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Perspective

From a study of the Newfoundland and Labrador school food system: Describing an evolution in ways of knowing about school food

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Abstract

In this perspective piece I reflect on the importance of considering the place of schools within broader systems for critical school food study and intervention. These reflections are based on my study of school food in Newfoundland and Labrador from a systems perspective which helped reveal to me how assumptions about school food tend to get in the way of deep understanding about the impact and sustainability of programs.

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What is a systems approach to school food?

The discussion of school food closely nestles changing conversations within food policy and public health which take into consideration the material, biological, social, and cultural reasons why people eat what they eat and how these factors operate within the food system (Lang, 2009; Rayner & Lang, 2012). Along with a shift in thinking about the broader social, economic, and environmental consequences of food systems has come a shift in thinking regarding school food and its relevance to society. Critically, Morgan and Sonnino (2008) have proposed the concept of a "school food revolution," which connects school food to concerns of food production, nutritional health, and environmental sustainability. Consideration of this larger scope entails understanding school food as a system. "Systems thinking" has been proposed as an alternative to a more reductive approach to understanding school food. Understanding school food as a system requires consideration of how multiple factors combine to influence it. This type of thinking requires researchers and practitioners to move away from traditionally more reductionist perspectives on school food towards a more systems-based, critical approach.

Informing this approach are ongoing conversations within research about food systems, education systems, and health systems, which share the sentiment that the act of knowing about these systems depends on a shift in epistemology towards socio-ecological, i.e., systems, understanding. Each field has developed its own concept born as a response to viewing and confronting the barriers of the current system in achieving healthy food systems (i.e., critical food pedagogy), socially and ecologically meaningful education systems (i.e., place-based education), and holistically healthful school environments (i.e., Comprehensive School Health framework) (Gruenewald, 2003; Simovska, 2014; Sumner & Wever, 2016). These concepts all address the consequences of reductionism for school food, including the limits of an industrial consideration of food, an industrial model of learning, and a biomedical approach to health. The interdisciplinary view of school food has evolved over a long history, beginning during an earlier time when school food was a simple response to a "simple" problem, that of child hunger (Oostindjer et al., 2017). The current thinking is that, to understand or improve how the current school food system functions, a particular critical form of knowledge about the system can address the crisis in thinking of past approaches to school food and the negative impacts on schools and school health.

More recent discussions of school food consider many factors: children eat at school, the school setting can influence how students understand food, schools can engage students in the entire food cycle, and school food can influence the broader community in its promotion of food practices (Rojas et al., 2017). Gilbert et al. (2018) describe school food as the tool "… for introducing a just transition to the local food system, enhancing food equity built from healthier social, economic, ecological, and political systems" (p. 95). They see public education systems as having a role and responsibility in managing and enhancing community food systems through public policy. Morgan and Sonnino (2008) describe school food as a litmus test to judge the degree to which countries are responding to social and ecological concerns.

Seeing these potential opportunities of societal transformation through school food potentially reveals a place where we as a society are calling into question not only the appropriateness of school food, but of schools themselves, for our changing society.

School food interventions and research need to consider the built-in infrastructure and assumptions around schools that come to fundamentally influence the limits and possibilities of school food. Part of this infrastructure includes the way in which schools tend to offer a fragmented view of the world. A number of school food interventions, such as school gardens, are helping educators and communities link together constructs and processes that tend to be neatly divided in society. Schools are linked into a societal infrastructure that has tended to ignore ecological or systems thinking (Greenwood, 2014). Greenwood (2014) explains how the dominant form of schooling is based on "…root metaphors of modernism- individualism, anthropocentrism, faith in progress, assumptions which have come to overdetermine or restrict possibilities for people and the places where they live" (p. 20). The question becomes: to what degree do we address school food as an eating problem versus a thinking problem? As Sumner and Wever (2016) indicate, with school food, there are deeper lessons at stake. A systems view of school food offers new possible collaborations and tools that can propel social systems in healthier and more sustainable directions.

What are examples of systems approaches to school food?

A systems approach to school food leans toward an understanding that the ways we know food (the mental aspects of food systems) are fundamentally linked to the infrastructure and connections to our places in those systems (the material aspects of food systems). Awareness of the systemic challenges within the school food system has led to research which attempts to be systematically thorough in its investigation of the characteristics and possibilities of this system, and how these change through time. For example, the Think and Eat Green @ School (TEG@S) project was built on the recognition that there were many positive school food system opportunities ongoing, but that they were functioning independently (Rojas et al., 2017). Rojas and colleagues (2011) defined the goal of school food transformation:

> The goal of school food system transformations is…to provide opportunities for students and staff at all levels to reconnect with the sources of their food and to learn to see food as the grand connector of all aspects of human life, including the relationship between humans and nature. The ways in which we learn about the connections among food, health and the environment at school, both explicitly and by the modelling of behaviours, have a lasting influence on the health of children, the school community and the ecosystems in which schools are located. (p. 766)

The School Food Environment Assessment Tool (SFEAT) was also a product of the TEG@S project (Black et al., 2015). This tool was developed in response to an absence of knowledge about the degree to which schools were engaged with food systems issues. The SFEAT was designed to support building a common language to describe the multiple domains where schools are taking action. It helps to outline some factors and processes considered in a school food system. These include: (1) the availability of healthy food; (2) food teaching and learning; (3) engagement with community; (4) food preparation; (5) gardens/ composting; (6) availability of environmentally sustainable food; and (7) the integration of school food actions along the food system. Black et al. (2015) developed the SFEAT because they found that "…existing tools largely evaluate only narrow components of school food environments such as local food procurement policies or access to healthy food in lunch programs, but seldom concurrently consider multiple facets of complex school food systems" (p. 2).

Another innovative example of school food systems practice that is particularly relevant to the study of the NL school food system is the lessons from Haida Gwai connected to Farm to Cafeteria Canada, which highlight practices such as using the land in school programming and incorporating traditional food into school meals (Farm to Cafeteria Canada, 2014). The link between systems thinking and Indigenous knowledge systems suggests that an education inspired by Indigenous cultures and epistemologies can help us to question assumptions on which unsustainable contemporary ideas about education, economics, and culture are based (Greenwood, 2014; Kincheloe, 2014; Morito, 2002).

The suggestion that improving school food connects to an epistemological problem which is best addressed not only through food policy and programs but also by applying ecological thinking more broadly to the infrastructure which makes up the school food system, including policy, learning, research, and engagement, is critical. An interdisciplinary framework informed by contextualized knowledge of the school food system permits crossing boundaries that lead to current fragmentations in approaches to school food, in schools, academia, and society. This research explores systems-thinking inspired methodology to bridge different ways of thinking about school food.

Methods as a systems approach to knowing school food

My research process connects with three key systems-thinking strategies and tools used for transformational change within systems (Swanson et al., 2012). The first is the principle that systems transformation depends on collaboration across disciplines, sectors, and organizations. The second is the principle of ongoing iterative learning for systems transformation. The final principle is that transformational leadership, i.e., innovation, is required for systems transformation.

Interdisciplinary = collaborative

The systems principle of collaboration manifests in an interdisciplinary vision of the actors and systems involved in addressing the question of school food. Framing an understanding of school food by linking together literature on school food systems, food policy, school gardens, school health promotion, public health theory, and systems thinking or ecological literacy allows a de-fragmentation of narratives that, when joined together, potentially allow for transformation of multiple parts of the system. The concept of the "school food system" addressed through this research was inspired by the definition developed by the School Food Environment Assessment Tool (SFEAT), which uses Comprehensive School Health framework components to frame the school food system in order to discover the extent to which schools have integrated healthy and environmentally sustainable food initiatives (Black et al., 2015). Within my own research, this new approach led to the use of an expanded map of school food system stakeholders. By overlaying a collaborative framework on the analysis of the school food system in NL, strategic areas for collaboration and integration were identified. Issues such as educational restructuring and unhealthy food environments play critical roles in school food programs and policies. While there are diverse supports available to and accessed by schools, there is a lack of strategic integration and systemic accountability regarding how health and food system resources function in individual schools to effectively confront consistent barriers.

Innovative = new tools, new concepts

While previous research in this province has addressed the effects of social and economic transformation on health and food systems, these discussions have not been connected directly to investigations of school food (Dolan et al., 2005; Keske, 2018; Parrish et al., 2007). The principle of transformational leadership manifests in this systems-inspired methodology by asking novel questions which attempt to push the boundaries of what factors are relevant when we discuss school food. This study of the system of school food in the province of NL can be understood as research that provides a site to create, imagine alternatives, and attempt to repair the distance between unecological and ecological approaches to this setting in society (Gruenewald, 2003). When school food is understood as a system in need of transformation, research can be positioned to help propel this transformation; this has been described by Rojas et al. (2011), who use a research process that relies on collaboration to identify opportunities to generate knowledge, and to devise and implement locally appropriate action to create desired change. Applying an alternative lens to the question of school food helps to narrate some of the tensions in the NL school food system. The best example of existing tensions is the discovery of barriers to the consumption and integration of fish in schools.

This is significant in a place that has dramatically transitioned from the "land of the fish" to a site where cod fish is an endangered species that interestingly (due to food allergies) has been banned in a majority of schools (Davis, 2014, p. 696). Another issue emerging at the time when I am completing my dissertation is the impact of COVID-19 on school food. I observe in my own children's school that the lunch service has been cancelled, and innovative approaches such as the farm to cafeteria local food salad bar are advised to halt at this time (Government of Canada, 2020). These new barriers occur at the same time that changes brought on by the COVID-19 pandemic will increase food insecurity (Food Secure Canada, 2020), and the emergence of the COVID-19 virus itself has been linked to problems with our food system (Wallace, 2016). The interconnectedness of these two issues further justifies approaches to school food research that can cross boundaries and support positive adaptations to systems that every day appear more broken.

Conclusion

This description of the study of school food in NL addresses the potential problem that perhaps our ways of knowing about school food are too entrenched. Thus far, the predominant approach to school food intervention and research has failed to respond to a larger critique that the education system (including research generated through it) has been incompatible with an approach to school food systems that critiques the fragmentation of social practices on a larger scale. The alternative approach described here involves critical school food systems pedagogy. I aim to demonstrate how a systems-minded methodology offers a new way to read and interpret the school food system in the province of NL. On a larger scale, this research about the province of NL can help to inform ongoing and emerging conversations about school food systems in Canada and throughout the world. This research contributes to our understanding of how fragmentation of knowledge characteristic of the current NL school food system can lead to a reduced ability to perceive and account for larger trends, which come into focus when a longer time frame and wider lens are used.

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