Proposal Report

THE BREAKFAST CLUB OF CANADA

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The purpose of this project is to understand the spending patterns of Northern British Columbia (BC) schools on breakfast food ingredients. Through this we can support the Breakfast Club of Canada (BCC) in improving the efficiency of money spent on nutrient dense foods for Breakfast programs.

Communities of Northern BC face ongoing challenges with food security. Food security is when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO,1996). The BCC works to alleviate food insecurity in Northern BC by giving financial aid to 15 schools from Prince George to Prince Rupert. School faculty use the money to purchase food for the breakfast program. However, due to food accessibility challenges, spending money efficiently is difficult.

Communities in Northern BC are greatly affected by climate change, seen through the infestation of pine forests by mountain pine beetles (Ostry *et.* al, 2011). The depletion of these forests has caused great damage to many communities that are dependent on rural resources, resulting in heightened local food insecurity of these rural communities (Ostry *et.* al, 2011).

Additionally, these communities face physical barriers to affordable and nutritious food due to limited access to local food outlets and lack of reliable transportation (Ostry, 2010). The BCC seeks to overcome these physical and environmental barriers faced by Northern BC.

The BCC is supported by partners including Costco and Walmart that aid in providing schools across Canada with affordable and nutritious food. Unfortunately, for many of these Northern communities, there is no access to larger grocers. Across the 15 communities in project, there are six Safeways and one Costco; so communities resort to buying food from local farmer's markets. Many of the schools reached by the BCC prefer supporting local markets because of a moral obligation they feel to participate in their community's economy (Ryan, personal contact). In a study conducted by JD Roth, cost was compared between a local farmer's market, a produce stand and Safeway. Although, the produce stand offered the best quality-cost balance, findings showed purchasing larger quantities was cheaper at Safeway because of their regular bulk deals (Roth, 2016). Because BCC programs feed upwards of 20 students per day, effective spending is essential. (Ryan, personal contact).

The BCC's goal is to ensure students in their breakfast program receive maximally nutritious food, despite the food insecurity issues faced by many Northern BC communities.

Significance/Why

The significance of our project is to improve the food security of the children attending Northern BC public schools in order to elevate their educational experience. This is important because the cost of living is higher in Northern BC as a consequence of living in more isolated communities. Community residents experience challenges accessing quality and affordable food. A report by Food Banks Canada titled Hunger Count 2014 found that food-bank use in Canadian Territories increased by 247% from 2008 to 2014. Gittelsohn and Sharma conducted a study exploring food environment, finding that the biggest

causes of food insecurity was low proximity to food stores/supermarkets, cost and limited availability of healthy food (2009). Although federal programs such as the Nutrition North Program have been developed to offset transport costs of perishable foods, not much has changed because staple foods like dry rice, dry pasta and canned fruits/vegetable are not eligible for government subsidization. BCC works to provide financial support to food insecure communities.

The origin of *breakfast* comes from Latin, meaning to "break the fast". Consuming breakfast breaks the longest fasting period within the 24-hour day cycle, and if missed, children are without food for 15-17 hours. (C.R. Mahoney *et al.*, 2005). Breakfast helps to control the metabolic response to overnight fasting conditions, to supply nutrients to the central nervous system (Rampersaud *et al.*, 2005). The BCC is an organization who aims to provide nutritious meals to children, who would otherwise attend school hungry (Our Mission, 2016). The role the BCC plays in the development and education of students is essential because of the improvements seen in children's test performance (Benton and Jarvis, 2007), auditory attention, spatial memory, short term memory, and cognitive development (C.R. Mahoney *et al.*, 2005). Through a survey done by Mahoney and colleagues, it was found that 42% of American children were regularly sent to to school without breakfast or eating breakfast 50% of the time (2005). The BCC is working to lower this statistic, because students who miss breakfast or eat a breakfast <150 calories are more likely to be distracted, off task, or lose focus (Benton and Jarvis, 2007).

In addition to academic benefits, students who consume breakfast eat a more complete nutrient profile in categories of micronutrients, macronutrients, and fiber (Rampersaud *et al.*, 2005). Students who eat breakfast have a lower fat intake, lower daily cholesterol, and enhanced micronutrient intake with improved nutrient status (Rampersaud *et al.*, 2005). The nutritional gains of students is not only based on breakfast consumption, it is also dependent on the quality of food. Mahoney and colleagues constructed a study comparing academic performance of students who consumed instant oatmeal, ready-to-eat cereal, or no breakfast. Students who consumed instant oatmeal, had the greatest performance (2005). The BCC not only provides financial support to schools, they also manage food purchases to ensure students are eating meals of nutritional adequacy.

Objectives + Inquiry Questions

- Find out what kind of food products the schools purchase with the money that the BCC donates to them.
- Suggest improvements that schools can make to efficiently use the monetary donation from the BCC to purchase high quality food in order to provide sufficient nutrients to children by comparing expenditure of food procurement from different places in Northern BC such as local food market, Costco, Walmart and Safeway.
- Identify spending patterns related to different food groups such as fruit and vegetables, dairy products, meat and grain products.

By assessing the objectives for this project, several questions can be noted below:

- How is the money spent allocated to different food groups? Do schools focus more on healthy food?
- How much discrepancy is there in-between the cities in Northern BC in terms of prices for food?
- Are the food needs of communities that BCC work with being met?

Methods

We began our project by meeting with a Breakfast Club representative to discuss the organization and our methods as a whole. Our contact has provided a recommended timeline for the completion of the project (Table 1).

To further immerse our group into this project, we will be attending a breakfast club event at a participating schools and observe the program in action. This visit will be accompanied by a BCC representative and undertaken in small groups of three people to ensure the program is not overwhelmed with our presence.

Our first step, is to receive electronic copies of receipts cataloging the breakfast food spending of Northern BC schools over the past two months. The data will be transferred into a Google spreadsheet to expedite our analysis and allow for simultaneous collaboration our BCC contact.

Our methodology will also include information-gathering, through online research to create a summary of the food system in each school's community, and, if necessary, contacting schools to clarify any unclear information. To ensure ethical practices are followed, our group will carefully consult with our instructors and community partner before initiating contact.

With the information consolidated, we will create spending profiles for each school.

Post feedback, we will proceed with the development section of our project, and assist our community partner by interpreting the data through creating graphical comparisons between each school. Finally, we will propose creative solutions to problems discovered through our research, focusing on strategies that partner with bulk food distributors including Sysco and Costco. Any proposals for change will be made with asset-based development strategy to respect our community partner and assist them in communicating positively with their schools.

Table 1 A rough timeline, suggested by our community partner, to guide our project's methods through to a timely completion.

	Project Steps	Target dates
Cataloging Phase	Receive school receipts from community partner	Oct 7
	Transfer receipts into google docs for analysis	Oct 7-21

	Fill in information gaps through online research, and contacting schools	
	Meet with community partner to touch base and discuss progress	Oct 22
	Report completed and ready to be viewed by community partner	Nov 4
	Community partner provides feedback and suggestions for additional tasks	Nov 11
Development Phase	Brainstorm future directions for the project and creative development strategies for the target schools with guidance from our community partner	Nov 12-24
	Project completed	Nov 25

References

Anderson, H. A. (2013). Breakfast: A History. Lanham, MD: Rowmann & Littlefield.

Benton, D., & Jarvis, M. (2006, September 25). The role of breakfast and a mid-morning snack on the ability of children to concentrate at school. *Physiology & Behavior*, 90(2-3), 382-385. doi:10.1016/j.physbeh.2006.09.029

Chitra, U., & Reddy, C. R. (2006, February 15). The role of breakfast in nutrient intake of urban schoolchildren. *Public Health Nutrition*, *10*(01). doi:10.1017/s1368980007219640

Community Partner Meeting #1 [Personal interview]. (2016, September 26).

Expert Panel on the State of Knowledge of Food Security in Northern Canada, desLibris - Documents, & Council of Canadian Academies, Expert Panel on the State of Knowledge of Food Security in Northern Canada Staff. (2014). Aboriginal food security in northern Canada: An assessment of the state of knowledge. Ottawa: Council of Canadian Academies.

FAO. 1996. Rome Declaration on World Food Security and World Food Summit Plan of Action. World Food Summit 13-17 November 1996. Rome.

Gittelsohn, J. and Sharma, S. (2009). Physical, consumer, and social aspects of measuring the food environment among diverse low-income populations. American Journal of Preventive Medicine, 36(4), S161-S165.

Glanville, N.T., and McIntyre, L. (2006). Diet quality of Atlantic families headed by single mothers. Canadian Journal of Dietetic Practice & Research, 67(1), 28-35.

Link, Alex, and Chris Lang. (2007, June). Farmers' Markets and Local Food Systems. Retrieved October 1, 2016, from https://crcresearch.org/case-studies/crc-case-studies/farmers-markets-and-local-food-system

Mahoney, C. R., Taylor, H. A., Kanarek, R. B., & Samuel, P. (2005, June 21). Effect of breakfast composition on cognitive processes in elementary school children. *Physiology & Behavior*, 85(5), 635-645. doi:10.1016/j.physbeh.2005.06.023

Ostry, A. (2010, August). Food for thought: The issues and challenges of food. Retrieved October 1, 2016, from

http://www.phsa.ca/Documents/foodforthought_issueschallengesoffoodsecurity.pdf

Ostry, A., Miewald, C., & Beveridge, R. (2011, November). Climate Change and Food Security in British Columbia. Retrieved October 1, 2016, from http://pics.uvic.ca/sites/default/files/uploads/publications/Food Security_2011.pdf

Our Mission. (2016). Retrieved from http://www.breakfastclubcanada.org/

Our Partners. (2016). Retrieved from http://www.breakfastclubcanada.org/

Rampersaud, G. C., Pereira, M. A., Girard, B. L., Adams, J., & Metzl, J. D. (2005, June). Breakfast Habits, Nutritional Status, Body Weight, and Academic Performance in Children and Adolescents. *Journal of the American Dietetic Association*, *105*(5), 743-760. doi:10.1016/j.jada.2005.02.007

Roth, J. D.(2016, June). Grocery Store vs. Farmers Market: Which Has the Cheapest Produce? Retrieved October 2, 2016, from http://happymoneysaver.com/farmers-markets-vs-grocery-store-for-fresh-produce-where-do-you-save-more-money/