UNDERSTANDING STAKEHOLDER VIEWPOINTS FOR FOODSERVICE LOCALIZATION: THE POTENTIAL OF THE LEADERSHIP VIEWPOINT

Josephine Greer, MDiet[1]; Miranda Mirosa, PhD[2*]; Heather Spence, PhD, RD[3]

[1]Dietitian, University of Otago, Dunedin, New Zealand
[2]Senior Lecturer Food Science, University of Otago, Dunedin, New Zealand
[3]Professional Practice Fellow, University of Otago, Dunedin, New Zealand

ABSTRACT

Localization has been identified as an area to improve foodservice sustainability. We asked the research question "What are the dominant shared stakeholder viewpoints about local food in a college foodservice and how might an understanding of these be used to help management localize the foodservice?"

We used Q methodology to group stakeholders (students, foodservice manager and staff, college staff and food suppliers) into four dominant shared stakeholder viewpoints. "The Leadership Viewpoint" showed the capacity to drive foodservice change. The study explores "The Leadership Viewpoint" of stakeholders in a college foodservice setting, which other dietetic professionals can compare to their own organizations.

Keywords: localization, leadership, dominant shared viewpoints, foodservice

INTRODUCTION

International foodservice companies, as well as university and hospital foodservices, are leaders in implementing sustainability policies and practices. Localization, the purchase of locally grown and produced food (Chamberlain, 2011; Hamilton, 2010), has been identified as an area to develop evidence-based guidelines and practices, and for dietitians, dietitian assistants and foodservice professionals to advocate for sustainability.

Consumption patterns are changing to source more local foods for their beneficial environmental and social impacts (Hamilton, 2010; Park & Reynolds, 2012; Wilhelmina, Joost, George, & Guido, 2010). Research on global and local food has identified the need to consider economic, environmental, and social impacts when weighing global-local food decisions (Wilhelmina et al., 2010). These three impacts are now discussed in turn. Firstly, in terms of economic impacts, local food systems are praised in the literature for increasing employment opportunities and the proportion of profit for producers (Strohben, 2005). Consumers reliably pay more for locally sourced products if they believe these benefits (Chamberlain, 2011), or that local food improves overall food quality (Park & Reynolds, 2012). Local food can enhance a foodservice's reputation and give a competitive advantage through marketing and corporate responsibility (Payne & Raiborn, 2001). Willingness to pay for local food is crucial as this provides capital for localization (Park & Reynolds, 2012). If consumers are not willing to pay more for local cost offsetting activities such as waste reduction, increased fees or purchasing less kitchen equipment, can make localization cost neutral. A recent report for the United States Department of Agriculture found economic development attributable to local food systems to be small, unmeasured or offset by public investments into their establishment (Martinez, Hand, Pra, et al.

2010). However, many foodservices are large organizations, and any change to their practices will have downstream economic effects on their communities (Weaver-Hightower, 2011). Institutional foodservices provide a new market for small producers to expand. Critics argue local food production is inequitable as it encourages small farms producing for an elite group (Malcolm, 2014). There is a need for supply chain infrastructure for bulk purchasing. In America, intermediated food systems (e.g. through a large foodservice) provide over three times the profit for local producers compared to food marketed through direct-to-consumer food systems (Low & Vogel, 2012).

Secondly, the literature also discusses a number of environmental impacts of foodservice localization. The food sector is affected by climate change and is a large contributor to greenhouse gases (The Culinary Institute of America, 2014). Literature suggests that although local food can reduce greenhouse gas emissions from food miles, it does not necessarily ensure sustainable food systems (Edwards-Jones, 2010). Because the majority of greenhouse gas emissions come from production rather than transport, sustainably produced imported food can have less of an environmental impact than unsustainably produced local food. Therefore, it is important that the carbon footprint of the entire lifecycle of a product is considered. If locality takes priority over the total environment impact at a policy level it leads to unforeseen implications (Edwards-Jones, 2010). Research in university foodservices has found environmental impacts are not a key driver when buying local compared to price and nutrition quality (Masset, Soler, Vieux, & Darmon, 2014).

Thirdly, in terms of the social considerations of foodservice localization, research shows that consumers and producers are looking for a sustainable product in a broader sense than just food miles (Chamberlain, 2011). Customers are now seeking fair trade products for ethical working conditions, humanely raised animals for animal welfare and organic products for ecologically sound food. Consumers see chefs and foodservice staff as experts in food procurement (The Culinary Institute of America, 2014), so they have the responsibility to make good decisions for their consumers. The goals of localization are just as important to focus on as locality itself when understanding attitudes to local food. Universities can be market leaders in developing local, sustainable and social food systems and give suppliers support and credit for doing the same. As part of an educational institution, university foodservices have a responsibility to support and teach sustainability while making their organizational values visible to students (Weaver-Hightower, 2011). Foodservices can be advocates for this as they shape what consumers want by the products or services they make available to them. A Harvard University study illustrated that certain areas of sustainability were not understood by students and endeavored to inform them for stakeholder engagement (Harvard Dining Services, 2008). Fostering student connections with food producers and suppliers has facilitated

*Corresponding Author: Phone: +64-3-479-7953; E-mail: Miranda.mirosa@otgo.ac.nz

community connectedness for many college foodservices (Chamberlain, 2011; Strohbehn & Gregoire 2005). Foodservice staff gain morale and work satisfaction from relationships with local producers (Buck, 2007) and the creativity that comes with using local seasonal ingredients on a menu (LaBarre, 2014). Ownership of local food gives a taste of the region that is unique and something for the foodservice to be proud of. Foodservice is becoming less about productivity and more about creating a sense of community (LaBarre, 2014).

Food and nutrition managers have an important role in procuring large quantities of food and this puts them in a position to advocate for and be leaders in food system sustainability (American Dietetic Association, 2007; The Culinary Institute of America, 2014). Though leaders are not necessarily managers, it is a shared responsibility (McCollum, 2014) and any stakeholder in an organization can have the vision and innovation required to be a leader and drive change within that organization (Boyce, 2014; Bushe, 2005; Posner, 2002). Civic dietetics highlights the interaction between producer, distributor and consumer to mediate the environmental and social impact of the food system (Wilkins, Lapp, Tagtow, & Roberts, 2010).

Foodservice researchers and dietitians need to identify and work in consultation with those who hold the viewpoints of leaders and are able to achieve the goals of civic dietetics. The purpose of this study was to explore the diversity of stakeholders' dominant shared viewpoints on localization in a college foodservice. This study used a standardized methodology across a spectrum of stakeholders to reveal dominant shared viewpoints and identified "The Leadership Viewpoint".

METHODS
Q-Methodology
We used Q methodology, a powerful method for exploring viewpoints as it combines the strengths of qualitative and quantitative paradigms (Brown, 1996; Cross, 2005). This correlational methodology has its origins in psychometrics. The basic method involves collecting data from a group of participants who sort a set of statements about a particular subject, the subsequent inter-correlation of these sorts, and factor analysis (Watts & Stenner, 2014). The comparison of sorts across participants enables the identification of statistically similar participant viewpoints that can then be interpreted using rich qualitative data. For a good overview of this methodology the reader can refer to Watts and Stenner (2014) or Cross (2005). Q methodology contrasts with the more traditional correlational research method used to measure attitudes, R methodology, in both its data collection methods and analyses. The biggest distinction between the Q and R approaches is that in R research, respondents are subjects and questions are variables and in Q research, subjects and variables are inverted so that the subjects of the study are the statements and the variables are the people who do the sorting. Thus in this inverted factor analytic study, the persons working in or eating in the foodservice are the variables that load onto the emergent factors that represent shared views on purchasing local foods and beverages with attention to sustainability.

Q is a powerful method for determining attitudes around controversial topics where it is hard to measure people's opinions and is an effective methodology for informing policymaking and its implementation (Cross, 2005). It has successfully been used for environmental, political, health and sustainability issues. Other applications of Q methodology in dietetics are Oring and Plihal's (1993) study on students' perceptions on dietetic education and Sutnick's (1981) investigation of nutrition attitudes.

Arendt et al detail the use of qualitative research in foodservice organizations and its challenges (2012). The common methodologies used in this context are ethnographic observatory studies, interviews and surveys. We identified that different surveys are often used for suppliers and foodservice managers and as a result, review articles on local food purchasing compare data from various sources. Primary standardized research methodologies are underused in local food research in foodservices. Also, college foodservice studies to date have not included students as the consumer and so have failed to identify the culture of the college foodservice as a complete system of suppliers, producers (foodservice producing the meals in this context) and consumers (Wilkins et al., 2010). To date there is no comprehensive multi-level stakeholder study assessing attitudes to local food in a college foodservice. In Q methodology, a comprehensive set of statements is generated about a topic (a Q set concourse) and participants are asked to sort the statements in the Q sort activity. All stakeholders do the same Q sort activity making it a standardized approach for understanding viewpoints (Watts & Stenner, 2014). As such, Q overcomes limitations of the aforementioned common methodologies that have been used in foodservice research to date.

Development of Q Set Concourse
First, we identified the concourse around localization. The aim in this step was to produce a list that was sufficiently representative of the "universe of interest" (Brown 1996) about the local food topic. Our aim was to produce a concourse of text that contained all of the possible statements (negative, neutral and positive) that participants might make on that topic. The size of a concourse list varies from one study to the next but often contains over 100 statements. We generated a pool of 163 short stand-alone verbal statements for our concourse. This was done by extracting positive, neutral and negative statements about local food from academic literature and popular media, as is typically done in Q methodology. The academic literature surveyed for ideas was primarily the college foodservice localization literature (e.g. Chamberlain, 2011; Macken, 2012; Park & Reynolds, 2012). A variety of popular media resources which included editorials and commentaries, internet sites and personal web logs was also accessed. Although additional to the usual requirements of Q methodology, we also collected primary data at this stage to generate further statements to those found in the academic and popular press literature. We deemed this additional step necessary to capture the diversity of attitudes amongst the varied college foodservice's stakeholders; consumers, suppliers and producers. We conducted one-on-one semi-structured interviews that elicited opinion statements around local food, with small number of stakeholders with different roles in relation to the college (n=9). Interviews were conducted in a tutorial room adjacent to the college kitchen and dining room. We asked all stakeholders how they define local food, what they perceived as the college's incentives and barriers to buying local food and how receptive they thought the college would be to localization.

We adapted the concourse matrices by other Q methodologists (Barry & Proops, 1999; Kraak, Swinburn, Lawrence, & Harrison, 2014; Oring & Plihal, 1993; Shepard & Furnari, 2013) to select a final reduced Q set without bias. We sorted the statements into six themes (policy, social responsibility, New Zealand identity, economic, environment, and quality) and then placed each theme in the matrix (Figure 1). The vertical axis sorted statements by sub themes to help remove overlapping statements. The horizontal axis sorted statements that were positive, neutral and negative towards local food, to help achieve a balance of opinions across the final Q set. We chose a final Q set of 42 statements, within the 40-80 statement optimal range for Q methodology studies (Watts & Stenner, 2014), to represent the

Social Responsibility	+ve	neutral	-ve
Choice	The college should buy more local food if it wants to without having to consult students	**The college should buy more local food if the majority of students agree to this**	I don't care if the college buys more local food or not.
Ethics	The college should meet its social responsibility to source local food	The college should not change its purchasing based on ethical values	**The college should ignore the self-righteous notion that local food is best**
Trend setting	**The college should become a market leader and show foodservices can support the 'Local Food Movement'**		The college does not need to source local food as its competitors are not yet doing this

Figure 1. Excerpt showing statements sorted by concourse theme (e.g. social responsibility). Rows are labeled with a topic title and columns are labeled according to whether the statements are positive, neutral or negative in orientation towards local food. Statements that were selected for the final Q set are in bold.

breadth of perspectives and balance positive, negative and neutral perspectives. We printed these statements onto laminated card. A pilot group (n=10) checked statements for balance and clarity (Watts & Stenner, 2014). We selected pilot participants who were supportive of, against and indifferent to local food. These individuals had no or little relationship to the college and none were included as participants in the research. Pretesting of the statements ensured we provided a balanced Q set so that individuals with a spectrum of clearly different opinions were able to express their viewpoint (Watts & Stenner, 2014).

Study Participants

Our participant recruitment was strategic as Q methodology studies aim to engage with all stakeholders who have a viewpoint worth considering. There were 47 participants in our study, which falls within the recommended participant number range for Q method (Watts & Stenner, 2014). We selected suppliers (fruit and vegetable, meat, dairy, dry goods), foodservice and management staff (foodservice manager, financial manager, college manager and cooks), and students (including residential assistants) who live on site at the college as participants. Each group had different relationships to the college foodservice. A list of suppliers was obtained from the foodservice manager. Suppliers were contacted by telephone and asked to participate in the study. All foodservice staff were asked to participate by the Foodservice Manager on the researcher's behalf. The top three members of management were approached in person. Students were recruited via an advertisement that was posted on the college's Facebook page. Participant selection was therefore purposeful, with participants selected to represent diverse perspectives about the study topic. Other selection criteria ensured a diverse participant set. For example, a relatively even proportion of males and females, various ethnic groups, a diverse range of students across humanities, business and science, and staff in a varied range of job positions). All the suppliers who expressed an interest in participating were included.

Procedures

Our study was completed in Dunedin, New Zealand, in a residential college of 187 first year university students. The college's in-house foodservice is funded by student fees and operates on a break even budget. We conducted a Q sort activity with participants that consisted of three stages; a pre-sort questionnaire collecting relevant socio-demographic data, the Q sort and a post-sort interview. The pre-sort questionnaire included age, gender, ethnicity, place of birth, study discipline or job at the college, as well as Likert scales that

measured how participants felt they identified with local region and sustainability concepts. We asked participants to sort statements onto the Q sort grid, shown in Figure 2.

After the sorting activity, we then interviewed participants on reasons for their placement of the cards, focusing on salient items at the extremes of the grid, items they expressed interest in or items that seemed out of place. Participants were advised that they could move statements within the grid throughout the post-sorting interview. As a part of the interview we asked participants to give their definition of local food, specifying a geographical area. We recorded the post-sort interviews and later transcribed them in order to start familiarizing ourselves with the data (Braun & Clarke, 2015) and to transform the recordings into written text.

Interviewees were advised that they could access their interview recordings and transcripts at any time for review. Interviews were analyzed on a continuous basis, continuously building on knowledge collected from each interview. The Q sort activity was stopped at 47 participant interviews, as additional sorts were not revealing any new perspectives. We deduced that we had reached data saturation. The Ethics Institutional Review Board approved the study protocol and all participants provided written informed consent.

Statistical Analysis

We analyzed Q sorts using free downloaded software called PQMethod, version 2.35 (Page, 2002) designed specifically to analyze Q methodology studies. It is a DOS-based platform to enter data for correlation and factor analysis. The PQMethod online manual was followed to run the data analysis (Schmolck, 2011). The forty-two statements were manually entered into a TextEdit computer program and then uploaded into the software. Each statement was given a numerical value (-5 to +5) for its position on the grid. All stakeholder groups were combined in the same analysis to look at the shared viewpoints between, rather than within, groups. The software was used to then produce a correlation matrix followed by an inverted factor analysis to determine the shared dominant viewpoints. A weighted average was calculated to show the correlation of participant's Q sorts with each factor. Weighted scores were then converted into z-scores for cross factor examination to reveal sorting similarities and differences between the factors.

Initially we extracted seven viewpoints from the correlation matrix, one for every six Q sorts (Watts & Stenner, 2014). We then did a

MOST DISAGREE   MOST AGREE

-5	-4	-3	-2	-1	0	1	2	3	4	5
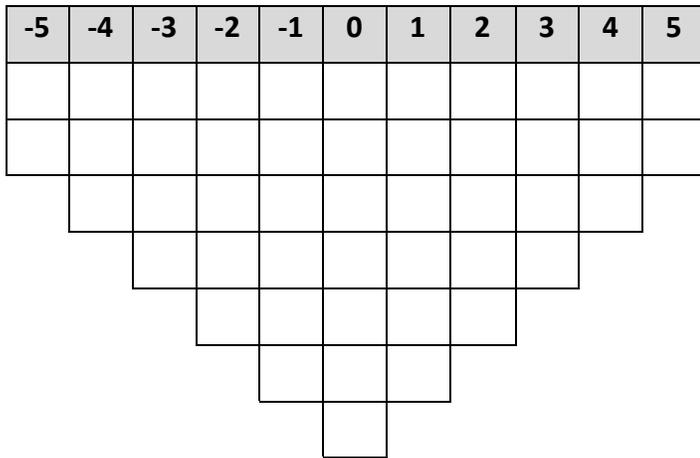
Figure 2. Fixed distribution* used for the Q study statement sorting score sheet. *Sorting pattern = 2, 3, 4, 4, 5, 6, 5, 4, 4, 3, 2. Each participant sorted the set of statements from most agree (5) to most disagree (-5) according to the column number given at the top of the figure in grey scale. The Q sorts of participants sharing a viewpoint were merged, using Z-scores (how a viewpoint placed statements compared to other viewpoints[22]) to produce a single Q sort grid representing the best fit of how a viewpoint collectively sorted statements.

manual varimax rotation to choose the best viewpoint solution. Q sorts that were significantly correlated with a viewpoint were flagged, except those that were confounded (loaded onto more than one viewpoint). Significant viewpoints have two or more non-confounded significant loadings. We ran an analysis with a significance level of 0.40 to 2 decimal points. At this significance level we extracted four viewpoints, representing four groups of people who sorted the statements in a similar way (Watts & Stenner, 2014). We decided that any more factors would have been impractical for us to interpret and

describe to readers. We used an Eigenvalue cut-off of 1.5 for this dataset. The literature reports that viewpoints with a value over 1 have a strong explanatory power (Watts & Stenner, 2014).

We used interview transcripts of those participants who loaded onto a given viewpoint to add meaning to the dataset (Cross, 2005; Brown, 1996). All of the researchers as well as an independent analyst individually reviewed the resulting factor summary data and interpretations then came together to discuss naming the factors and the key distinguishing statements that defined the viewpoints. We gave each viewpoint a name based on the most salient parts and idiosyncrasies when compared to the other viewpoints.

RESULTS AND DISCUSSION
Table 1 describes the socio-demographic characteristics of the study participants. Forty-seven participants performed the Q sort activity, the population was gender balanced but the majority of participants were students (64%) aged between 18-25 (64%) and New Zealand European (81%). We used strategic recruitment to ensure that staff (19%) and food suppliers (17%) were also included for their unique perspectives of the foodservice compared to the student population.

The purpose was not to have a representative sample and generalize it to other populations (Watts & Stenner, 2014). The focus was on the content and diversity of viewpoints on localization rather than on understanding who held a particular viewpoint. Identifying viewpoints in one organization is enough to reveal new ideas and possibilities and in turn redefine how the organization operates (Watts & Stenner, 2014).

Four distinct viewpoints emerged from the data analysis. Together they accounted for 48% of the variance in the Q sorts. Any value over 40% is considered a sound solution (Watts & Stenner, 2014). The first viewpoint, explained 18% of the variance, and was named "The Leadership Viewpoint" (n=13). Thirteen participants loaded onto "The Leadership Viewpoint"; six were students, four staff and three suppliers (Table 1). Participants holding "The Leadership Viewpoint" sorted statements in a way that showed both the capacity and authority to drive foodservice change and the willingness to

Table 1: Characteristics of stakeholders (N=47)		
Characteristics	**Total Participants** No. (%)	**Participants in "The Leadership Viewpoint"** No. (%)
Gender		
Male	25 (53)	9 (69)
Female	22 (47)	4 (31)
Age, years		
18-25	30 (64)	6 (46)
25-40	4 (9)	3 (23)
41+	13 (28)	4 (31)
Ethnicity		
NZ European[a]	38 (81)	13 (100)
Other[b]	9 (19)	0 (0)
Relationship to College		
Students	30 (64)	6 (46)
Staff[c]	9 (19)	4 (31)
Food supplier[d]	8(17)	3 (23)

[1] New Zealand European
[2] Other: Asia, Samoan, and Maori
[3] Kitchen staff, kitchen management staff and college management staff
[4] Local, regional and national distribution level suppliers.

collaborate with other stakeholders to achieve localization. Since leaders are required for foodservice change this viewpoint is the main focus of this paper.

The subsequent three viewpoints explained 11%, 10% and 9% of the variance. The other viewpoints were: "The Idealist Viewpoint" (n=12), shared by participants who were willing to sacrifice some diet staples for localization as they felt local food was more ethical and socially just; "The Global Viewpoint" (n=14), shared by participants who were open to importing food as they were informed about traceability of the global food system and "The Individual Viewpoint" (n=8), shared by participants who were not willing to take responsibility for localization but supported it as they felt local food ensured the provision of better quality food. Each viewpoint supported different localization initiatives but all stakeholders were willing to collaborate with "The Leadership Viewpoint" on localization.

As aforementioned, "The Leadership Viewpoint" is the focus of this paper as leaders are required for foodservice change. Table 2 shows statements that distinguished this viewpoint from other viewpoints and Figure 3 shows the key quotes representative of this viewpoint. When referring to a particular statement in the text the statement number (detailed in Table 2) is given in brackets.

Credibility (Figure 3, theme 3.1)

Participants with "The Leadership Viewpoint" in this foodservice identified local food as a critical sustainability issue (21), as well as identifying the need to include it in a wider sustainability strategy (7). Those participants holding "The Leadership Viewpoint" were more supportive of developing local food clauses (4) in contracts with suppliers. While there is significant public interest in sustainability amongst young people (Pelletier, Laska, Neumark-Sztainer, & Story, 2013) not all stakeholders holding "The Leadership Viewpoint" prioritized localization before other sustainability initiatives (21).

Table 2: Distinguishing statements[a] for the thirteen participants in "The Leadership Viewpoint"				
	Viewpoints Rank Order Value			
Q Sample Statement (Statement Number)	Leadership	Idealist	Globalist	Individualist
The college should buy as much local food as it can within its current budget (27)	5	0	1	3
The college's students and staff should run a vegetable garden to have some fresh herbs, spinach and rhubarb on hand (36)	4	4	2	-4
The college should feature a completely local meal at least one night a month (8)[b]	4	1	-1	1
The college should tell suppliers to inform them when there is excess local produce going to waste (33)[b]	4	3	3	1
The college should buy more local food if the majority of students agree to this (9)	3	1	2	2
The college should become a market leader and show that New Zealand foodservices can support the 'Local Food Movement' (11)	3	2	0	-1
The college should introduce the idea of eating local to its students, before they go flatting (independent living) (13)[b]	3	1	0	-3
The college should buy local food to be fair to businesses in its community (16)[b]	3	2	1	0
The college should label local menu items with an 'L' on the menu (19)[b]	1	0	0	-1
The college should buy non-local vegetables over winter months when cabbages, carrots, spinach and swedes get repetitive (28)[b]	0	-2	3	3
The college should buy dietary staples like bananas without concern for food miles (29)[b]	-1	-3	3	3
The college should make sure suppliers can tell them where every food item is from (3)[b]	1	3	4	3
The college should concentrate on other sustainability initiatives before local food (21)	-1	2	2	0
The college should make it its policy to spend 70% of its food budget on local food (2)	-1	-1	-2	0
The college should avoid imported food to ensure ethical working conditions are met (42)[b]	-2	4	-3	2
The college should buy food based on how it is grown not where it is grown (31)[b]	-2	0	4	4
The college should not have a local food clause in its contracts with suppliers (4)	-2	-1	-1	-1
The college should avoid imported food, as it may not be to New Zealand food safety regulations (41)[b]	-3	-1	-4	2
The college should not include local food as a part of a campus sustainability strategy (7)	-4	-3	-4	-2

[a]A distinguishing statement is when a particular statement is placed in column number (+5 to -5) that is different to where other viewpoints placed that statement. Statements with extreme scores are those ranked - 4 or 5 "strongly disagree" and + 4 or 5 "strongly agree". A rank order value of 0 represents the midpoint so represents a neutral reaction to the statement ('neither disagree nor agree').
[b]Significant distinguishing statements are in bold P<0.05.

Theme	Representative Quotes	Source
3.1 Credibility		
	"Students don't need to give consent for something that is a positive."	Male Teaching Student
	"A strategy would be a good thing to make sure it happened."	Female Law Student
	"The foodservice could do it without my consent [localization]."	Male Law Student
3.2 Stakeholder led change		
	"When New Zealand is such a small country local can be just over on the other island."	Female Chef
	"Things get too expensive if you try buying everything here. Some things you just have to accept that you won't be able to buy local."	Female Business Student
	"Everyone loves bananas; they are a really good staple."	Female Chef
	"It's all going to vary based on the product bought. You could allocate certain percentages to different categories, meat, veg and grain."	Male Kitchen Store-man
3.3 Collaboration		
	"The hall should support its own community because it is better for the hall if it is thriving."	Female Business Student
	"It is something we could do in conjunction, depending on where the hall is going we would have to follow."	Meat Supplier
	"We participate in the quote for the business. I know they have to feed people on $7 a day. They have to produce food at a price."	Dry Goods Supplier

Figure 3. Representative key quotes from the post-sort interviews with the participants holding "The Leadership Viewpoint" (n=13), grouped by themes (credibility, stakeholder led change, and collaboration)**.**

Their viewpoint indicated that they have the credibility of leaders, such as identifying critical issues (Posner, 2002).

"The Leadership Viewpoint" also had the credibility to undertake the required change for localization. Local food was consistently identified as better quality by all viewpoints but holders of this viewpoint showed critical thinking when weighing up local-global purchasing decisions (Wilhelmina, et al., 2010). Harmon et al (2011) identified this skill is developed in individuals exposed to problem-based learning. They were informed about traceability of the food system and so, unlike other viewpoints did not fall into the "Local Food Trap", where one assumes that local food has inherently better ethical working conditions (41) or food safety (42) than non-local food. The four college staff who loaded onto "The Leadership Viewpoint" considered students in their procurement decisions and in turn was trusted to make decisions on students' behalf (9). This builds on the aforementioned hospitality literature that shows consumers see chefs and foodservice staff as experts in food procurement (The Culinary Institute of America, 2014) and the literature on choice that discusses how those considered experts are held responsible for making good decisions on the behalf of others (Salecl, 2009; Uzzell et al., 2006).

This study identified that students, staff and suppliers could all be credible leaders. Students often take the lead on campus sustainability projects but research shows that staff involvement is essential for compliance to goals and strategies (Barlett, 2011). Previous researchers have agreed that managers are not necessarily the best leaders (Posner, 2002; Boyce, 2014) and that leaders can be found at any stakeholder level (Bushe, 2005). Furthermore, it is the interaction between distributor, producer and consumer that determines the impact of the foodservice (Wilkins et al., 2010).

Stakeholder-led change (Figure 3, theme 3.2)
Participants with "The Leadership Viewpoint" showed sympathy for the ideals of localization and they selected feasible initiatives to drive that vision. They wanted to expose students to local food through a student and staff-run vegetable garden (36) and a local meal once a

month (8). They preferred these initiatives to labeling local food on the menu (19) as they were seen as more time efficient for staff and more noticeable to students. They chose interventions that worked within the college's food culture and made local food visible, both of which are required for successful implementation of any sustainability initiatives or policies (Di Pieatro, Cao, & Partlow, 2012; Buck, 2007). This also adds to existing dietetic literature that identifies leaders as practical and forward thinking individuals most capable of finding sound solutions to the challenges of the profession (Bushe, 2005).

Participants with "The Leadership Viewpoint" felt where food was produced was just as important as how food is produced (31). However, suppliers, staff and students with "The Leadership Viewpoint" all acknowledged the challenge of localization within the foodservice's current budget (27). They identified the need to import dietary staples like bananas and non-local vegetables (28, 29) when they were competitive in price or stakeholders saw them as needed to maintain the quality of students' diet. They considered all three dimensions of sustainable foods detailed by Masset et al: the environment, nutritional quality and price (Masset, Soler, Vieux, & Darmon, 2014).

Those with "The Leadership Viewpoint" in this foodservice defined local more broadly than those with other viewpoints, reflecting the informed, realistic nature of the viewpoint. As was found in a Yale University study, a need to adopt product-dependent definitions of local food was voiced (Barlett, 2011). Participants with "The Leadership Viewpoint" felt that local could be anywhere in New Zealand for some products. They felt that this would be less restrictive to stakeholders and would allow the foodservice to keep food staples and contracts with national suppliers whilst increasing pressure on stakeholders to pursue local alternatives where they exist. They did not want to make a general policy to spend a minimum amount on local food (2) in case the quality or amount of food was sacrificed. They wanted to set effective long-term goals and strategies: a strong characteristic of successful leaders (Barlett, 2011).

Collaboration (Figure 3, theme 3.3)

Holders of "The Leadership Viewpoint" knew college foodservices are a major source of supplier income and so were willing to collaborate to be fair to local businesses (16). This 'fairness to local businesses' is identified repetitively in studies of foodservice staff (American Dietetic Association, 2007) and builds on foodservice literature that highlights social responsibility as a strong characteristic of leaders (Chamberlain, 2011). Those with "The Leadership Viewpoint" wanted to minimize financial constraints on the foodservice and administrative constraints on the suppliers. They believed it would be an unrealistic demand to expect suppliers to tell them where every food item was from (3). In return, suppliers empathized with the college's need to meet their budget (27). Suppliers and staff with "The Leadership Viewpoint" were willing to take food at a reduced price (33) to help suppliers prevent waste and to help the college get more affordable food showing how collaboration between distributer, producer and consumer can achieve the goals of civic dietetics (Wilkins, et al., 2010). There was a relationship of mutual trust; suppliers will collaborate with the college if staff make their purchasing demands known. This reinforces the comment in the literature review by LaBarre (2014) that foodservice is becoming less about productivity and more about creating a sense of community.

In this study, those holding "The Leadership Viewpoint" felt the college could become a market leader for localization (11) as they considered themselves able to educate and empower stakeholders in their foodservice and other organizations. Informing all stakeholders is seen as best practice in studies on local food in university foodservices (Macken, 2012; Park & Reynolds, 2012). "The Leadership Viewpoint" holders wanted to introduce the idea of eating local food to students before they move to independent living (13) as they felt the foodservice had a moral obligation to inform consumers about local food. The Academy of Nutrition and Dietetics defines leaders as those with "the ability to inspire and guide others toward building and achieving a shared vision" (Boyce, 2014). As part of educational institutions, college foodservices have a responsibility to support and teach sustainability (Weaver-Hightower, 2011). Those with "The Leadership Viewpoint" allowed for a shared vision with other stakeholders, across all other viewpoints, because they consider and support them. This is in line with Rossner's statement that understanding each other's viewpoints is the first step to mutual trust and working towards shared goals (Kraak, et al., 2014). Through stakeholder engagement leaders enable others to join them in sustainability (Harvard Dining Services, 2008; Arendt & Gregoire, 2014). Foodservices leaders can shape what their community wants by the products or services they make available (Payne & Raiborn, 2001).

CONCLUSION AND APPLICATIONS

In the case of localization, "The Leadership Viewpoint" was identified across students, staff and supplier stakeholder groups. This viewpoint prioritized local food as a critical area for sustainability. The group holding "The Leadership Viewpoint" showed a commitment to the environmental and social impacts of food procurement suggesting both feasible short-term initiatives and long-term policy changes for localization. They had the capacity to lead foodservice change and other stakeholders trusted in their authority to enact change. They were considerate of other stakeholders needs and saw room to educate and empower others to join them in their sustainability goals. Holders of the Leadership Viewpoint wanted to extend existing stakeholder relationships to share their vision and collaborate on sustainability goals.

Q methodology was a powerful methodology for exploring stakeholder viewpoints and was able to identify four dominant shared viewpoints including a group of stakeholders that share viewpoints indicative of leadership. It used one standardized methodology across a comprehensive range of stakeholders placing the same importance on each stakeholder level. By identifying shared viewpoints and focusing on all stakeholders in the college food system rather than single stakeholders, the researchers were able to gain a deep understanding of the foodservice culture. The use of this method in future foodservice research concerned with understanding multiple stakeholder viewpoints is warranted. Q methodology is especially suited to studies that seek to explore the potential for collaboration between diverse foodservice stakeholder groups.

The Q set defined the scope of the study; although it was selected to be unbiased it is important to be aware of the limitations of the Q set provided. We pre-tested the statements to ensure that we could provide the best set of statements possible and that participants with a wide range of viewpoints felt they could express them. However, some participants may still have found it difficult. Measurement in Q methodology is focused on the context of the Q set and does not aim to generalize outside of this which means that the ability to make generalizations of the identified stakeholders' viewpoints beyond the college foodservice setting is limited.

This study also provides a foundation for future research on stakeholder viewpoints about local food. Given that the study focused exclusively on one setting, conducting a representative survey in other college foodservices, based on "The Leadership Viewpoint", would be an interesting research focus. It would allow us to generalize the prevalence of "The Leadership Viewpoint" and to understand the socio-demographic characteristics of leaders on localization (Danielson, 2009). Finally, given the complexity of local food considerations in terms of economic, environmental and social impacts, future research might well investigate how existing leadership analysis tools such as the multi-criteria decision analysis tool, developed to help structure such complex decision-making in foodservice (Ruddick & Davison, 2013), might be used by foodservice management to incorporate local food considerations into their decision making. The challenges that dietetic and foodservice professionals face in sustainability will benefit from more research on stakeholder viewpoints and leadership.

REFERENCES

American Dietetic Association. (2007). Position of the American Dietetic Association: Food and Nutrition Professionals Can Implement Practices to Conserve Natural Resources and Support Ecological Sustainability. *Journal of the American Dietetic Association, 107*(6), 10033-11043.

Arendt, S., Roberts, K. R., Strohbehn, C., Ellis, J., Paez, P., & Meyer, J. (2012). Use of qualitative research in foodservice organizations. A review of challenges, strategies, and applications. *International Journal of Contemporary Hospitality Management, 24*(6), 820-837.

Arendt, S. W., & Gregoire, M. B. (2014). Dietetics Students Perceive Themselves as Leaders and Report They Demonstrate Leadership in a Variety of Contexts. *Journal of the Academy of Nutrition and Dietetics, 114* (5, Supplement), S20-S25.

Association of University Leaders for Sustainable Future. (2008). *The Talloires Declaration*.

Barlett, P. (2011). Campus Sustainable Food Projects: Critique and Engagement. *American Anthropologist, 113*(1), 101-115.

Barry, J., & Proops, J. (1999). Seeking sustainability discourses with Q methodology. *Ecological economics, 28*, 337-345.

Boyce, B. (2014). Learning to Lead. *The Journal of the Academy of Nutrition and Dietetics* (May 2014), 688-692.

Braun, V., & Clarke, V. (2015). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Brown, S. R. (1996). Q Methodology and Qualitative Research. *Qualitative Health Research, 6*(561), 561-567.

Buck, M. (2007). *A Guide to Developing a Sustainable food Purchasing Policy*. Oregon: Association for the Advancement of Sustainability in Higher Education.

Bushe, G. R. (2005). Appreciative Leadership. *Journal of the American Dietetic Association, 105*(5), 699-700.

Chamberlain, C. (2011). *Local Food Production And Institutional Purchasing: Assessing Producer Consumer Relations At Duke University*. Duke University.

Cross, R. (2005). Exploring attitudes: the case for Q Methodology. *Health Education Research, 20*(2), 206-213.

Danielson, S. (2009). Q Method and Surveys: Three Ways to Combine Q and R. *Field Methods OnlineFirst*, 1-19.

Di Pieatro, R., Cao, Y., & Partlow, C. (2012). Green practices in upscale foodservice operations; Customer perceptions and purchase intentions. *International Journal of Contemporary Hospitality Management, 25*(5), 779-796.

Edwards-Jones, G. (2010). Does eating local food reduce the environmental impact of food production and enhance consumer health? *Proceedings of the Nutrition Society, 69*, 582-591.

Hamilton, M. (2010). *A Rotten Food System: How the Local Food Movement is Creating Alternatives*. University of Louisville, Louisville.

Harmon, A., Lapp, J. L., Blair, D., & Hauck-Lawson, A. (2011). Teaching Food System Sustainability in Dietetic Programs: Need, Conceptualization, and Practical Approaches. *Journal of Hunger & Environmental Nutrition, 6*(114-124).

Harvard Dining Services. (2008). *The Harvard Dining Services Sustainability Report*. Massachusetts: Harvard University.

Kraak, V. I., Swinburn, B., Lawrence, M., & Harrison, P. (2014). A Q methodology study of stakeholders' views about accountability for promoting healthy food environments in England through the Responsibility Deal Food Network. *Food Policy*, *49, Part 1*(0), 207-218.

LaBarre, S. (2014, 3rd Oct, 2014). What Google's Cafeterias Can Teach Us About School Lunches. *Fastcodesign*, 1-4.

Low, S. A., Vogel, S. (2012). *Direct and Intermediated Marketing of Local Foods in the United States.* Washington: United States Department of Agriculture.

Macken, K. (2012). *Identifying Best Practices for University Eat-Local Initiatives*. Rochester Institute of Technology.

Martinez, S., Hand, M., Pra, M. et al. (2010). *Local Food Systems: Concepts, Impacts and Issues.* Washington: United States Department of Agriculture, Economic Research Service.

Malcolm H. (2014). The Future of Food: How our eating habits will change. In: *USA Today*, ed.

Masset, G., Soler, L.-G., Vieux, F., & Darmon, N. (2014). Identifying Sustainable Foods: The Relationship between Environmental Impact, Nutritional Quality, and Prices of Foods Representative of the French Diet. *The Journal of the Academy of Nutrition and Dietetics, 114*(6), 862-869.

McCollum, G. (2014). Leadership in Nutrition and Dietetics: Today's Wisdom for Tomorrow's Leaders. *Journal of the Academy of Nutrition and Dietetics, 114*(5, Supplement), S3.

Oring, K. E., & Plihal, J. (1993). Using Q-methodology in program evaluation: a case study of student perceptions of actual and ideal dietetics education. *Journal of the American Dietetic Association, 93,* 151-162.

Page TQ. (2002). PQMethod Software (Version 2.35). *[computer program]*. Retrieved 15th June 2014, from http://schmolck.userweb.mwn.de/qmethod/

Park, B., & Reynolds, L. (2012). *Local and Sustainable Food Procurement: A comparative analysis of the development of local and sustainable food procurement in Canadian universities*.

Payne, D., & Raiborn, C. (2001). Sustainable Development: The Ethics Support the Economics. *Journal of Business Ethics, 32*(2), 157-168.

Pelletier, J. E., Laska, M. N., Neumark-Sztainer, D., & Story, M. (2013). Positive Attitudes toward Organic, Local, and Sustainable Foods Are Associated with Higher Dietary Quality among Young Adults. *The Journal of the Academy of Nutrition and Dietetics, 113*(1), 127-132.

Peters C, Hansen E, Clingerman J, Hereford A, Askins N. (2012). West Virginia Food System Opportunities and constraints in local food supply chains. West Virginia: West Virginia Food & Farm Coalition;2012.

Posner, K. (2002). *The Leadership Challenge* (3rd ed.). San Francisco: Jossey-Bass.

Ruddick, J. E., & Davison, K. M. (2013). Setting Strategic Direction for Complex Publicly Funded Foodservice Systems: Application of Multi-criteria Decision Analysis. *Journal of Agricultural and Environmental Ethics, 113*(12), 1591-1599.

Salecl, R. (2009). Society of Choice. *A Journal of Feminist Cultural Studies, 20* (1), 157-181.

Schmolck, P. (2011). PQMethod Manual. Retrieved 15th June 2014, from http://schmolck.org/qmethod/pqmanual.htm.

Shepard, K., & Furnari, M. (2013). Exploring what university teachers think about education for sustainability. *Studies in Higher Education, 38*(10), 1577-1590.

Strohbehn, C., & Gregoire, M. (2005). *Local Food: From Farm to College and University Foodservice.* Foodservice Systems Management Education Council, *1*, 1-20.

Sutnick, M. (1981). The Q sort Technique Applied to Nutrition Attitudes Investigation. *Journal of Nutrition Education, 13*(1), 2102-2105.

The Culinary Institute of America. (2014). *Menus of Change; The Business of Healthy, Sustainable and Delicious Food Choices; 2014 Annual Report.* Harvard: Harvard School of Public Health, Department of Nutrition.

Uzzell, D., Muckle, R., Jackson, T., Ogden, J., Barnett, J., Gatersleben, B., et al. (2006). *Choice Matters: Alternative Approaches to Encourage Sustainable Consumption and Production.* Guilford: Department of the Environment Food and Rural Affairs.

Watts, S., & Stenner, P. (2014). *Doing Q Methodology Research; Theory, Method and Interpretation.* (2nd ed.). London: Sage Publications Ltd.

Weaver-Hightower, M. B. (2011). Why Education Researchers Should Take School Food Seriously. *Educational Researcher, 40*(15), 15-21.

Wilhelmina, Q., Joost, J., George, E., & Guido, R. (2010). Globalization vs. localization: global food challenges and local solutions. *International Journal of Consumer Studies, 34,* 357-366.

Wilkins, J. L., Lapp, J., Tagtow, A., & Roberts, S. (2010). Beyond Eating Right: The Emergence of Civic Dietetics to Foster Health and Sustainability through Food System Change. *Journal of Hunger & Environmental Nutrition, 5*(1), 2-12.