



FOOD LITERACY
FOR LIFE




A Call to Action for Healthy Eating:
Using a Food Literacy Framework
for Public Health Program Planning, Policy, and Evaluation

The Locally Driven Collaborative Project: Measuring Food Literacy in Public Health
September 2018

BRIEF INTRODUCTION

Food literacy is increasingly recognized as an important influence on eating patterns. ^(1, 2) Currently, there is no reliable tool to measure food literacy in Canada. The absence of a measurement tool along with a limited shared understanding of the comprehensive nature of food literacy makes it challenging for nutrition practitioners to assess the impact of food literacy programs or services on eating behaviours.

To inform the development of a measurement tool, the Locally Driven Collaborative Project (LDCP) team, consisting of members from 16 health units in Ontario, conducted a Scoping Review and a Delphi (a consensus building technique) to identify the key attributes of food literacy and to develop an evidence-informed definition and framework.



Food Literacy is a set of **INTERCONNECTED** attributes organized into the categories of **food and nutrition knowledge, skills, self-efficacy/confidence, food decisions, and other ecologic (external) factors.**

THE PURPOSE FOR THE CALL TO ACTION:

The Call to Action for Healthy Eating provides a rationale for and illustrates how food literacy can be used as a comprehensive, evidence-informed framework when planning, implementing, and evaluating programs and services that address healthy eating. This approach can be utilized to:

- Facilitate chronic disease prevention efforts;
- Promote healthy growth and child development; and,
- Contribute to the health of children and youth through working with schools and other community partners.

The Call to Action advocates for public health practitioners to adopt the food literacy framework as the foundation for healthy eating programs and services. This Call to Action recommends public health practitioners consider each of the evidence-informed attributes of food literacy as key elements that can reinforce or enhance programming.

A consistent application of the framework across the public health setting in Ontario helps establish the groundwork for a shared understanding of food literacy prior to the development, testing, implementation, and dissemination of a food literacy measurement tool.

THE CURRENT SITUATION: Healthy Eating, Food Literacy, and Population Health

Chronic diseases influence many of the primary causes of death and disability in Canada and across the globe. ⁽³⁻⁷⁾ Dietary risk factors are some of the most important contributors to mortality in Canada. ^(6,7) Unfortunately, the growing prevalence of large-scale and fast food retail outlets along with the modernization of the global food system have altered the food supply with respect to food availability, affordability, and quality. ^(8, 9) Consumers have greater access to low-cost, energy dense, and nutrient poor foods and beverages. ⁽⁴⁾

Additionally, there has been a decline in domestic food preparation skills (known as ‘deskilling’ in the literature) due to a lack of introduction to and opportunity for the acquisition of cooking skills from parents, grandparents, and/or school environments. ⁽¹⁰⁻¹⁵⁾ Independent of preparation skills, there are also several factors that drive an individual’s food selection including physiology, food availability, taste, price, marketing, convenience, social norms and cues. ⁽¹⁶⁾ The foods people cook and the food preparation skills they utilize are all influenced by social, economic, and cultural contexts which are constantly changing. ^(17,18)

Collectively, these complex factors impact an individual’s or population’s food literacy. As a result, eating patterns do not always meet well-established and evidence-informed health and dietary recommendations. ^(19, 20) Because food literacy can have significant influence on eating patterns, this research, like other studies, highlights the interconnectivity among food, health, and the environment, in attempting to improve eating behaviour overall. ⁽²¹⁾

BACKGROUND: LDCP Research

In 2016, the LDCP team conducted a Scoping Review to identify the attributes of food literacy. A total of 19 peer-reviewed and 30 grey literature sources were systematically reviewed, leading to the classification of 15 food literacy attributes in five interrelated categories (Figure 1). A detailed discussion of the Scoping Review is published elsewhere. ⁽²⁹⁾

Subsequent to the Scoping Review, a consensus-building Delphi Technique with public health practitioners and other key stakeholders was completed to obtain input about the cogency, relevance, and importance of each of these attributes, within the public health context. This, along with additional consultation with public health practitioners, resulted in a final list of 12 interrelated key attributes that describe food literacy (Table 1). The attributes in each of the five interrelated categories are shown in a [conceptual model](#), which allows visualization of their interconnections and interdependence. ⁽³⁰⁾

Therefore, food skills as defined in the 2008 version of the Ontario Public Health Standards (OPHS) Guidance Document (2008) (i.e., knowledge, planning, mechanic techniques of preparing food) may not be sufficient to achieve population-wide healthy eating outcomes. In this research, food skills is only one of the 12 attributes and is described primarily as the preparation of healthy and safe meals throughout the lifespan using basic mechanical skills.

It is confirmed that food literacy encompasses more than food skills. ^(1, 2, 9, 23, 24) The findings from the Delphi provide further evidence to confirm the broader scope of food literacy.

In 2018-2019, the LDCP Team will develop a measurement tool and evaluate how well this tool performs with identified priority populations. This research is integral to the proposed food literacy framework and will support public health program planning, policy work, and evaluation.



THE LINK BETWEEN FOOD LITERACY AND THE 2018 ONTARIO PUBLIC HEALTH STANDARDS (OPHS):

The OHPS ⁽²⁵⁾ uses a 'Policy Framework for Public Health Programs and Services' focused in four domains: Social Determinants of Health, Healthy Behaviours, Healthy Communities, and Population Health Assessment (Table 2). The food literacy framework, with its five categories and 12 attributes links with the four domains, three foundational standards, and five program standards of the modernized standards.

For example, the Social Determinants of Health was identified as an attribute of food literacy and has a direct connection to the Foundational Standard - Health Equity. Social and environmental conditions (e.g., inadequate income and education) can result in inequities in health status which can impact the capacity to make decisions about food and cooking.

Also, the food literacy categories of Food and Nutrition Knowledge, Food Skills, and Self-Efficacy and Confidence contribute to the domain of Healthy Behaviours. And finally, food literacy contributes to Foundational Standards—Population Health Assessment and Effective Public Health Practice, as shown with the recent LDCP research whereby the identified key attributes of food literacy will be used in the development and pilot testing of a tool to measure food literacy.

**Figure 1:
The Five Categories of Food Literacy**

Food and Nutrition Knowledge:

Relate to facts and information acquired through experience or education related to foods and nutrition, including the capacity to distinguish between "healthy" and "unhealthy" foods.

Self-Efficacy and Confidence:

Relate to one's capacity to perform food skills in varied contexts and situations.

Food Skills:

Focus on techniques related to food purchasing, preparation, handling, and storage throughout the life stages.

Food Decisions:

Includes dietary behaviour which pertains to the application of knowledge, information, and skills to make food choices.

Ecologic (External) Factors:

Capture factors operating beyond the individual (e.g., socio-cultural influences, socio-economic status) and their interactions with food decisions and behaviours.

Table 1: Categories and Key Attributes of Food Literacy



FOOD KNOWLEDGE

To understand the variety of foods within all food groups. To know where food comes from and what is in it.

NUTRITION KNOWLEDGE

To understand the nutrients in food and how these can affect health and wellbeing.

FOOD AND NUTRITION LANGUAGE

To understand commonly used words to describe characteristics of nutrition in food (e.g., high fibre, low sodium) and preparation of food (e.g., sauté, fold).

FOOD SKILLS

To be able to prepare meals throughout the life span using basic skills like chopping, measuring, cooking, reading recipes, and food safety.

NUTRITION LITERACY

To be able to distinguish between credible and false nutrition information. Knowing how to find reliable nutrition information and how to make sense of it (e.g., reading a food label).

FOOD AND NUTRITION SELF-EFFICACY

To believe in one's ability to apply food and nutrition-related knowledge to select, buy, and prepare food to make healthy choices in a complex food environment.

COOKING SELF-EFFICACY

To have confidence in one's ability to use cooking techniques and to prepare tasty meals with available food.

FOOD ATTITUDE

The desire to learn how to: prepare food; develop a healthy relationship toward food; have respect for food traditions and culture; and prepare and enjoy food to eat together with others.

FOOD SYSTEMS

The impact of the food system (e.g., growing, manufacturing, transportation, preparation, consumption and disposal of food products) on individual health, broader societal and economic wellbeing, and the environment.

SOCIAL DETERMINANTS OF HEALTH

Access to living wages, affordable housing, learning environments, healthy and adequate food and cooking equipment.

SOCIO-CULTURAL INFLUENCES AND EATING PRACTICES

The influence of socio-cultural values, norms, and beliefs on food choices and eating practices; the social support to learn and share food skills; and the cultural and family food practices (e.g., eating together).

DIETARY BEHAVIOUR

To make healthy food choices.

Table 2: How Food Literacy Aligns with the Policy Framework for Public Health Programs and Services

GOAL	To Improve and Protect the Health and Well-being of the Population of Ontario and Reduce Health Inequities			
DOMAINS	Social Determinants of Health	Healthy Behaviours	Healthy Communities	Population Health Assessment
OBJECTIVES	To reduce the negative impacts of social determinants that contribute to health inequities	To increase knowledge and opportunities that lead to healthy behaviours	To increase policies and practices to create safe, supportive and healthy environments	To increase the use of population health information to guide the planning and delivery of programs and services in an integrated health system
FOOD LITERACY CATEGORY	<ul style="list-style-type: none">• Ecologic Factors (External)<ul style="list-style-type: none">- Social Determinants of Health	<ul style="list-style-type: none">• Food and Nutrition Knowledge• Food Skills• Self-Efficacy and Confidence• Food Decisions	<ul style="list-style-type: none">• Ecologic Factors (External)<ul style="list-style-type: none">- Food and Other Systems	<ul style="list-style-type: none">• Food and Nutrition Knowledge• Food Skills• Self-Efficacy and Confidence• Food Decisions• Ecologic Factors (external)
PROGRAMS AND SERVICES	GOALS Associated with Food Literacy			
	<ul style="list-style-type: none">• To increase the use of public health knowledge and expertise in the planning and delivery of programs and services within an integrated health system• To reduce health inequities with equity focused public health practice• To increase the use of current and emerging evidence to support effective public health practice• To improve behaviours, environments, and policies that promote health and well-being• To improve growth and development for infants, children, and adolescents			
PROGRAMS AND SERVICES ADDRESSING FOOD LITERACY	Five Program Standards: <ul style="list-style-type: none">• Chronic Disease and Well-Being• Food Safety• Healthy Environments• Healthy Growth & Development• School Health		Three Foundational Standards: <ul style="list-style-type: none">• Population Health Assessment• Health Equity• Effective Public Health Practice	
	Potential Measurable Outcomes of Food Literacy (Desjardins et al, 2013 ⁽⁹⁾)			
	<ul style="list-style-type: none">• Increased preparation of healthier and safe meals• Increased likelihood of consuming a healthier diet• Feeling better, physically and mentally• Increased connectedness to others with respect to food and eating• Feelings of satisfaction in preparing food for oneself and others• Increased knowledge, food skills, and self-efficacy for culinary job opportunities; and• Improved access to healthy foods attributable to more income			

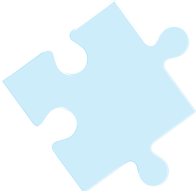
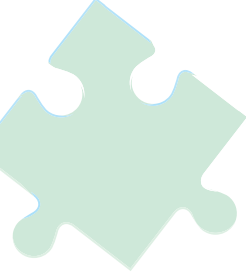
Adapted from Ontario Ministry of Health and Long-Term Care, "Ontario Public Health Standards Requirements for Programs, Services, and Accountability", January 1, 2018 (page 7).

FOOD LITERACY AND PUBLIC HEALTH PRACTICE:

Call to Action for Healthy Eating

The goal of the recommendations below (Table 3) is to use the food literacy framework as an evidence-informed approach for public health programs, services, and policies that address healthy eating. All the recommendations contribute to a culture of quality and continuous improvement to public health practice.

Table 3: A Call to Action for Healthy Eating Recommendations, Rationale and Public Health Actions

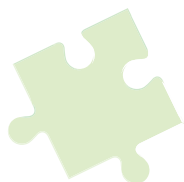
RECOMMENDATION #1: Support and adopt the research findings.	
OPHS ⁽¹⁾	<ul style="list-style-type: none"> • Foundational Standard: Effective Public Health Practice (EHPH)
RATIONALE 	<ul style="list-style-type: none"> • Ensures all programs and services are informed by evidence (EHPH, Requirement 4).
	<ul style="list-style-type: none"> • Fosters knowledge exchange on current food literacy research that may contribute to improved dietary behavior and population health through evidence informed practice (EHPH, Requirement 5 & 6).
	<ul style="list-style-type: none"> • Contributes to a consistent language and understanding of food literacy to establish the groundwork prior to the completion a food literacy measurement tool and to increase the generalizability of findings from future evaluation efforts (EHPH, Requirement 2 & 3).
ACTION	<ul style="list-style-type: none"> • Communicate the comprehensive food literacy definition and its 12 attributes broadly with relevant public health staff and community partners (EHPH, Requirement 5).
	<ul style="list-style-type: none"> • Advocate and champion a change in the language used to describe “food skills” programming to that of “food literacy” programming.
RECOMMENDATION #2: Use food literacy as a comprehensive framework to identify attributes addressed in current and new programs, services, or policy when planning, implementing and evaluating healthy eating initiatives in public health.	
OPHS	Foundational Standards: Effective Public Health Practice (EHPH); Health Equity (HE); Program Standards: Chronic Disease Prevention and Well-Being(CD), Food Safety (FS), Healthy Growth and Development (HGD)
RATIONALE 	<ul style="list-style-type: none"> • Supports the use of a systematic process that integrates best available research when planning, implementing and evaluating public health programs and services that address healthy eating (EHPH, Requirement 1 & 4; CD, Requirement 2).
	<ul style="list-style-type: none"> • Improves the implementation and potential effectiveness of programs by assessing gaps and/or enhancements (EHPH, Requirement 3 & 4).
	<ul style="list-style-type: none"> • Assists with aligning the needs of specific priority populations (i.e., youth and young parents) assessed by a previous research (Desjardins et. al., 2013) (9) (HE, Requirement 1 & 2; CD, Requirement 2).
	<ul style="list-style-type: none"> • Supports individuals and families with increased knowledge about healthy eating and food safety, food skills and access to external resources related to healthy growth and development to effectively manage the different life stages and their transitions (HGD Program Outcome and Requirement 2; FS, Requirement 3).

⁽¹⁾ Ontario Public Health Standards (OPHS): Requirements for Programs, Services, and Accountability, January 2018

RECOMMENDATION #2:

Continued

ACTION



- Review current public health and community healthy eating programs through the lens of a comprehensive food literacy framework to identify gaps and opportunities for improvements. If public health programs or policies are not reflective of all food literacy attributes, consider feasible changes or enhancements.
- Consider other programs and services in your organization and community that address any of the attributes of food literacy (e.g., social determinants of health, healthy environments (or food system), etc.) and engage with relevant public health staff and community partners/local stakeholders to ensure a comprehensive approach and to promote consistency.

RECOMMENDATION #3:

Use the comprehensive food literacy framework to develop and implement a program of public health interventions that address healthy eating in schools and to ensure that attributes of food literacy are being addressed and/or considered.

OPHS

Foundational Standard: Effective Public Health Practice (EPHP)
Program Standard: School Health (SH)

RATIONALE

- Contributes to the health of school-aged children and youth (SH, Requirement 3 & 4; EPHP, Requirement 5).

ACTION

- See recommendation #2 above. Consult and collaborate with school boards, principals, educators, parent groups, student leaders, and students.

RECOMMENDATION #4:

Support the development and testing of a tool to measure food literacy.

OPHS

Foundational Standards: Population Health Assessment (PHA); Effective Public Health Practice (EPHP);
Program Standards: Chronic Disease Prevention and Well-Being(CD), School Health (SH)

RATIONALE

- Provides a means to understand the relevance of food literacy to dietary behavior and health and to assess the needs of local populations (PHA, Requirement 3, 4, 5)
- Supports research efforts to address a gap in the availability of evaluated measurement tools (1, 2, 9, 23, 24)
- Supports public health research activities in collaboration with other public health units and provincial organizations and fosters relationships with academic partners and PHO (EPHP, Requirement 5 & 6).
- Allows public health practitioners to:**
 - Identify gaps in programs and services;
 - Identify, assess, and monitor food literacy needs in local populations;
 - Tailor, target, and evaluate comprehensive food literacy programs;
 - Engage in advocacy efforts and appropriately allocate resources; and,
 - Advance knowledge and measure food literacy locally; (PHA, Requirement 4 & 5; EPHP, Requirements 2,3,4; CD 2; SH 3).

ACTION

- Provide in-kind contribution of staff time to advise the work on tool development, partake in knowledge exchange opportunities and participate in training opportunities for implementing the tool in practice.

RECOMMENDATION #5:


Work with community partners to rebrand and promote relevant community-based food programs (e.g., community gardens, community kitchens, Good Food Box) as ‘food literacy programs’ rather than programs that address household food insecurity or food security.

OPHS	Foundational Standard: Effective Public Health Practice (EPHP)
RATIONALE	<ul style="list-style-type: none">Clarifies misconceptions and minimizes confusion about the impact of community-based food programs on income levels and ensures all programs and services are informed by evidence (EPHP, Requirement 4). <p>Although these types of programs may help to improve food access, food knowledge, cooking self-efficacy, and dietary behaviour (key attributes of food literacy) evidence shows that they do not address/improve household food insecurity (i.e., income) ^(27, 28).</p>
ACTION	<ul style="list-style-type: none">Develop and implement a knowledge exchange plan to share food literacy research with community partners (EPHP, Requirement 5, 7).
	<ul style="list-style-type: none">Support the Ontario Dietitians in Public Health (ODPH) Position Statement on Responses to Food Insecurity ⁽²⁸⁾.



Appendix A: Examples of Food Literacy in Action within the Public Health Context

PROGRAM EXAMPLE	PROGRAM DESCRIPTION	FOOD LITERACY ATTRIBUTES ADDRESSED	WHAT COULD BE STRENGTHENED*
Recreation Program	Recreation canteen program with healthier items placed on the menu using pricing and purchasing strategies. Promotional campaign and activities conducted. Web-based nutrition information developed by an RD. Sample of new menu items provided. Sales of healthier food items increased and other recreation centers motivated to start a similar program.	<ul style="list-style-type: none"> • Food Knowledge • Nutrition Knowledge • Food and Nutrition Language (e.g., high fiber, low sodium) • Nutrition Literacy • Food Attitude • Dietary Behaviour • Food Systems <p>How? Promotional and awareness raising activities (e.g., posters, website, point of purchase nutrition information, brochures) and taste-testing. Food Systems is being addressed because a healthier food environment is being provided.</p>	<p>Food Skills and Cooking Self-Efficacy</p> <ul style="list-style-type: none"> • Recreation settings may be a great space to provide practical, hands-on food skills workshops for children and youth and as part of after school programs and summer camps. <p>Food Systems</p> <ul style="list-style-type: none"> • More awareness about where food comes from and promotion of a sustainable food system. Link with local farmers and have fresh local produce available that is reasonably priced and strategically placed.
Train-the Trainer for Indigenous People	Funding for the Diabetes Prevention Project that focuses on the Aboriginal population and on promoting physical activity and healthy eating. Partnership with many First Nations communities and Indigenous Friendship Centres. Partners see benefit of connecting with their clients around food. Community kitchens modules developed and partners trained to host community kitchens in their communities.	<ul style="list-style-type: none"> • Food Knowledge • Nutrition Knowledge • Food and Nutrition Language • Food Skills • Nutrition Literacy • Food & Nutrition Self-Efficacy • Cooking Self-Efficacy <p>How? Hands-on activities increase food and nutrition knowledge including how to read food labels; hands-on learning in preparing and cooking food and practicing new techniques; information provided on how to create a supportive, positive environment for clients and for sharing food. Grocery cards are provided for programs to assist clients with limited funds for food.</p>	<p>Food Systems</p> <ul style="list-style-type: none"> • Change in food systems-making healthy and culturally appropriate food accessible. <p>Food Attitude & Socio-Cultural Influences and Eating Practices</p> <ul style="list-style-type: none"> • Food attitude cannot change until people feel safe embracing and practicing their culture. <p>Social Determinants of Health</p> <ul style="list-style-type: none"> • Advocacy needed for funds to be used for infrastructure (staff, kitchen equipment) and other basic needs (e.g., clean water, access to healthy and culturally appropriate food, mental health supports).
Healthy Babies Healthy Children (HBHC)	HBHC staff recognized their need for resources and training to support their clients who face a range of barriers to food literacy. A policy and procedure (which includes training and resources) were developed which allows staff to tailor food literacy support to their clients needs. This policy aims to enable HBHC clients to become more food	<ul style="list-style-type: none"> • Food Knowledge • Nutrition knowledge • Food Nutrition Language • Food Skills • Nutrition Literacy • Food & Nutrition Self-Efficacy • Cooking Self-Efficacy <p>How? Staff are trained with hands on cooking, attend a grocery store tour, and use the HBHC Food Literacy Questionnaire with its resources to</p>	<p>Food Systems and Social Determinants of Health</p> <ul style="list-style-type: none"> • Clients have limited funds to purchase healthy foods, for transportation to locally grown foods and other foods used in cooking. <p>Cooking Self-Efficacy and Dietary Behaviour</p> <ul style="list-style-type: none"> • Home visitor may not be able to see changes in dietary behaviour and cooking self-efficacy as a result of this

PROGRAM EXAMPLE	PROGRAM DESCRIPTION	FOOD LITERACY ATTRIBUTES ADDRESSED	WHAT COULD BE STRENGTHENED*
Healthy Babies Healthy Children (HBHC) (Continued)	literate and improve self-efficacy as a vital life skill.	increase client knowledge. The policy allows for the provision of funds for resources that aid in food skill development such as slow cookers, Basic Shelf Cookbooks, and basic kitchen implements.	program due to capacity issues and an inability to have sufficient follow-up with each client.
Municipality Food Strategy	A multi-year strategy that includes the entire food system to set the direction for resource allocation and decisions for how the municipality and community will address food issues. One of the four goals are to increase food literacy to promote healthy eating and empower residents. Food literacy training is provided to community partners.	<ul style="list-style-type: none"> • Food Knowledge • Nutrition Knowledge • Food Skills • Food and Nutrition Language • Nutrition Literacy • Food & Nutrition Self-Efficacy • Cooking Self-Efficacy • Food and Other Systems • Social Determinants of Health <p>How? Training on Canada's food guide; understanding nutrition labels; food safety; ingredient substitutions; and practical applications of how to lead healthy eating and cooking workshops.</p> <p>Sustainable food system is a goal and linking to local food programs; and all residents are a target, especially youth and low income.</p>	<p>Food Systems</p> <ul style="list-style-type: none"> • Continue efforts to ensure people know the local food system and they make connections with growing, cooking, eating. <p>In General</p> <ul style="list-style-type: none"> • To collaborate more with community partners to ensure all programs in the municipality address food literacy in a fulsome way. 

* Programs examples will not address the Food System and Social Determinants of Health fulsomely as more comprehensive advocacy and policy measures are required. These ecologic (external) factors can be considered when planning, implementing and evaluating programs that address healthy eating.

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