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Evaluation of the Community Capacity Building Strategy

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Executive Summary

The Farm to School Salad Bar is a new and innovative initiative in British Columbia (BC) designed to increase the consumption of fruits and vegetables amongst students and raise awareness of the health benefits of doing so. Although the concept of farm to school appears simple, it has multiple planning-related objectives including adopting a comprehensive and holistic approach to school nutrition, establishing links with local farmers and or producers and ensuring the initiative is environmentally friendly. The initiative drew on the work and experience of other farm to school initiatives from the United States (US) and from Ontario, as well as a local BC salad bar pilot project that was established in Dragon Lake Elementary School in Quesnel, B.C. in 2007.

Background

As part of its Healthy Eating Strategy, the BC Healthy Living Alliance (BCHLA) awarded an \$825,371 grant to the Public Health Association of BC (PHABC) to develop and implement farm to school salad bars in BC schools. A total of 16 elementary and high schools located within the jurisdictions of BC's Northern and Interior Health Authorities were selected and awarded grants to develop and implement a farm to school salad bar for the 2008/09 school year. These schools had responded to a request for proposals in April 2008 and they were notified in June 2008 that they had been successful. Under the terms and conditions of the grant, the schools were to develop farm to school salad bars to:

- provide a salad bar lunch to students twice a week for 26 weeks;
- provide lunch salad bar lunches to children between 5 and 18 years of age;
- be available to all students at a cost of \$2.50 for each salad bar meal with financial assistance for those who wished to use the salad bar but were unable to afford it;
- be self financing and sustainable;
- use local produce;
- provide six vegetables, three fruits, one grain or bread, one meat or alternative at each salad bar;
- establish links between local producers and farmers and schools;
- develop curriculum-based activities;
- disseminate information on best practice on operating a farm to school salad bar; and
- develop a “how to” guide on establishing and running a farm to school salad bar.

The Social Research and Demonstration Corporation was commissioned to evaluate the Farm to School Salad Bar. SRDC focused the evaluation on the implementation.

The Farm to School Salad Bar Initiative was an ambitious undertaking. The initiative was implemented in 16 schools, many of which were in rural and remote areas of BC. It was designed to achieve multiple goals. While not all goals were met, the schools taking part in the initiative were committed to the initiative and accomplished a lot in a short

time. In the 11 schools participating in the evaluation, the initiative reached about 5,000 elementary and secondary students. The implementation study offered the following lessons on the implementation of this initiative.

Planning the Farm to School Salad Bar

Those involved in this initiative all agreed that more time was needed to plan and develop the salad bars in schools. School principals, staff and volunteers were pleased and relieved at how the farm to school salad bar had developed. However, with the benefit of hindsight, all wished there had of been more time to plan the initiative and to make sure renovations were complete, permits were in place and equipment arrived before the original start date for the salad bar. Schools that were able to put the necessary infrastructure in place quickly were able to implement the salad bar earlier.

The Timing of the Start of the Farm to School Salad Bars

Most schools started between October and December 2008, when the supply of local foods, especially fruit and vegetables, was diminishing. Those trying to develop menus using local produce struggled to find items that would work in the salad bar and, most reluctantly, had to rely on larger chain grocery stores to provide the range of foods at a cost the schools could afford. It was suggested that starting the salad bar in January, when schools could benefit from agreements with farmers to use poly-tunnels to produce early crops, would work much better for all involved. This approach would free up the fall term to plan menus, link with local producers or farmers, and develop supporting curriculum activities.

Staffing the Farm to School Salad Bar

Being able to staff the salad bar with enthusiastic and committed individuals was key. All those involved in the initiative stressed the importance of having a good team of people to implement the salad bar. The staffing of the farm to school salad bars represented substantial hidden costs within this initiative, and many schools, especially elementary, relied on a small group of volunteers. Without the work of volunteers, staff and contractors (all of whom did more than they were supposed to simply because there were things that needed to be done), the farm to school salad bar would not be able to operate.

Operating the Farm to School Salad Bar

The majority of those involved in the initiative had expected the farm to school salad bar to be relatively straightforward to operate. All emphasized the fact that there was a lot more involved in operating the salad bar than anticipated, and suggested other schools thinking about starting a salad bar should be aware of the other tasks involved. They suggested that understanding what was involved would reduce stress levels and “make life easier.”

Changes to the school system

One challenge for some elementary schools was managing the flow of students through the salad bar. Those involved in the salad bar were reminded that students, especially those in the lower grades, did not eat very quickly and needed more time to access the salad bar. Some elementary schools moved to a “play first, lunch later” system because students came in happy and hungry and accessed the salad bar more quickly. They were also more willing to try new foods.

Involvement of Local Producers or Farmers

Local farmers and producers saw the farm to school salad bar as a real opportunity to develop strong links with schools and to have a market for their produce. However, for most, this partnership did not materialize in the first year largely due to the small order sizes from schools. Local producers and farmers needed time to plan ahead to enable changes to be made to planting schedules so they would be able to provide schools with a wider variety of produce. Some farmers and local producers were planning to develop a root cellar to store produce so as to ensure a steady supply through the winter. This was a time-intensive process, and schools needed to factor this into their plans.

Cost was another issue for farmers and local producers. They understood that schools were constrained in what they could charge students, but some orders were so small that it was not financially viable for the farmers/producers to supply the schools.

The Farm to School Salad Bar and High Schools

All high schools failed to meet their predicted targets for students using the farm to school bar despite the effort they had put into developing and operating it. Various strategies were used to encourage participation, and some met with limited success. A further challenge was that some high schools students were mobile and were able to leave campus, unlike elementary students who had to use the services provided by the schools. Some high school participants suggested that the farm to school salad bar model needed to be refined if it was to work successfully in this setting.

Raising Awareness about Healthy Eating in Schools

The speed at which the farm to school salad bars were rolled out prevented many schools from developing accompanying classroom materials or establishing the kind of partnerships they wanted with local farmers and producers. All were keen to move forward with these aspects in year two, as they realized the farm to school salad bar could encourage students to eat more healthily but the reasons *why* health eating was important needed to be reinforced for students.

Changing Students’ Eating Behaviours in the Short Term

Schools participated in the farm to school salad bar initiative to help improve students’ eating behaviours. Based on their own observations and anecdotal feedback from students, staff and parents, those interviewed believed they were slowly achieving this goal. It takes time, but they were beginning to make real changes to the nutritional intake of their students.

The preliminary results from the surveys in four schools suggest that students were more willing to try new fruits and vegetables and they found it easier to eat fruit and vegetables every day with the farm to school salad bars. Students had increased their consumption of fruit and raw vegetables and there was a small but significant change in the frequency with which students ate salad or grated vegetables.

The feedback received from parents was very positive. They were very satisfied with the farm to school salad bar and reported their children enjoyed it. They wanted to see the initiative continue and they would happily recommend it to another parent.

The Need for Ongoing Support

The PHABC employed a project manager to oversee and support this initiative. The schools appreciated the help and support provided, but some felt they would have benefitted from more practical support and help with the everyday aspects of the farm to school salad bar. They also wanted input to develop strategies to address low student participation rates.

The Need for Ongoing Funding

All schools stressed the importance of ongoing funding to meet some of the operating expenses of the farm to school salad bar. All struggled to make the salad bar financially viable within the first few weeks. As the farm to school salad bars became more established, revenues increased, but the need to keep operating costs low prevented some schools from shopping locally. While the schools acknowledged that it might be possible for some salad bars to cover the cost of the food, they indicated that they would be unlikely to recover staffing and other costs.

The Challenge for Policy and Practice

All the schools that participated in this evaluation achieved a lot in a relatively short period of time. They were able to do this because of the enthusiasm, commitment and goodwill of those involved. However, all schools found that it took more time, effort and resources to plan, develop and operate the farm to school salad bar, especially if it was to become an established and integrated component of the school.

The multiple goals of the project may at times have been in conflict with one another, and phasing in selected goals (e.g. links with local producers and farmers and schools) at later periods and over a longer timeframe may have made the implementation easier and smoother.

To make the farm to school salad work, schools adapted the original model so that it addressed local needs. A one-size-fits-all approach would have limited success, especially in the Northern and Interior Regions of BC. The challenge for practice and policy is how to support this initiative on an ongoing basis. For the farm to school salad bars to be implemented successfully, there needs to be:

- adequate time for planning and development;
- funding for operating as well as capital costs;

- assessment to determine whether the school has the equipment, space, facilities, funding and resources to operate the program;
- a mechanism to support volunteers;
- practical supports to schools to help them solve problem;
- reliable sources of locally produced fruits and vegetables available at an affordable price;
- provincial supports reflecting local challenges; and
- government endorsement for long-term sustainability.

In addition, the practical lessons from this initiative are substantial. The initiative has already produced a “how to” guide for schools and communities planning this type of initiative. It may be further strengthened through the findings detailed in this evaluation, for instance through the advance development of materials and resources that can be provided to schools to be adapted for their environment, or support to school administrators on engaging school communities (particularly high school students), sourcing, cost, time, paid and volunteer staffing. This type of “how to” manual and the factors for success listed above can play an important role in future endeavours.

1. Introduction

There is growing concern about the health and nutrition of school-aged children. Data from a number of surveys from the United States (US), Canada and the United Kingdom (UK), show that many school-aged children are not eating the recommended five portions of fruit and vegetables each day, and are not obtaining the health benefits from a well-balanced and varied diet. The challenge is how to increase the consumption of fruits and vegetables among students and raise awareness of the health benefits of this increased consumption.

One initiative that was developed was Farm to School. These projects began in the US in 1996 with a small number of pilot projects in California.¹ The findings from these early pilot projects were positive, and since the mid 1990s, the number of farm to school projects has increased: indeed, in 2010 there are now estimated to be 2,051 farm to school projects in 43 states across the United States.²

Although the concept of farm to school appears simple, it is a relatively new and innovative strategy with multiple planning-related objectives.³ This includes adopting a comprehensive and holistic approach to improving the food choices and the eating behaviours of school-aged children, teaching students about healthy eating, exposing them to fresh fruits and vegetables and giving them a sense of where, how and by whom their food was grown. It also involves developing local markets for local farmers and growers.⁴

As the farm to school model has evolved it has been adapted by schools to meet their individual needs and capabilities.⁵

The success of the US farm to school projects inspired those working in school nutrition in Canada and in 2002 two salad bar projects were established in elementary schools in Toronto.

The work of Joshi and Azuma (2007) together with reports on the projects mentioned above, suggest that to successfully implement a farm to school project, including a salad bar, the following is required:

- a feasibility study to ascertain whether a school has the equipment, space, facilities and resources to operate a farm to school project and to identify the additional resources that will be required;

¹ Santa Monica-Malibu USD and the Edible Schoolyard, Berkley and Florida (New North Florida Marketing Cooperative): http://www.farmtoschool.org/files/publications_164.pdf

² Farm to school website, <http://www.farmtoschool.org/index.php> downloaded January 2010

³ Vallianatos, M., Gottlieb, R., and Haase, M. (2004) Farm to school. *Journal of Planning Education and Research*, Vol. 23, No. 4, 414–423

⁴ Joshi, A., and Beery, B. (2007). A Growing Movement: A Decade of Farm to School in California. Center for Food & Justice, The Urban & Environment Policy Institute Occidental College.

⁵ Farm to School: Case Studies and Resources for Success National Farm to School Program 2004: <http://www.farmtoschool.org>

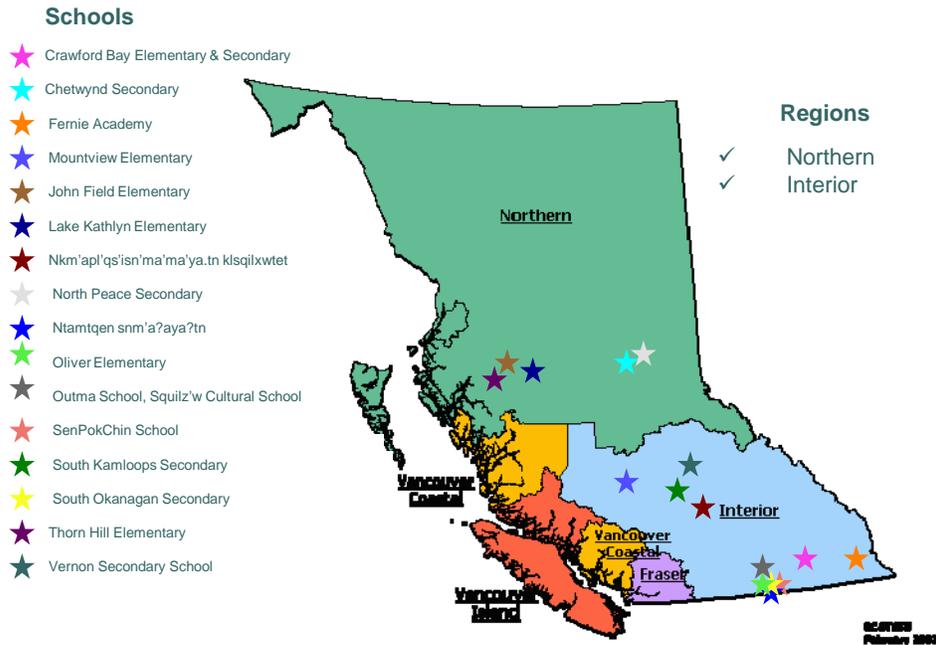
- a realistic assessment of whether there is interest from staff, students, parents as well as local farmers and producers. This includes an awareness of the time and effort that will be required to get the project up, running and to sustain it;
- a cost assessment so all involved understand how the project will be funded, including an understanding of whether the project is to be self-financing or if it will be subsidized and, if the latter, where this money will come from;
- the presence of a local champion who will be able to move the project forward, as well as a team of volunteers who will support the project to set up and operate the salad bar;
- an awareness that the farm to school project requires a school-wide approach so that the healthy eating messages are reinforced across school activities and curriculum; and
- reliable sources of locally produced fruits and vegetables that are available at an affordable price.
- In addition to these features, many farm to school projects have developed:
 - school gardens in which children obtain hands-on experience in growing food;
 - field trips to local farms and classroom visits from food producers;
 - integrated nutrition curriculum that connects experiential learning at the farm and in the garden to healthy choices in the lunchroom; and
 - waste reduction, composting, and recycling strategies.

About the Farm to School Salad Bar in BC

As part of its healthy eating strategy, the BC Healthy Living Alliance awarded a grant of \$825,371 in January 2008 to the Public Health Association of British Columbia (PHABC) to develop and implement farm to school salad bars in schools in British Columbia (BC). The schools were to be located within the jurisdictions of BC's Northern and Interior Health Authorities. A call for proposals was issued and those schools interested in developing a farm to school salad bar were asked to submit an application. In June 2008, 16 schools (elementary and high schools) were selected and awarded grants to develop and implement farm to school salad bars. Figure 1.1 shows the locations of these schools, all of which are located in Northern and Interior regions.

PHABC employed a project manager on a 60 per cent basis to develop and implement the initiative and to liaise with schools and other stakeholders.

Figure 1.1: Schools Awarded a Grant for Farm to School Salad Bar



PHABC Farm to School Salad Bar Program Model

Under the terms and conditions of the grant, the farm to school salad bars were to:

- provide a salad bar lunch to students twice a week for 26 weeks;
- provide lunch salad bar lunches to children between 5 and 18 years of age;
- be available to all students at a cost of \$2.50 for each salad bar meal with financial assistance for those who wished to use the salad bar but were unable to afford it;
- be self-financing and sustainable;
- use local produce;
- provide six vegetables, three fruits, one grain or bread, one meat or alternative at each salad bar;
- establish links between local producers and farmers and schools;
- develop curriculum-based activities;
- disseminate information on best practices for operating a farm to school salad bar; and
- develop a “how to” guide on establishing and running a farm to school salad bar.

The PHABC farm to school salad bar drew on a local BC salad bar pilot project that was established in Dragon Lake Elementary School in Quesnel, B.C. in 2007. The pilot was evaluated by the Northern Health Authority in 2007. Evaluation findings from this pilot indicated that:

- students reported eating more or a lot more fruits and vegetables; and
- knowledge and awareness about food, nutrition and health increased.

The early findings from the Dragon Lake Salad Bar were positive in that students, staff and parents enjoyed the food provided via the salad bar and appeared to increase their overall consumption of fruits and vegetables. To tap into the experience of those at Dragon Lake School, PHABC brought together representatives of the schools awarded a grant to develop and implement a farm to school salad bar in June 2008. Some local producers and farmers associated with the schools also attended. The meeting focused on implementation issues and provided a useful forum for schools and producers to network and to exchange information about their proposed farm to school salad bar.

2. The Evaluation

Joshi and Azuma (2007) call for rigorous evaluations of farm to school projects so as to demonstrate their worth and to capture lessons about what does and does not work. They also recognize some of the challenges of conducting such evaluations as each school adapts and changes the original model to suit local surroundings and finds ways to overcome operational issues. The original evaluation design for the PHABC farm to school salad bar had intended to conduct a before and after study to focus on outcomes arising from this initiative — more specifically changes in fruit and vegetables consumptions by students. However, after the schools received their grant funding, it quickly became apparent that for many, getting the farm to school salad bar operational would be challenging. The main reasons for these initial delays centred on ordering the salad bar units, obtaining the necessary permits and completing renovations of kitchens and food preparation areas to meet health and safety standards.

The farm to school salad bars were anticipated to begin operation in the fall in the 2008/09 school year, but the date was pushed back until late October and into November, with one school not starting until January 2009. Given the slow start-up of the farm to school salad bars, the evaluation focused its efforts on a process rather than an outcomes study so that lessons could be learned about developing and operating a farm to school salad bar in the Northern and Interior Regions of BC.

Evaluation Questions

The three main research questions to have been explored by this evaluation were:

- **Does the Farm to School Salad Bar Initiative increase fruit and vegetable consumption amongst students in participating schools?
- **Does the Farm to School Salad Bar Initiative increase awareness, knowledge and skills around healthy eating behaviours for students participating in the initiative?
- **Does the initiative create sustainable farm to school salad bars?

Further research questions included:

- *Was the farm to school salad bar implemented as intended?
- *What percentage of students participated in the salad bar?
- **What is the impact of the initiative on local food producers?
- *Is the initiative able to provide local fruits and vegetables throughout the school year given the climate restrictions?
- ***Does the impact of the initiative extend beyond participating students?
- ***Does the initiative generate and support other food initiatives?

The research questions were modified given the refocusing of the evaluation on implementation. In addition, the evaluation did not address all the above research questions as the original evaluation design was partially implemented only in a few schools. Consequently, the final evaluation answered the research questions with one asterisk (*). For those questions marked with two asterisks (**) there is incomplete data collected from most schools, and for those with three asterisks (***) the evaluation team only have preliminary data. More

specifically, there is no reliable data to assess the impact of the farm to school salad bar on consumption of fruits and vegetables and increased awareness and knowledge.

Data Sources

The evaluation included several quantitative and qualitative data collection processes. Each school that participated in the evaluation was visited twice by one of a team of researchers — once as the salad bar was starting to operate and again towards the end of the school term. The second visit was scheduled as late as possible in order to observe any effects of the initiative. In between visits, the evaluators were in touch with schools by phone and email and attended some of teleconferences coordinated by the initiative during the school year.

The before and after methodology was retained for both interviews and site visits. Administrative data on the type of foods purchased was also collected. Schools were still asked to participate in the before and after student questionnaires, as well as a parent questionnaire.

Evaluation Sample

Eleven of the 16 schools participated in the evaluation — four secondary and seven elementary schools. Students in Grades 4 and above were given self-completion questionnaires to complete in class: seven schools participated in the pre-surveys (a total of 427 students) and four schools (351 students) in the post-survey. Four schools also completed parent questionnaires, which provided some feedback on their experience of the farm to school salad bar.

The Implementation Study and Data Sources

The implementation study has provided a detailed description of the farm to school salad bar in participating schools. It also provided information about how the farm to school model was implemented, the challenges encountered and how these were or were not addressed.

Data Source

The implementation data was collected using a variety of methods which are summarized below.

- Administrative data was used to explore operations including information on the sourcing, ordering and distributing of fruits and vegetables, capital and running costs, training and staffing.
- Key informant interviews were conducted with individuals involved in the farm to school salad bars. These interviews were conducted in the fall of 2008 and in the spring of 2009. People interviewed by the evaluators included:
 - school principal;
 - farm to school salad bar coordinator;
 - food service staff;
 - volunteer staff;
 - local food security champion; and

- local producer/farmer.

The interviews and focus groups explored the following issues:

- the motivation for developing a farm to school salad bar;
- what is seen as success and failure for the salad bar;
- whether the goals of the farm to school salad bar were met;
- the practicalities of setting up and running a salad bar;
- relationships with producers and other stakeholders;
- response from parents, students and the wider community and
- any unintended consequences arising from the farm to school salad bar.

Site visits and observation were conducted in all schools participating in the evaluation. Schools were visited twice to ascertain how the farm to school salad bars were operating and to observe students and staff's interaction with the salad bar.

Outcomes Study

A limited outcomes study was conducted in four of the 11 schools in the evaluation.⁶ The evaluation team reviewed the literature on fruit and vegetable consumption and were aware of the difficulties in trying to collect this data from school-aged children.⁷ Discussions with the participating schools suggested that the questionnaire should be brief and take no more than 10 minutes to complete. A before and after questionnaire was developed based on the ProChild Questionnaire and similar to that used in a study in Northern Ontario. Letters were sent to parents via the school obtaining informed consent for the students to participate in the survey.

The before questionnaire included the following measures:

- how often fruit and vegetables were consumed;
- usual school eating behaviour;
- awareness and knowledge of healthy eating;
- willingness to try new foods;
- awareness of farm to school salad; and
- age, sex and grade of student.

⁶ Baseline data was to have been collected from all students in participating schools before the salad bar before the farm to school salad bar began and the after data in May/June 2009 when the salad bar had been operating for the planned 26 weeks. While every effort was made to keep to this schedule it was not always possible to adhere to it given time constraints on schools. The evaluation team worked with the schools to find suitable times to visit the schools and conduct the study. For example, in some schools the student surveys were sent prior to the evaluation team visiting and were completed before the site visits. A few other schools had informal "practice runs" of the farm to school salad bar to reassure the teams that it was possible to feed the students within the lunch time period.

⁷ Rasmussen, M., Krølner, R., Klepp, K., Lytle, L., Brug, J., and Bere, E. (2006). "Determinants of fruit and vegetable consumption among children and adolescents: a review of the literature. Part I: quantitative studies.", *International Journal of Behavioural Nutrition and Physical Activity* 2006, 3:22

The after questionnaire measures repeated the before measures listed above, and had an additional section to determine whether the students had consciously made changes to their eating behaviours or consumption of fruits and vegetables.

A parent questionnaire was also developed and distributed to parents in the participating schools. This questionnaire collected data about use and satisfaction with the farm to school salad bar and whether parents thought their children were consuming more fruits and vegetables.

Limitations

There were a number of factors that affected the evaluation and the results need to be viewed in context of these items.

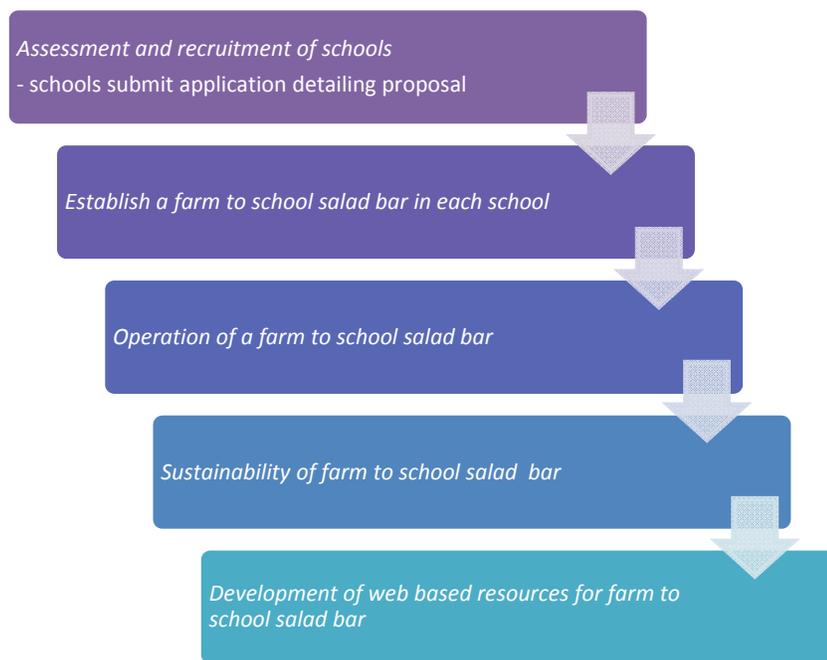
- Self-completed questionnaires were administered students in Grades 4 and higher. The Evaluators designed the tools acknowledging the difficulties, such as reliability of self-reported data, that are inherent with these data collection methods.
- Factors such as busy schedules and competing priorities in schools affected the administration of the student and parent questionnaires. The evaluation used the data that was collected, but not all schools in the evaluation completed the questionnaires.
- The initial evaluation plan and activities were revised to better reflect the actual implementation of the initiative in schools, in order to ensure the lessons learned were relevant. More specifically, the timeline in implementation activities affected the implementation of the evaluation activities and their completeness.
- There were variations in the implementation of the initiative across the schools.
- The outcomes study used a before and after design. The use of comparison schools would have added more rigour to the results.

3. Implementing Farm to School

The original aim of the PHABC Farm to School Salad Bar Initiative (F2S) was to establish 12 projects across schools in the Northern and Interior Health Authorities in BC. In the event, 16 schools were awarded grants to develop and implement a farm to school salad bar. These schools had responded to a request for proposals in April 2008 and they were notified in June 2008 that they had been successful. The majority of schools received grants of \$20,000.⁸ The project manager planned to visit all schools prior to grants being awarded but because of time constraints and the distance between the schools, this proved not to be possible. Those schools awarded a grant were invited to attend a two-day workshop in June 2008 to meet other schools, farmers and food producers involved in the initiative.

Figure 3.1 below outlines the major steps in the implementation plan for the farm to school salad bar project.

Figure 3.1: Major Steps in Implementation Plan



Following is a description of the activities undertaken to support the implementation of the initiative, and the challenges they encountered and resolved.

⁸ Two schools received grants of \$35,000 due to additional start up costs and predicted number of students to use the farm to school salad bar.

Planning the Farm to School Salad Bars

The 16 schools awarded grants were pleased and excited about being able to develop a farm to school salad bar. All the schools recognized the need to encourage students to eat more fruit and vegetables and hoped the farm to school salad bar would help improve eating behaviours as well as ensuring students received a nutritious healthy meal twice a week.

Those responsible for the farm to school salad bar were keen to get it operational but from the outset, all experienced slippages in schedules. While many of these involved factors outside the schools' and the project manager's control, they had a significant impact on the implementation of the projects within the school year. Those involved in planning the farm to school salad bar reported feeling rushed and wished they had a longer lead-up time to plan and organize prior to implementing the salad bar. The need for more time to plan and organize is explored in more detail in a later section but it is vital in understanding the context in which the farm to school salad bar was implemented. The main reasons for these initial delays are outlined below.

The Timing of the Awarding of the Grants

Schools were notified towards the end of the school year (June 2008) which left them with relatively little or no time to get things organized before the summer vacation. Schools tried to do what they could during the summer months, but this proved challenging as many people were on vacation. Tasks that had been planned for the summer months were not addressed until September, causing delays and raising anxiety levels amongst staff and volunteers.



Ordering Equipment

One priority task was to order the salad bar units, which are relatively specialized but essential equipment. These units had to be suitable for use by elementary school-aged children (see picture). The project manager provided contact details for potential suppliers but some schools had to wait until they were shipped from the US and did not receive the units until the middle of the fall term. Without this core piece of equipment, schools could not start operating their salad bar. Schools also had to order other equipment, including reusable plates, serving utensils and ice packs to keep the food cool.

Completing Kitchen and or Food Service Area Renovations

Many schools had to undertake some alterations to accommodate the farm to school salad bar. While the high schools had school cafeterias and kitchens, most of the work required by these schools was to accommodate the salad bar unit(s) ensuring that there was enough room to set up the units and for students to access it.

The majority of elementary schools, however, did not have access to a kitchen or cafeteria seating area and so they had to install kitchens that met local health and safety guidelines. While most school districts completed the work, it proved more costly and time-consuming than anticipated. When the work was completed, schools were pleased with their new facilities, which were accessed by other groups within the school. A further challenge arose for some elementary

schools because students had to eat their salad bar lunch in their own classrooms. Students in the primary grades often needed help carrying their food back to their classrooms and returning plates and cutlery.

Obtaining Local Authority Permits

Setting up a farm to school salad bar was a new venture for all involved. Schools knew their food preparation facilities and procedures had to meet health and safety standards and they required permits to be able to operate the salad bar. The challenge for participating schools was that there was some variation between local authorities and districts in grant permits. The project manager liaised with environmental health officers and tried to clarify the situation for schools, which was welcomed, but ultimately, further delays were experienced.

Accessing and Recruiting Key Staff and Volunteers during the Summer Vacation

The implementation plans submitted to PHABC identified key staff for the farm to school salad bar. While some of these individuals were around during the summer months, others were not. As mentioned, it took time to order equipment and complete renovations, which meant that some of the tasks planned for the summer months were pushed back to the beginning of the new school year. The staff and volunteers who were around spent time ordering equipment, sourcing local produce, testing recipes, developing menus and the infrastructure to enable the farm to school salad bar to run smoothly.

Eight of the 16 schools also had to recruit a paid coordinator, and while most had identified a suitable individual, for some schools this proved problematic as the coordinator took on additional tasks. Recruiting other volunteers during the summer vacation was also challenging simply because people were not around and some were reluctant to commit to the project without knowing exactly what would be required from them. As a result, training of staff and volunteers mostly happened at the beginning of the new school year.

Sourcing Local Produce and Developing Relationships with Local Farmers/Producers

Although schools contacted local farmers prior to submitting their applications, the partnerships were very new and underdeveloped. Some farmers had made commitments to supply schools with certain fruits and vegetables, but schools discovered by the time they had been awarded the grants most farmers had already sold most of their crops to other customers or the produce was no longer available. Farmers and producers advised the schools they would need more advance notice about which crops to plant for the coming year, as well as an indication of the quantities that would be required. At the time the farm to school salad bar started, schools were not in a position to provide this information as they did not know how much they would need. The farm to school project manager circulated information from other salad bars that had operated in the US and Toronto, and while this information was useful, it was not directly transferable because of the challenges inherent in the climate and location of the schools in the Northern and Interior Health Authorities.

Schools also discovered that in some areas there were few farmers or local producers and in some instances they produced only one or two crops (for example apples and soft fruits). A few schools realised they would have to liaise with several farmers to purchase a variety of local produce which took additional time and effort.

Developing Curriculum Materials

All of those involved in the farm to school salad bar found themselves extremely busy during the summer vacation and at the beginning of the new school year planning, developing and operating the salad bar. As a result, most schools made the decision to delay developing an educational component until later in the year or in year two when they hoped to have more time and when the farm to school salad bar was more established.

Schools Participating in the Evaluation

All the schools awarded a PHABC grant were happy to participate in the evaluation of this initiative but, only 11 were able to do so fully. The others were not able to get their salad bar operational by December 2008. Table 3.1 lists the 11 schools that participated in this evaluation, their respective student numbers, and the schools' First Nations status.⁹ The initiative reached roughly 5,000 elementary and secondary students in the 11 evaluation schools.

Table 3.1: Schools Participating in the Evaluation

	Schools	Type of school	Student Numbers 2008/09	First Nations School
1	South Kamloops Secondary	Secondary	1550	
2	North Peace Secondary	Secondary	901	
3	Vernon Secondary	Secondary	1065	
4	Chetwynd Secondary	Secondary	398	
5	John Field Elementary	Elementary	165	
6	Mountview Elementary	Elementary	170	
7	Thornhill Intermediate	Intermediate	270	
8	Sen Pok Chin	Elementary	50	✓
9	Oliver Elementary	Elementary	350	
10	Ntamtgen snm'aaya?tn	Kindergarten to grade 4	17	✓
11	Outma School Squilz'w Cultural School	Elementary	50	✓

⁹ South Okanagan Secondary School (525 students) is not involved in the evaluation, but was part of the Oliver Elementary School Farm to School Salad Bar application. The schools are located beside each other. The secondary school has a cafeteria and the food service staff on this site prepared all the food for the salad bar for Oliver Elementary. The original intention had been to operate a salad bar project in the secondary school as well as in the elementary school. Two salad bar units were purchased and in the beginning staff the set up the salad bar unit on a twice weekly basis. However, the response from the high school students was very low (a maximum of 1015 students used the salad bar each week). High schools students used the school cafeteria but did not choose the salad bar option despite it being available. The evaluators interviewed the food service staff at South Okanagan, but the secondary school did not participate in other parts of the evaluation and so have not been included in Table 2.1 or in the evaluation findings presented below.

Operating the Farm to School Salad Bar

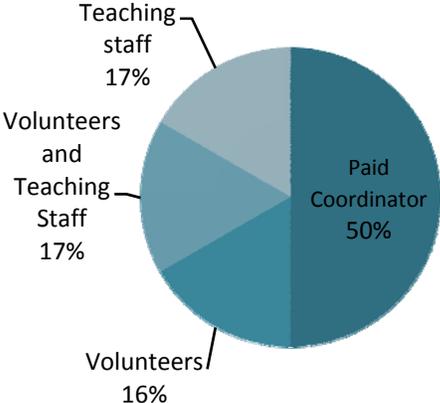
All 11 schools operated their farm to school salad bar twice a week; which days were chosen depended on what else was happening in the school. Tuesdays and Thursdays were the most popular days for the salad bar: five schools had this combination of days, four schools ran it on consecutive days (either two Tuesday and Wednesday or Wednesday and Thursday), one had it on Monday and Thursday, and the last remaining school held it on Wednesday and Friday. Some schools opted to incorporate their fundraising lunches into the salad bar so that the demand on volunteers would be reduced. The schools that opted to hold the salad bar on consecutive days did so because they hoped there would be less food wasted as food left over from one day could be reused the following day.

Schools estimated that it took on average between three or four hours to prepare the lunch for the salad bar and to set it up. More time was required depending on the hot or protein option. This time did not include shopping or ordering from local producers, which took an additional one to two hours. Finally, cleaning up after the salad bar took an additional one to two hours.

Approximately half the schools had a paid coordinator who was in charge of the farm to school salad bar. In the high schools this tended to be the person who was in charge of the food services for the whole school. These individuals had experience in food service in schools and had an existing contract. In elementary schools, this role was filled by a parent who was interested in healthy eating and while they were known to be good cooks, they did not have experience in cooking for large numbers on a regular basis (see Figure 2.3). Parents received a small honorarium but all worked for more than the hours they were paid for. Volunteers enjoyed being part of the salad bar and despite the fact that it was “a lot of work, more than I had planned for,” all wanted to continue to be involved. One volunteer in an elementary school stated, “Yes, it’s fantastic. It’s [the farm to school salad bar] getting better and better. We give the kids so much variety to eat for lunch.”

Figure 3.2 shows that half of the individuals responsible for the Farm to School Salad Bar were paid coordinators, but regardless of their position, all those who were interviewed were surprised at how much work went into preparing and running the salad bar. Those schools that relied on volunteers were concerned about burnout as it was the same small group of women who helped each week. The advantage of this was they developed a good system for working with the salad bar, but if they were unable to help one week, there was no one to take their place. All agreed that it was possible to streamline procedures but the knowledge required to achieve this took time to develop, saying, “We have fine-tuned things, we are always trying to improve and take advice.”

Figure 3.2: Positions of Individuals Responsible for the Farm to School Salad Bar



Most schools encouraged students to help with the farm to school salad bar, particularly in the area of food preparation. Both high school and elementary school students helped with serving and cleaning up, composting and developing marketing materials. In some schools the student volunteering component was very successful while in others it was less so. In high schools where the farm to school salad bar was seen to be successful, the students were pleased and proud to be involved. In those schools where the salad bar struggled to become established, the student volunteers were less committed and enthusiastic. Elementary school students were much more enthusiastic about being involved in all aspects of the initiative. In many elementary schools, being chosen to help with the salad bar was often seen as a reward or recognition for good behaviour: “The kids love being able to help. Mostly they help with the clearing up and the recycling and composting. They feel so proud to be allowed to do it. They love the salad bar and tell all their friends they help.”

Farm to School Organizing Committees

All schools established farm to school committees which had representatives from teaching staff, volunteers, the individual responsible for the salad bar, local producers or farmers, nutritionists and healthy eating coordinators. Some of the high schools also had student representatives. These committees tended to meet on a regular basis during the early months of the farm to school salad bar but as the initiative became more established, the frequency of the meetings decreased and many only continued to meet on an ad hoc basis when there were issues to be resolved. Those interviewed commented that this was the best use of everyone’s time but they acknowledged that the downside of this was that sometimes issues were left unresolved or that one or two people were left to do most of the work around the farm to school salad bar. While all agreed it might be useful to meet on a more regular basis, all stated there was just not enough time within an already very busy school system to add yet another meeting.

The Role of Nutritionists

Most schools had direct links with community nutritionists who provided good support and advice to local schools. Many helped with developing menus or offered suggestions as to foods and ways of presenting foods that would be enjoyed by students while meeting the healthy eating guidelines. While the nutritionists were keen to be involved, they stressed they had relatively little time to give the farm to school salad bar and it was something they “did off the side of their desk.”

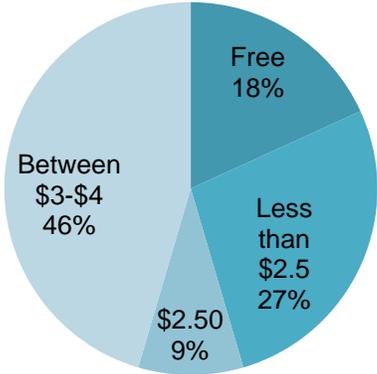
The Cost of Farm to School Salad Bar

The farm to school salad bar model specified a cost of \$2.50 for each salad bar meal, with subsidies for students who were not able to afford this. The average cost of using the salad bar was \$2.30, with subsidies available in each of the participating schools (Figure 3.3), and the cost ranging from free to \$4 per salad bar meal. The cost in almost half of the schools was between \$3 and \$4. The schools differed in how they allocated the subsidies: some operated an informal system wherein teaching staff, knowing which students were hungry, sent them to the salad bar, while other schools relied on students to indicate that they wanted to attend the salad bar but did not have enough money. The more formal subsidy systems included those students who already received school meal assistance and directed those students to the salad bar. In reality, most

elementary schools operated a mixed subsidy system with teaching staff keen to ensure that no students were hungry when food was available at the farm to school salad bar. One principal of an elementary school said: “If I see a student who I think is hungry or who has forgotten their lunch I will just tell them to go along to the salad bar. We have a core group of students who are subsidized through the school but we don’t want students to go hungry, especially when there is food in the school.”

In two of the First Nations schools that participated in the evaluation, the farm to school salad bar was free with the Band underwriting the cost of the salad bar. A principal of an elementary school which has Aboriginal students said: “The Local Band has stepped up: they fund their kids and it has worked really well. They’re happy, the students are happy and so are we. There’s not many things that’s a win all around — the farm to school salad bar is one of them.”

Figure 3.3: Cost of Lunch at Farm to School Salad Bars



Operating Costs and Local Produce

The main challenge for many of the schools in this initiative was that the grant received from PHABC only covered the cost of the salad bar for the first few weeks of operation. A few schools were creative and were able to stretch this money over additional weeks by obtaining donations of produce from local suppliers. The limited operating costs meant the salad bar had to run on a cost recovery basis for the foods served almost from the beginning, which few schools managed to achieve. Only two high schools did not use other funds to subsidize the salad bar and six schools were engaged in fundraising activities to try and help cover the costs.

The challenge for the schools was to keep the cost to the students affordable or they would not be able to use the salad bar; at the same time the constraints of having to “watch every penny” added to the stress of developing menus and shopping for local produce. The actual costs were more than funds availability, which resulted in schools purchasing foods for local supermarkets rather than local or BC-produced foods. Those involved in shopping found they were not able to afford more local produce, but all stressed the main aim was to feed students a healthier lunch. It was not always possible to do this with local foods due to cost, but those

involved in the salad bar were hopeful that as the salad bar became more established, it would be possible to source more affordable local produce.

Schools found it difficult to provide the evaluation with information on what the actual operating costs of the salad bar were, due to cross subsidies from other programs. For example, some schools used extra fruit from other programs in the salad bar and some parents and other producers donated foods or local produce. Also, leftover food was often used in other food or snack programs in the school.

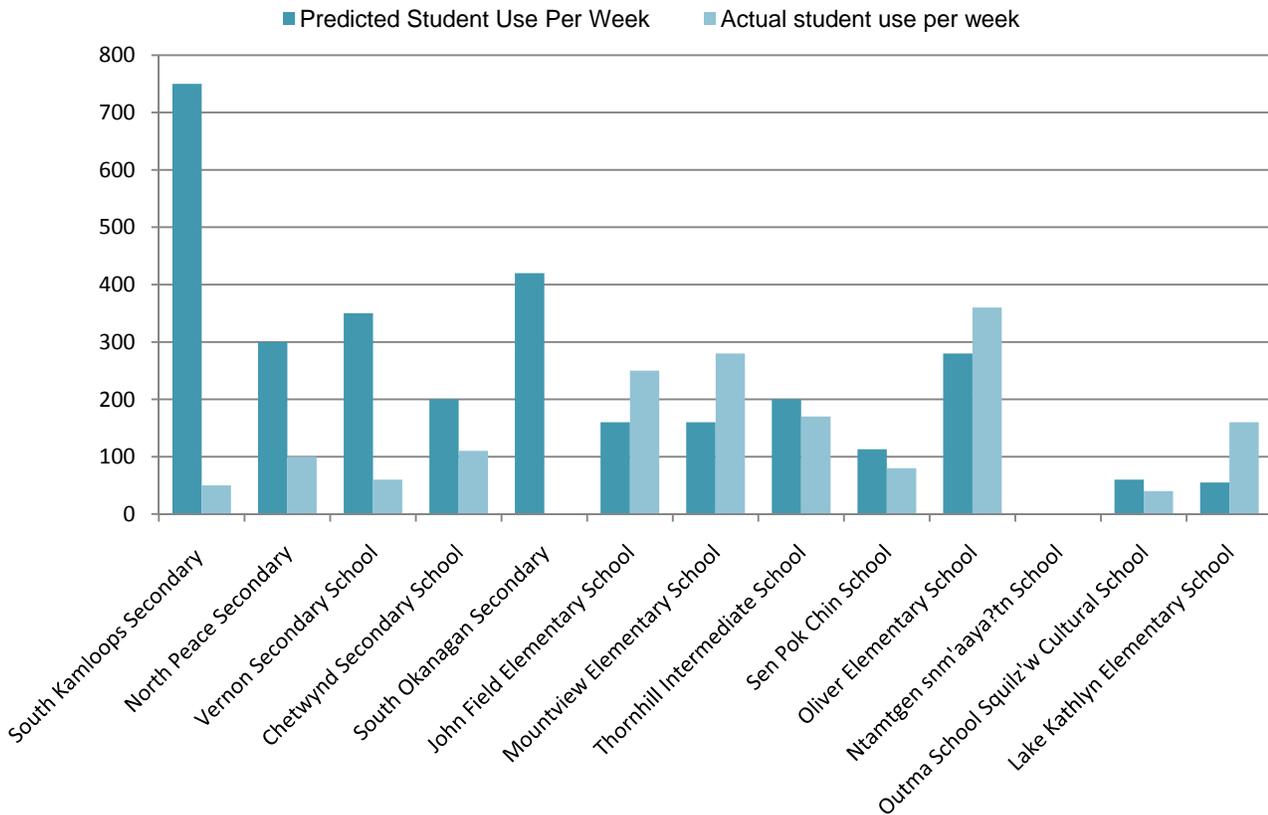
Student Use of the Farm to School Salad Bar

All schools were excited at the prospect of operating the farm to school salad bar as it was seen as an opportunity to encourage students to eat more healthily and to become more aware about the importance of eating locally produced food. In their funding application, schools had to estimate the number of students likely to use the farm to school salad bar. Figure 3.4 shows that high schools overestimated the number of students that would use the salad bar while elementary school estimates appear to have been more realistic.

The difference between the estimated and predicted use of the farm to school salad bar helps to explain why those involved in the initiative in high schools had more challenges with participation than in elementary schools. High schools were also substantially larger than the elementary schools yet despite the size of this potential market, demand failed to materialize. Those interviewed suggested various reasons for the low participation of high school students and these are summarized below.

- High school students were able to leave the campus and go elsewhere to buy lunch. Some just wanted to go off campus to eat.
- High schools students had their own money and could decide what to have for lunch.
- The farm to school salad bar was often in competition with other cafeteria lunch options, while in elementary schools, no alternative lunches were available.
- Students wanted to be able to take their lunches out of the cafeteria and to eat elsewhere. The reusable plates and cutlery did not lend themselves to a takeaway type lunch.
- Students were used to eating certain types of food for lunch. In the winter, many preferred the hot options rather than the salad bar.
- The format of the salad bar, which served single vegetables, was not always appreciated by students who wanted ready prepared salads to go.
- In some schools, students perceived the salad bar option as not being good value for money despite the fact that it was often cheaper or the same price as other options.

Figure 3.4: Actual and Predicted Use of Farm to School Salad Bar



High schools tried hard to persuade students to use the salad bar and had developed different initiatives to encourage their attendance. The high school students liked the theme day lunches and attendance improved when the salad bar was sponsored by a school team with some of the proceeds going to them. Some high schools tried to get feedback from students on what they wanted from the farm to school salad bar: value for money and filling food they could eat where they wanted were cited as being important. However, some high schools already had these features and actual use remained relatively low compared with overall numbers of students in the schools. Those involved in running the farm to school salad bar suggested that it took time for things to become established and to convince students to opt for the salad bar, but some added that it was frustrating and disappointing when considerable effort and resources went into the salad bar. One high school food provider said: “We’ve tried lots of things to try and get them here. They like the theme days but most of them are either too busy at lunchtime or they go down to the 7 Eleven.”

Three high schools experienced higher initial use which then declined; only one high school experienced steady use and growth.¹⁰ All were keen to build on the work they had done to date and to keep the farm to school salad bar operational.

A further challenge for some high schools was that food service was contracted out and in some, food service operated as a business. Contractors reported that it was not possible to deliver the farm to school salad bar at \$2.50 a serving, especially given the low numbers. They stated it was not financially viable on a long-term basis. One contractor suggested they were basically competing against themselves — the more farm to school salads sold (which they did, at a loss in real terms when staffing costs were accounted for), the less they sold of other items, which they needed to do to cover their operating costs. When asked if using volunteers would help, the contractors indicated no, because of the practical difficulties of having volunteers in the kitchen when they were trying to prepare other foods for the school. If the farm to school salad bars are to operate with private contractors, this issue needs to be addressed or contractors will opt out of the initiative.

Other high schools operated culinary programs and incorporated the farm to school salad bar into these classes. Students would help prepare and serve the salads. Those involved in these classes often told friends what was for lunch and encouraged others to use the salad bar.

The farm to school salad bars were more popular in elementary schools than in high schools. Interviews with staff, volunteers and students suggest there were a number of reasons for this and these are summarized below:

In elementary schools:

- Parents prepaid for the salad bar lunch and decided if students attended the salad bar.
- The farm to school salad bar was seen as a novelty within the school and students were keen to see what it was.
- Students felt lucky to go to the salad bar as it was seen as a treat. This view was held even by students who did not like to eat the fruit and vegetables!
- Students wanted to go because most of their friends and teachers went to the salad bar.
- Students liked the variety and single serve items which meant they could take more of the foods they liked.
- The majority of those adults who were involved in the salad bar were enthusiastic and praised the students for making healthy choices. The students responded well to this positive reinforcement.
- In most schools, students were able to get a second serving if there was food left over, which there usually was.
- The most popular foods in the salad bars tended to be the protein and the grains, but as students became more accustomed to the salad bar they enjoyed more of the fruit and vegetables.

¹⁰ Local issues in the school made the operation of the farm to school salad bar difficult. The school were planning changes to the menus for year two.

- Parents were reminded of the farm to school salad bar in newsletters and reminder notices. The feedback to schools suggested parents supported the farm to school salad bar.

Still, there were some challenges in implementing the salad bar in elementary schools. These challenges included:

- Developing systems to make sure students washed their hands before using the salad bar. Most schools had a few assemblies on salad bar etiquette which told the students what to do. Volunteers and staff were there to make sure these rules were followed.
- Making sure students took enough food and did not take only the vegetables they liked but tried other less familiar fruits and vegetables.
- Ensuring that students got through the salad bar in a timely manner. The lower-grade students were slower at choosing and at serving themselves. Most schools had less than an hour for lunch, with approximately 20 minutes for eating and the rest for playing. Students had been in classrooms for most of the morning and had lots of energy to expend. A few elementary schools recognized that students needed to play first before lunch and switched the order of the play/lunch sequence. Those involved in running the salad bar commented that hungry students were more likely to try new foods; they were strong advocates of the play-first lunch model.

The Foods Served

All those involved in the farm to school salad bar tried to provide a wide range of local produce to students. However, as stated this proved to be very challenging because of availability and cost. The challenge was to provide foods that were appealing to students and those involved tried to ensure the salad bar had brightly coloured foods that were fresh and attractively presented. If the foods were locally sourced, it was considered a bonus, but for the majority of schools, local availability did not drive the menu. Farm to school coordinators all noted how little local produce was available during the winter months; the only way to overcome this was to have a root cellar to store produce, and schools did not have time to do this prior to setting up the salad bars.

All schools adhered to the farm to school model requisites of six vegetables, three fruits, one grain or bread, one meat or alternative at each salad bar. For the majority of schools, these were served as single items, with the most popular vegetables being: salad greens, carrots, peppers, tomatoes, potatoes, cabbage, cucumbers and cauliflower. The most popular fruits were apples, pears, berries, plums and melons. Whole wheat bread and a variety of wraps were found to be popular. Rice and pasta were student favourites. Many salad bars also had dried seeds and fruits. The protein served included chicken, bison, pork, turkey, cheese, and eggs and, in some First Nations schools, salmon and game.

All schools served a hot option alongside the salad bar. The rationale for this was that students, especially those in Northern BC and the Interior, needed something hot to eat during the day. This was particularly true during the winter months. Among the hot options most schools served were: soup, chilli (meat- and bean-based), as well as some pasta and sauce, including macaroni and cheese. While most schools made sauces from scratch, some bought in prepared products because of time constraints. In addition to these hot options, schools also

served protein separately — for example beans in a salad, or chicken or ham that students were able to add to their lunch.

To encourage attendance, many schools also ran theme days during which foods from other cultures were provided. These proved very popular with students but required more preparation.

Elementary schools tended to present the fruits and vegetables as single items and often had adults around the salad bar to explain what the foods available were and to encourage students to try new foods as well as to ensure students had enough to eat. Schools differed in the strategies they used to encourage children to try new foods. Some elementary schools had a rule that said you have to try everything even if it was only one bite. Others acknowledged students at school assemblies if they had tried something for the first time. Students responded well to these incentive schemes. Staff and volunteers noted that as the salad bar became more established, the students were better able to serve themselves and were more inclined to take a variety of foods.

Those responsible for the salad bars in high schools commented that their students were more mobile and many were able to leave the school campus and buy lunch elsewhere. The feedback they had received was that high school students wanted food they could take away from the salad bar, and that they wanted something that was already prepared. To respond to these challenges some high schools prepared different types of salads (for example Greek salad) and wraps students could purchase and take with them.

Links with Local Food Producers

All schools participating in the evaluation had links with local food producers; this included five schools that had agreed to partner with food cooperatives or collectives. Local food producers were interviewed and all were keen to be involved in the farm to school salad bar. The main reason for their enthusiasm was their passion for producing healthy foods for the local market and they saw the farm to school salad bar as a way to showcase the types of food that were produced. They wanted to be part of an initiative that was going to encourage and educate students about eating healthy local foods.

Local producers, especially farmers, were concerned with the short lead-in period for the farm to school salad bar. Most were only notified in June or July that schools had secured funding, which was well into their growing period: crops were already in the field and most were already allocated to retailers. A further implication of start time of the farm to school salad bar was that local producers did not have time to plant crops that might be more suited to the initiative; instead, schools had to take what was available, some of which might not have been particularly well suited to a salad bar.

Local producers stressed how the climate in the North and Interior resulted in a relatively short growing period and that the most productive time in the year was in the summer and early fall, when most schools were on vacation. They acknowledged that with careful planning and the use of poly-tunnels it was possible to have early crops, but that would require a firm commitment from schools with regard to orders so that it was financially viable for the local producers. During the first year of the farm to school salad bar, most local producers did not have the variety or quantity of produce to satisfy a school. Over the years, many local producers had concentrated on a couple of crops and they indicated that it would take time to diversify to meet the needs of individual schools.

A further issue that arose for local producers was the relatively small orders that were placed by schools. In nearly all schools, the farm to school salad bar started slowly and grew gradually. For some local producers delivery \$50 worth of fruit and vegetables to a school that was over 30 kms away was not sustainable. Local producers had expected larger orders from high schools simply because they were bigger, but the orders were small.

Most schools supplemented their order from local producers with shopping done by volunteers or staff at local superstores or retailers. This frustrated local producers who had expected the farm to school salad bar to be driven by what was seasonally available. Instead, all schools continued to serve lettuce, tomatoes and peppers throughout the winter when these vegetables were not available locally. One person interviewed noted the tomatoes in the salad bar were better travelled than they themselves were and explained even though the plants were sown in BC, they had been flown down to Mexico to ripen and then returned to BC. Their question was what else were they to do as they could not rely solely on local or BC-only produce for the salad bar during the winter months.

Some schools started a school garden to produce food for the salad bar. Students were keen to be involved in the gardens and they presented good opportunities for students to understand where food comes from. However, these gardens took time, money and staff input and there was a delay before any produce would be available for the salad bar.

Some local producers were involved in educational strategies within the schools; some visited the schools, bringing things for the students to plant, or talking to them about local foods. Some arranged visits for groups of students to their farms to see how they operated and how food was produced. However, this level of involvement happened in few schools: while other producers were keen to be involved, they explained they were very busy and that all this took time to get into place. Many anticipated more activities in the following year.

Educational Strategy

In their funding application, all schools had planned to develop an education strategy that complemented the farm to school salad bar. Many were aware of the need for education and activities to encourage and support students to eat more fruits and vegetables. In reality, however, many schools found themselves overwhelmed by how much effort was required to get the farm to school salad bar up and running, and the education component was deemed less urgent. While schools tried to engage students and raise awareness about healthier eating, most agreed the educational component would not really be developed until the second year. The activities some schools used to engage students included: making posters, conducting tasting sessions, and hosting information sessions when either a farmer or nutritionist or both went into classrooms and talked to students.

Support for Schools

All schools reported needing ongoing support if they were to get the farm to school salad bar up and running. The project manager visited the schools at least once to see how they were doing. While schools were appreciative of this visit, they wished it could have been longer and reoccurring. They emphasized their need for practical advice about running the salad bar, developing a menu, knowing how much food to order, how to store leftovers, as well as ideas

about encouraging students to use the salad bar, especially in high schools. During the project, there were monthly conference calls; in-person meetings were not possible because of the distances between most schools. These conference calls were well attended in the beginning, but as the project progressed some schools found them less helpful and wanted more hands-on, direct advice. Those participating in the conference calls also reported that the issues facing many of the high schools were very different to those experienced by elementary schools, and suggested that one strategy for managing the conference calls would be to have separate calls for high schools and elementary schools. This would also serve to reduce the number of potential attendees so that a more useful and in-depth discussion could occur, rather than a summary of events.

PHABC tried to address some of these concerns by producing a “how to” guide for schools. The guide was developed based on the experiences of the schools in this initiative, and it is now available to schools. A website was also developed, and while schools were in favour of this, at the time of this initiative it was still being developed and did not have the level of practical information schools wanted or needed. The website has continued to be developed and has information on each school that participated in the initiative as well as the guide.

Self-Assessment: Did the Farm to School Salad Bars Meet Their Aims?

All schools were asked to complete a form in which they assessed on a scale of 1 to 5 how well they had met nine project goals. These goals were:

1. Increase access to local nutritious, safe and culturally appropriate foods.
2. Increase consumption of fruit and vegetables.
3. Increase knowledge about local foods, the food system, nutrition and health.
4. Increase skills in the areas of food production, processing and serving.
5. Strengthen farm, school, health, family and aboriginal links.
6. Support the local food economy.
7. Develop a farm to school salad bar is self-financing.
8. Use eco-friendly practices.
9. Develop a model of best practice.

1. *Increase access to local nutritious, safe and culturally appropriate foods.* Only two schools thought they had met this goal. Although both schools had a relationship with a local producer they bought the majority of their foods from local supermarkets. This was partly because of cost and the lack of availability of the foods they wanted to serve. As stated above, for most schools menus determined the foods served rather than what was available at local markets. The majority of other schools were more successful in increasing access to local foods but this was often a small number of food items. Schools hoped this would increase as the salad bar became more established.

2. *Increase consumption of fruits and vegetables.* Only one high school thought they had made minimal impacts on the goal, the others thought they had succeeded. In reality most schools had increased consumption of fruits and vegetables and, while this is commendable, it should be treated with caution as the schools described themselves as having a very low starting point. In elementary schools, students were eating more fruits and vegetables but those interviewed stated that there was “a long way to go before students were eating five servings for fruits and vegetables. It’s a start and a good one!”
3. *Increase knowledge about local foods, the food system, nutrition and health.* Three of the four high schools were somewhat circumspect and wondered if the farm to school salad bar had increased knowledge about healthy eating amongst students. They suggested that within their schools, the salad bar was too small to have a widespread impact on knowledge but they hoped this would change over time. The majority of the elementary schools thought they had made good progress with increasing knowledge about healthy eating. For most, this came about through discussion about the farm to school salad bar rather than specific classroom or other activities. Schools were only really developing curriculum-based activities and visits to local producers towards the end of the initiative, as most of their time and resources went into getting the farm to school salad bar up and running. It was only when they felt confident about the farm to school salad bar that other aspects of the initiative could be undertaken.
4. *Increase skills in the areas of food production, processing and serving.* Five of the 11 schools that participated in the evaluation did not have increasing skills as a goal for the farm to school salad bar. They stated from the outset that any improvement in food preparation skills or in gardening/planting skills were unlikely to come about in the first year. The explanation given was the lack of time to develop activities and resources to supervise them. The remaining six schools had made some positive movement towards this, but it was with a relatively small group of students.
5. *Strengthen farm, school, health, family and aboriginal links.* The majority of schools had made progress towards this goal but it should be remembered that prior to this initiative, most schools did not have any links with local farmers or producers. Schools had invited local farmers into their schools but these visits were still in their infancy and were going to be further developed in year two. The students, especially those in elementary schools, enjoyed these visits and remembered them. Some had planted seeds and were looking forward to eating their produce and were delighted to be helping the farmer.
6. *Support the local food economy.* All 11 schools stated that this was the one goal they had made least progress on. Those interviewed expressed that it had not been possible to include more local foods in the farm to school salad bar, the reasons being cost, access and seasonal availability. Some questioned how much impact the farm to school salad bar could have on the local economy as some schools were very small. It was suggested that the best they could realistically hope for was to raise awareness amongst staff and parents about buying local and supporting producers in their area.

7. *Develop a farm to school salad bar that is self-financing.* All but two schools said their farm to school salad bar was self-financing. The majority of schools relied on the money paid by those who attended the salad bar to cover costs. However, in some First Nations schools, as well as those elementary schools with a large number of Aboriginal students, local Bands paid or subsidized students to use the salad bar. Without this money the farm to school salad bar would not have been able to operate. Other schools subsidized the farm to school salad bar by fundraising, or providing staff hours to help run it. In elementary schools, all the salad bars relied on volunteers, and even those who received an honorarium worked more than they were paid to. While individuals were happy to be involved, schools were concerned that if a key individual left or volunteers were too burdened, operations would cease. The salad bar did not generate enough income to pay staff and those involved did extra things to help keep costs down. Without this behind-the-scenes effort, the salad bar would not be able to run and in this sense, it was not self-financing.
8. *Use eco-friendly practices.* As part of their applications, all schools had to agree to implement eco-friendly practices. All farm to school salad bars had invested in reusable plates and cutlery. Most had composting systems operating and they had met this goal.
9. *Develop a model of best practice.* All but two schools were happy about how their farm to school salad bars were operating. These two schools were planning to make changes to encourage greater participation or to streamline operations. The remaining nine schools were “learning as they went along” but had systems they were pleased with and that worked for them. All stated the farm to school salad bar model had to be adapted to work in individual schools. They were clear that one size did not fit all and wanted the freedom to adapt the model to suit local needs. However, they agreed they had learned core lessons of what did and did not work. Key amongst these were:
- There was a need for adequate time for planning.
 - The majority of schools would not start the farm to school salad bar in the fall/winter terms when local fruits and vegetables were most scarce.
 - There was a need to have renovations completed before starting the farm to school salad bar and to have a good understanding of local permit and health requirements
 - The grant could have covered more of the initial operating costs. Expecting the farm to school salad bar to be self-financing was unrealistic and placed added stress on those involved.
 - Having a core group of individuals with a local champion was vital to get things started and keep them going
 - It was essential to provide training for those operating the farm to school salad bar so they had a better idea of menus that work and the recommended guidelines. This would give those involved more confidence.
 - There was a need to involve the local producer or farmer as early as possible in planning and in educational activities.
 - Have a strategy to engage students so as to encourage participation.

- Set realistic targets and goals.
- The farm to school salad bar works best when it is a school wide initiative.
- The practicalities of setting up the farm to school salad bar twice a week must be well thought through. For example, where will equipment be stored, do younger students need help serving themselves, where will students eat if there is no cafeteria, do they have to carry their food back to their classrooms, how will dishes be returned, what kind of payment system will be used? Who is going to staff it, order the food, prepare the menus, etc.? Those involved said that knowing the answers to some of these basic questions before starting would make operating the salad bar easier.

Challenges for the Farm to School Salad Bar Initiative

All those interviewed were asked about the three main challenges to setting up and running the farm to school salad bar. The six key challenges identified were:

1. Participation: low participation (or lower than expected) by students.
2. Local foods: access to locally produced fruits and vegetables that were affordable.
3. Cost: the cost of producing a salad bar lunch for \$2.50 per meal.
4. Set-up time: time required to set up the salad bar, including renovations and ordering equipment. Those involved were also surprised at how much time was required to prepare the foods and to run the salad bar twice a week.
5. Staffing: there were many behind-the-scenes activities that had to take place for the salad bar to operate twice a week. Finding individuals who could and would do these tasks on a regular basis was difficult. Most schools had a coordinator who received a small honorarium, as well as a few core volunteers. Preventing volunteer burnout was something all schools were concerned about.
6. Equipment: the key piece of equipment was the salad bar unit. All schools had to purchase a unit and for some there was a delay in receiving the unit. However, schools also required a dishwasher and food preparation area as well as a means for students to wash their hands, and other smaller items such as serving utensils, reusable plates and cutlery, ice packs to keep food cold and some way of serving hot food. A composting system was also needed before the salad bar was operational.

The Experience of PHABC Farm to School Project Manager

The project manager was very committed and enthusiastic about the farm to school initiative. It was seen to meet several needs within schools, including raising awareness about healthy eating, presenting students with opportunities to eat more healthily, and increasing capacity within schools for providing healthy foods by providing grants for initial start-up costs. It was hoped that the initiative would help to support the local food economy.

The project manager was disappointed that so many schools experienced delays in starting the farm to school salad bar. While all these delays were understandable, in hindsight perhaps only those schools with kitchen equipment in place should have participated in the pilot phase of the initiative because of the time and costs required to complete renovations. Also, it was

suggested that if there had been sufficient time before awarding the grants, it would have been useful to have visited each school to assess firsthand each school's situation.

In general, the project manager was very pleased with how each school was implementing the farm to school initiative and the response they were receiving from students, parents and local producers was extremely positive.

In discussing the role of the project manager it was recognized that while schools needed practical supports, the manager's role was to help with networking, coordination and ensuring schools had the information and suggestions they required to move forward. The project manager facilitated the monthly conference calls, which were intended to give schools the opportunity to share experiences and to help one another solve problems. While this did happen to some extent, schools wanted more direct supports, especially in the beginning. The project manager saw the "how to" guide as meeting some of these needs; the difficulty, however, was that although the schools wanted this guide before the initiative began, the project manager needed the schools' experience to develop the guide.

Some of the main challenges for the project manager were time and distance between the schools. It was acknowledged that schools did need a longer lead-in time for the reasons discussed previously, but also to help them be more prepared for the start of the farm to school salad bar and to have more established links with local producers.

The distance between the schools also proved challenging as it took a full day to travel to most schools; this was also an expensive endeavour. Visits were therefore kept to a minimum. The project manager relied on the conference calls, newsletter or bulletin as well as the website to keep in touch with all the schools. There were few opportunities for schools to get together again because of the distance, and it was hoped that schools would informally talk and network to share experiences. It was anticipated that this would occur more frequently as the initiatives became more established after the first year.

The project manager was pleased with the initiative and how it had been implemented. There was some disappointment at the challenges encountered by high schools and, on reflection, it was suggested that a different model might be required if more students were going to use the salad bar. In elementary schools the response was better than anticipated and the project manager shared the hopes of those in the schools that this initiative would encourage students to eat more fruits and vegetables so that by the time they got to high school they would be used to the salad bar format. Within the schools, the presence of a local champion was key to the success of the salad bars. At the high schools, the champions were those individuals who kept the salad bar going and tried different activities and menus to tempt students.

Sustainability of the Farm to School Salad Bar

The evaluation concluded before the next school year, but all 11 schools planned to continue with the farm to school salad bar for a second year so as to build and consolidate their efforts from the first year. Most schools saw the second year as an opportunity to streamline food preparation and service, to develop stronger links with local producers and to develop educational materials.

4. Preliminary Outcomes of the Farm to School Salad Bar

This section of the report presents the outcomes for schools that completed the before and after questionnaires. As mentioned, only a small number of schools completed the before and after questionnaires and the overall response rates were low, thus the results presented should be treated as preliminary and tentative and interpreted cautiously. They provide insights rather than definitive findings. Of the 11 schools in the evaluation, seven participated in a before student questionnaire and four completed both a before and after questionnaire. Students in Grades 4 and above were asked to complete the questionnaire. In four schools parents also provided feedback via a short self completed survey.

Student Survey Samples

A total of 778 students completed a before survey in class, with 48 per cent boys and 52 per cent girls. For the seven schools that completed the before questionnaire only, there was a total of 427 students who completed the survey with 22 per cent in high schools and 78 per cent in elementary schools. In the before and after study, a total of 351 students completed the questionnaires in the four schools, which represents about 21 per cent of the student population in the four schools with 64 per cent of the respondents in elementary schools and 36 per cent in high school.

Use of Farm to School Salad Bar

All 11 schools in the evaluation operated the farm to school salad bar twice a week. Based on administrative data from schools, approximately 1,500 students used the farm to school salad bar each week. Of the 1,500 students, almost a quarter (24.2 per cent) were subsidized. Elementary schools subsidized more students than high schools (Figure 4.1). It was noted earlier that some First Nation Bands provided subsidies for Aboriginal students.

Figure 4.2 shows the number of students who used the farm to school salad bar each week alongside the number of students per school. This figure is driven mainly by the higher use in the elementary schools. As shown in Figure 4.2, the use of the salad bar by high school students was very low. Four elementary schools reached or improved on their initial estimate of how many students would use the salad bar each week. Within these schools, the farm to school salad bars had become well established and were popular amongst students and staff.

Figure 4.1: Number of Students Using the Farm to School Salad Bar and Number who Received Subsidies

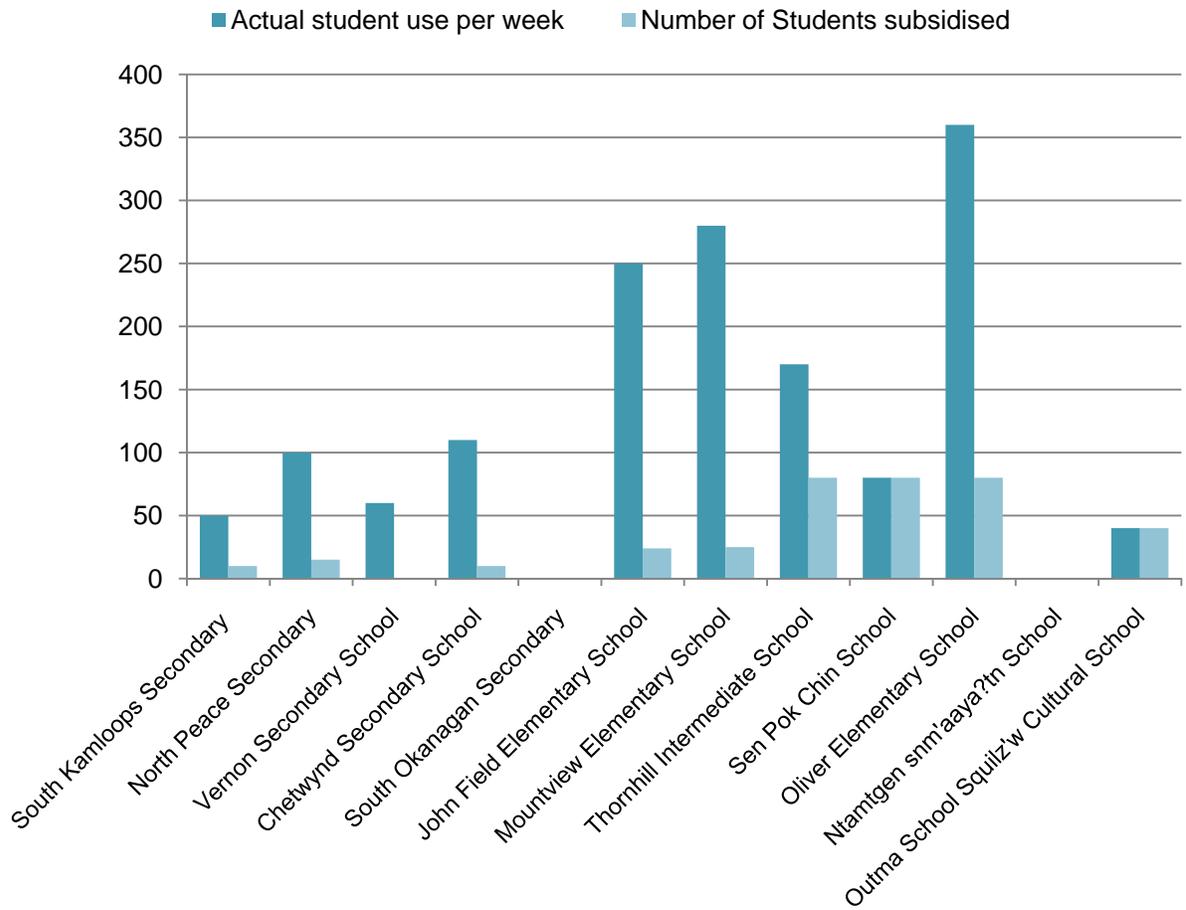
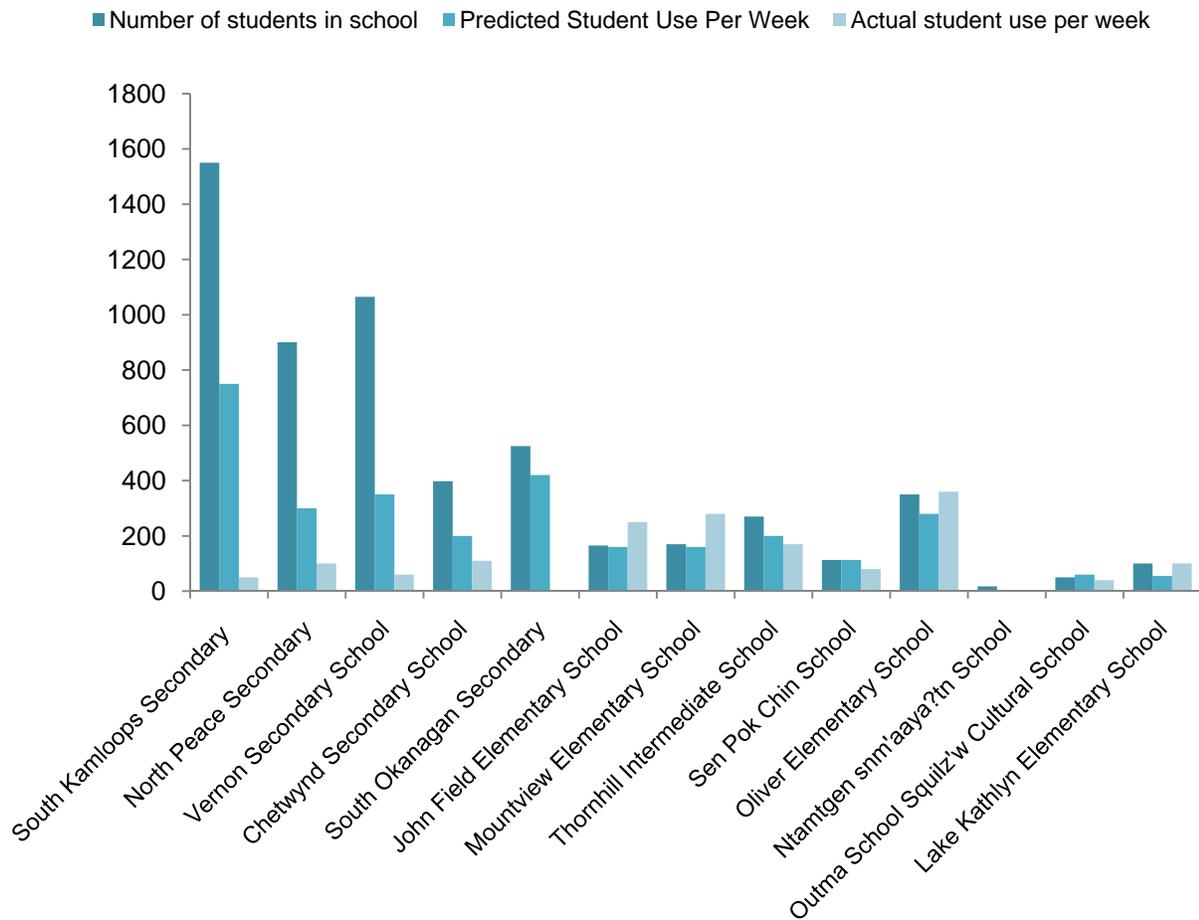


Figure 4.2: Number of Students in Schools with Actual and Predicted Use of Farm to School Salad Bar



Consumption of Fruits and Vegetables

Table 4.1 shows the frequency with which students ate the following food before and after the salad bar was implemented:

- fruit;
- salad or grated vegetables;
- raw vegetables;
- potatoes; and
- cooked vegetables.

There was a small, but non-statistically significant, increase in the percentage of students eating fruit, raw and cooked vegetables five to six days a week and/or every day from before and after the farm to school salad bar. However, there was a statistically

significant increase in students eating salad from before the farm to school salad bar and after. While these differences are small in real terms, they reinforce the data from the interviews with staff, which suggested an increase in consumption of vegetables from the salad bar. There was a decreased noted in the consumption of potatoes 5-6 times per week or every day.

Table 4.1: Student Survey — Consumption of Fruits and Vegetables Before and After the Salad Bar

	TOTAL		
	Before N (%)	After N (%)	Difference (%)
Frequency students consumed fruits			
1 per week	29 (9.7)	26 (7.5)	-2.2
2 per week	74 (24.7)	75 (21.6)	-3.1
5-6 per week	52 (17.4)	68 (19.6)	2.2
Everyday	144 (48.2)	178 (51.3)	3.1
TOTAL	299 (100)	347 (100)	
Mean (sd)	3.04 (1.058)	3.15 (1.005)	
T-test _(2-tail)	t(644) = -1.315, p = .189		
Chi-square			2.340
Frequency students consumed salad or grated vegetables			
1 per week	80 (26.8)	79 (22.6)	-4.2
2 per week	91 (30.5)	97 (27.8)	-2.7
5-6 per week	54 (18.1)	63 (18.1)	0.0
Everyday	73 (24.5)	110 (31.5)	7.0
TOTAL	298 (100)	349 (100)	
Mean (sd)	2.40 (1.128)	2.58 (1.153)	
T-test _(2-tail)	t(645) = -2.020, p = .044**		
Chi-square			4.378
Frequency students consumed raw vegetables			

	TOTAL		
	Before N (%)	After N (%)	Difference (%)
1 per week	85 (28.4)	96 (27.6)	-0.8
2 per week	93 (31.1)	93 (26.7)	-4.4
5-6 per week	57 (19.1)	62 (17.8)	-1.3
Everyday	64 (21.4)	97 (27.9)	6.5
TOTAL	299 (100)	348 (100)	
Mean (sd)	2.33 (1.106)	2.46 (1.167)	
T-test _(2-tail)	t(645) = -1.395, p = .163		
Chi-square			3.954
Frequency students consumed potatoes			
1 per week	115 (38.5)	154 (44.3)	5.8
2 per week	91 (30.4)	118 (33.9)	3.5
5-6 per week	40 (13.4)	36 (10.3)	-3.1
Everyday	53 (17.7)	40 (11.5)	-6.2
TOTAL	299 (100)	348 (100)	
Mean (sd)	2.10 (1.105)	1.89 (.998)	
T-test _(2-tail)	t(645) = 2.574, p = .01***		
Chi-square			7.502*
Frequency students consumed cooked vegetables			
1 per week	68 (22.7)	79 (22.8)	0.1
2 per week	76 (25.4)	90 (25.9)	0.5
5-6 per week	72 (24.1)	74 (21.3)	-2.8
Everyday	83 (27.8)	104 (30.0)	2.2

	TOTAL		
	Before N (%)	After N (%)	Difference (%)
TOTAL	299 (100)	347 (100)	
Mean (sd)	2.57 (1.122)	2.59 (1.141)	
T-test _(2-tail)	t(644) = -.184, p = .854		
Chi-square			.828

*p<.1 **p<0.05 ***p<.01

Knowledge of Recommend Servings of Fruit and Vegetables

Students were asked how many servings of fruit and vegetables it was they recommended that they eat each day. One in five students knew they were supposed to eat at least five servings of fruit and vegetables each day. This figure did not change between after the implementation of the salad bar. Staff in schools were aware that educational activities and resources were required if students were to be more aware of nutritional and health issues. However, as stated above, the educational component of the farm to school salad bar was often last to be developed.

Changes in Students Bringing Fruit and Vegetables to School

Those involved in the farm to school salad bar hoped students would get used to eating fruit and vegetables as part of their lunch and would start bringing them to school themselves on non salad bar days. Table 4.2 shows that there were small increases in the percentage of students who brought fruit and vegetables to school for lunch and or snacks.

Table 4.2: Student Survey — Frequency Students Bring Fruits and Vegetables to School

	TOTAL		
Frequency bringing fruits and vegetables to school	Before N (%)	After N (%)	Difference (%)
Never	20 (6.7)	23 (6.6)	-0.1
Hardly ever	36 (12.1)	36 (10.4)	-1.7
Yes, sometimes	91 (30.5)	96 (27.7)	-2.8
Yes, most days	64 (21.5)	81 (23.3)	1.8
Yes, always	87 (29.2)	111 (32.0)	2.8

	TOTAL		
Frequency bringing fruits and vegetables to school	Before N (%)	After N (%)	Difference (%)
TOTAL	298 (100)	347 (100)	
Mean (sd)	3.54 (1.217)	3.64 (1.217)	
T-test _(2-tail)	t(643) = -.970, p = .332		
Chi-square			1.532

*p<.1 **p<0.05 ***p<.01

Ability to Eat and Try New Fruits and Vegetables

Table 4.3 shows that there was an increase of almost 14 percentage points in the number of students who were able to eat fruit and vegetables every day if they wanted to do so. This difference was statistically significant.

Table 4.3: Student Survey — Difficulty with Eating Fruits and Vegetables Every Day

	TOTAL		
Frequency of students who agree or disagree with the statement: It is difficult for me to eat fruit and vegetables every day	Before N (%)	After N (%)	Difference (%)
Disagree	172 (57.9)	250 (71.8)	13.9
Neither agree nor disagree	76 (25.6)	68 (19.5)	-6.1
Agree	49 (16.5)	30 (8.6)	-7.9
TOTAL	297 (100)	348 (100)	
Mean (sd)	1.59 (.758)	1.37 (.637)	
T-test _(2-tail)	t(643) = 3.969, p = .000***		
Chi-square			15.495***

*p<.1 **p<0.05 ***p<.01

Willingness to try new fruit and vegetables

Table 4.4 shows that students were more willing to try new fruits and vegetables after implementation of the farm to school salad bar than before. The increase in students' willingness to try new fruit is higher than the increase in willingness to try new vegetables. Staff involved in the farm to school salad bar noted that fruit was always a popular item for all students, and that students were always more willing to try new fruits than vegetables.

Feedback from Parents

Although the response rate was low (a total of 169 parents in three elementary schools provided feedback on the farm to school salad bar),¹¹ the results are still insightful. The feedback from parents about the farm to school salad bar initiative was very positive. Parents were pleased the initiative was operating in their children's schools and they regarded it as having made a positive impact on the eating behaviour of their children.

Of the parents who participated in this survey, 96 per cent were aware of the farm to school salad bar initiative and 94 per cent of their children had tried it at least once. Over two thirds (69 per cent) of these children used it on a weekly basis.

Table 4.4: Student Survey — Willingness to Try New Fruits and Vegetables

	TOTAL		
	Before N (%)	After N (%)	Difference (%)
Willingness of students to try new fruits			
Not willing	11 (3.7)	10 (2.9)	-0.8
Not Sure	25 (8.4)	23 (6.6)	-1.8
Somewhat willing	131 (44.3)	126 (36.1)	-8.2
Very willing	129 (43.6)	190 (54.4)	10.8
TOTAL	296 (100)	349 (100)	
Mean (sd)	3.28 (.771)	3.42 (.741)	
T-test _(2-tail)	t(643) = -2.417, p = .016**		
Chi-square			7.589*
Willingness of students to try new vegetables			

¹¹ Questionnaires had been sent to all 11 schools but because of time demands in schools only three schools returned the questionnaires.

	TOTAL		
	Before N (%)	After N (%)	Difference (%)
Not willing	31 (10.5)	29 (8.3)	-2.2
Not Sure	36 (12.2)	38 (10.9)	-1.3
Somewhat willing	127 (42.9)	156 (44.7)	1.8
Very willing	102 (34.5)	126 (36.1)	1.6
TOTAL	296 (100)	349 (100)	
Mean (sd)	3.01 (.942)	3.09 (.893)	
T-test _(2-tail)	t(643) = -1.001, p = .317		
Chi-square			1.272

*p<.1 **p<0.05 ***p<.01

Parents reported that most children who used the farm to school salad bar enjoyed it (86 per cent) and only 10 per cent said they were disappointed with the range of foods served. Three quarters of parents stated that their children tried new foods at the farm to school salad bar and two thirds said they eat healthier foods when they go to the salad bar for lunch. One third of parents reported that their children ate more fruit and vegetables at home since the farm to school salad bar started. Almost half of the parents said their children were more willing to try new fruit and vegetables (47 per cent) and again this change in behaviour was attributed to the farm to school salad bar initiative. Parents also stated that their children knew more about making healthier food choices (63 per cent) and half said they were more aware about local foods (50 per cent).

Most parents (62 per cent) said their children got enough to eat at the salad bar and did not go hungry. Over three quarters regarded it as being good value for money (78 per cent) and 66 per cent paid for the salad bar on a monthly basis.

Over 90 per cent of those who completed the parent survey were satisfied with it and 90 per cent would recommend it to another parent. Almost all parents (98 per cent) wanted the farm to school salad bar to continue.

5. Conclusions

A total of 16 schools in the Northern and Interior Regions of BC were funded by PHABC with a grant from BCHLA to develop a farm to school salad bar. The aim of the initiative was to improve students' nutrition by providing them fresh, local, safe and culturally appropriate foods. The farm to school salad bars were to operate for 26 weeks and establish links with local farmers and or producers. Of the 16 schools that were funded, 11 (four high schools and seven elementary schools) participated in the evaluation, which consisted of an implementation and a limited before and after outcomes study.

The Farm to School Salad Bar Initiative was an ambitious undertaking. Many of the schools in which the initiative was implemented were in rural and remote areas of BC. In the 11 schools participating in the evaluation, the initiative reached about 5,000 elementary and secondary students.

The initiative was designed to achieve multiple goals. One of the main findings from this evaluation is that the schools achieved a lot in a very short period of time. They entered into this initiative with enthusiasm, as all recognized the need to encourage and support their students to eat more healthily in schools. Those schools that were most successful in achieving these goals integrated the farm to school salad bar into the school so that it was seen to be something "special" and an initiative to be proud of. Staff and students talked about the farm to school salad bar and there were posters advertising it. While the majority of the salad bars provided hot options, it was in elementary schools that staff, students and the evaluation noticed and commented on the wonderful smell of food that filled the school on farm to school salad bar days. In these schools everybody knew when it was salad bar day, partly because most other days, students had to bring a packed lunch because schools did not have a cafeteria. The farm to school salad bar was something students and staff looked forward to.

This final chapter draws out the lessons learned from the evaluation of the Farm to School Salad Bar Initiative.

Planning the Farm to School Salad Bar

"I would do it again but I would do it differently!"

This was the view echoed by most of those involved in the farm to school salad bar. School principals, staff and volunteers were pleased and relieved at how the farm to school salad bar had developed. However, many noted that it had been a steep learning curve especially in the beginning as there was so much to do. Those involved in the farm to school salad bar had learned what worked as they went along which often meant trial and error. With the benefit of hindsight, all wished there had of been more time to plan the initiative and to make sure renovations were complete, permits were in place and equipment arrived before the original start date for the salad bar. Trying to organize all these components was stressful and having to delay the start of the salad bar was

frustrating for those involved. Schools that were able to put the necessary infrastructure in place quickly were able to implement the salad bar earlier.

A further challenge for the schools in this initiative was the timing of the start of the salad bars. Most started between October and December 2008, when the supply of local foods especially fruit and vegetables was diminishing. Those trying to develop menus using local produce struggled to find items that would work in the salad bar and, most reluctantly, had to rely on larger superstores to provide the range of foods at a cost the schools could afford. It was suggested that starting the salad bar in January, when schools could benefit from agreements with farmers to use poly-tunnels to produce early crops, would work much better for all involved. Also more produce would become available as spring came into being. This delayed start would then free up the fall term to plan menus, link with local producers or farmers and to develop supporting curriculum activities. It would also give schools a chance to establish routines and systems before the autumn and winter of the following year.

Staffing the Farm to School Salad Bar

“We have a great team, everybody gives 200 per cent. I don’t know what we would do if one of them stepped aside. There aren’t a line of people waiting to take their place.”

All those involved in this initiative stressed the importance of having a good team of people involved in the salad bar. All elementary schools relied on a small group of volunteers, some of whom received a small honorarium. The concern from principals, as well as others, was the farm to school salad bar was more work than anyone anticipated and volunteers would burn out and leave the salad bar, which would make it unsustainable. Schools were aware they needed strategies to attract, support and retain volunteers. Most elementary schools also had teaching staff who were involved in the farm to school salad bars: some were allocated time to do this, others did so out of interest. Again, without this input the salad bars would not be able to run.

High schools had cafeterias with staff contracted to provide meals in the school. The farm to school salad bars were they asked to do it addition to their existing workload to take on and incorporate it into their lunch routine. Most contractors were willing and happy to oblige but this was extra work as the salad bar was provided as an additional meal choice for students. Some contractors were unsure if the farm to school salad bar was financially and practically viable in the long run because of the time required and the relatively low participation by students. High schools planning a farm to school salad bar need to work closely with contractors to resolve these issues.

The staffing of the farm to school salad bars represents substantial hidden costs within this initiative. Without the input from volunteers, staff and contractors, all of whom did more than they were supposed to simply because there were things that needed to be done, the farm to school salad bar would not be able to operate. Schools thinking of starting a farm to school salad bar needs to be aware from the outset how much work is involved and the importance of having a team of people involved.

Operating the Farm to School Salad Bar

“I never expected there would be so much to do. The actual food prep is the easiest. It is all the other things, the ordering and shopping, there’s just so much to do. But the upside is the kids enjoy it and when they see me in the school they keep asking if we are having salad bar and they tell me what they liked. It’s great!”

The majority of those involved had expected the farm to school salad bar to be relatively straightforward to operate: source local produce, prepare it, serve it to the students and clean up afterwards. All stressed there was a lot more involved in operating the salad bar and suggested other schools thinking about starting a salad bar should be aware of the tasks involved. They suggested that understanding what was involved would reduce the stress and “make life easier.” The key tasks identified were:

- *Develop menus and work out how much food was required.* Many in elementary schools had never prepared food for large numbers of children on a regular basis. Those involved in the salad bars were constantly trying to find recipes that did not require significant preparation time, used or could be adapted to include healthy options and that the students would enjoy.
- *Source local affordable produce.* Those involved in this initiative were “constantly on the lookout” for locally produced items. This often involved meeting with the producers or farmers and working out what could be provided, the cost and whether delivery was included.
- *Ordering and shopping.* Many of the schools reluctantly used local superstores to shop for food for the salad bar because of availability and cost. Most individuals made special trips to the store to try and make sure the food was fresh.
- *Food preparation and service.* While preparing the food for the salad bar was the main task, for many it was the peripheral tasks that created the most challenges. This included: developing a payment system, ensuring students washed their hands, making sure students were able to get food back to their classrooms, and washing the reusable plates and cutlery and composting. Incorporating health and safety guidelines into food preparation, service and storage of food was vital.
- *Communication.* All schools had established a farm to school salad bar committee and this met regularly in the beginning. As the salad bar began operating the committee met less often mostly because people were too busy. However, there was an ongoing need for communication between school staff, contractors (when present), volunteers and producers to discuss what was and was not working.
- *Ongoing support.* The majority of schools felt they would have benefitted from more practical support and help with the everyday aspects of the farm to school salad bar. They also wanted input to develop strategies to address low participation rates by students. Although the monthly conference calls facilitated by the PHABC project manager provided updates schools wanted more help with problem solving as they were going along rather than having to come up with solutions themselves.

- *Understand the health and safety regulations.* This was a time-consuming task for elementary schools that did not have an in situ kitchen. They had to establish what the guidelines were and then implement them. These could vary between regions and while the project manager helped to clarify these schools suggested having this information from the beginning would have been useful.
- *Understand the healthy eating guidelines.* The farm to school salad bar guidelines specified the amount of fruit, vegetables, grain and protein, which most schools adhered to. However, a couple of schools struggled to incorporate these guidelines and make the food appealing to students or to remain within the guidelines on a consistent basis.
- *Administration.* Those involved in the farm to school salad bar also had to contend with considerable administration and attendance at meetings; vital tasks which all took time. Knowing ahead to time how much administration there was going to be and how often and when meetings were to be held, it was suggested would help with the smooth running of the salad bar.

Changes to the School System

“We’ve gone to play first here in this school and it works. We had some opposition in the beginning, some real concerns but we worked through them. We had been thinking about it before the salad bar but we could see that if this initiative was going to work then we had to make changes.”

The challenge for some elementary schools was managing the flow of students through the salad bar. Those involved in the salad bar were reminded that students, especially those in the lower grades, did not eat very quickly and needed more time to access the salad bar. In addition to this, some schools discovered students were easier to manage if they were given the opportunity to go outside and get some exercise after having been in class all morning. When they came in they were happy and hungry and accessed the salad bar more quickly, and were more willing to try new foods.

Involvement of Local Producers or Farmers

“I love being involved with this initiative, being able to go into schools and tell them about farming, getting them involved is what it is all about. If they learn now to eat well and know what is available around them, then there is hope for all our futures.”

“When we started supplying to schools, I was very optimistic, but the orders can be small and it’s not really worth my while when you add in delivery. When it was talked about, I thought the schools would use what is available and put that in the salad bar. Most start with their menus and work from there. In that game, we are at a disadvantage.”

Local farmers and producers were very excited when the farm to school initiative started. They saw it as a real opportunity to develop strong links with schools and to have

a market for their produce. However, for most, the first year was disappointing in terms of size of orders from schools. Local producers and farmers needed time to plan ahead to enable changes to be made to planting schedules so they would be able to provide schools with a wider variety of produce. Some farmers and local producers were planning to develop a root cellar to store produce so as to ensure a steady supply through the winter. To do this took time and schools needed to factor this into their plans.

Cost was another issue for farmers and local producers. They understood schools were constrained in what they could charge to students but for some orders were so small that it was not financially viable for them to try and supply schools. Farmers and producers were unsure on how to resolve these issues.

The Farm to School Salad Bar and High Schools

“We’ve tried lots of things to get our students to use the salad bar and it is disappointing. Most of them don’t want the single serve, they want something they can take and eat somewhere else.”

“I think it is different for us, we have our culinary arts programs and that helps to when students are talking to their friends telling them to come to the salad bar.”

All high schools failed to meet their predicted targets for students using the farm to school bar despite the amount of effort they put into developing and operating it. All had tried various strategies to encourage participation and some of these met with success, but these had to be tailored to the individual setting and respond to the feedback from students. Some high schools found the single-serve items did not work well and they modified this to provide prepared salads and wraps students could choose from. A further challenge was that some high schools were mobile and could leave campus, unlike elementary schools where students had to eat what was provided for them. In high schools, some of those involved in this initiative suggested the farm to school salad bar model needed to be refined if it was to work successfully in this setting. Again, with hindsight it was suggested more tailored support to help resolve some of their challenges would have also been beneficial.

Raising Awareness of Healthy Eating in Schools

“We’ve got posters about the farm to school salad bar and about healthy eating. We put things in the newsletter but what will make a difference is when we’ve got the same messages about healthy eating and local foods and information about where foods come from in the classrooms. It has to be sustained not just on salad bar days and it has to be healthy eating throughout the school. This is just the beginning. We’re not there yet but we’re further along than we were.”

The speed at which the farm to school salad bars were rolled out prevented many schools from developing accompanying classroom materials or establishing the kind of partnerships they wanted with local farmers and producers. All were keen to move forward with these aspects in year two as they realised the farm to school salad bar could encourage students to eat more healthily but the reasons why this was important had to be reinforced across the school.

Changing Students' Eating Behaviours

“We see the students going to the salad bar and eating more fruits and vegetables so we know we've made a difference – whether this will show up in any statistics I don't know. We're starting from a low point - it can only get better! We're a small school but the kids are eating things they'd never done before and if that's just twice a week at school it's more than they were doing. ... Change takes time and money!”

The motivation for schools participating in the farm to school salad bar initiative was to help improve the eating behaviours of students. Based on their own observations and anecdotal feedback from students, staff and parents, those interviewed believed they were achieving this goal. They recognized it was a long term goal and they were only just beginning to make real changes to the nutritional intake of their students.

The results from the surveys in the participating schools suggest that students were more willing to try new fruits and vegetables and that they found it easier to eat fruit and vegetables every day if they wanted to. Students had increased their consumption of fruit and raw vegetables and there was a small but significant change in the frequency students ate salad or grated vegetables.

The feedback from parents was very positive. They were very satisfied with the farm to school salad bar and reported their children enjoyed it. They wanted to see the initiative continue and they would happily recommend it to another parent.

The Need for Ongoing Funding

“According to the grants the salad bars were to be self-financing within a few weeks. That didn't happen for us and the other schools I've talked to haven't managed it. Our big struggle for next year is going to be finding the money for the honorariums for the volunteer; without that we will be stuck.”

All schools stressed the importance of ongoing funding to meet some of the operating expenses of the farm to school salad bar. Those interviewed emphasized that because this was a new initiative and students and parents would take time to get used to it. The challenge was to make the salad bar affordable, attractive, healthy and financially viable. All schools struggled to make the salad bar financially viable within the first few weeks. As the farm to school salad bars became more established revenues increased but keeping operating costs low prevented some schools from shopping locally.

Also schools were keen to stress they were subsidizing the farm to school salad bar by allocating staff time and through the use of volunteers. While they acknowledged that it might be possible for some salad bars to cover the cost of the food they would be unlikely to recover staffing and other costs.

The Challenge for Policy and Practice

As stated above all the schools which participated in this evaluation achieved a lot in a relatively short period of time. They were able to do this because of the enthusiasm, commitment and goodwill of those involved. However, all schools found that it took

more time, effort and resources to plan, develop and operate the farm to school salad bar especially if it was going to become an established and integrated component of the school.

The multiple goals of the project may at times have been in conflict with each other at times, and phasing selected goals (e.g. links with local producers and farmers and schools) in later periods and over a longer period may have made the implementation easier and smoother.

To make the farm to school salad work schools adapted the original model so that it addressed local needs. A one size fits all approach would have limited success especially in the Northern and Interior Regions of BC. The challenge for practice and policy is how to support this initiative on an ongoing basis. For the farm to school salad bars to be successful, there needs to be:

- adequate time for planning and development;
- funding for operating as well as capital costs;
- assessment to ascertain whether the school has the equipment, space, facilities, funding and resources to operate;
- a mechanism to support volunteers;
- practical supports to schools to help them solve problems;
- reliable sources of locally produced fruits and vegetables available at an affordable price;
- provincial supports reflecting local challenges; and
- government endorsement for long-term sustainability.

In addition, the practical lessons from this initiative are substantive. The initiative has already produced a “how to” guide for schools and communities planning this type of initiative. It could be further strengthened from findings from this evaluation, such as developing materials and resources in advance that can be provided to schools to be adapted for their school environment and support to school administrators on engaging school communities (particularly high school students), sourcing, cost, time, paid and volunteer staffing. This type of manual and the factors for success listed above can play an important role in future endeavours of this kind.