people with relevant knowledge willing to help.
b) Food service providers	<ul style="list-style-type: none"> - 4 food service providers felt that some of their biggest lessons involved building relationships both on and off campus with related people and groups - 3 food services learned that education and advertising programs are important - 2 food services felt that good planning and organization were a big lesson learned - 3 food services felt that even if things do not turn out exactly as planned, just undertaking the initiatives and realizing that there is no one right way to implement and run them was a valuable lesson to learn
c) Independent cafés	<ul style="list-style-type: none"> - 1 café's lessons were setting guidelines for communication, building consensus, and to spend time together as a group to take a break - 1 café learned how a project can still work within the economic system and create change from within - 1 café learned a lot about logistical issues such as licensing, health certificates, and zoning
d) Composting	<ul style="list-style-type: none"> - All 3 composting projects learned the importance of education/advertising and the simplification of both for best results - 1 composting project also learned that taking costs into consideration is important - 1 composting additionally learned that implementing a composting program out of a sustainability office rather than through physical services on campus is a very difficult task (and is not recommended)
e) Awareness projects	<ul style="list-style-type: none"> - Both awareness projects found that the difference advertising can make was a big lesson - 1 project found that the spatial needs of a centre aren't really known until it is in operation - 1 project learned that outreach events require planning in terms of getting enough participants to attend, and getting committed volunteers is also important
f) Skill-building	<ul style="list-style-type: none"> - This project's most prominent lesson learned is that people can actually change if they try
g) Farmer's markets	<ul style="list-style-type: none"> - 1 farmer's market was pleasantly surprised at how great a partner university administration can be, that it is possible to easily work with different farmers, but that student commitment can waver - 1 project learned that the rewards of hard work are great, and that passion can help change student views
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - 6 of the multidisciplinary projects shared that their biggest lesson was how important collaboration both within their organizations and externally with other groups on and off campus is to their projects
i) Food banks	<ul style="list-style-type: none"> - All 3 food banks felt that the biggest lesson they have learned is how in demand their service is on campus

a) Community gardens

The prominent lessons learned by the community garden representatives had to do with the people involved in the projects. The first garden learned that though many people may be interested in the beginning, support can wane and it is important then to network and create relationships (Project 5 – community garden, 2012). The second garden learned how important it is to make sure that there are people able to take on the work when others leave the project. This project also learned that having relationships with other groups on campus is essential for making the project known, reputable, and having outside support. The organizer also personally learned a lot about gardening and how to grow food, as well as how to work by consensus-based non-hierarchical decision-making (Project 7 – community garden, 2012). For the third garden, the biggest lesson has been that success mostly relies on the people involved in the project and you have to find those people. As well, seeking support at the highest level produced the best results for this project, and though not everything went exactly as planned the organizers learned that you have to stay strong (Project 12 – community garden, 2012). The fourth garden learned that starting small is ok, as it is easier to get support and maintain the space at that level (Project 14 – community garden, 2012). For the fifth garden, a surprising lesson was that there were many people with food knowledge on campus willing to help, which led to many relationships being developed (Project 16 – community garden, 2012). The sixth garden learned that though gardens are grassroots projects, there has to be a lot of planning involved in order to keep it going and maintain the structure (Project 20 – community garden, 2012). The seventh garden learned that students do not necessarily stick around for the summer, so having a communal space in the garden might not always be the best idea. As well, another lesson was that they should have gotten something in writing from the university to have some more security about the support for the project (Project 24 – community garden, 2012). The eighth garden found a lot of value in having participants sign a waiver outlining expectations for their contribution to the garden; this makes them feel obligated to their commitment, or makes them re-think if they have time for the commitment. As well, they found that having signage for the garden has helped to increase awareness and decrease some damage. Finally, the organizers and volunteers have become more aware of how quickly things can change so preparation and having long-term plans help (Project 26 – community garden, 2012). For the ninth garden, advertising events and outreach activities have been very important in getting more support and participants. Maintaining a link to an administrative group on campus has also been helpful to have for support, funding, and programming has also been an important lesson (Project 27 – community garden, 2012). The tenth garden learned the most about funding. It went from being completely volunteer run

to being institutionalized by having a student levy, which has made a giant financial difference and has impacted the programming and services that can be offered (Project 30 – community garden, 2012). The eleventh garden organizer personally learned how to manage a large volunteer group, and that motivations and commitment vary so it is important to keep an eye on that. The organizer also found that everyone involved finds the project rewarding, which is inspiring to see (Project 36 – community garden, 2012).

b) Food service providers

For the food services projects, the main lessons for the organizers were fairly positive and involved good planning and outreach. For the first interviewee, the biggest lesson has been that the more you get into local food and policy, the more that can be done so some limitations have to be set to keep the projects manageable as there are other goals to meet in the department. Another lesson learned here is that advertising the initiatives in some way generally receives good feedback, and that much more marketing is needed on campus to get students more involved (Project 6 – food services, 2012). The second food service representative agreed that goals have to be focused, as one department cannot do everything. It is helpful to learn from others who have undertaken similar projects, and go outside the usual bubble of the same suppliers (Project 10 – food services, 2012). The third food service participant learned that there is no one right way to do something, and that the option that works best in a particular situation is good enough (Project 18 – food services, 2012). The fourth interviewee learned that there is no question that these initiatives are the right thing to do. However, it is also important to get early mass buy-in to be successful, and connections to other organizations outside the university can help (Project 28 – food services, 2012). The fifth food service organizer's main lesson is that creating the initiatives and succeeding is possible (Project 31 – food services, 2012). For the sixth food service participant, the main lesson was that the message about local food still needs more advertising (Project 33 – food services, 2012). The seventh representative highlighted that an important lesson was that working with other departments on campus was helpful to meet goals, and it is time to remove some of the silos that currently exist. Another lesson learned was that attitudes differ from behaviour, and even though people might want to make things better there is a disconnect. Simple and focused messaging might assist with this (Project 35 – food services, 2012). The eighth food service provider's lessons were about the campus culture. Having good management for the programs themselves, enough support from campus administration, developing partnerships on and off campus, and remembering to market initiatives have all been important for this project. As well, one major

lesson learned was that even if the goals set will not be fully met at once, the activities should still be undertaken and they will evolve (Project 37 – food services, 2012).

c) Independent cafés

The lessons experienced by the non-dining-hall café interviewees centred around expectations. For the first café representative, the tensions that have come out of power dynamics and people not knowing how to communicate with each other have brought up the importance of setting guidelines for communication, building consensus, but also to spend time together as a group to take a break and have fun to let the positive atmosphere develop on its own (Project 9 – non-dining-hall café, 2012). The second café's organizer felt that the biggest lesson learned was how a project can criticize the mainstream food system, yet still work within the economic system and create change from within (Project 19 – non-dining-hall café, 2012). For the third café, the expectations lesson encompassed logistical issues such as licensing, health certificates, and zoning, which nobody involved thought there would be issues with. Similarly, for the everyday café arm of the group there has already been a learning curve where it has been realized that it cannot be solely volunteer run, and staff have to be hired (Project 29 – non-dining-hall café, 2012).

d) Composting

One common lesson learned by all three composting project representatives was the importance of education/advertising. The first project representative also learned that it is important to think about any extra costs that might be incurred from the project or necessary equipment (Project 4 – composting, 2012). The main lesson for the participant of the second composting project was the simplification of educational materials for best sorting practices. However, an additional lesson learned was that the attitudes of university administration affect the attitudes of the students. All staff and faculty must realize that their jobs exist because of the students, and a partnership to ensure that things students feel are important have value in the university system (Project 23 – composting, 2012). The third project shared the lesson of simplifying project materials, or else nobody will participate. Another big lesson has been the difficulty of implementing a composting program out of a sustainability office rather than through physical services on campus. Inter-departmental communication is difficult, and addressing issues is also difficult as bin ownership and contracts are involved (Project 38 – composting, 2012).

e) Awareness projects

The lessons learned by the two awareness projects revolve around the idea of planning. For the educational centre, the planning lessons learned were that the spatial needs of a centre aren't really known until it is in operation, and that projects dependants on people need to think about advertising well in advance (Project 25 – awareness, 2012). The student-run group realized quickly that outreach events require planning in terms of getting enough participants to attend, or else they run the risk of contradicting their own mission and have to throw out food and other perishable materials. The importance of advertising events, making educational materials simple, and the need to educate volunteers to better get their message across were additional lessons that the current organizers felt were important to mention (Project 34 – awareness, 2012).

f) Skill-building

The founder of the skills-based project said that the most prominent lesson from his program is that people can actually change. People come into the program willing to learn, and actually leave with a set of skills and a desire to use them to improve the way they eat (Project 22 – skills, 2012). This lesson is important to keep in mind when debating the merits of different types of SFS projects, as the outlook is not completely hopeless.

g) Farmer's markets

Both farmer's market programs had fairly positive lessons learned. The first market was pleasantly surprised at how great a partner university administration can be. This project also learned that it is possible to easily work with different farmers, as all the participating vendors always came prepared and organized and needed little instruction. An unhappy lesson from this market was that because student groups have to deal with school schedules, ongoing commitment from them is hard to rely on (Project 15 – farmer's market, 2012). The second market's organizer learned that the rewards of hard work are great, and that passion can help change student views on how to feed themselves. This participant also learned that in-person communication gets things done much quicker than phone calls or emails (Project 39 – farmer's market, 2012).

h) Multidisciplinary participatory projects

The lessons for the multidisciplinary projects strongly referenced collaboration and support. The first project organizer has learned a lot about running a program as a collective, and has noticed a

pattern of heavy female involvement in this and similar initiatives (Project 3 – multidisciplinary project, 2012). The second interviewee learned that collaboration with other departments is extremely important, as is being open and transparent with all stakeholders (Project 8 – multidisciplinary project, 2012). For the third multidisciplinary project, too, communicating everything as a joint initiative and encouraging collaboration has helped the programs. Another lesson has been the benefits of integrating projects into university operations so that they run smoother (Project 11 – multidisciplinary project, 2012). The fourth project learned how much support there was on campus, but that this support and excitement does not always translate into an understanding of some of the projects and processes. As well, this centre learned that a vision might not always have the desired results, and more capacity building to realize those results is often needed (Project 13 – multidisciplinary project, 2012). The fifth project has learned that having support and a foundation of people knowing their roles is essential to getting things done, and helps for succession planning. As well, volunteer appreciation is key for creating that kind of community. Having a campus support network of other outside groups and people is also important for a multi-disciplinary project (Project 17 – multidisciplinary project, 2012). For the sixth project, a main lesson has been to have all people involved in the projects at the table in order to be able to properly map out goals and address needs. Another lesson has been to think about the big picture first, and work out logistics later in order to try and create the best projects possible (Project 21 – multidisciplinary project, 2012). The seventh project organizer learned that having more resources available is beneficial, as is institutionalizing programs so that they can continue year to year (Project 40 – multidisciplinary project, 2012).

i) Food banks

All three food bank organizers felt that the biggest lesson they have learned is how in demand their service is on campus. The second and third food bank projects added that even though they, the organizers, have never had to go through tough times, they are glad that those who do need the service have one available and are visibly grateful for it (Project 2 – food bank, 2012; Project 32 – food bank, 2012).

j) Summary

In terms of lessons learned, the importance of planning, collaboration, and having a good support network were mentioned by most projects. Succession planning was also mentioned by several projects, which was inspiring to hear as it demonstrated that the groups realized that for a project to

work at a university, student turnover in particular has to be taken into consideration. The observation from the skills project that people can change if they try should spark hope in all SFS projects and others concerned about the state of the food system. When provided with knowledge and skills, things can be different. However, by the same token the lesson from the food banks about their services being extremely high in demand highlights a potential gap in the university system where students are paying to go to school but may not be able to pay for necessities of life. The lessons make it clear that there is still work to be done, but that there are capable and willing people at universities to take on the challenges.

4.2.2.7 Project future

The seventh interview question inquired about the future plans of the SFS projects. This was important to know to gauge the direction that this area is heading towards. As expected, the responses varied from project to project. However, the overall theme seemed to be one of continuity and expansion in some form. The table below briefly details these answers.

Table 10: Overview of project future plans

Project Category	Key Results
a) Community gardens	- All 11 garden projects expect to maintain their infrastructure and possibly expand programming in the future
b) Food service providers	- All 8 food service providers plan on adding to their project repertoires
c) Independent cafés	- all 3 cafés have plans for expansion or slight transformation to their programs, mainly involving politics, goal setting, and assisting other projects
d) Composting	- 1 composting project plans to increase communication about its free compost, and also hopes to attract more students to conduct research relating to the composter - 1 composting project hopes to improve its organic waste recuperation rate - 1 project hopes to integrate its composting program with the general university waste management system
e) Awareness projects	- 1 awareness project hopes to expand programming - 1 project plans on working on the university's food charter
f) Skill-building	- The skills project has plans to expand to several more universities and eventually offer a version of the program for young professionals, and will charge money for that program
g) Farmer's markets	- Both farmer's markets plan to continue for the near future - 1 of the markets is planning on becoming a university service through the student union to ensure continuity and funding
h) Multidisciplinary participatory projects	- All 7 multidisciplinary projects plan on project growth, synergizing and refining their own offerings along with partnerships with others
i) Food banks	- 2 of the food banks hope to get more space in the near future to be able to scale up their initiatives - 1 food bank plans to confidentially collect patron information in order to

Project Category	Key Results
	improve their offerings

a) Community gardens

Most of the garden projects expect to maintain their infrastructure and possibly expand programming in the future. The first garden simply plans to stay the same, just have more interested people involved in the day-to-day activities (Project 5 – community garden, 2012). The second garden project has been approached to build a greenhouse and is considering that option. Otherwise, it plans to build upon the space and programming it has, and hopes to improve its educational aspects (Project 7 – community garden, 2012). For the third garden, the hope is to expand in terms of garden size and activities, and look into the possibility of having a greenhouse. As well, broadening the link between the garden and campus teaching and research activities is a big goal for the future (Project 12 – community garden, 2012). The fourth garden sees an expansion into the area of food policy on campus, and a dedicated herb garden for food services. Another possibility is using the garden as a teaching tool, expanding its focus from just staff to students as well (Project 14 – community garden, 2012). The fifth garden project wants to be able to sell the produce to the community, or to have it go to a community kitchen. It would also like to have a water collection system to water the garden with, and to experiment with vertical growing to optimize the space currently available. This garden also would like to try to use the collective model of governance (Project 16 – community garden, 2012). For the sixth garden, the goal is to continue keeping up with good work, but trying to find the crops that grow the best in the space (Project 20 – community garden, 2012). The seventh garden hopes to soon expand as the city has approached the university to broach a partnership (Project 24 – community garden, 2012). The eighth garden plans to experiment with a mobile garden, planning multiple items in barrels and other movable planters. As well, rain barrels will be installed and more workshops will be conducted throughout the year in order to increase the educational component of the garden. This garden project is also hoping to get a storage area closer to the garden to make it easier for the volunteers to get tools and garden at more convenient hours of the day (Project 26 – community garden, 2012). For the ninth garden, the main future goal is improving on what has already been physically done in the garden. There are plans to strengthen the programming side of things, and put in place a structure under which the garden could still function if the paid positions no longer exist. The garden plans to continue to advocate for urban agriculture and food sovereignty on campus, and demonstrate that it is part of a sustainable

future, particularly on a university campus (Project 29 – community garden, 2012). The tenth garden will be adding more infrastructure to enhance the space, and will be putting on more workshops and creating more educational connections (Project 30 – community garden, 2012). The eleventh garden is hoping for approval of a grant application that would help to increase the educational component of the garden, helping to create ways to incorporate the space into academic courses. It also plans to do more work with the collective network in the region to improve food security (Project 36 – community garden, 2012).

b) Food service providers

Because all the food service activities are at different stages, the details for all their futures vary. However, all 8 providers plan on adding to their project repertoire. The first food service plans to continue sourcing more in-province products, tackle the topic of sustainable seafood, and look at waste management within the food department. As well, there will be more educational events and materials to build awareness (Project 6 – food services, 2012). The second participant shared that future projects include eggs from the campus farm, getting Marine Stewardship Council (MSC) certification, Fair Trade certification, and increasing the partnership with LFP (Project 10 – food services, 2012). The third interviewee envisions that food services department as eventually being a leader on campus and in the country with a written set of policies and procedures, and by partnering with outside organizations to succeed (Project 18 – food services, 2012). The fourth food service representative confirmed that new initiatives will continue to be added every year, and as new ideas come up across North America they will be adopted at this university (Project 28 – food services, 2012). The fifth participant acknowledged that the program seems to be getting bigger, and that new initiatives are added all the time and that this will continue. At this campus, there is a lot of support because people understand that it is the right thing to do, and many suggestions come in from staff, students, and faculty (Project 31 – food services, 2012). The sixth food service is looking to put together a collaborative team from all areas of food services to plan, put policies and procedures in place, and keep building awareness and making the project a part of everyone's everyday life (Project 33 – food services, 2012). The seventh interviewee shared that one of the main future projects will be to publicize the program through partnerships with other groups. Another initiative will be monitoring and measuring progress to determine if things are moving in the right direction, and this will be a challenging process (Project 35 - food services, 2012). The eighth food service has just opened up a new outlet that will supplement the services and initiatives currently offered, and that is the future focus at this moment (Project 37 – food services, 2012).

c) Independent cafés

The three non-dining-hall cafés all have plans for expansion or slight transformation to their programs. The first café hopes to increase its ability to push a political agenda on campus, and be a safe place to discuss food issues on campus. It also plans to get a space it can fully control, and hire new staff to take on new projects, such as community outreach (Project 9 – non-dining-hall café). The second café is in the middle of reviewing its goals and mandate for the next 5 years, and the members of the cooperative have indicated a need for more connections to the community and development of the local food system (Project 19 – non-dining-hall café, 2012). The third café envisions itself as an incubator for other similar projects on campus, but until that situation forms the everyday café arm is looking at how to bring in more revenue, and the weekly lunch service hopes to eventually be on a pay-what-you-can system permanently in order to be even more accessible. Both parts of this café hope to include more educational events as part of their offerings (Project 29 – non-dining-hall café, 2012).

d) Composting

All three composting projects interviewed are optimistic about the future. The first project plans to increase communication to the university as well as the outside community about their composting project, as well as about the quality of their free compost. As well, there are high hopes to attract students to conduct research related to composting or the composter (Project 4 – composting, 2012). The second project aims to improve its organic matter recuperation rate, as there will always be compostable materials to deal with. The project organizer also hopes for more food-related projects to start up on campus to complement the collection process, as the university believes in sustainability and such projects will likely succeed (Project 23 – composting, 2012). The third project hopes to integrate composting with general waste management to improve the system. There is also a surge of students interested in looking to close food system loops on campus, and relating gardening to composting might be next on the agenda. This might enable some on-site composting, as there would be a stronger business case to do so (Project 38 – composting, 2012).

e) Awareness projects

Much like other projects, both awareness programs have high hopes for the future. The educational centre plans to expand their programming to reach their three target audiences of students at the school, families, and agricultural businesses. The centre also sees a lot of community outreach, setting up booths at various local events (Project 25 – awareness, 2012). The student-run project plans

to work on the food charter being developed at their university, and hope that this step will help them to become more involved on campus, and collaborate with other groups and food services to broaden their project scope (Project 34 – awareness, 2012).

f) Skill-building

The skills-based project falls under the expansion category. The long-term goal is for this program to be available at universities across Canada, and two more universities in addition to the two participating schools are on board to start offering the program over the next year or so. This project is also looking to expand into low-cost cooking classes for young professionals in the near future, broadening its audience in addressing sustainable food preparation and consumption (Project 22 – skills, 2012).

g) Farmer's markets

Both farmer's markets expect to continue their projects. The first market will definitely be in operation for this upcoming second season, and will keep a close watch on how things go. It generally takes up to five years for a market to become well established in a particular location (Project 15 – farmer's market, 2012). The second market is in the process of becoming a service through the campus student union. This would make it a permanent fixture, and provide the opportunity to hire staff to better run and shape the program (Project 39 – farmer's market).

h) Multidisciplinary participatory projects

The futures of all the multidisciplinary projects involve growth. The first is looking for a way to integrate the various separate projects it runs to synergize. As well, it is looking to increase the amount of food its gardening projects grow, as well as increasing educational capacity of the other programs (Project 3 – multidisciplinary project, 2012). The second project has hired several interns, and has plans to tackle food procurement on campus and working on educational campaigns to engage students and change purchasing behaviour and demand (Project 8 – multidisciplinary project, 2012). The third project hopes to have a year-long farmer's market and a larger garden, and to support the student-run rooftop garden more (Project 11 – multidisciplinary project, 2012). For the fourth program, the immediate future plans involve getting feedback on how to better build sustainability and a unified vision for the center (Project 13 – multidisciplinary project, 2012). The fifth project hopes to have its garden built by the end of the year, and hopes to instantly start using it for learning and educational workshops. As well,

this project will be facilitating a discussion about increasing accessibility to fresh, local, and sustainable foods for food-insecure students on campus (Project 17 – multidisciplinary project, 2012). The sixth project expects to get stronger in the face of new challenges presented by the global food system by continuing to build capacity for others to solve problems on their own, and by developing a new sustainability strategy that includes more food priorities (Project 21 – multidisciplinary project, 2012). For the seventh project, the idea is to expand the garden and possibly start offering weekly food boxes. Additionally, this project will be creating more links to larger programs on campus (Project 40 – multidisciplinary project, 2012).

i) Food banks

The participating food banks all had slightly different future plans, though they all hope to continue to exist at least in the same capacity as they do currently. The first food bank added that, due to the issues of patrons taking too many items, they may return to a standard predetermined hamper/box system (Project 1 – food bank, 2012). The second food bank hopes to scale up the initiative, especially because there are plans to build a new student union building on campus within the next 4 years, which would make a designated food bank space a possibility (Project 2 – food bank, 2012). The third food bank hopes to get a bigger space that will allow for a more diverse selection of products, but in the mean time is moving forward with the aforementioned survey to collect information that will allow them to better serve their community (Project 32 – food bank, 2012).

j) Summary

The entire group of interviewed SFS projects plan on adding to their projects in some form, be it through new space, more programming, or new partnerships. Some projects, such as several gardens and one composting project (Projects 4, 16, 24, 36), also plan on more community outreach with their offerings, which is important in involving more stakeholders in the solutions for a more sustainable food system. The development of new university sustainability strategies and food strategies in particular are also exciting as they indicate big steps being taken by university administration in order to become role models and live what they want students to learn.

4.2.2.8 Links to other sustainability initiatives

The eighth question posed to interviewees was one of high interest to the researcher. This question asked what links the SFS project in question had to other sustainability initiatives, primarily on-

campus but if the links were strong with off-campus activities those were considered as well. This was asked to get an idea of the campus dynamic for sustainability-oriented programs, and if cooperation on related issues was important for the particular projects and their home institutions. The community gardens, non-dining hall cafés, and multidisciplinary projects had some of the most varied and strong links. Food service providers generally had multiple links as well. The rest of the project categories had some linkages, but most admitted to needing improvement on that front. Below, Table 11 outlines these answers further.

Table 11: Overview of project linkages

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none"> - 10 community gardens have links to other sustainability initiatives on and off-campus, ranging from donations to food banks and independent cafés, sustainability offices, student unions, composting projects - Most would like to see their links grow and improve - 1 garden did not have any links
b) Food service providers	<ul style="list-style-type: none"> - 4 food service providers categorize their links as being strong, mainly to composting and sustainability offices on campus - 4 food services have some links, albeit no actual collaboration, but think that their links will soon improve due to upcoming projects on campus
c) Independent cafés	<ul style="list-style-type: none"> - All 3 cafés have very strong links to other sustainability and food sustainability groups on campus, such as composting ,farmer's markets, research groups, and sustainability offices
d) Composting	<ul style="list-style-type: none"> - All composting projects are linked to campus food services and waste management sustainability initiatives
e) Awareness projects	<ul style="list-style-type: none"> - Neither awareness project has very strong links - 1 does work with waste management on campus in their waste reduction program, and plans on creating relationships with a composting group - 1 project has a very strong tie to student union sustainability programs, but not to any others
f) Skill-building	<ul style="list-style-type: none"> - The skills project has no direct links to any sustainability groups on campus
g) Farmer's markets	<ul style="list-style-type: none"> - 1 farmer's market has no links to any groups on campus, but is hoping to start one with the community garden soon - 1 market is connected to the food bank on campus, awareness groups, and hosts joint food and sustainability events with other small groups on campus
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - 5 multidisciplinary projects have multiple moderate links to other sustainability and food sustainability projects - 2 projects have one or two small links, and would like to improve on that front
i) Food banks	<ul style="list-style-type: none"> - There is no link between any of the food banks interviewed to other sustainability initiatives on campus, though one of the food banks acknowledged that there should and could be

a) Community gardens

Though all of the community gardens have some links with other sustainability initiatives on campus, some of those links are stronger than others. The first garden is linked to the restored piece of land on campus, and both are usually maintained together. As well, as there is no cafeteria on campus the harvested vegetables are left in a public space for everyone to take (Project 5 – community garden, 2012). The second garden has a strong relationship with the non-dining-hall café on campus, providing their food and collaborating on political and educational events. As well, the greenhouse on campus provides some of the seedlings for the garden, and more educational programming is done with a food access group on campus (Project 7 – community garden, 2012). The third garden was initially involved with a student-led sustainability organization on campus, but that relationship has since ended. There are some current connections with research on campus, as well as connections with a province-wide community garden organization. The campus sustainability office is linked in terms of programming and finding partnerships with other campus organizations, which will hopefully grow in the future (Project 12 – community garden, 2012). The fourth garden does not have many strong links, but it is involved with a relevant graduate program on campus that is trying to open up the sustainability and food sustainability agenda on campus (Project 14 – community garden, 2012). For the fifth garden, there is a link with the student union's sustainability committee but the main link at the moment is with the campus food bank. The garden gives part of the produce grown so that patrons have access to fresh vegetables (Project 16 – community garden, 2012). The sixth garden is linked to the office of sustainability and the composting process at the university, and is trying for some more off-campus community gardening links (Project 20 – community garden, 2012). At the seventh garden, the links are very weak as the garden is not involved in composting or other initiatives (Project 24 – community garden, 2012). The eighth garden feels that it has strong ties to a sustainability club on campus, the research body on campus, and is a way for people to share recipes and talk about preserving food in addition to discussing food security (Project 26 – community garden, 2012). The ninth garden collaborates with the Environmental Student union, participates in environment week on campus, sits on the sustainability advisory committee, helps other food-related organizations on campus and is involved with the sustainability office and food services (Project 27 – community garden, 2012). The tenth garden has some links, but would like them to be stronger. Various student groups and academic programs have plots, and there is a project to build compost bins that was done in conjunction with an external compost education centre. Some of the produce goes to a food bank, which is another connection (Project 30 – community garden, 2012). The eleventh garden would like to see its

relationships improved. It does have activities with environmental groups on campus, but the events and communications are not regular. However, some produce is donated to a café close to campus that has a student cupboard for donations, and the garden also donates produce to other community groups (Project 36 – community garden, 2012).

b) Food service providers

Some of the food service projects have strong links with other food/sustainability groups on campuses, and others have no links at all. The common thread for this question was that all interviewees believed that there should and could be better relationships on campus. The first food service mentioned that there is currently a disconnect, but the sustainability committee on campus will be working to bring projects together so things may change (Project 6 – food services, 2012). The second food service has many links to other groups, but hopes to have more connections soon. They participate in the on-campus composting program, sit on a committee that discusses food on campus in general, and works with a student group to further initiatives (Project 10 – food services, 2012). The third project has an inherent connection to other initiatives on campus, such as participating in the same initiatives, but there is no cooperation or collaboration (Project 18 – food services, 2012). The fourth food service categorizes its links to other projects as very strong, as the sustainability office on campus is good at bringing groups together and students and administration are supportive (Project 28 – food services, 2012). The fifth food service does not have any links other than supporting other projects on the website and participating in a food stakeholder working group that meets once in a while (Project 31 – food services, 2012). The sixth representative mentioned a link with waste reduction on campus, mainly through composting. There is also a link with tracking carbon footprints and finding ways to reduce it in various campus departments, which food services participates in (Project 33 – food services, 2012). The seventh food service does not currently have many links, but expects there to be many stronger ones once a campus-wide policy statement will be created and forces collaboration (Project 35 – food services, 2012). The eighth project has strong ties to the campus sustainability office and participates in all the projects that come out of there, such as water conservation, waste reduction, energy reduction, and social initiatives (Project 37 – food services, 2012).

c) Independent cafés

The three non-dining-hall cafés interviewed all had very strong links to other sustainability and food sustainability groups on campus. The first café works with the composting group on campus to deal

with their organic waste, shares leftover produce with the farmer's market group, gets donations from the garden group on campus and works with that same group on summer programming. It also has some links to the sustainability office on campus for funding (Project 9 – non-dining-hall café, 2012). The second café caters for many campus events and considers that as a strong indicator of the type of relationship it has with the other organizations. As well, this café is connected with the various research bodies on campus for various educational projects (Project 19 – non-dining-hall café, 2012). The third café also has links to the group on campus that has a composter, and has links to the groups that request catering services. As well, various events and workshops are generally held in conjunction with other groups. There is also a strong off-campus link with a homeless shelter, where this café donates. As well, there is a link to the co-op network in the area (Project 29 – non-dining-hall café, 2012).

d) Composting

As they involve the collection of food, all the interviewed composting projects have some links to other campus sustainability initiatives but these links could certainly be stronger and more numerous. The first project is linked with the overall waste management system of the campus, as sorting stations all over the school were changed to include compost. As well, there is the link with food services in terms of sorting and choosing compostable items (Project 4 – composting, 2012). The second project also has a link to the general waste management and reduction program on campus, but not many other links at this point in time (Project 23 – composting, 2012). The third composting project is linked to the food service provider on campus, which strives for sustainability in its own operations. As well, because composting is currently under the umbrella of the sustainability office at this school, any other projects taking place in that office do get linked together with this one (Project 38 – composting, 2012).

e) Awareness projects

The links of the two awareness projects to other sustainability initiatives exist, but are not as strong as they could be. The educational centre does work with waste management on campus in their waste reduction program, and plans on creating relationships with a composting group on campus, as well as local product sourcing in addition to all the non-sustainability partnerships they run (Project 25 – awareness, 2012). The student-run program is part of the student union sustainability initiative, and has a very strong tie in to student union programs. The organizers are starting to make links with food-oriented groups on campus, but thus far have found it hard to have a partnership as student-led

organizations often have the common constraint of chair-people having to balance busy school schedules with their organizations (Project 34 – awareness, 2012).

f) Skill-building

The skills-based project currently has no direct links to any other food or sustainability projects on the campuses it operates on. There is an interest from other campus groups to have this link, and it is expected to be explored at some point in the future (Project 22 – skills, 2012). Given that there are several existing initiatives at the campuses involved, cooperation here could help overcome the challenges discussed earlier.

g) Farmer's markets

One of the participating markets does not have any links to programs, but the other has several. The first market interviewed is not involved with any other sustainability initiatives on campus, but is hoping that the community garden on campus will consider having a booth this year if they have enough produce to sell. As well, this market hopes that some of the campus food outlets will consider placing orders with some of the farmers in order to bring the message of supporting more sustainable food choices right inside the school itself (Project 15 – farmer's market, 2012). The second market interviewed had several links to other groups on campus. Any easily perishable produce gets donated to the food bank on campus. The market works with an environmental awareness advocacy group on campus to promote sustainability, and reaches out to host joint events with smaller groups wanting to promote sustainability in general as well as food sustainability (Project 39 – farmer's market, 2012).

h) Multidisciplinary participatory projects

There are varying degrees of linkages between the multidisciplinary projects interviewed and other sustainability groups on campus. The first project has strong links to the other sustainability working groups on campus through being part of the overall university sustainability initiative. As well, this project grows food for the non-dining-hall café on campus and a food store on campus. Finally, the project is very closely linked to composting initiatives on campus (Project 3 – multidisciplinary project, 2012). The second program is linked with the campus sustainability office and the environmental residence council, contributing to multi-group programming and strategy sessions (Project 8 – multidisciplinary project, 2012). There are a few links for the third project, but they could be stronger. Composting is something that it participates in, and farmer's market produce is incorporated into

various campus events. However, there is the opportunity to make more decisions with more relevant groups, such as what paving a path to the garden would mean for overall campus sustainability (Project 11 – multidisciplinary project, 2012). The fourth project has some links to the campus garden, but not with any other groups (Project 13 – multidisciplinary project, 2012). The fifth project is part of the overall sustainability group on campus, so there are links between those groups such as composting, academic links, and a discussion with the carbon-neutral group on future projects (Project 17 – multidisciplinary project, 2012). For the sixth project, the main link is with project partners who choose to undertake separate activities within their own departments but still use this project as a resource. As well, there is a link with the campus climate action plan and farm plan (Project 21 – multidisciplinary project, 2012). The seventh project is strongly linked with composting on campus, but acknowledges that it needs improvement in other areas (Project 40 – multidisciplinary project, 2012).

i) Food banks

There is no link between any of the food banks interviewed to other sustainability initiatives on campus. The first food bank acknowledged that there probably should be a link, but was not sure how the link could be made (Project 1 – food bank, 2012). The second food bank has links to other food-collection initiatives on campus, but that's it (Project 2 – food bank, 2012). The third project had nothing further to add.

j) Summary

The community gardens, non-dining hall cafés, and multidisciplinary projects had some of the most varied and strong links. Food service providers generally had multiple links as well. The rest of the project categories had some linkages, but most admitted to needing improvement on that front. The absence of any links for the food bank projects interviews was concerning, as several gardens, independent cafés, and even one food service provider have links to their food banks (Projects 9, 16, 18, 29 30, 36). As well, since most of the projects felt that a big lesson learned related to gaining project support and collaborating with other groups on campus, it was surprising that there were not as many strong links as expected. From these conclusions, it seems that there is a gap between recognizing the need for connections and building them when it comes to other sustainability and other food groups on campus.

4.2.2.9 Suggestions to other universities

The ninth question participants were asked to answer was what they would suggest to those at other universities interested in starting projects similar to theirs. This question was of most interest to the researcher, as it is hoped that this thesis will be useful to those who have not yet embarked on this path. Overall, the main suggestions were to start small, not be afraid to experiment, plan well, manage relationships and networks, try to keep costs down, but most importantly most project categories would suggest to just do it. Passionate people will find the right synergies on campus to make their ideas work. The table below provides a summary of these suggestions.

Table 12: Overview of suggestions

Project Category	Key Results
a) Community gardens	<ul style="list-style-type: none">- Most community gardens suggested to start small, and to have a good planning process and strong leadership- Creating relationships with other relevant groups on campus to ensure support, continuity, and to get free resources were also popular suggestions- 1 garden also suggested that linking to coursework would give the garden more value
b) Food service providers	<ul style="list-style-type: none">- Most of the food service projects suggested that other campus food service operators should just take the plunge and start some initiatives because it is important- Many also suggested to take stock of what is possible given the university atmosphere and what is available in the region, and to come up with an appropriate vision
c) Independent cafés	<ul style="list-style-type: none">- All 3 cafés suggested to make good use of available resources in order to minimize costs, as well as to be well prepared in order to be able to overcome various obstacles
d) Composting	<ul style="list-style-type: none">- 1 composting project suggested that schools thinking of starting a program think about why they want to implement a composting program, and decide whether on-site or simply recuperation and sending it off-site works best, and that a person should be hired to exclusively deal with the project- 1 composting project suggested that simplifying educational materials was key for any composting projects, and that if students are the ones starting the project they should be persistent and not give up- 1 composting project recommended that the project needs to not just be the responsibility of one department, and that all costs and contracts and other implications of a new project be taken into consideration
e) Awareness projects	<ul style="list-style-type: none">- Both awareness projects suggested to focus on relationship-building
f) Skill-building	<ul style="list-style-type: none">- The skills project suggested being extremely organized and ensuring that there is a passionate person to undertake the responsibilities
g) Farmer's markets	<ul style="list-style-type: none">- 1 market suggested that any new market should be prepared and well researched, and things like market type, audience, marketing plan, where to find farmers, and what the overall goal of the market is should be thought about beforehand

Project Category	Key Results
	<ul style="list-style-type: none"> - 1 market suggested taking the path of least resistance to start the project and work up from there
h) Multidisciplinary participatory projects	<ul style="list-style-type: none"> - The main suggestion from all the multidisciplinary projects was to work with other groups on campus - 1 project also suggested that a multi-disciplinary participatory project can look different at each school, and there is no one formula to follow, but funding and logistical planning are also important - 2 projects suggested just sitting down to talk and dream with a passionate group of people, and come up with an idea to start from - 1 project suggest that being as self-sufficient as possible, and even institutionalizing the project, are steps to consider
i) Food banks	<ul style="list-style-type: none"> - 1 food bank suggested experimenting with how food is distributed to minimize waste - 1 food bank suggested to start small and grow from there if the space and audience allows for it - 1 food bank suggested to directly speak to other campus food banks and look at studies in order to make an informed decision about the distribution system, and to keep in mind that some advertising needs to be done while still providing the confidential service to those in

a) Community gardens

A common suggestion of many of the gardens was to start small, and have a good planning process and strong leadership. The first garden added that creating relationships with others, and using the garden as a teaching tool is also a good idea (Project 5 – community garden, 2012). The second garden mentioned that it is important to make the initial small space look great to win more support. As well, it is possible to obtain many things for free, such as compost, so the budget does not have to be too large. The final piece of advice from this garden was to understand that everyone can bring something to the table, no matter their experience (Project 7 – community garden, 2012). The third garden also stressed that having support and a garden site is key to beginning the project. As well, there needs to be a leader who can be firm and make things happen (Project 12 – community garden, 2012). The fourth project agreed with this, and added that using on-site low-cost resources should be the goal in order to financially save (Project 14 – community garden, 2012). The fifth garden also commented about resources – whatever the campus can offer, be it people or a site, relying on that resource to start building relationships is important (Project 16 – community garden, 2012). The sixth garden focused on the importance of having a leader with a vision (Project 20 – community garden, 2012). The seventh garden suggested that some type of written agreement with the university is essential to legitimize the garden. As well, getting feedback from potential participants in order to get early buy-in could be helpful

(Project 24 – community garden, 2012). For the eighth garden, an important step is to partner with a group such as the campus sustainability office as it can help provide continuity for the project because of the connections such an office usually has (Project 26 – community garden, 2012). The ninth garden advised having a long-term plan for maintenance to show university administration that there has been thought put into the project. As well, if other parties can be brought on board, it would make the project and its offering stronger (Project 27 – community garden). For the tenth garden, synergizing with other things happening on campus in order to expand the project is recommended (Project 30 – community garden, 2012). The eleventh garden advised getting sufficient support from the campus community, and making sure that there is a solid volunteer workforce for the project. As well, the more the initiative can be linked to courses or other work on campus, the more value it will have (Project 36 – community garden, 2012).

b) Food service providers

Most of the food service projects suggested that other campus food service operators should just take the plunge and start some initiatives because it is important to do. The first interviewee also suggested that the most important thing is to have a vision, and have some sort of long-term plan to work towards that vision while still considering costs and other limitations. Starting out with smaller goals to reach in the beginning is a good idea, and making sure to tell people about the initiatives is important for support and succeeding in the larger initiatives. This rep also suggested that when goals are achieved, recognizing those who made things possible is essential (Project 6 – food services, 2012). The second food service suggested to take a look at what others are doing and follow the best examples. You don't have to be the leader, and can just be the best follower and still meet quality, focused, goals (Project 10 – food services, 2012). The third participant suggested being open and creative, as there is no one right way to do things. The department has to be willing to make changes and want to be a difference; if everyone is not on board, there will be more challenges to overcome (Project 18 – food services, 2012). The fourth food service only made the initial introductory comment. The fifth interviewee suggested that those involved in purchasing decisions should be brought on board first to make the process easier. As well, the location of the school and availability of products in the area must be taken into consideration when picking a project. Relationship building is also a key element in making projects work, and starting small and working up from there is perfectly acceptable (Project 31 – food services, 2012). The sixth food service provider suggested that the awareness piece is important so that the greater campus can understand and support the initiatives. Building relationships helps the projects

and awareness piece along (Project 33 – food services, 2012). The seventh participant also stressed that not every project that is brought up has to be done. There has to be a session to establish a mission, direction, and measurable goals as one little thing can have many impacts. Getting buy-in from administration helps with financial issues, and if there is enough money in the budget hiring someone dedicated to the sustainability side of food services would be very helpful (Project 35 – food services, 2012). The eighth food service suggested being realistic about what can be achieved given the atmosphere on campus, and try to get support from all areas of the university (Project 37 – food services, 2012).

c) Independent cafés

The common suggestion for new projects from all three non-dining-hall cafés was to make good use of available resources in order to minimize costs. The first café representative highlighted that many things can be obtained for free, such as space and even food. As well, this rep suggested that new groups not get discouraged at any barriers to their project and to be as well prepared as possible so that these barriers can be overcome (Project 9 – non-dining-hall café, 2012). The second café strongly suggested getting support at every level of the university in order to get help from wherever possible, but that starting small and building up can be a good path to choose. As well, there are plenty of similar organizations out there so utilising existing models for mandates and goals do not have to be re-invented (Project 19 – non-dining-hall café, 2012). The third café strongly suggested that organizers undertaking new initiatives are committed or find committed individuals to help because it is a long process that takes a lot of work. A structure has to be put in place to ensure the project lasts, and this includes finding a market, kitchen, and good volunteer base (Project 29 – non-dining-hall café, 2012).

d) Composting

The suggestions from the three composting projects were varied and quite complementary to one another. The first project suggested that schools thinking of starting a program think about why they want to implement a composting program, and decide whether on-site or simply recuperation and sending it off-site works best. This representative also suggested that a person be hired specifically to coordinate the project, as it involves a lot of work in terms of training people, developing educational materials, and so on (Project 4 – composting). The second project suggested that simplifying educational materials was key for any composting projects. As well, if students are the drivers behind a new composting project, they should not give up and make sure that they create the demand for it on

campus (Project 23 – composting, 2012). Finally, the third project recommended that the project needs to not just be the responsibility of one department, especially when so many people are involved in carrying it out. Thinking about this can help understand the full costs associated with the project, such as the materials, staff contracts, and waste hauling contracts (Project 38 – composting, 2012).

e) Awareness projects

The main suggestion that both awareness projects made was to focus on relationship-building. The education centre stressed that “we have partnered with the university, a ministry, producer groups, education and other groups interested in sustainability and environment. We have been able to do a lot more with the resources we have – which is one of the keys to doing a good job...” (Project 25 – awareness, 2012). The student-run initiative regrets not building strong relationships early on, and highly recommends new projects seek those out early, particularly with food services and any other food related groups already on campus in order to be able to combine efforts. Another suggestion they made was to be organized and have a strong structure for outreach and volunteer training, as it will yield better results in the end if everyone has set tasks and responsibilities (Project 34 – awareness, 2012).

f) Skill-building

The skills-based project suggested being extremely organized and ensuring that there is a passionate person to undertake the responsibilities. It is a lot of work, but is very rewarding and benefits everyone involved (Project 22 – skills, 2012).

g) Farmer’s markets

The two farmer’s markets answered this question from very different perspectives. Being primarily a business, the first market suggested very practical advice. Any new market should be prepared and well researched, and things like market type, audience, marketing plan, where to find farmers, and what the overall goal of the market is should be thought about beforehand (Project 15 – farmer’s market, 2012). The second market, as a student group, suggested to start the market through the system of lowest resistance and evolve it from there. “Once you are working within the system, the project can go anywhere...” with a bunch of passionate people at the helm (Project 39 – farmer’s market, 2012).

h) Multidisciplinary participatory projects

The main suggestion from all the multidisciplinary projects was to work with other groups on campus. The first interviewee maintained that having good relationships has been one of the best choices, and that it can help with getting space (Project 3 – multidisciplinary project, 2012). The second project representative advised to first understand the system of the particular university and finding people who care to take part, and that those connections can help integrate with other student groups to meet goals (Project 8 – multidisciplinary project, 2012). For the third project, collaboration with appropriate departments gives activities stronger backing. As well, having a paper agreement that outlines various roles and responsibilities is good for the long-term (Project 11 – multidisciplinary project, 2012). The fourth interviewee suggested that a multi-disciplinary participatory project can look different at each school, and there is no one formula to follow. The important things to look at are the university's atmosphere, available resources, and opportunities to encourage cross-departmental work. Funding and logistical planning are also important, as is making sure that there are plenty of opportunities for learning are naturally built into the projects (Project 13 – multidisciplinary project, 2012). The fifth project suggested just sitting down to talk and dream with a passionate group of people, and come up with an idea to work off of. The learning and listing of things to do comes along the way. However, finding stakeholders to support the project is essential for success (Project 17 – multidisciplinary project, 2012). The sixth project would agree, and getting a relevant group of people on campus together to discuss a vision and what can be done to meet it is a great first step. Getting funding for a central coordinator will help with project continuity (Project 21 – multidisciplinary project, 2012). The seventh participant suggested starting with an assessment of campus and making sure targets are realistic and that resources and interested people are available for the project itself. Being as self-sufficient as possible, and even institutionalizing the project, are steps to consider (Project 40 – multidisciplinary project, 2012).

i) Food banks

The three food banks had a variety of suggestions for newcomers. The first food bank suggested experimenting with letting people take what they want to eat before deciding on a pre-determined box system, as it is likely that less food would be wasted since people could take what they would actually eat (Project 1 – food bank, 2012). The second suggested to start small and grow from there if the space and audience allows for it (Project 2- food bank, 2012). The third food bank suggested to directly speak to other campus food banks and look at studies in order to make an informed decision about the

distribution system. This food bank also suggested that organizers keep in mind that some advertising needs to be done, but that providing the confidential service to those in need must be the priority (Project 32- food bank, 2012).

j) Summary

The suggestions provided by the interviewees covered many topics. Overall, the main suggestions were to start small, not be afraid to experiment, plan well, manage relationships and networks, try to keep costs down, but most importantly most project categories would suggest to just do it. Passionate people will find the right synergies on campus to make their ideas work (Projects 13, 22, 39). Additionally, the gardens suggested to have a good planning process and strong leadership, as well as to find links to coursework in order to make the garden easier for others to use and relate to. The food service providers highlighted that having a vision and employing creativity will help projects, as there is no one right way to do things (Projects 6, 18, 35, 37). The independent non-dining hall cafés stressed that it was possible to get things for free or at a low cost, and that avenues for doing so should certainly be explored early on. The composting projects made it clear that it has to be a cross-departmental effort, and that the rationale and process must be clear to everyone involved. The awareness projects exist only because of partnerships and highly suggest other similar projects keep that in mind. The skill building project recognizes that the coordinator of such a project must be dedicated and organized. The suggestion of one of the farmer's markets to be well-researched and prepared in terms of market audience and logistics could be helpful not only to other markets, but to all other project types, too. The multidisciplinary projects also provided cross-category advice, such as to understand the atmosphere on campus and map out the possibilities of the project before beginning. The food banks, too, acknowledged that different systems might work in different places. All these suggestions will hopefully be of assistance or inspiration to other SFS projects, as the participants interviewed have learned from their processes, challenges, and achievements and have a lot of knowledge to offer.

4.2.2.10 Additional comments

The last part of the interview gave participants the opportunity to add any comments they felt necessary. Some chose to expand on previous thoughts, some chose to fill in any gaps they thought there were in the interview questions, and some participants chose not to add anything further.

a) Community gardens

Six of the interviewed gardens chose to add a few more points. One garden highlighted that sometimes getting funding for an existing project can be difficult, so thinking about that is important (Project 5 – community garden, 2012). A second garden commented that this kind of project is growing in popularity as it looks great for the university, and those who participate really do get a lot out of it (Project 7 – community garden, 2012). Another garden voiced that universities could do so much more in this area, and could become a community hub. Universities are often not seen that way, but they are public institutions and thus have that opportunity (Project 14 – community garden, 2012). A fourth garden added that all volunteers come to participate for various reasons, and finding those out and catering to them can be beneficial for all parties involved (Project 20 – community garden, 2012). A fifth project felt that the journey of being part of the garden has been interesting thus far, and that it has been unexpected how happy people who are invested in the garden are doing things like digging and other hard work (Project 26 – community garden, 2012). The last garden to add a comment agreed with an earlier suggestion that universities need to be more open to the community. There is often a disconnect between the school and the community surrounding it, and it is important to build that relationship (Project 36 – community garden, 2012).

b) Food service providers

Half of the food service participants made additional comments. One interviewee wanted to highlight that sustainability is not just for a single person or organizations, and there are lots of things to be learned from one another because ideas can always be translated to different situations (Project 6 – food services, 2012). Another participant mentioned that “it is an exciting environment to be in at a university – to have support for these things and to be able to do it. Everyone will be going there soon...” (Project 10 - food services, 2012). A third project added that their customer base does not really demand any of the changes that have taken place, which detracts from their feeling of success (Project 33 – food services, 2012). Finally, another food service added that a sustainable campus is multi-faceted and can look very different from place to place. However, it is important to the students to practice what you preach (Project 35 – food services, 2012).

c) Independent cafés

Only one of the non-dining-hall cafés chose to make an additional comment. This representative wanted to add that the nice thing about having various food-focused groups on campus creates

opportunities for students to experience different parts of the food system – what it’s like to grow, cook, and eat the food (Project 19 – non-dining-hall café, 2012).

d) Composting

Two of the composting projects had some ideas to add. The first one just wanted to reiterate the topic of costs. If the university itself has the budget to pay for the composting project, that is probably the best option, as it could cost too much for a smaller individual department to take it on (Project 4, 2012). The second composting project wanted to emphasize how much the attitude and atmosphere on campus impacted the ability of the composting project to succeed. The general thoughts were that composting is a good-citizenship decision, and because there was enough support around it and the city the university is in supports it in a big way, the decision was made that much easier (Project 23 – composting).

e) Awareness projects

Neither awareness project chose to make any additional comments.

f) Skill-building

The skills-based project chose to highlight the relationships created as a result of the program. Most participants of the project stay in touch with the organizers, sharing their pride in the dishes they can now make and their new appreciation for real food (Project 22 – skills, 2012).

g) Farmer’s markets

The second farmer’s market representative chose to add one final comment to the interview. She wanted to make sure that others know that out of everything, “it is important to go for it – the biggest part is to just try” (Project 39 – farmer’s market, 2012).

h) Multidisciplinary participatory projects

Two of the multidisciplinary projects added a few more comments. The first wanted to say that “at universities there is an opportunity to be innovative and think outside the box, taking small risks in the spirit of inquiry and innovation....food is universal, and where it lives on campus will make a difference in how it’s addressed...” (Project 13 – multidisciplinary project, 2012). Another participant added that though it is a constant learning process, being part of a local is empowering and student run

projects should seek out all the advice there is available in order to enhance their experiences (Project 17 – multidisciplinary project, 2012).

i) Food banks

Only one of the three food bank projects interviewed chose to add an additional comment. The organizer wanted to share that anywhere between 6-20 people use the food bank each day (Project 1 – food bank, 2012).

5. Conclusions

5.1 Summary

The conventional food system is undergoing significant challenges, and is expected to continue on this path (Mittal, 2009; Lawrence, 2010). Environmentally, pesticides, land degradation, GMO's, and GHG's are of concern. Socially, the unequal distribution methods and points of access, along with fluctuating food prices, are alarming. Economically, there is duplication in crops being imported and exported, and billions of dollars in food waste annually. There are many ways to address these issues, one being SFS projects: small projects that "attempt to integrate the environmental, economic, and social health of their food systems..." (Feenstra, 2002).

University campuses with SFS projects were chosen as the site of further investigation. As centres of communities with large footprints and the potential to have a lot of impact by their actions, universities are responsible for both researching answers to universal problems and are increasingly expected to practice what they preach. Additionally, there are usually food outlets and people eat food on most university campuses, so addressing food concerns has a logical link to both university operations and sustainability. Though all universities could potentially qualify for this study, the scope was limited to Canadian post-secondary institutions part of the AUCC.

The first step taken was a content analysis to determine the sample for research. From the original list of 95 AUCC institutions, 69 universities with a combined 201 SFS project components were identified. This complete inventory is listed in Appendix C. After receiving REB approval, invitations for research interviews were sent to the 119 of these projects that had easily-located contact information. Of these invitations, 58 positive responses were received, 11 negative responses were given, and 50 contacts did not reply. In the end, 40 research interviews were conducted. There were 11 interviewees from community garden projects, 8 representing food services, 7 from multi-disciplinary participatory

projects, 3 food bank participants, 3 composting projects, 3 independent cafes, 2 farmer's markets, 2 awareness-based programs, and 1 skill-building project.

These interviews followed a content analysis that identified a significant shortcoming in available online information about these projects. The results of these interviews are as follow:

- 1) There is room for a multitude of SFS projects at universities, and there is no one type of project that can exist and succeed.
- 2) There is potential to increase the use of the term SFS project so as to help create links between projects that might not have thought they were related, such as food banks and university food services sustainability initiatives.
- 3) There seems to be a strong pattern on Canadian university campuses of people engaged with social and environmental issues enough to act on their desires to change the system
- 4) Existing university departments may be good partners to support, house, or partner with various SFS projects due to the possibility that they may have more decision-making capacity than independent projects would.
- 5) All types of projects will have challenges to overcome at some point in their histories, and that they are not alone in what they are experiencing.
- 6) When provided with knowledge and skills, things can be different and people can make changes to work towards a sustainable food system. However, by the same token the lesson from the food banks about their services being extremely high in demand highlights a potential gap in the university system where students are paying to go to school but may not be able to pay for necessities of life. The lessons make it clear that there is still work to be done, but that there are capable and willing people at universities to take on the challenges.
- 7) The expansion of SFS projects and the mention of sustainability and food strategies possibly indicate big steps being taken by university administration in order to become role models and live what they want students to learn.
- 8) It seems that there is a gap between projects recognizing the need for connections and relationships and actually building them when it comes to other sustainability and food-related groups on campus.
- 9) The participants interviewed have learned from their processes, challenges, and achievements of their projects and have a lot of knowledge to offer and suggest to other projects.

The original research questions for this project asked 1 main question and 5 sub-questions:

- 1) To what extent do SFS projects exist on Canadian university campuses?
- 2) Why is it important for a university to partake in SFS projects?
- 3) Which institutions have SFS projects?
- 4) What are the motivations and challenges faced by these projects?
- 5) What can current SFS projects suggest to their peers for improvement, or to new SFS projects?
- 6) What can be different in the future for these and new SFS projects?

The first overarching question, as to how the projects currently exist at Canadian universities, was answered through the content analysis and interviews. There are multiple types of SFS projects, and they all look a little different from one another even within the same categories. The inventory of 201 SFS projects, found in Appendix C, provides details on the projects and their locations, as well as links to further information. This not only answers question 3 in terms of what institutions have SFS projects, but demonstrates that they are found in all corners of the country and in different formats: student-led, staff-led, cooperatives, externally run, research based, experiential, and from the east coast all the way to the west. Many of the characteristics of the projects researched met the characteristics described by Barlett (2011).

The second question, pertaining to the importance of university participation in SFS projects, was addressed partially in the literature review. Universities have a responsibility to their campus community, the surrounding communities, and the public at large. They make up the policies, procedures, laws, and other agreements that shape society, and they often make choices that reflect norms, values, and interests (Ishii-Eiteman, 2009). Truly sustainable university campuses believe in, and take action on, operational, academic (in terms of the subject matter being taught), research, and external community sustainability (Cortese, 2003). The interview participants further supported the need to act by having organizers that recognized that tackling the issue of the SFS was the right thing to do.

The fourth question, about motivations and challenges faced by the projects, was also discussed in the interviews with university SFS project participants. Most projects across all categories felt the need to address some sort of gap on campus and to bring the community together. The challenges, while varied, concluded that a common theme across all project categories was difficulty in getting participation or volunteers, and the need to raise more awareness about the projects and the issues

they try to address. Funding, too, was a challenge experienced by most categories, aside from food services. Logistics and project hierarchy were also challenges projects had to overcome. The short answer to this question is that there are many equally valid motivations and challenges for SFS projects, and they can all contribute to planning, goal setting, and results in different ways.

The fifth question, relating to the suggestions of current projects to other or upcoming SFS projects, resulted in a very full suggestion bank for others to draw from. Starting small, not being afraid to experiment, planning well, managing relationships and networks, trying to keep costs down, and simply taking the plunge and starting a project were among the popular pieces of advice from the interviewed projects. However, given that many of the projects still experience challenges with these exact suggested actions, new projects cannot expect to have a smooth path to their goals.

Finally, the topic of how things can be different for the current SFS projects and any new ones created in the future may have more to do with the changing university sustainability landscape than it does with the projects themselves. Though most participants cited expansion, new programming, and enhancements for their spaces and current initiatives, the ones that mentioned new sustainability strategies and food strategies point to something exciting on the horizon: sustainability embedded into university culture.

5.2 Contributions

This study is significant for several reasons. The first is that no inventory of SFS projects at Canadian universities currently exists. All interview participants were excited at the prospect of a central list with most of the projects mentioned so that they could make connections with others conducting similar work. In a broader context, this listing is expected to be of great use to many different stakeholders. University sustainability offices looking for project ideas will have a resource to see what sorts of programs have been implemented, student groups can use this same resource to convince campus administration to allow similar projects to be implemented, and researchers can use the inventory to draw out other lessons and analyses.

The second contribution, related to one of the gaps mentioned in the introduction, is that of Canadian content. Though some of the schools cited in the reasons for choosing the SFS project term, UBC and McGill, are often used as examples in research on the topic, there are many more case studies of schools elsewhere in the world that are investigated. This study sought to show that there are plenty of Canadian examples to draw from and to be proud of.

A third contribution relates to capturing information from those involved in the initial creation of the SFS projects. As many of the programs are still relatively young, it is useful to hear from the organizers of the SFS projects so that the information can impart some useful lessons, both for the original project and for other projects. Students generally do not stay in school forever, and even faculty and staff can move departments or institutions. Those who had a hand in either creating or running SFS projects have a lot of valuable information to share but their stories might not always make it through the lifetime of a project (as was evident from some of the interview responses). The interviews allowed for some of those journeys to be recorded.

Finally, having so many different project categories and projects involved in the interview portion of this thesis created a second reference, in addition to the inventory, that will be valuable to various stakeholders. The steps taken to create the projects, the challenges faced, the lessons learned, and the suggestions, are all helpful for new projects and for existing projects looking for some help. Organizers of SFS projects usually have other tasks to complete, and while speaking to a few people at other schools might be possible, this thesis provides them with notes from 40 colleagues to extract knowledge from. Similarly, this resource should be used in preparation for new project proposals as there are many ideas within the interview findings from groups that have already been approved elsewhere. This resource can also provide reassurance to programs undergoing difficulties, as all projects in all categories experience challenges and try their best to get through them. All interview participants expressed an interest in seeing the results of this study, so there is even a use for existing SFS projects.

5.3 Challenges and Limitations

This research experienced several challenges and limitations. The one with the most impact relates to the responses from potential participants. It was a challenge to find all the contact information for the various projects, as even contact pages for project websites often were forms to fill in instead of an e-mail address. As a result, the number of interviews conducted was limited to 40. A larger sample may have helped to draw out more conclusions or validate existing ones.

A related challenge was the difficulty in finding all of the SFS projects happening at every Canadian University campus. Not all projects had pages on the official university websites, not all keyword searches yielded satisfactory findings, and it was not always easy to determine whether or not external websites found for various projects were still valid. This not only made it difficult to find contact

information, as mentioned earlier, but it made it difficult to evaluate the projects to begin with. This also placed a limitation on the accuracy of the inventory. It is entirely possible that existing projects are missing as a result.

Another limitation to the research was that the data gathered relied heavily on the information provided by other people, and did not involve firsthand observation conducted by the investigator. While website information and the research interviews with representatives directly involved in the projects can be viewed as fairly reliable, there is always bias that has to be taken into consideration.

A limitation that could be overcome in future research was the exclusion of colleges nationwide, as well as not having any representative institutions from the territories. While it is likely that there are SFS projects being undertaken at those locations, because of the vast number of colleges in the country this would have made the scope too wide. In terms of the territories, none of the few educational institutions located there seemed to be on the AUCC list, and thus are likely colleges, but it would certainly be interesting to get their perspective on the issues.

5.4 Recommendations for future research

There are still many aspects of this work that can be further researched in the future. The preliminary content analysis highlighted some gaps to fill, and the interviews uncovered patterns for deeper investigation. A related project that is already underway has to do with focusing specifically on cafeterias and food services. The Sierra Youth Coalition, in partnership with several other organizations, has launched a national survey for university food service providers in an attempt to spread the movement of getting healthier and more sustainable food into mainstream campus. The survey will provide a gateway to the expansion of their campus food strategy groups, aimed at making use of student research into how to apply their solutions to tackle large food issues in university dining halls. This study will provide a complementary piece of the puzzle when it comes to groups for collaboration and the imperative to work on these food issues on campus.

Another area to explore would be looking at the frequency of SFS projects among members of the Association for the Advancement of Sustainability in Higher Education (AASHE) specifically. Given that these are schools that have indicated their commitment to sustainability, looking at the presence or lack of SFS projects and critically evaluating them could be important to determine whether they are meeting their promises. As can be seen in the inventory, found in Appendix C, membership in this organization was noted for this very purpose.

A potential future research project could be to expand this study to Canadian colleges, as there are SFS projects also occurring there. The purpose of this kind of research would be not only to see the similarities between those institutions, but to compare the motivations, challenges, and operations to that of universities. This would help to address the issues faced by all SFS projects at the various kinds of post-secondary institutions. Similarly, a comparison of Canadian school projects to international ones would also be interesting to see.

Yet another possible future research undertaking relates to the aforementioned limitation of not being able to include any firsthand observation of the SFS projects. It would be a very interesting collaborative research effort to have various individuals visit each project and provide a firsthand account of their experiences. This would likely provide more of an insight into the operational dynamic and campus culture surrounding the various projects, an important aspect to study in order to be able to create any sorts of recommendations for the necessary conditions for success of SFS projects.

A future research project directly linked to some of the conclusions of this research also exists. The theme of lack of awareness leading to issues with having enough volunteers and funding seems large enough to warrant further investigation as to why advertisements may not work for SFS projects, and why funding can be such an obstacle. The poor links experienced by many of the projects could lead to a study about how to better create those networks, and how to design projects that can work to reach other sustainability goals concurrently.

The diverse nature of SFS projects will allow for many new projects to be created and many further studies to be conducted in the future. As food issues gain more attention, various avenues for finding solutions will have to be explored and SFS projects at universities will be great examples and incubators for ideas.

6. Appendices

Appendix A: List of all AUCC member institutions (AUCC, 2011)

<u>British Columbia</u>
Emily Carr University of Art + Design
Kwantlen Polytechnic University
Royal Roads University
Simon Fraser University
Thompson Rivers University
Trinity Western University
University of British Columbia
University of Northern British Columbia
University of the Fraser Valley
University of Victoria
Vancouver Island University
<u>Alberta</u>
Athabasca University
Concordia University College of Alberta
Mount Royal University
The King's University College
The University of Lethbridge
University of Alberta
University of Calgary
<u>Saskatchewan</u>
Campion College
First Nations University of Canada
Luther College
St. Thomas More College
University of Regina
University of Saskatchewan
<u>Manitoba</u>
Brandon University
Canadian Mennonite University
The University of Winnipeg
Université de Saint-Boniface
University of Manitoba

<u>Ontario</u>
Algoma University
Brescia University College
Brock University
Carleton University
Dominican University College
Huron University College
King's University College at The University of Western Ontario
Lakehead University
Laurentian University
McMaster University
Nipissing University
OCAD University
Queen's University
Redeemer University College
Royal Military College of Canada
Ryerson University
Saint Paul University
St. Jeromes University
The University of Western Ontario
Trent University
University of Guelph
University of Ontario Institute of Technology
University of Ottawa
University of St. Michael's College
University of Sudbury
University of Toronto
University of Trinity College
University of Waterloo
University of Windsor
Victoria University
Wilfrid Laurier University
York University
<u>Québec</u>
Bishop's University
Concordia University
École Polytechnique de Montréal
HEC Montréal

McGill University
Université de Montréal
Université de Sherbrooke
Université du Québec
Université du Québec – École de technologie supérieure
Université du Québec – École nationale d’administration publique
Université du Québec – Institut national de la recherche scientifique
Université du Québec à Chicoutimi
Université du Québec à Montréal
Université du Québec à Rimouski
Université du Québec à Trois-Rivières
Université du Québec en Abitibi-Témiscamingue
Université du Québec en Outaouais
Université Laval
<u>New Brunswick</u>
Mount Allison University
St. Thomas University
Université de Moncton
University of New Brunswick
<u>Nova Scotia</u>
Acadia University
Cape Breton University
Dalhousie University
Mount Saint Vincent University
Nova Scotia Agricultural College
NSCAD University (Nova Scotia College of Art and Design)
Saint Mary’s University
St. Francis Xavier University
Université Sainte-Anne
University of King’s College
<u>Newfoundland & Labrador</u>
Memorial University of Newfoundland
<u>Prince Edward Island</u>
University of Prince Edward Island

Appendix B: List of Canadian AASHE university member institutions (AASHE, 2012)

AASHE Member Directory

[Members 35](#)
[Associate Members 0](#)
[Hide Search Options](#)

Keyword Search

Type [Select All](#)

- ☐ Two Year Institution
- ☒ Four Year Institution
- ☒ Graduate Institution
- ☐ Business
- ☐ System Office
- ☐ Nonprofit/NGO
- ☐ K-12 School
- ☐ Government Agency

Country [Select All](#)

- ☐ Australia
- ☒ Canada
- ☐ China
- ☐ Denmark
- ☐ Dominican Republic
- ☐ Egypt

State/Province

[SEARCH](#)

Organization	Type	Location	STARS	ACUPCC
Algonquin College	Four Year Institution	Ottawa, Ontario		
British Columbia Institute of Technology	Four Year Institution	Burnaby, British Columbia		
Concordia University (Montreal, QC)	Four Year Institution	Montreal, Quebec	✓	
Dalhousie University	Four Year Institution	Halifax, Nova Scotia		
Durham College	Four Year Institution	Oshawa, Ontario	✓	
Emily Carr University of Art & Design	Four Year Institution	Vancouver, British Columbia		
Grant MacEwan University	Four Year Institution	Edmonton, Alberta		
King's University College	Four Year Institution	Edmonton, Alberta	✓	
Kwantlen Polytechnic University	Four Year Institution	Surrey, British Columbia		
McGill University	Four Year Institution	Montreal, Quebec	✓	
McMaster University	Four Year Institution	Hamilton, Ontario		
Mount Royal University	Four Year Institution	Calgary, Alberta		
OCAD University (formerly Ontario College of Art & Design)	Four Year Institution	Toronto, Ontario		
Queen's University	Four Year Institution	Kingston, Ontario		
Royal Roads University	Four Year Institution	Victoria, British Columbia		
Saint Mary's University	Four Year Institution	Halifax, Nova Scotia	✓	
Sheridan Institute of Technology and Advanced Learning	Four Year Institution	Oakville, Ontario	✓	
Simon Fraser University	Four Year Institution	Burnaby, British Columbia		
Thompson Rivers University	Four Year Institution	Kamloops, British Columbia	✓	
Université de Sherbrooke	Four Year Institution	Sherbrooke, Quebec		
Université Laval	Four Year Institution	Quebec, Quebec		
University of Alberta	Four Year Institution	Edmonton, Alberta		
University of British Columbia	Four Year Institution	Vancouver, British Columbia		
University of Calgary	Four Year Institution	Calgary, Alberta	✓	
University of Guelph	Four Year Institution	Guelph, Ontario		
University of Manitoba	Four Year Institution	Winnipeg, Manitoba		
University of Northern British Columbia	Four Year Institution	Prince George, British Columbia		
University of Ottawa	Four Year Institution	Ottawa, Ontario	✓	
University of Saskatchewan	Four Year Institution	Saskatoon, Saskatchewan	✓	
University of Toronto	Four Year Institution	Toronto, Ontario		
University of Victoria	Four Year Institution	Victoria, British Columbia		
Vancouver Island University	Four Year Institution	Nanaimo, British Columbia		
Western University	Four Year Institution	London, Ontario	✓	
Wilfrid Laurier University	Four Year Institution	Waterloo, Ontario		
York University	Four Year Institution	Toronto, Ontario		

[About AASHE Membership](#)

Member Directory

[Business Product & Service Directory](#)

[Member Spotlight Archive](#)

[Member Discounts](#)

[AASHE-Member Logo](#)

[Contact Membership](#)

Appendix C: Complete inventory of SFS projects at Canadian universities

Province	Membership in AASHE	School	Projects	Project website or other information
BC	Yes	Kwantlen Polytechnic University	Institute for Sustainable Horticulture	http://www.kwantlen.ca/sh/about.html
			Richmond Farm school	Same as above
			Sustainable agri-food systems research	http://www.kwantlen.ca/sh/research/agri-food/projects.html
			Sustainable seafood purchasing	http://www.kwantlen.ca/supply/green.html
			composting	Same as above
	Yes	Royal Roads University	Habitat Cafe local food	http://sustainability.royalroads.ca/food
			Community garden	http://www.royalroads.ca/royalroads/Templates/Generic/one_column_large_portrait_image_4E.aspx?NRMODE=Published&NRNODEGUID=%7B7677B918-EA00-4360-A0ED-FD0B54A7A066%7D&NRORIGINALURL=%2Fabout-rru%2Fgovernance%2Fsustainability%2Fcommunity-garden.htm&NRCACHEHINT=NoModifyGuest
	Yes	Simon Fraser University	Educational outreach	http://www.sfu.ca/sac/resources/greenpages/eatwell/eat_well.html
			Weekly farmer market	http://sfulocalfood.ca/
			Harvest box	Same as above
			Natures garden cafe	
			Solid ground skills training	
			Composting	http://students.sfu.ca/residences/sustainability.html
	No	Trinity Western University	Community garden	http://impact.twu.ca/project/project.aspx?asset=118
	Yes	University of British Columbia	SEEDS	http://www.sustain.ubc.ca/seeds
			Fair-trade coffee	http://www.food.ubc.ca/sustainability/sustainability

Province	Membership in AASHE	School	Projects	Project website or other information
				-initiatives
			Sustainable seafood	Same as above
			Local food procurement policies	Same as above
			Food education	http://blogs.landfood.ubc.ca/foodsystemproject/about-the-project/
	Yes	University of Northern British Columbia	Farmers market	http://www.unbc.ca/green/living.html
			Educational outreach	Same as above
	No	University of the Fraser Valley	Low- cost organic/local dinners	http://www.ufv.ca/sustainability/student_activities_research/Students_for_Sustainability.htm
			Campus food garden	Same as above
	Yes	University of Victoria	Local food purchasing	http://web.uvic.ca/sustainability/Food.htm
			Campus community garden	http://web.uvic.ca/~ccgarden/
			Family student housing complex demo garden	
	Yes	Vancouver Island University	Community garden	http://blogs.viu.ca/solutions/?s=sustainable+food
			Educational outreach	Same as above
			Sustainable purchasing plan	Same as above
AB	Yes	Mount Royal University	Community garden	http://www.mtroyal.ca/AboutMountRoyal/MediaRoom/Newsroom/FTDATA_CGA_102011.htm
			Food bank	http://www.mtroyal.ca/AboutMountRoyal/MediaRoom/FTDATA_charity_120210.htm
			Start from scratch program	http://startfromscratch.ca/tag/mount-royal-university/
	Yes	The King's University College	Community garden	http://sustainablefoodedmonton.org/2012/04/27/the-kings-university-college/ or https://www.facebook.com/pages/The-Kings-

Province	Membership in AASHE	School	Projects	Project website or other information
				University-Community-Garden/196180130427448?sk=info
	No	The University of Lethbridge	Food bank	http://www.ulsu.ca/?p=23
			Cooperative garden	http://campusroots.blogspot.ca/
	Yes	University of Alberta	Food bank	http://campusfoodbank.com/
			Local food sourcing	http://www.augustana.ualberta.ca/offices/sustainability/programs/food.html and http://www.campusdish.com/en-US/CA/Alberta/Sustainability/
			Community garden	http://www.publichealth.ualberta.ca/collaborators-partners/community_engagement/green_gold_garden.aspx
	Yes	University of Calgary	Eco campus catering	http://www.ucalgary.ca/sustainability/food_beverage and http://www.ucalgary.ca/sustainability/dining
			Farmers market	http://www.ucalgary.ca/mymarket/
			Campus food bank	http://www.su.ucalgary.ca/page/quality-student-life/health-life-admin/campus-food-bank
			Start from scratch program	http://startfromscratch.ca/
SK	No	First Nations University of Canada	Community garden	http://rpirg.org/events-projects/reginas-edible-campus/ and http://www2.uregina.ca/yourblog/?p=2048
	No	St. Thomas More College	Local organic food choices	http://www.stmcollege.ca/choices-at-stm/choices-general-info/index.php

Province	Membership in AASHE	School	Projects	Project website or other information
	No	University of Regina	Local food options	http://www.dineoncampus.ca/uofregina/?cmd=CampusSustainability
			Good food box	http://ursu.ca/services/good food box/
			Community garden	http://www2.uregina.ca/yourblog/?p=5853
	Yes	University of Saskatchewan	Seager Wheeler Residence community garden	http://facilities.usask.ca/sustainability/whatcampusisdoing/
			Composting campus waste on campus	http://www.usask.ca/consumer_services/culinaryservices/sustainability/index.php
			Local food purchasing	Same as above
MB	No	Brandon University	Food bank	http://busu.ca/section/95
			Community garden	http://www.brandonu.ca/news/2011/03/22/sife-brandon-earns-top-honours/
	No	The University of Winnipeg	Sustainable food service	http://www.uwinnipeg.ca/index/food-services-overview
			Food waste compost	http://www.uwinnipeg.ca/index/uw-news-action/story.5/title.greening-uwinnipeg-with-campus-wide-composting
			Community garden	http://uniter.ca/view/7727/
	Yes	University of Manitoba	Farm and food discovery centre	http://umanitoba.ca/faculties/afs/discovery_centre/about/vision.html
ON	No	Algoma University	Food bank	http://algomafoodnetwork.wordpress.com/organizations/food-banksemergency-food-programs/algoma-university-food-bank/
			Local food option	http://www.dineoncampus.ca/algomau/?cmd=CampusSustainability
			Community garden	http://www.ausu.ca/?nav=services&section=the-

Province	Membership in AASHE	School	Projects	Project website or other information
				peoples-garden-at-algoma-u
	No	Brock University	Local food options	http://www.brocku.ca/dining-services/about-us/buy-local
			Food bank	http://www.brocku.ca/webcal/2011/undergrad/life.html?view=printable
	No	Carleton University	Food centre (food bank and programs)	http://www.cusaonline.com/foodcentre/
			Good food box	Same as above
			Campus Food Strategy Group	http://studentfood.ca/?page_id=19
			Local food sourcing	http://www1.carleton.ca/newsroom/news-articles/carleton-wins-buy-local-challenge/
			Community kitchen	http://www.garden-spot.ca/2010/08/about-the-garden-spot/
	No	King's University College at The University of Western Ontario	Sustainable/local food options	http://www.campusdish.com/en-US/CA/Kings/Sustainability/
	No	Lakehead University	Sustainable/local food options	http://www.campusdish.com/en-US/CA/Lakehead/Sustainability/
			Community garden	http://agora.lakeheadu.ca/index.php?ai=37
			Food bank	http://www.lusu.ca/thunderbay/?page_id=398
	No	Laurentian University	food project in the Congo	http://www.aucc.ca/media-room/news-and-commentary/laurentian-university-helping-to-boost-food-security-in-the-democratic-republic-of-the-congo
			Food bank	http://en.sga-age.ca/index.php?section_id=71
			Community garden	http://eeelaurentian.wordpress.com/2011/07/20/laurentian-universitys-community-garden-flourishes/

Province	Membership in AASHE	School	Projects	Project website or other information
	Yes	McMaster University	Food bank	http://www.msumcmaster.ca/breadbin/donors.htm
			Community garden and Farmstand	http://www.mcmaster.ca/sustainability/gs_campus_garden.html
			Local and organic food options	http://www.mcmaster.ca/sustainability/hw_eating.html
	No	Nipissing University	Local and organic food options	http://www.campusdish.com/en-US/CA/NipissingCanadore/Sustainability/
			Food bank	http://www.nipissingu.ca/about-us/pages/student-union.aspx
	Yes	OCAD University	grOCAD food programming group	http://www.ocadu.ca/students/campus_life/student_groups.htm
			food bank	http://www.ocadu.ca/students/student_union.htm
			campus cupboard affordable bulk food	Same as above
			good food box	Same as above
	Yes	Queen's University	Sustainable and local food options	http://housing.queensu.ca/resources/hospitality_services/files/sus%20report%20draft%201.pdf
			Farmer's market	http://www.thefarmersmarketatqueens.com/
			Composting/organic waste diversion	http://queensu.ca/news/articles/organics-composting-expands-office-lunchrooms
			Community garden	http://www.queensu.ca/sustainability/initiatives/projects/garden.html
	No	Redeemer University College	Local food options	http://www.redeemer.ca/about/campuservices/diningservices/sustainable.aspx#LocalFood
	No	Ryerson University	Centre for Studies in Food security	http://www.ryerson.ca/foodsecurity/
			Community garden	http://ryeshomegrown.blogspot.com/

Province	Membership in AASHE	School	Projects	Project website or other information
			Community food room	http://rsuonline.ca/index.php?section_id=13
			Local food options	http://www.campusdish.com/en-US/CA/Ryerson/Sustainability/
			Farmer's market	https://www.facebook.com/rufarmersmarket?sk=info , http://www.mymarket.ca/about.html and http://www.ryerson.ca/ryersontoday/stories/20110610_farmers.html
	No	Saint Paul University	Farmer's market	http://ustpaul.ca/upload-files/AdminGov/AnnualReport2010/en/files/assets/pages/page0015.swf
	No	St. Jeromes University	Composting	http://dineoncampus.ca/sju/?cmd=CampusSustainability
			Fair trade options	Same as above
	Yes	The University of Western Ontario	Community garden	http://www.usc.uwo.ca/envirowestern/Projects/GROWGarden.html
			Food support services	http://www.usc.uwo.ca/page.asp?id=50
			Organic food options	http://www.has.uwo.ca/hospitality/sustainability/
			partnership with London Food Co-op Store for organic local food at outlets	Same as above
	No	Trent University	Local dining options	http://www.campusdish.com/en-US/CA/Trent/Sustainability/
			Composting	See below
			Root cellar	See below
			Off-campus local food outlet	http://www.trentu.ca/stuorg/seasonedspoon/about.html
			Green-roof/ community	http://www.greenroofs.co

Province	Membership in AASHE	School	Projects	Project website or other information
			food gardens	m/projects/pview.php?id=558
	Yes	University of Guelph	Sustainable restaurant project	http://restaurantsustainability.wordpress.com/
			Local food options	http://www.hospitality.uoguelph.ca/sustainability/downloads/passionateAboutProduce.pdf and http://www.hospitality.uoguelph.ca/sustainability/downloads/HospitalitySustainabilityInitiatives.pdf
			Honeybee research centre	Same as above
			Educational outreach	Same as above
			Excess food donation	Same as above
			Guelph centre for urban organic farming	http://www.organicag.uoguelph.ca/learn/gcuof.html
	No	University of Ontario Institute of Technology	Some local dining options	http://www.campusdish.com/en-US/CA/DurhamUOIT/Sustainability/
	Yes	University of Ottawa	Fair trade food products	http://www.sustainable.uottawa.ca/campus-initiatives/food.html
			Community kitchen – People’s republic of Delicious	http://www.sustainable.uottawa.ca/campus-initiatives/food.html#community-kitchen or https://www.facebook.com/groups/2249291613/
			Food bank	http://foodbank.sfu.ca/
			Community garden	http://www.sustainable.uottawa.ca/community-garden.html
			Partnership with Food for All	http://www.justfood.ca/foodforall/weblinks/a-food-action-plan-for-ottawa-summary/
	Yes	University of Toronto	U of T campus agriculture project (UTCAP) - sky garden	http://uas.sa.utoronto.ca/

Province	Membership in AASHE	School	Projects	Project website or other information
			dig in! campus agriculture	http://campusagriculture.wordpress.com/
			Greenhouse renewal	Same as above
			Hart house farm plots	http://harthouse.ca/campusagriculture
			UTSU gardens	http://utsu.ca/section/1068
			UTM urban agriculture society	http://uas-mississauga.sa.utoronto.ca/
			organics collection	Same as below
			partnership with Local Food Plus and other local dining options	http://ueat.utoronto.ca/about-us/sustainability-report/
			food advisory committee	Same as above
			Hot Yam! Food collective	http://hotyam.ca/
			U of T food bank	http://utsu.ca/section/1067
			Weekly farmer's market	http://www.food-beverage.utoronto.ca/food/FarmersMarket.htm
	No	University of Waterloo	Local and fair trade food options	http://www.foodservices.uwaterloo.ca/sustainability/
			Farmer's market	http://www.foodservices.uwaterloo.ca/uwfarm_market/
			Food resource page	http://www.foodservices.uwaterloo.ca/foodbuzz/index.php
			Sustainability project Ecoeats committee	http://uwsp.feds.ca/ecoeats/about
			Community garden	http://wpirg.org/action-groups/community-garden/
			Food bank	http://foodbank.feds.ca/about-us
	No	University of Windsor	Local and fair trade food options	http://www.uwindsor.ca/food/system/files/Sustainable%20Initiatives%202011.pdf
			Composting	Same as above

Province	Membership in AASHE	School	Projects	Project website or other information
			Food bank	http://cronus.uwindsor.ca/units/ionacollege/mainv2.nsf/cf50c73c23e058b985256db30060a59e/4a81fdaed2a95b288525762700663623!OpenDocument
			Community garden	http://www.uwindsor.ca/cgcp/
	No	Victoria University (At UofT)	Community garden club	http://clubs.vusac.ca/?page_id=664/
	Yes	Wilfrid Laurier University	Farmers market	http://www.wlu.ca/page.php?grp_id=12304&p=20322
			Local food options	http://www.wlu.ca/page.php?grp_id=12304&p=16774
	Yes	York University	Examining campus food sustainability study	http://www.iris.yorku.ca/wp-content/uploads/2009/09/Food-Report-FINAL-Sept-25-2009.pdf
			Maloca community garden	http://malocagarden.wordpress.com/
			Food bank	http://yfs.ca/section/125
			composting	http://www.yorku.ca/csbo/grounds/fleetwaste/recycling/program.html
QC	No	Bishop's university	Composting	http://sdxcampuservices.com/ubishops/sustainability/local.html
			Local food options	Same as above
	Yes	Concordia University	Rooftop greenhouse project (city farm school)	http://sustainable.concordia.ca/ourinitiatives/greenhouse/
			Composting program	http://sustainable.concordia.ca/ourinitiatives/r4/compost/
			Food systems project	http://concordiafoodsystem.blogspot.com/p/about-project.html
			Sustainable food fair	http://www.concordia.ca/campus-life/sustainability/

Province	Membership in AASHE	School	Projects	Project website or other information
			Local and organic food options	http://www.dineoncampus.ca/concordia/?cmd=CampusSustainability
			The People's Potato	http://www.peoplespotato.com/index.html
	Yes	McGill University	Sustainable/local food purchasing	http://www.mcgill.ca/foodservices/responsible-food
			Farmers market	http://mcgillfarmersmarket.blogspot.ca/
			Food systems project	http://mfsp.wordpress.com/
			Campus Crops	http://www.campuscrops.mcgill.blogspot.ca/
			Composting	http://gorilla.mcgill.ca/
			Free weekly lunch	http://www.mcgill.ca/sustainability/get-involved/student-groups
			Midnight kitchen food collective	http://themidnightkitchen.wordpress.com/
			Organic campus project (partnership with farmers)	http://organiccampus.blogspot.com/
			Edible Campus project	http://santropolroulant.org/2009/E-garden.htm
	No	Université de Montreal	Composting program	http://www.durable.umontreal.ca/nos-actions/fonds-vert.html
	Yes	Université de Sherbrooke	Composting	http://www.cafecaus.ca/?page_id=24
			Local food options	Same as above
	No	Université du Québec – École de technologie supérieure	Composting	http://www.etsmtl.ca/Services/dd/Initiatives-pour-un-campus-durable/matieres-residuelles
	No	Université du Québec à Chicoutimi	Composting	http://www.uqac.ca/cenviro/?q=projets_recyclage
			Eco-options in the cafeterias	http://www.uqac.ca/cenviro/?q=node/80
	No	Université du Québec à Montréal	Centre for research in eco-food	http://www.eco-alimentation.uqam.ca/
	No	Université du Québec à Rimouski	Student food assistance	http://www.uqar.ca/aide-financiere/alimentaire/

Province	Membership in AASHE	School	Projects	Project website or other information
		Université du Québec en Abitibi-Témiscamingue	Student food assistance	http://www.ugat.ca/services/etudiants.asp?menu=sae&sousmenu=sae_depan
	Yes	Université Laval	Composting	http://www2.ulaval.ca/developpement-durable/a-propos/actions-concretes.html#c132003
			Meals for those in need	http://www.sodexotraiteur.ulaval.qc.ca/indexFr.asp?numero=77
			Food education	Same as above
NB	No	Mount Allison University	Local food purchasing	http://www.campusdish.com/en-US/CA/MountAllison/Sustainability/
			Campus farm	http://www.mta.ca/news/index.php?id=3723 and http://www.cbc.ca/shift/columnists/home-grown/2011/10/07/home-grown-mount-allisons-local-food-farm/
	No	St. Thomas University	Food bank	http://w3.stu.ca/stu/sites/food_bank/access.html
			Local food in dining services	http://w3.stu.ca/stu/sites/dining/culinary.html
	No	University of New Brunswick	Local/sustainable food purchasing	http://www.campusdish.com/en-US/CA/NewBrunswickSainJohn/Sustainability/
			Educational outreach	http://www.unb.ca/fredericton/sodexo/sustainability.html
			Community garden in Magee Residence	http://www.unb.ca/fredericton/residence/residences/magee/
NS	No	Acadia University	Local/sustainable food purchasing	http://www.dineoncampus.ca/acadiau/?cmd=CampusSustainability
			Acadia community farm	http://acadiafarm.org/
			Partnership with Great Meals for Change	http://www.greatmealsforachange.ca/great-meals-origins.php

Province	Membership in AASHE	School	Projects	Project website or other information
	No	Cape Breton University	Local/fair trade dining options	http://www.dineoncampus.ca/cbu/?cmd=CampusSustainability
			Food bank	http://www.cbu.ca/news/cape-breton-university-library-launches-annual-food-drive
	Yes	Dalhousie University	Local/seasonal/sustainable sourcing	http://www.campusdish.com/en-US/CA/Dalhousie/Sustainability/
			Farm-to-table program	http://www.campusdish.com/en-US/CA/Dalhousie/Sustainability/FarmtoTableatDalhousie.htm
			Composting	http://fm.dal.ca/waste.htm
			Community garden	http://seemoregreen.wordpress.com/map-of-where/
	No	Mount Saint Vincent University	Community garden	http://www.msvu.ca/en/home/aboutus/Sustainability/communitygarden/whatwedo.aspx
			Participatory action and research centre on food security	http://www.foodsecurityresearchcentre.ca/the-centre/
	No	Nova Scotia Agricultural College	Community garden	http://nsac.ca/news/e-bulletin/2010/june/june24.asp and http://nsac.ca/news/2011/garden.asp
			Local/sustainable dining options	http://dineoncampus.ca/nsac/?cmd=CampusSustainability
		NSCAD University (Nova Scotia College of Art and Design)	Food bank	http://www.sunscad.org/services.php
	Yes	Saint Mary's University	Community garden	http://www.smu.ca/sustainability/green.html
			Local food options	http://www.campusdish.com/en-US/CA/SaintMarys/Sustainability/
			Food cooperative	https://www.facebook.co

Province	Membership in AASHE	School	Projects	Project website or other information
				m/pages/SMU-Food-Cooperative/201281836579741
NFLD	No	Memorial University of Newfoundland	Local/sustainable food	http://www.dineoncampus.ca/mun/?cmd=CorporateSustainability
			Community garden	http://www.mun.ca/communitygarden/
PEI	No	University of Prince Edward Island	Local/fairtrade food	http://www.dineoncampus.ca/upei/?cmd=CampusSustainability

Appendix D: Interview invitation

Dear [person's name or title]:

My name is Ruvena Buslovich and I am a MASc student at Ryerson University. I am conducting a thesis research study on the implementation and management of sustainable food system projects at Canadian universities. I hope that you have about 30-45 minutes of your time to spare in order to share your views and answer a few questions over the phone.

If you are willing, I would like to ask you about [project name] as I think that it qualifies as a sustainable food system project. Your participation will be kept confidential. A copy of the Informed Consent Form that is required by Ryerson University's Research Ethics Board will be sent to you prior to the scheduled date, and can be emailed or faxed back.

I look forward to hearing from you regarding your availability for this short phone call. In the meantime, if you have any questions or if you would like additional information, please don't hesitate to e-mail.

Best regards,

Ruvena Buslovich, B.E.S., MASc Student

Environmental Applied Science & Management Program
Ryerson University
350 Victoria Street
Toronto, ON, Canada
M5B 2K3
Email: rbuslovi@ryerson.ca

Appendix E: Informed consent form

Informed Consent Form

Research Project Title: Food for thought: an inventory and analysis of the implementation of sustainable food system projects at Canadian universities.

Introduction:

You are being asked to participate in a research study. Before you give your consent to be a volunteer, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Investigator:

Ms. Ruvena Buslovich, B.E.S., MSc Student
Environmental Applied Science and Management Program
Ryerson University

Purpose of the Study:

The purpose of this research is to explore and affirm the role of universities in addressing food issues by creating a usable inventory and set of preliminary recommendations around sustainable food system projects at Canadian post-secondary institutions. Personnel from identified organizations have been invited to participate in the study.

Description of the Study:

All participants are asked to be interviewed over the telephone. Completion of the interview will require approximately 30-45 minutes. Once the interview has been completed, the key comments noted throughout the discussion will be written up and sent to the participant for review and confirmation at the agreement of the participant. Participants will also be asked to sign and return a copy of this form to the investigator.

Risks or Discomforts:

You will be asked to reflect on the experience of your organization in implementing programs to address issues of a sustainable food system. If you begin to feel uncomfortable at any time, you may discontinue your participation, either temporarily or permanently.

Benefits of the Study:

The proposed research will yield a potential benefit for universities and similar institutions seeking to implement food-related programs. This research will provide insight into sustainable food system projects on campus. There are a number of universities that have already implemented comprehensive starter programs to address food issues– not only for their staff and students, but for the greater community. Drawing upon their successes and challenges, patterns will be compiled and analyzed as a resource for other universities, or similar institutions, who would like to do the same.

There are no guaranteed individual benefits for the participants involved in this study.

Incentives to Participate: Participants will not be paid to participate in this study.

Costs: There are no costs associated with participation.

Voluntary Nature of Participation:

Participation in this study is voluntary. Your choice of whether or not to participate will not influence your future relations with Ryerson University. If you decide to participate, you are free to withdraw your consent and stop your participation at any time without penalty or loss of benefits to which you are allowed. At any particular point in the study, you may refuse to answer any particular question or stop participation altogether.

Confidentiality:

This study will maintain participant confidentiality. Any information disseminated throughout the research process will avoid the use of names, and any quotations in the final thesis will be non-attributable. The main concepts collected throughout the interviews are the focus of the research, not the participants. As such, personal data will be stored exclusively with the investigator, Ruvena Buslovich, and will only be shared with the thesis supervisor, Dr. Corey Searcy, when necessary.

Questions about the Study:

If you have any questions about the research now or in the future, please contact:

Ms. Ruvena Buslovich
Email: rbuslovi@ryerson.ca

If you have questions regarding your rights as human subject and participant in this study, you may contact the Ryerson University Research Ethics Board for information:

Research Ethics Board
c/o Office of the Vice President, Research and Innovation
Ryerson University
350 Victoria Street
Toronto, ON, M5B 2K3
416- 979- 5042

Agreement:

Your signature below indicates that you have read the information in this agreement and have had a chance to ask any questions you have about the study. Your signature also indicates that you agree to be in the study and have been told that you can change your mind and withdraw your consent to participate at any time. You have been given a copy of this agreement.

You have been told that by signing this consent agreement you are not giving up any of your legal rights.

Employer consent:

- ☐ Yes, I had to obtain employer consent to agree to participate in this study and a signature is below.
- ☐ No, I did not have to obtain employer consent to agree to participate and the lines below are blank.

Name of employer (Please Print)

Signature of employer

Date

Interview notes:

- ☐ I would like to have my interview notes sent back to me via email for review
- ☐ No, I do not want my interview notes sent back to me via email for review

Future feedback:

- ☐ I am willing to be contacted for a possible follow-up interview to give feedback on the recommendations created by the researcher. I understand that even if contacted, I am not obligated to participate.
- ☐ No, please do not contact me for future feedback

Name of Participant (Please Print)

Signature of Participant

Date

Signature of Investigator

Date

7. References

- AASHE. Member directory. Accessed 1 June 2012.
<http://www.aashe.org/membership/member-directory?keyword=&field_organization_type_value_many_to_one%5B%5D=Four+Year+Institution&field_organization_type_value_many_to_one%5B%5D=Graduate+Institution&country%5B%5D=ca&province=>>
- Aber, J., Kelly, T., and Malloy, B.(Eds) (2009). *The Sustainable Learning Community: One University's Journey to the Future*. Hanover: University Press of New England.
- AUCC (2011). Canadian Universities. Accessed 20 September 2011.
<<http://www.aucc.ca/canadian-universities/our-universities>>
- Babich, R. and Smith, S. (2010). "Cradle to Grave": An Analysis of Sustainable Food Systems in a University Setting. *Journal of Culinary Science & Technology*, 8 (4), 180-190.
- Baldwin, C. (2009). *Sustainability in the Food Industry*. Iowa: Wiley Blackwell.
- Barlett, P. (2011). Campus Sustainable Food Projects: Critique and Engagement. *American Anthropologist*, 113 (1), 101–115.
- Bhatt, V., Farah, L. M., Luka, N., & Wolfe, J. M. (2009). Making the edible campus: A model for food-secure urban revitalisation. *Open House International*, 34(2), 81-90.
- Blay-Palmer, A. (2011). Food hubs: Growing community based solutions for sustainable, local food systems. Sustainable Local Food Systems in Policy and Practice. Carleton University Policy Brief.
- Block, D., Chavez, N., Allen, E., and Ramirez, D. (2012). Food sovereignty, urban food access and food activism: contemplating the connection through examples from Chicago. *Agriculture and Human Values*, 29, 203-215.
- City of Vancouver. (2011). Community services and social planning: food policy. Accessed 15 November 2011. <<http://vancouver.ca/commsvcs/socialplanning/initiatives/foodpolicy/systems/just.htm>>
- Cortese, A. (2003). The Critical Role of Higher Education in Creating a Sustainable Future. *Planning for Higher Education*, May 2003, 15-22.
- Ericksen, P. (2008). Conceptualizing food systems for global environmental change research. *Global Environmental Change*, 18, 234–245.
- Feenstra, G. (2002). Creating space for sustainable food systems: lessons from the field. *Agriculture and Human Values*, 19, 99-106.

- Flick, U. (2009). *An introduction to qualitative research (fourth edition)*. Sage, London, UK.
- Forum for food sovereignty. Nyeleni 2007 Synthesis Report. February 23-27 2007.
- Friedmann, H. (2007). Scaling up: Bringing public institutions and food service corporations into the project for a local, sustainable food system in Ontario. *Agriculture and Human Values*, 24, 389–398.
- Garrett, S. and Feenstra, G. (1999). Growing a Community Food System. Community Ventures: Partnerships in Education and Research Circular Series. Western Regional Extension Publication in Cooperation with the U.S. Department of Agriculture. Washington State University.
- Holz, R. (2010). Historicizing Sustainability: German Scientific Forestry in the Eighteenth and Nineteenth Centuries. *Science as Culture*, 19(4), 431–460.
- Hughes, R., Serebriyanikova, I., Davidson, K., and Leveritt, M. (2011). Student food insecurity: The skeleton in the university closet. *Nutrition & Dietetics*, 68, 27–32.
- Ishii-Eiteman, M. (2009). Reorienting local and global food systems: institutional challenges and policy options from the UN agricultural assessment. In Clapp, J. and Cohen, M. (2009). *Global Food Crisis: governance challenges and opportunities*. Centre for International Governance Innovation.
- Kaufman, J. L. (2004). Introduction. *Journal of Planning Education and Research*, 23(4), 335-340.
- Koc, M, R. MacRae, L. Mougeot, and J. Welsh (eds.) (1999). *For Hunger-Proof Cities: Sustainable Urban Food Systems*. Ottawa: IDRC Books.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology (2nd ed.)*. Thousand Oaks, California: Sage Publications.
- Kvale, S. (1996). *Interviews: an introduction to qualitative research interviewing*. London: Sage Publications.
- Lawrence, G., Lyons, K. & Wallington, T. (Eds.) (2010). *Food Security, Nutrition, and Sustainability*. London: Earthscan.
- Lumley, S. and Armstrong, P. (2004). Some of the nineteenth century origins of the sustainability concept. *Environment, Development and Sustainability*, 6, 367–378.
- McGill Food Systems Project (n.d). About Us. Accessed 25 June 2011.
<<http://mfsp.wordpress.com/about/>>
- Meldrum, A. and Willows, N. (2006). Food insecurity in university students receiving financial aid. *Canadian Journal of Dietetic Practice and Research*, 67(1), 43-46.
- Miller, S. (2008). *EdibleAction – Food Activism & Alternative Economics*. Winnipeg: Fernwood Publishing.

- Mittal, A. (2009). The blame game: understanding structural causes of the food crisis. In Clapp, J. and Cohen, M (eds) *The Global Food Crisis: Governance Challenges and Opportunities*. Waterloo: Wilfrid Laurier University Press
- Okane, G. (2011). What is the real cost of our food? Implications for the environment, society and public health nutrition. *Public Health Nutrition*: 15(2), 268–276.
- Oxford Dictionaries. “Sustainable”. Accessed 09 December 2011 from
<http://oxforddictionaries.com/definition/sustainable#m_en_gb0833570.006>
- Pawlick, T. (2006). *The end of food: how the food industry is destroying our food supply and what you can do about it*. Vancouver: Greystone Books.
- Rogers, P. P. (2008). In Jalal K. F., Boyd J. A. (Eds.), *An introduction to sustainable development*. Sterling, VA: Earthscan.
- Rojas, A., Richer, L., & Wagner, J. (2007). University of British Columbia food system project: Towards sustainable and secure campus food systems. *EcoHealth*, 4(1), 86-94.
- Rojas, A., Valley, W., Mansfield, B., Orrego, E., Chapman, G., and Harlap, Y. (2011). Toward Food System Sustainability through School Food System Change: Think&EatGreen@School and the Making of a Community-University Research Alliance. *Sustainability*, 3, 763-788.
- Saunders, C., Barber, A. & Taylor, G. (2006). Food Miles – Comparative Energy/Emissions Performance of New Zealand’s Agriculture Industry. Report no. 285. Lincoln: Lincoln University.
- Schmidt, S. Canada first wealthy nation to be probed by UN food monitor. Accessed 3 May 2012.
<<http://www.canada.com/business/Canada+first+wealthy+nation+probed+food+monitor/6554582/story.html>>
- Shaw, D. (2007). *World Food Security: A history since 1945*. New York: Palgrave Macmillan.
- Smith, P., Martino, D., Cai, Z. et al. (2007). Agriculture. In Metz, B., Davidson, O., Bosch, R. et al., (eds.). *Climate Change 2007: Mitigation Contribution of Working Party III to the Fourth Assessment Report of the International Panel on Climate Change*. Cambridge: Cambridge University Press.
- Sumner, J. (2011). Serving Social Justice: The Role of the Commons in Sustainable Food Systems. *Studies in Social Justice*, 5(1), 63-75.
- Turner, B. (2011). Embodied connections: sustainability, food systems and community gardens. *Local Environment*, 16(6), 509-522.
- Ukaga O., Maser C. and Reichenbach M. (Eds.) (2010). *Sustainable development: Principles, frameworks, and case studies*. Boca Raton: CRC Press.
- University of Toronto Food Services – St. George Campus (2009). 2008-2009 Annual Report.

Accessed 1 April 2011 from < <http://www.food-beverage.utoronto.ca/Assets/Ancillary+Services+Digital+Assets/Food+Bev/food/Annual+Report+08-09.pdf>>

Wilkins, J. (2005). Eating right here: Moving from consumer to food citizen. *Agriculture and Human Values*, 22, 269–273.

Wilson, G., Furniss, P. and Kimbowa, R. (Eds.) (2010). *Environment, development, and sustainability : Perspectives and cases from around the world*. Toronto: Oxford University Press, Milton Keynes England. In association with The OpenUniversity.

The World Bank (2011). Food Price Watch. Accessed 15 April 2011 from
<http://www.worldbank.org/foodcrisis/food_price_watch_report_feb2011.html>

World Commission on Environment and Development (WCED). (1987). *Our Common Future*. Oxford University Press, Oxford U.K.

World Food Summit (1996). Rome Declaration on World Food Security and World Food Summit plan of Action. Accessed 30 October 2011 through
<<http://www.fao.org/docrep/003/w3613e/w3613e00.htm>>