

Understanding School Culture and Its Relation to Farm to School Programming

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ABSTRACT

Purpose/Objectives

The number of Farm to School (FTS) programs is increasing across the United States. These programs employ a variety of school-based initiatives including, but not limited to, local procurement for the school nutrition program, nutrition education in the classroom, hands-on and garden-based learning, and community partnerships with local farmers. The aim of this study was to explore the relationship between school culture and FTS efforts.

Methods

For this qualitative research study, semi-structured interviews were conducted with ten Vermont principals of PK-12 public schools where at least 30% of students received free or reduced-price lunches. Interviews were digitally recorded, transcribed verbatim, and open-coded by the researchers through constant comparative analysis to identify emergent themes.

Results

Interviews yielded three major themes: (1) relationships are foundational to support educational innovation and experimentation, (2) the value of engaging in FTS must be experienced and communicated by a broad swath of the school community, and (3) prioritization of FTS leads to embeddedness into school daily life and practice. Success of FTS programming was often attributed to foundational relationships at the school that supported innovation. The value of engaging in FTS must be communicated in order to gain funding and school policy support from parents, school boards, faculty, and staff.

Applications to Child Nutrition Professionals

This study connects FTS programming with school culture and illustrates that FTS is successful when efforts are integrated with school-wide initiatives. Child nutrition professionals play an essential role in these areas. Strong communication of the value of FTS can lead to support for policies and funding that can sustain programming beyond the passions of any one individual person. For benefits such as increased fruit and vegetable consumption to be realized, FTS must be communicated, experienced, and prioritized.

Keywords: Farm to School (FTS); school culture; school leadership/principal; value; partnerships (collaboration)

INTRODUCTION

Farm to School (FTS) encompasses a number of strategies and practices that integrate local, healthy foods, such as fresh fruits and vegetables, into a school. FTS programs are growing around the country, promising to unite a variety of school-based initiatives; such as professional learning, student behavior programs, and wellness initiatives. Scholars and practitioners have defined three

main ways FTS is carried out: “cafeteria improvements, hands-on nutrition education, and community involvement and support” (Beery & Joshi, 2007), or the “3 C’s” of Cafeteria, Classroom, and Community (Vermont FEED, 2017). While FTS has many possible benefits, including reduction in childhood obesity and economic development, (Aftomes et al., 2011) it is important to explore which factors ensure success of the program (National Farm to School Network, 2017).

Two studies have suggested that a school's culture is the most powerful predictor of success in implementing new educational strategies (Anderman, 1991; Darling-Hammond & Sclan, 1996). School culture, according to Stolp and Smith (1995), includes both the explicit and implicit values, traditions, and messages of a school. School culture is a unique sub-community expressed in the day-to-day affairs of each school (Meier, 2012; Stolp & Smith, 1995). Educational value measures including teacher behavior, which impacts curriculum, school climate, and student achievement have been linked to school culture (Meier, 2012).

School culture often goes unexamined, leaving the faculty and staff unaware of the influence it has in guiding professional decision-making and thus programming (Joseph, 1999). Previous research identified employee motivation and support among food service professionals as key to successfully implementing FTS (Stokes & Arendt, 2016). This study sought clearer examples of how school culture can be shaped in order to create such supportive environments.

In Vermont, FTS has permeated the fabric of schools and communities, making the area an ideal case study. In 2017, 89% of K-12 schools reported having a FTS program (Vermont Agency of Agriculture Food & Markets, 2017). A recent evaluation by PEER Associates of the Vermont Food Education Every Day (VT-FEED) Northeast FTS Institute noted that 9 out of 10 schools participating in the program identified improvements in school culture.

Additionally, the National Farm to School Network has put out an explicit call to researchers to further understand school culture as an outcome, indicator, or measure of FTS. The aim of this study is to provide a greater understanding of the intersection between school culture and FTS efforts through the research questions: “How does school culture support the development and sustainability of FTS programs?” and “How does engaging in FTS affect school culture?” By understanding the connection between FTS and school culture, school nutrition professionals, teachers, and administrators in schools can better adapt and align their efforts to help ensure that interventions are sustainable and provide maximal benefit to students.

METHODOLOGY

For this qualitative research study, the research team first developed a proposal, interview guide, and consent form. The interview guide was developed by reviewing the literature on school culture and FTS, and then piloted with colleagues and experts in the fields of education and evaluation, after which final adjustments were made. After obtaining Institutional Review Board approval, participants were recruited from a list of schools that had taken part in the VT-FEED FTS Institute within the previous five years and had a population with over 30% of students receiving free or reduced-price lunches. Principals were targeted for this study as they are in communication with all stakeholders in the school including child nutrition professionals, teachers, families, and farm-to-school organizations, and, thus are able to speak to school culture from a variety of viewpoints. Moreover, principals play an essential role in developing school culture (Turan & Bektas, 2013). Inquiries were sent to 16 school principals that together were representative of the demographics of Vermont, including schools from around the state with a

range of student enrollments in both urban and rural settings. Ten principals responded affirmatively to the request to be interviewed via telephone.

Sample

Ten school principals, three identifying as female and seven as male, were interviewed from schools representing nine different Vermont counties; one interview was conducted jointly with a principal and FTS coordinator. The tenure of the principals in their current school ranged from 2-22 years, with a median term of 5.5 years, which is above the national average of 3-4 years (Hull, 2012). The population of students receiving free and reduced-lunches ranged from 30-81%, with a median of 54%, which is above the 2016 state average of 44.19% (Vermont Agency of Education, 2016).

The specific programming at each of the schools varied, but all included initiatives that addressed the “3 C’s” framework of FTS: classroom, cafeteria, and community. Most schools included school gardening as a component, and using local produce from the garden and/or neighboring farms was a goal for the school nutrition programs. Nutrition education was not an explicit component of every FTS program in the classrooms, but some form of food or agricultural education was being conducted by teachers in each of the schools interviewed. All principals stated that community partnerships with farms, families, or businesses were part of their FTS program.

Data Collection

School principals were called via phone and were first asked to speak about their overall FTS program: who is involved, how success is defined in their FTS program, and what their challenges have been. Principals were then asked to describe the overall school culture, which was defined as “the way teachers and other staff members work together and the set of beliefs, values, and assumptions they share” (Great Schools Partnership, 2014). Finally, informants were asked to share a story about how the FTS programming reflected school culture and if there were any changes to school culture that could improve FTS efforts. Researchers used regular meetings to discuss interviews, identify emergent themes, and maintain consistent interview strategies. Interviews were digitally recorded, transcribed verbatim by an external service, and reviewed for any errors by the researchers.

Data Analysis

The 10 transcripts were open-coded independently by the two researchers. The open codes within and across interviews were compared and synthesized by both of the researchers in regular meetings. Coding involved a continual process of review and recoding until general themes were developed across all transcripts through constant comparative analysis of the codes and extant literature (Glaser 1965; Strauss & Corbin, 1990). Transcripts were reviewed in their entirety to verify themes and identify quotes. To protect the privacy of interviewees, pseudonyms were used to replace any identifiers in the data.

RESULTS AND DISCUSSION

This study helped determine how school culture supports the development and sustainability of FTS programs and how engagement in FTS can reflexively affect school culture. Interview transcripts yielded three recurring themes: (1) relationships are foundational to support educational innovation and experimentation, (2) the value of engaging in FTS must be experienced and communicated by a broad swath of the school community, and (3) prioritization of FTS leads to

embeddedness into school daily life and practice (See Table 1). Relevant quotes supporting these themes are presented below.

Relationships are Foundational

Participants acknowledged FTS required added planning and experimentation by faculty and child nutrition professionals, and as such, relationships were key in creating a healthy, trustworthy school culture that embraced FTS. When asked how her school's culture shifted since engaging in FTS, Janet said, *"It's not as a result of engaging in FTS. FTS is a component... All this stuff is because we're engaging in relationships and community building and we're putting that first."* Internal relationships within the school and district were essential for FTS to thrive and for students to have opportunities to make connections between what they were learning and what they were eating. Students in Lydia's school grew produce in raised beds as part of their curriculum and brought the produce to child nutrition professionals. She explained how this helped build relationships between students and child nutrition staff: *"Instead of just seeing them as the cook or the people in the kitchen, they're able to have more of a conversation of what they're bringing to them and why they're bringing them these items."* Lydia also noted that engaging with child nutrition staff helped students better understand the school's menu, commenting, *"That's where it starts, having that conversation. Each party understanding the why's."*

Michael spoke to the relationships that child nutrition professionals have with students, families and the community. *"The relationship that the people who are involved with food services have with kids is good and dynamic. By that I mean people know who the people are that work in the kitchen....It's embraced in our community."* Thomas said, *"I have a kitchen staff who is really getting along well with students"* which makes the cafeteria *"an inviting place for kids to hang out."* This led students to feel safe and trusting of the child nutrition staff in a way that allows for easier acceptance of new foods.

Other principals commented on community partnerships, specifically with farms, that aided in curriculum integration and family well-being. Catherine shared, *"We scheduled a few days where kids went up [to a partner farm] and harvest foods that they had planted themselves...Then from there, the [Community partner] had organized crop shares for our families for eight weeks."* Strong relationships with farmers helped teachers and students access relevant and meaningful content and gain hands-on skills. Child nutrition professionals in relationship with farmers helped them source local food. Lydia stated that relationships with community partners and other schools were vital to her school's FTS success: *"We're making an extension; we're making connections with others schools, other people. This work cannot be done in isolation."*

Strong internal and external relationships were also characterized by celebration of efforts at multiple levels. Acknowledging successes was a key component in building trust and a culture of innovation and experimentation. Thomas explained: *"We're not doing anything magical here; it's just taking advantage of the fact that you have smart people working with you. When they have a smart idea, have them define the goal and then get out of their way and let them do the work."*

Celebrating successes bolsters a culture of innovation. Similarly, Charles described the gains in confidence within his staff when they acknowledge student success, encouraging them to learn more about FTS and take it on as their own. He shared, *"The adults are becoming educated, and as they become educated, they're caring more."* By acknowledging the successes achieved at various levels, a positive feedback cycle develops that strengthens a culture of support.

Value of FTS Must Be Experienced and Communicated

In order for FTS to flourish, the value to stakeholders must be experienced by diverse members in a school and communicated to the extended community. While specific goals of engaging with FTS depend on the school community, the National Farm to School Network reported that schools engage in FTS so that students develop positive attitudes toward healthy, local foods (National Farm to School Network, 2017). It is important to note that FTS is not standardized, but is characterized by “heterogeneous and innovative practices” that reflect the needs and resources of the particular school and community (Conner et al., 2012). Not surprisingly, many principals spoke to engaging in FTS because of the academic benefits to students through experiencing hands-on, place-based learning and providing leadership opportunities. Brian talked about how the hands-on nature of FTS has allowed students, especially those who struggle in a typical classroom, to engage in learning. *“If we had tried to do that [FTS] in a traditional classroom, there’s always a handful of kids who either aren’t going to get it or they’re going to get frustrated and then it becomes a behavior issue, but... when they’re seeing it, feeling it, and touching it, they are able to be successful.”* He elaborated that FTS reaches across student groups, saying *“When we do those activities, we see them be successful or more successful, all kids... not just the ones who struggle... it’s all kids that we see benefits for. That’s really why we’re doing it.”*

In addition to academic outcomes, students experience benefits through the child nutrition program. Catherine talked about the value to the whole child such as *“their basic needs met,” “getting exercise,” “putting nutrition in their bodies,”* and supporting *“the social and emotional needs of the kids”*. She also noted the role the community plays in sharing the value of FTS, having said that a visit to a farm *“was probably one of the best trips that they’ve [the students] ever had, and we’re a fairly poor community, so we don’t have access to a lot of things that other kids have for trips.”*

Furthermore, the value must be clearly and regularly communicated to multiple stakeholders in the school community and beyond. FTS value is communicated in various ways from newsletters and daily announcements to policies and hiring practices, as indicated by the FTS coordinator that participated in the study along with their principal.

Several principals said FTS becomes part of the school culture when the inherent values of FTS mirror the values of the community, such as raising healthy children and developing pride in sustainable agriculture. Lydia explored the notion of FTS being essential to her school’s identity by commenting, *“When you’re looking at FTS and when you’re looking at our school culture, our students realize that’s who we are and they should be really proud of that.”* Janet talked about the importance of communicating the value FTS to her school board: *“The year after we came back with that [FTS action plan], the school board rewrote the vision and mission and included the stewardship language in the mission of the school.”*

Not only was FTS seen as a reflection of a school’s values, but also a reflection of Vermont values. This notion was echoed by several principals who talked about FTS being a Vermont value including supporting the health, well-being and growth of a thriving entrepreneurial food and farm sector. John noted, *“...people in Vermont have pride in Vermont, I think, and have pride in Vermont products...”* He noted that FTS has promised to *“promote a sense of pride in who we are and what we are, and to promote good healthy nutrition, I think there’s tremendous potential for that.”*

Prioritization of FTS Leads to Embeddedness

As relationships developed among stakeholders in a school community the FTS value was

experienced, FTS became embedded into school culture. Embeddedness, or the nature of being fully ingrained in a school, is recognized when FTS is explicitly connected to other initiatives, integrated into daily practice, and supported through policies and resource allocation.

A policy that clearly connects school culture, values, and relationships with FTS is hiring protocols. Multiple principals indicated that while staff turnover is undesirable, they used open positions to embed FTS in job criteria. Charles relayed that a previous child nutrition director (CND) with a fixed mindset against FTS was a “*roadblock*”. When the CND retired, the hiring committee strongly prioritized candidates who supported FTS programming. When the new CND was hired, Charles described it as “*a linchpin setting us free... the cafeteria is totally on board... they’re coming around in practical strategy.*”

Budget expenditures were another indication of FTS embeddedness that came about by making FTS a central part of a school’s identity. Thomas indicated that his school board supports the \$30,000 FTS budget allocation because “*part of that is that there’s a plan... we made it a priority to hire someone to manage it [the greenhouse and garden], so that it’s not dependent on teachers giving up their free time.*” Other principals talked about providing planning time and/or stipends for educators to integrate FTS concepts into curriculum. Brian talked about offering stipends for FTS committee members to honor the time spent above and beyond normal contract hours. “*We have some dedicated [FTS] staff and they are paid a nominal fee to do it. They would do it anyway because it is a passion of theirs... I give them that small stipend just to say ‘thank you’.*”

In addition to stipends, principals supported FTS efforts in their schools by allocating resources for professional learning of all staff, from food service trainings to professional development on connecting academic standards with FTS. Lydia spoke to how her school has created time for staff to plan FTS curriculum, “*... retreats really help to center folks around what we’re working on as a school community.*”

Nicolas spoke to a common challenge related to the integration of FTS, “*It’s not necessarily farm to school ... It’s more of a challenge of trying to make it fit with everything else.*” He noted that his school assembled a FTS committee to help plan activities because FTS “*is one sliver of what a teacher has to do in the course of their year... we have the farm to school committee that does a lot of that work for the teachers.*” Another strategy to make FTS easier to use and get teachers on board with school-wide taste tests is providing support staff. Catherine’s school “*assigned an extra support person for every classroom so the teacher had help... then we had it all set up so that every class came out organized.*” This increased the willingness of teachers to engage in FTS with the child nutrition staff. George commented how his school has embedded FTS into their curriculum, “*Teachers just saw how valuable it was for kids ... now, through curriculum development ... 80% of the time, we make sure when we do some kind of activity, it has a standard or at least an academic objective connected to it.*”

Discussion

FTS becomes embedded into a school’s culture when planning and experimentation are supported through relationships and when the value of FTS is experienced by and communicated to the school community. School culture has been linked to a variety of educational value measures including teacher and student behavior (Meier, 2012), and this study now demonstrates the link between a school’s culture and success in integrating FTS.

Successful FTS programming was attributed to foundational community partnerships and internal relationships with child nutrition professionals, teachers, and other school staff that supported

innovation. Many principals indicated that FTS programs aligned with their school and community culture that put “what’s best for students” at the heart of their practice. While schools engage in FTS for a variety of reasons, foremost for many was seeing the value for students. Similar to Joshi and Azuma’s (2009) findings, the value of FTS to students included positive attitudes about healthy foods through increased knowledge and access. Additionally, principals spoke to the academic value to students through hands-on, engaging curriculum that was part of FTS programming. These data show the need to go beyond the focus on academic value of FTS for students and illustrates the need for further communication about the other impacts on students, including engagement and overall student well-being.

While none of the principals specifically commented on their own role as champions, principals can play a key role in embedding FTS into school culture by (a) supporting planning and reflection time for all staff, (b) advocating for funding towards FTS, (c) evaluating candidates for new positions based in part on their willingness to engage in FTS, and (d) communicating school values internally and to the larger school community. As principals prioritized FTS by creating these conditions and allocating resources, FTS became further embedded in the school’s culture, highlighting the crucial role principals play in the staying power of FTS programs.

Most principals spoke about FTS being aligned with existing values of the school and/or community. Stolp and Smith (1995) reinforce that if an initiative like FTS is to become embedded into a school and benefit students and the community, it must be supported by the values, traditions, and messages of the school. The value and purpose of engaging in FTS must be communicated in order to gain funding and policy support. FTS needs to be part of a larger system of policies and activities supporting healthy food choices for children, since simply bringing in local food will not lead to behavior change in students (Joshi, Azuma, & Feenstra, 2008; Aftomes et al., 2011). Strong communication of the value of FTS can lead to support for policies and funding that can sustain programming beyond the passion of any individual.

Limitations

Every effort was made to ensure a diverse geographic representation from Vermont, but the specific context of Vermont’s values around food and agriculture may be a limitation for this study having broader national implications. Additionally, many Vermont schools, even those in cities, have smaller student populations than elsewhere in the US, and ethnic diversity in rural schools is minimal. As such, the ability to align internal and external communications within a smaller school community may vary greatly from districts with larger and more socioeconomically and ethnically diverse communities.

CONCLUSIONS AND APPLICATION

While findings from this study build upon previous research that underscores the importance of school or organizational culture as being essential for “innovation success” (Buschgens, Baush, & Balkin, 2013), there has been little, if any, mention of the connection between FTS and school culture. This study adds to the understanding of how to make FTS sustainable so that its many benefits for students and community can be realized.

To develop and grow FTS programming, a variety of recommendations by the researchers are included here and summarized in Table 1. It is recommended that schools plan and implement regular communication about their FTS programming. This recommendation is in line with a previous study in which school districts indicated that increasing outreach was a key lesson learned in implementing their FTS program (Hong, Benson, Russell, Powers, & Sanderson, 2017).

Communication should highlight the values of FTS to a variety of stakeholders, including families, school board members, staff members, and district administration. CND's can use already in-place means of communication such as a website, social media, and newsletters to share stories about local farm partnerships and new recipe taste tests.

To gain administrative support where it is lacking, students, faculty, and child nutrition professionals can provide principals and other administrators with opportunities to learn about and experience the value of FTS programs by inviting them to dine with students and see students engaging in hands-on learning experiences. CND's willing to invite outside personnel into the cafeteria to experience both the challenges and celebrate the successes of their staff's efforts can likely generate greater empathy and support for the child nutrition program. Goal-setting with staff and department heads ought to be tailored to meet individual needs and comfort level with FTS programming. Principals and CND's should constantly acknowledge small successes along the way, with an eye towards continual, incremental growth.

Table 1. Recommendations for School Personnel to Shift School Cultural Practices into Alignment with Farm to School Goals

Relationships are foundational	
Goal-setting with staff tailored to meet individual needs and comfort level with FTS programming	CNDs, principals, staff department heads
Provide principals and other school administrators with opportunities to learn about and experience the value of FTS programs in cafeteria and classroom	CNDs, teachers, FTS committee members
Develop relationship-building strategies within the school and with the larger community as a foundation for effective partnerships	CNDs, principals, teachers, FTS committee members
Value of FTS must be experienced and communicated	
Communication that highlights the values of FTS to a variety of stakeholders, including families, school board members, staff members, and district administration.	CNDs, principals, teachers, FTS committee members
Use already in-place means of communication - website, social media, newsletters - to share stories about local farm partnerships and new recipe taste tests	CNDs, principals, teachers, FTS committee members
Plan and implement regular communication about their FTS programming	CNDs, principals, teachers, FTS committee members
Language around FTS programming should be aligned to reflect the values of other educational and/or community-supported initiatives	CNDs, principals, teachers, FTS committee members
Prioritization of FTS leads to embeddedness	
Advocate for planning and reflection time, stipends and committees to support integration of FTS programming.	CNDs, teachers
Acknowledge small successes along the way, with an eye towards continual, incremental growth.	CNDs, principals, staff department heads

Champions of FTS can advocate for planning and reflection time, stipends and committees to support integration of FTS programming. Principals were keenly aware that while their own support for FTS was strong, FTS was often one of a multitude of initiatives that teachers and child nutrition professionals must balance in their work. It is therefore critical to have dedicated time during contract hours or dedicated funds that support staff and faculty to plan for FTS

programming. This is supported by Hong et al. (2017), who found that lack of dedicated personnel resources was often a challenge for schools wishing to strengthen their FTS program. In turn, if administrators and school boards receive regular reports and testimony from students on the value of FTS, they will be more likely to allocate funding towards FTS programming. Therefore, gathering and documenting stories is another key action to support FTS.

FTS cannot happen without support from the larger community, as connections to local agriculture and community-based learning experiences are a cornerstone of FTS programming. School leaders, teachers and CNDs should develop relationship-building strategies within the school and with the larger community as a foundation for effective partnerships. Ensuring CND representation on a wellness committee and/or equipping the committee with knowledge of the child nutrition program is essential for holistic FTS implementation. Language around FTS programming should be aligned to reflect the values of other educational and/or community-supported initiatives. This may include a focus on decreasing hunger, increased consumption of fruits and vegetables, knowledge of agricultural practices, and support for the local economy.

Future Studies

This study was conducted within the specific context of Vermont public schools. Additional research would benefit from interviews with principals from a diverse representation of schools across the United States. Furthermore, this study solely spoke with principals, as they were seen as leaders in the development of a school's culture. Additional insight could be gained by interviewing the faculty, child nutrition staff, community members, and students from the school communities involved in this study to see how perceptions of FTS and school culture vary across stakeholders within a single school or district. This could lead to new insights on how to promote FTS and embed it within the sub-communities of a school.

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BIOGRAPHY

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