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Best Practices and Challenges to Composting in a Restaurant Setting

Christopher Jon Audette

Submitted in partial fulfillment of the
Requirement of the degree of
Master of Arts in Leadership

AUGSBURG COLLEGE
MINNEAPOLIS, MINNESOTA

2018

MASTER OF ARTS IN LEADERSHIP

AUGSBURG COLLEGE

MINNEAPOLIS, MINNESOTA

CERTIFICATE OF APPROVAL

This is to certify that the Action Research Project of

Christopher Jon Audette

has been approved for the Action Research Final Project requirement for the Master of Arts
in Leadership degree

Date of Action Research Project Completed _____

Advisor

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ABSTRACT

BEST PRACTICES AND CHALLENGES TO COMPOSTING IN A RESTAURANT
SETTING

CHRISTOPHER JON AUDETTE

APRIL 2018

- Thesis
- Leadership Application Project
- Non-thesis (ML597) Project
- Action Research (ML588) Project

Composting and organic waste reduction has been an important topic in recent years. The large volume of food waste that is generated and sent to landfills is of growing concern for municipalities as they struggle to handle ever increasing waste. Though recycling efforts of glass, paper and metal materials has become more common, the addition of composting organic waste on a large scale is still relatively not established. Composting in restaurants is a growing component to reducing the amount of organic waste that ends up in landfills due to the high volume of waste that they generate. The creation of a program and plan for beginning composting is important as an addition to the core activities in a food service operation. Additionally, the guidance that comes from transformational leadership can emphasize the greater importance of a business striving towards creating a better environmental footprint and instill that ethos in its members and the community.

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Introduction

Food waste programs have been a growing sector in waste reduction and landfill diversion for some time (US Compost Council, April 20, 2011). Diverting food waste that is produced from restaurant businesses away from municipal landfills and incinerators and into compost instead has been of increased importance. According to Freeman (2011), food service businesses generate a substantially large percentage of garbage containing organic material that could otherwise be composted (p.24). Composting is part of zero waste initiatives, which have become part of a growing movement of environmental activities centered around preventing and managing food and other wastes (Mourad, 2016, p. 464). World wide, one third of all food produced is wasted; that is, it never reaches the consumer, but is lost as waste (Cristobal, Castellani, Manfredi, & Sala, 2018, p. 4). Restaurants waste 4-10% of food before it reaches consumers (Baldwin, Wilberforce, Kapur, 2011, p.45). Though food waste is the major component to a compost program, paper-based products can be included in composting programs as well. The inclusion of paper products in composting systems is of great importance to the success of waste diversion due to the high volume of paper products that are used by restaurants and food service businesses. Materials such as waxed based food handling tissues, paper cups, as well as paper hand towels can be included, as they are comprised of organic components that are completely compostable. By diverting food and all organic waste to compost, which converts that organic matter into usable soil and energy, restaurants can significantly reduce the amount of garbage that is placed in landfills or burned in incinerators.

Furthermore, restaurants can act as a model to other businesses and to customers to begin composting waste materials themselves. Through their leadership, restaurant owners

can model that composting is possible on both a large and small scale. Businesses can be a change maker and improve the environment, which will have a positive impact on their communities. It is important that the organization have strong leadership to facilitate a transition within its structure. Transformational leadership is a leadership style that would be effective to create a change-oriented workplace which would guide the organization during this shift in daily activities. The work that Bernard Bass has done to develop and test the transformational leadership theory will be the basis for this action research.

The restaurant that I am studying (which I will refer to as "the restaurant", for the sake of anonymity) has been in business for over thirty years and recently has made efforts to move towards more comprehensive environmentally sustainable activities. It has had a history of being active in its participation of ecologically sustainable activities through sourcing organic foods when possible and maintaining recycling of paper, aluminum, glass and plastics. Additionally, it has converted much of its lighting to energy efficient bulbs and fixtures. All these efforts align with the need to begin composting its organic waste.

The composting of food and other organic materials will significantly reduce its effects on the environment and be a way to model a different method of handling its waste to other businesses in the community. Composting is one major component to reducing its waste that enters the garbage stream. Recently, it has added donating consumable food to charity, which has significantly reduced undesirable and unnecessary wasting of edible food. Donation of consumable food is also a preferred method of reuse as devised by Environmental Protection Agency (U.S. EPA, 2013). The EPA has devised a pyramid ranking of the best uses for unwanted food waste (Figure 1-EPA food reuse pyramid). It is a method in which to gauge the best uses for food when it is not of the freshest quality to be sold

for customer use, but still retains consumable value. The pyramid illustrates ways to prevent food from entering the solid waste stream, thus benefiting people, animals and the environment rather than harming them as waste (U.S. EPA, 2013). According to Mourad (2016), composting has been deemed to be at the bottom of the hierarchy of prevention and recovery of food waste. It is however, still an important component and, as it were, a last step in the process of recover of food waste, especially as that recovery occurs through an organization such as a restaurant (p.462).

Though the restaurant had previously participated in food waste diversion through a program that supplied left-over food and food scraps to a livestock farm, it has been many years since that program was in place and most of the staff were not employed at the restaurant during that time. This previous involvement in food-waste recovery, however, has created a history of both positive and negative experiences that could influence the leadership's perception of the success of the program and the way it will be implemented. The new food waste-to-compost program is different in how it will be run from the previous program and needs to have a procedure that will make it as productive as possible. This action research project is being undertaken as a method of preparing the staff for the composting program and as an aid in devising a plan for the organization to set up and begin its composting operation. Also, it will serve as a possible framework for how the leadership can use the principles of transformational leadership to help implement the change to a new system within the organization and how to guide the staff to a positive outcome.

The restaurant is being studied because it can reduce its compostable waste that is now picked up by a garbage hauler and brought to the municipal waste site and divert that waste to become a renewable resource. With significant amounts of pre- and post-consumer

food waste and non-recyclable paper products (napkins, paper cups, coffee filters, and milk cartons and more) that are all compostable, the benefits both to the company economically and to the community environmentally are great. The main goal of the program is to divert compostable material from being wasted to being reclaimed through converting organic material to soil. Through composting food and other organic waste material, less organic waste is sent to landfills or incineration with the additional positive result of creating soil and capturing waste gases to use as energy in the composting process. The uses for composted soil include agriculture, road building projects and other non-agricultural uses such as flower beds. Of the options that are in existence in the composting market place, composting material to create soil for non-agricultural use is a streamlined method that captures a significant amount of compostable material and is most convenient to establish within a restaurant business. A similar method exists which involves collecting only food-based waste is known as in-vessel composting. However, this method excludes paper-based products that can be recovered and made into soil as well. This method is for purely agricultural use and limits the total volume that is compostable by an organization.

As it was mentioned previously, the owners of the restaurant have focused on creating changes to the business that have had a great affect on sustainability efforts for some time. These changes also have helped in preparation toward the implementation of the composting program. An area that has been of importance has been a change in the type of packaging used in the take-out containers. A large portion of its business comes from take-out sales of its products. It has moved from using plastic to-go containers to using a compostable packaging that is made from a corn by product. Along with the residual food waste and

paper products that are generated from the daily activities of the restaurant, this packaging can be part of the mix of compostable material.

The owners of the company are also cognizant of the importance of waste reduction for both their business and in the world. The need to create a composting program for the business derives from these ethical considerations. What is important to them to ensure that the program will get off to a strong start is to provide the best leadership possible both to the managerial staff as well as directly to the employees (from interview with the owner, June 2013). In this manner, they will increase the likelihood that the program will succeed. Further, the management's attitude and commitment will ensure that the employees will become proficient quickly in the procedures of the program. As a part of this study, analyzing the leadership style of transformational leadership will help to decipher what hurdles there are for the employees to be on board with the program and how a transformational leadership model can be used by the owners and managers to instill the ethos that the owners have surrounding composting and sustainable efforts.

As with anything new that is introduced in an organization, a certain amount of training is needed. This is even more important in an activity that is ancillary to the main goals of the organization. Given this, an extra focus is needed in the introduction of a composting program. In a restaurant setting, the primary goals are the production of the products and the service to the customer. By contrast, a setting such as an elementary school, where a composting program would mainly be needed only during mealtime, only limited over site would be needed to ensure its success. A restaurant needs to incorporate the procedures of composting to fit into every aspect of the employees' routine and be a continual part of the employees' shift. Thus, the need to focus the leadership of the management on the

composting program is imperative. The activities that surround the management's role as leader and the disposal of organic waste products in a composting program need to be given extra attention, especially at the inception and early stages. The quality of the leadership within the organization is crucial to this implementation as they will set the tone and direction needed to make it a success.

As part of the process of the program, gauging the knowledge about composting among all the employees is also of importance to its success. As important it is to have good leadership in an organizational change, it is just as good to have followers who can rise to the challenges put forth from the leadership. Because of this, it is important to discover what is known and not known among the staff to get to an appropriate level of direction about the new activity. For the implementation of the compost program, a certain level of procedural knowledge already exists. Concepts of organization, time management and problem solving have been a part of daily activities throughout the history of the organization. A challenge that exists in creating the composting program is that it will encompass all the staff from every department of the business. Furthermore, the composting program will incorporate the participation of the customers, adding a secondary layer to the procedures involved. Because of this, a large-scale change in how everyone approaches the manipulation of waste throughout their daily routine will need to be addressed. Fundamentally, the leadership needs to be a driving force behind the change that will ensure the most involvement possible and needs to provide the guidance at both the procedural level, but more importantly instill the ethic and moral rationale behind the decision to begin a composting program.

Literature Review

The focus of this paper is to analyze the methods of organizing and implementing a compost collection program at a restaurant business. Of importance is creating the groundwork to best implement a program successfully and getting the most functional participation from the staff to create the best outcomes. There needs to be a focus on these two aspects to achieve the best outcome. First, the quality of the implementation process needs to be high for the greatest amount of materials to be moved from the waste stream to the compost stream. The guidance at the outset needs to come from the leadership to develop the focus and to put the plan in place. Secondly, the attitude of the leadership and the level of commitment from the employees at the beginning of the composting program will be of importance to how aligned they become as the program becomes a routine part of daily business activities. As a central part of that process, determining what is the best leadership style that can be used in composting programs and in ushering in new activities in a restaurant to most positively affect the outcome of this program will lay the groundwork to determining how to best approach the stages of implementation and monitoring that is needed to produce the best results possible.

To look at the issue of composting broadly, understanding how people first perceive and then come to internalizing an issue is important. The procedural changes that occur in the day-to-day tasks of a restaurant work environment can be challenging. The fast-paced environment and routine and often repetitive activities that can take time and reinforcement to instill. Adding the values that stem from why a program like composting is being implemented and further explaining the context of the program is integral to its success. The transformational leadership approach is well suited to the needs of this program. Lee,

Almanza, and Jang (2013) point out that through transformational leadership, managers “empower and support employees” which “enhances their commitment towards the organizations objectives” (p.283). Transformational leadership can also “inspire and stimulate employee’s attitudes and behavioral intentions” towards the desired goals (Lee, Alamanza and Jang, 2013, p.283).

Transformational leadership is a useful component to an undertaking such as a creation of a new program like composting of organic waste because it involves oversight of the leadership and a change in daily methods of waste disposal by the entire staff. As mentioned by Bauhtotal and Rollo (1996) “proper motivation and framing” are key factors to success in a composting program (p.12). Additionally, the “why” factor is critical to a successful program right from the beginning (Bauthotal and Rollo 1996, p.35). Significant concepts within transformational leadership of "energizing" and "exciting followers" can be applied to embrace an environmentally focused program as well (Hanson and Middleton, 2000, p. 98). Transformational leadership style has a way of “pulling” staff into a vision that is value driven also changes the focus of tasks to be undertaken to a greater purpose (Hanson and Middleton 2000, p. 99). Arriving at the point of collective knowledge and participation is the goal of the leadership to make the program succeed. Though there are multiple perspectives that transformational leadership encompasses, the work of Bernard Bass on transformational leadership is the main theory used in this research.

Food waste in the restaurant industry comprises a tremendous amount of the total waste handled as garbage. As much as 40% of food produced globally is not consumed (Gunders 2012, p.11). Of that food waste, only 3% of food lost is composted (ibid, p. 14). As the largest private sector employer, restaurant and food service industries have a significant

impact on the environment through garbage generation (Baldwin, et. al, 2011, p. 41).

Composting in the workplace requires a thorough amount of education for the staff to fully participate and for the best outcome to occur. As Shepard (2011) points out in a case study of composting programs, “teaching about the importance of composting” was key to its success (p.63). Additionally, “motivation...stems from a high level of education” about the composting program’s methods. From the comprehensive knowledge passed on to the staff from the leadership about how the composting process occurs to the environmental benefits gained from composting, a positive outcome can be attained from changing to a composting program (Shepard 2011, p.63). The teaching of composting procedures requires a proficient level of communication from the leadership. According to Heikkla et. al (2016), research shows the importance of communication from managers to employees and between employee to customers. “Notice boards, written messages or instructions all contribute to improve the flow of information” (p.450). Heikkla, et. al (2016) also identify “professional skills” as a key component in preventing food waste, which is a first step in a composting program. Dividing processes into steps can prevent food loss in the first place, which ultimately creates less waste (p.450).

Getting people to be invested in the composting program has a lot to do with how they perceive the importance of composting and waste reduction efforts that exist in general. According to Ebreo & Vining (2001), the behavioral commitment to waste reduction is derived from perceptions of environmental concerns that are more future oriented (p. 432). This concentration on the ‘why’ factors of recycling and composting has to do with motivation for participation, which stem from moral and ethical concerns about protecting our environment. In a study by Ebreo & Vining, (2001), those who feel that engaging in

waste reduction is beneficial and worth the effort were more likely to change habits that created more waste reducing results (p. 428). Additionally, in the study of recycling and waste reduction done by Ebreo and Vining (2001), only 9.4% of the respondent mentioned composting as a method of waste reduction, where as shopping habits (43.8%) and reusing products or packaging (37.5%) ranked much higher. Recycling was only slightly higher than composting at 12.5% (p.437). These results suggest that although recycling is known and participated in at a nominal level, composting organic material is done even less so. This could be a potential hurdle to overcome in educating and reaching full participation in a compost program. According to the study conducted by Kwon (2009) a potential barrier to implementation was the perception by leadership of the server's attitude toward the hands-on nature of composting food. In a survey of administrators in a university setting considering adding composting to their waste reduction strategy, many believed that servers and customers do not like to separate food waste from plates and packages (p.66). However, the Likert-style survey that the administrators participated in, showed that training of staff will likely to very likely result in a positive result for a composting management program (p.37).

The creation of a food waste composting program necessitates a considerable amount of planning prior to introduction an organization's staff. According to Barrett, Chow, Ferris, Ho, Leeman, Samia-Lindemauer, and Tsui, (2007), a waste audit is necessary to determine what areas in the waste stream need improvement (p.9). The audit will determine items that can be composted, replaced with compostable material (as in packaging), and eliminated from use. Next, a campaign to promote the composting program prior to its start is crucial to being successful (p.9). As noted by Sussman and Gifford (2011), the creation of proper signage also increases the participation rate and effectiveness of composting (p.326-327).

Sussman and Gifford have also found that creating a social norm around composting also encourages participation (p.324).

Composting has become an important feature in the changing landscape of waste reduction throughout the country. Composting is also becoming a part of zero waste initiatives, which have become a growing movement of environmental activities centered around preventing and managing food waste (Mourad 2016, p. 464). State initiatives that promote or require composting are becoming a national trend. In certain cities, it has become a mandatory practice. In San Francisco and Vermont, laws have passed that address both recycling and composting which make it illegal for businesses and residents not to participate (www.recyclevermont.org). According to Mourad (2016), Massachusetts has also passed a state initiative that bans food waste disposal in landfills (p.470). In a slowly growing manner, the incentive to reduce waste is coming not through an altruistic sense of purpose by individuals, but through legal, enforceable channels.

Leadership Theory

In the analysis of what are the best leadership styles that lead to effective sustainable practices in a restaurant setting, creating an atmosphere that contributes to a successful change is imperative. What is needed from leadership is to give guidance and to motivate the employees as well as instill the values and ethics that are behind the environmentally sustainable activity. The leadership style of transformational leadership, as developed by Bernard Bass, provides the necessary framework to accomplish these goals. This paper relies on the interpretation of transformational leadership that Bass and his associates have developed as its guiding leadership model.

The theoretical framework of transformational leadership developed by Bass stems from the work of James MacGregor Burns in his book *Leadership*. In it Burns describes the transition that takes place from transactional leadership to that of the transformational leadership model. Drawing from transactional leadership, Burns (1978) pin pointed the need for leadership that was based on creating fundamental changes within followers as well as one that was not reliant on trait-based leadership that was found in transactional leadership.

The challenges that exist to orienting a program of composting wastes in a restaurant successfully involve the guidance of the leadership as well as the employees acknowledging the difficulties of a new system and complying with them to the best of their abilities. With a program such as composting, an important element that needs to be conveyed is an understanding about the larger context of waste in our society and how the program of composting contributes to lessening the effect that daily activities have on the world outside of the organization. What the employees need from the leadership is guidance to bring those

for whom composting is a brand-new concept into the fold and to align everyone with the parameters of the program. Transformational leadership in ecologically sustainable programs has been found to be an effective way to relay the message about why new process is being implemented, as well as how the process needs to be organized and accomplished for it to be successful. In researching change methods in a food service setting Lee, Almanza and Jang (2013) found that transformational leadership was effective in both focusing objectives and inspiring support among the staff members.

Transformational leadership is an important component to a successful endeavor that requires changing and reorganizing actions (Bass and Avolio 1990). The work of Bernard Bass in developing transformational leadership theory into a comprehensive and testable form is the basis of this action research study. Primarily, his articles “Transformational leadership and organizational culture” and his book “Leadership performance beyond expectations” form the main sources for this paper. The important shift from the task focus of the transactional approach to one that instills vision and encompasses moral and ethical beliefs that is fundamental to transformational leadership magnifies the importance of the work being done by the employees rather than lacking deeper meaning and being solely interested in the tasks of the organization. According to Bass (1997), the difference that exists between the transactional and transformational leadership is that a "transactional leader works within the constraints of the organization; the transformational leader changes the organization" (p.132). According to Bass and Avolio (1990), transformational leadership emphasizes that the leader engenders “collective purpose and change” by instilling values that the followers will see as a guide for the tasks at hand (p.426). These interactions that take place between the leader and follower happen not just once, but continually over time

(p.427). Additionally, the process occurs over time with multiple interactions and iterations instilling the goals and values as the motivation for the changes (p. 455).

To create the connection between how to instruct followers on a new project and instill the values and meaning behind the project requires certain leadership skills. One that gives the ability to relate those values is the key components of transformational leadership. According to Bass (1985), a transformational leader is "someone who raised the awareness about issues of consequence, shifted them to higher-level needs, influenced them to transcend their own self-interest for the good of the group or organization and to work harder than they originally expected they would" (p.29). Bass (1997) also states transformational leaders "enlarge and elevate follower's motivation, understanding, maturity and sense of self-worth" (p. 130). In this manner, the transformational leader is one that acts not for a short-term end purpose but is pushing for a greater good or need that the organization can strive towards.

Through the process of creating a new systematic approach in the workplace, such as creating a composting program, the four components developed by Bass is crucial to its success. Bass (1997) devised the four "I's" which comprise the major tenets of his approach to transformational leadership. First, the Idealized Influence that the leadership shows displays "conviction, trust and values" that sets the tone for how the program's goals will be reached (p 133). Second, Inspirational Motivation gives an "articulation of vision" of how the program will proceed and "challenges followers" to be fully on board with the tenants of the program (p.133). Third, Intellectual Stimulation asks leaders to "question old assumptions" and will "encourage expression of ideas" so that the program is not marred by previously held ideas (p. 133). Finally, Individualized Consideration helps "leaders consider individual needs, abilities, and aspirations, listen attentively, advise, teach and coach" so that each

employee can build their own skill set and be able to reach the goals set by the leadership (p.133). Within each branch of the four "I's", leaders have to opportunity and ability to use their ethical and moral beliefs to shape changes within the organization and within individuals among the organization.

According to Bass (1997), transformational leadership in practice can go beyond the role of the top leadership. It can occur not only from the upper leaders of the company, but from middle and lower ranks too. This leads to the understanding and ability for all levels of employee to embrace and be influential in the transformational leadership of the company (p. 132).

Though transformational leadership has been cited as a successful method of leadership in many organizations and with many differing groups, there have been those who have believed to the contrary. There is a need for members of an organization to be aligned with the mission and values that shape the organization and its leadership. According to Martin and Epitropki (2001), members of an organization that are low in “organizational identification” have more response to transactional leadership. They are often less motivated and not as committed to the organization (p.250). Those with a high “organizational identification” respond more to transformational leadership in that they are highly motivated and the promotion of the “collective good” resonates with them (p.251). Transformational leadership’s potential for creating a fundamental change in members’ beliefs and motivation is contingent upon the how committed and aligned they are to the organization’s mission and values from the start of their tenure at the organization.

Transformational leadership’s ability to transform members works only as far as the members are willing or able to be receptive to it. Additionally, there are scholars who

believe that there is a negative potential to transformational leadership. As Bass and Steidlmeier (1999) find in a review of the potential negative of transformational leadership, transformational leadership is on the continuum with transactional leadership; what makes a leader transformational is whether they are pursuing the leadership components of the four "I's" most of the time (p.185). If a leader is lacking in the conscious "moral character and ethical values embedding in a leader's vision" it could be easy to slip into a transactional mode of leading (p.182). Authentic transformational leaders are, however, not profoundly transforming others all the time. It is not an all or nothing endeavor. At times they need to exhibit transactional leadership components to complete tasks and behavioral compliance at various points. However, a leader does maintain the transformational role if they are able to maintain the values and moral center that guides the organization and its members. The goal of transformational leadership is to foster positive change, both in the organization's actions and in the values of its members (p. 192).

There is also the negative view that transformational leaders are not acting as altruistic agents of change but are doing harm to the organization's members. According to Staen, D'Intino and Victor (1995), transformational leaders are "subversive, because transformational leaders encourage members of an organization to go beyond their self-interests for the good of the organization" (p, 204). That is, they are forcing members to go against their own self-interests to align with the organization. Transformational leaders need to be aware that not everyone maybe aligned with their values and ethics but may however be following an equal but different moral and ethical course. In this manner, a leader may only "enhance" a follower in manners which are striving for the greater good, rather than be the idyllic leader that helps pave a path for them (Bass and Steidlmeier, 1999).

Methodology

The research procedures undertaken for this paper has been approved under Augsburg IRB # 2012-87-4 including permission to conduct the research project, interviews and surveys.

The research into programs and the best practices that exist in other businesses and institutions necessitated the discovery of what contributes to the general and specific knowledge that the employees possess about composting prior to the start of the program. Specifically, what affect that prior knowledge (or lack thereof) has on the program's implementation and ultimate success. To gain an understanding of what level of knowledge that the employees had about composting, a survey was created to collect data and analyze their current participation in composting in their personal lives. Several questions on the survey were intended to gage how much information existed in the employee's background that would transfer directly to the knowledge needed for composting in the restaurant. The methods for creating the best possible program derive from studies that incorporate both employee participation as well as participation from the customer (Sussman & Gilford, 2011, p.336). This research study contains two methods of obtaining qualitative data from both the leadership level and from the employees. The designation of leadership refers to the owners of the organization. They are the originators of any changes that occur and decisions that are made regarding changes in the business's operation. An interview was conducted by the primary investigator with the leadership to gain perspective on the background of the compost program proposed for the organization. Questions regarding the decision to begin a composting program, as well as background questions regarding their own knowledge and participation in composting were asked. The questions were used as a launch pad to establish

what would be needed to begin a composting program. Secondly, the interview questions aimed to discover the owner's viewpoints about the importance of the involvement of the managers in guiding and maintaining good participation in the composting program.

The interview was also aimed to ask and address any challenges that the leadership anticipated prior to beginning the program. Though the interview was intended to gain insight into what leadership had planned for the program, it also served to create a moment where the leaders could reflect on the plan and take a second look at how it could be modified or enhanced to perform more effectively.

Simultaneously, a survey was developed and made available to the employees regarding their knowledge of composting and recycling a priori to beginning a composting program.

The results of the employee survey were used along with the information gathered through the research process and the interview with the leadership plan to create a Plan of Action for the project. The plan coupled the leadership theory of transformational leadership with the plan for the compost program to create guidelines for how the compost program could be constructed. Both the physical structures (container placement and proper signage) and the components of the leadership's involvement (transformational leadership theory and monitoring by fellow employees) were combined to create the working model. A copy of the survey is found in Appendix B.

Interview With Leadership

In preparation for the action research project, an interview was conducted with the owners of the restaurant. The purpose of the interview was to inquire about why a compost project was desired, what issues they see prior to implementing a compost system, and what role that they as leaders need to take to create the best possible outcome from the project.

I conducted the interview with one of the owners, during a face-to-face session, asking her a series of questions regarding the compost project and her thoughts about reasons for starting the project and what might be areas that could help the project. I recorded the answers on a notepad as we discussed the issues and have formalized them in the following summary.

To begin, I asked her what the major reason for was beginning a composting waste diversion program. She cited a mix of social, economic and ecological reasons. She ranked the ecological higher than the social or economic in importance. When asked if there were economic reasons, she believed that there was a desire to lessen the cost that was associated with garbage hauling, but that there were similar, if not equal, costs that are incurred through composting with a recovery company and that it was not the main motivation. Economically, the proposed composting program also added costs to the organization. The social aspect was something that she had not planned on being an element to the program, though she did believe that transmitting the information that the company was doing a composting program was a positive idea. Of highest importance to her was the ecological aspects of beginning a composting program. Working towards being less wasteful has been of importance to the business for as long as they have been open. Knowing that she was doing something better

for the environment by eliminating unnecessary waste to the garbage stream was the greatest purpose.

A second component to the composting program that I asked the owner about was setting the best plan of action with the staff prior to its implementation. I asked if there were specific activities regarding training of staff and logistical set-up needs that were going to occur before the composting program was to start. She said that there were going to be new signage describing what materials were to be included and was going to be separated as garbage. However, she did not state that any plan was in place to train the staff or the management as to what was expected in the change in how compost was to be handled and the responsibilities expected of each level of the organization.

Employee Survey Results

The surveys were completed by twenty-three employees out of a possible eighty employees. That total equals 28% of the total employee population, which is sufficient to create an adequate quantitative sample. The questions on the survey were used to attain information regarding composting and recycling that they participate in outside of work, as well as their attitudes surrounding composting and recycling (for see Tables I, II, and III in Appendix C). The addition of questions about recycling were included in the survey to compare their current participation in both activities and the amount, if any, they participate in one or both activity. Though the research did not involve recycling activity per se, the results from the questionnaire gave insight to awareness of composting in general as a method of waste reduction. Furthermore, the survey aimed to collect information about how their current knowledge and willingness to participate in composting will affect the level of participation and the ease in which the composting program could be implemented as a result.

The results of the survey generated responses that were aligned with expected answers of the research project. Questions regarding knowledge of composting and personal participation in composting were asked, including “what is your definition of composting?” 52% provided an answer that was like how the Environmental Protection Agency defines composting. The EPA defines composting as “the controlled microbial decomposition of organic matter (such as food scraps and yard trimmings) in the presence of oxygen into a humus (or soil-like) material” (U.S. EPA, 2012). Only 21%, of the employees participate in composting activity on their own, were as 39% responded that they would not compost where they live and 21% who responded that they could not compost, citing living in

apartments as a hurdle to participating on their own. Conversely, 100% of the respondents reported that they recycle materials at home through curbside pickup programs. Anecdotally, every respondent answering that they participate in recycling could be the result of the many years that recycling has been available to most cities, versus the shorter time that modern home composting has been occurring and hurdles that are present to compost easily and efficiently at home. Many also reported taking extra efforts to recycle items that are not picked up by curb-side programs. In total, 52% of respondents reported bring items such as electronics, batteries and other items to municipal drop-off centers or businesses that offer recycling collection not available from one's home. From these responses, there seems to exist a high percentage of employees that are aware of the need to take extra steps to properly dispose of certain items, rather than putting them in the garbage, which results in recyclable materials ending up in a landfill or sent to be incinerated. This is a positive sign that the composting plan will have a positive level of successful participation.

Further questions were asked about the employees' personal feelings regarding recycling and composting. Whether or not they value waste reduction efforts and data on their current participation can be an indicator of how detailed the information and signage would need to be prior to beginning a new method of handling and managing waste. The questions were administered using a Likert-style question model, with additional questions that gauged their awareness of composting and recycling. The results can be found in Appendix C.

One possible correlation that can be derived from the results of the survey is that although 100% of the employees who completed the survey participate in recycling on their own, there is a gap to be closed when it comes to participation in composting efforts. It can

reasonably be asserted that because there is recycling pick-up available where they live, and recycling receptacles exist throughout the communities of 100% of employees surveyed, the knowledge and awareness of the importance of recycling has resonated as important and routine, resulting in wide spread participation. However, the limitations surrounding composting (primarily that it must be done on an individual level, with the physical space to store it where one lives) prevent participation (and thus knowledge) about what it is and how to become involved. This gap in knowledge about composting is an opportunity for instruction about how composting will work in the setting of a restaurant, but it also is a challenge. Given the lack of prior knowledge about composting among many the employees, extra efforts and attention will need to be taken to ensure that the program is implemented effectively and that the employees are well informed prior to the start of the program, as well as during the early phases of the change. A positive indicator to the program's potential for success is that 57% employees agreed 26% employees strongly agreed and that they would encourage others to participate, and 95% responded that they would be willing to monitor the composting efforts in their department. Only one respondent answered that they would be unwilling to monitor the composting activity in their department. This is a positive sign that many throughout the organization are willing to take the extra steps necessary to ensure that the program is successful. It also validates the importance that the employees place on composting and that they agree there is a need for the compost program.

As found by other composting programs studied hurdles that need to be overcome include a "yuck" factor, and the concept of incorporating a new process on top of current activity for most of the staff, and the activity of composting replacing previous systems. As was found in an example from the San Diego hospital system (Carvalho, 2012), not until the

program is fully operating does the full scope of the points in the compost system become realized by the staff and the process becomes part of the regular daily tasks.

Plan of Action

An analysis of the employee survey and the interview conducted with the leadership at the organization, a need exists to help everyone at the organization understand the importance of a composting program and share with them the benefits that come from composting. The survey results also revealed that although there is much enthusiasm for participation, fundamental knowledge about composting needs to be transmitted to many employees.

The significant change in how waste is handled to accommodate food and materials composting necessitates having a plan to ensure that the employees are knowledgeable about what can and cannot be composted. Similarly, preparing them prior to the start of the composting program will raise awareness of the logistics of the composting and how it will change the way in which handling, and disposal of compostable materials will be undertaken. To start, the way in which waste materials are currently managed throughout the restaurant needs to be addressed. Waste of all types is handled by three different sectors within the restaurant. First, at the primary preparation level, food scraps and compostable material are discarded by food preparers in the restaurant's main kitchen and in its bread baking area. It is at these two locations that a large amount of compostable material is discarded. For these two areas, containers will need to be labeled "compostable materials only." A list of what can be included will also need to be located that is clearly visible. (A list of compostable and non-compostable material that is handled is in Appendix A). The use of a compostable bag that is of a different color than the non-compostable waste will reinforce the visual distinction between the two types of receptacles, as well as pictures for quick reference.

The second section of the restaurant is the front of the house locations. Because of the nature of the restaurant, the employees serve the customers from a counter in a cafeteria style setup. Because of this method, the front-line servers handle significantly less compostable food and more non-food compostable material. Items such as compostable paper constitute the bulk of the compostable material that will need to be included in the compost stream. Items that cannot be composted must be placed into the regular garbage, which include polyethylene food handling gloves and a limited amount of polyethylene food wrappers. Because of this, the size and location of the compost container will need to reflect the compostable material that will be included. Specifically, waste paper from hand washing stations and any food scraps will be included. As is important in the primary food preparation areas, signage that describes what can and cannot be included and proper placement that is clearly visible to the employees will greatly increase the quality of materials placed into the composting stream.

The third sector of the restaurant that will be handling compostable material is the table staff. This sector of the restaurant will handle the most complicated amounts and types of material and will need the highest level of clarity in signage and location of containers to achieve the best results in participation. The table staff is responsible for collecting the food trays from each table. Plates, glasses, silverware and any other waste material that is left by the customers are brought to a sub-station where the items are sorted into tubs. It is at these locations that residual food is removed from plates and other waste items are discarded. The large amount of compostable material verses non-compostable materials will necessitate only a small receptacle for items which are non-compostable. Proper signage that designates where to place each type of material simplifies the process (Farrell, 2004, p. 28). Creating a

program of composting food waste involves taking the proper steps to set up the physical containers to place the compostable material in which will make the new process as easy as possible to bring everyone up to speed on how the process of sorting and collecting will be organized (Bauhotel and Rollo 1996, p.12).

The change in thinking about how all the employees handle materials that are discarded is of greatest importance to the plan of action. The concept that everything is discarded into one place (a garbage can) will need to be replaced with a concept in which one of two receptacles is selected (a compost bin or garbage can). Additionally, thinking about materials and deciding where to place them before they are discarded will be part of the learning curve. This change in thinking will require both training prior to the start of the composting program and ongoing oversight of each employee's participation both at the start of the program and as it becomes routine. The quality of leadership of both the restaurant's owners and the management within each department will be crucial to the program's success.

In terms of the leadership's approach to the change of how waste is handled, a focus on the importance of composting and how it fits into the business's mission, vision and goals of becoming more environmentally sustainable is equally important. The use of transformational leadership concepts will create an added emphasis to why it is important to compost and can be the framework to create a collective consciousness to the value of composting as a societal good, rather than merely something that is done as a part of the work of the business. Through this method, the program of recycling can more easily become incorporated into the tasks of the employees replacing the previous mindset and routine. Finally, the creation of a "compost leader" in each department can be helpful to cement the concepts of the compost program. Employees who have an extra level of

enthusiasm for composting who act as a role model for others and a “go-to” person regarding questions about compostable material and procedures. In this way the process of composting can be owned not just by the leadership level, but by everyone throughout the organization.

There is also the ability for transformational leadership methods to be used to extend the activities beyond the workplace. Those for which composting is of great societal value can go beyond solely participating in composting at work, to incorporating it into their daily lives at home and inspire others in their lives to become interested in composting as well. Additionally, the restaurant can also become a role model for other businesses who desire to create and implement a composting program. Methods of how the program was set up structurally, as well as how they exhibited positive leadership to the employees can be passed on. Diagram 1 summarizes the plan of action for communicating the operation of the compost plan for the restaurant.

Plan for Implementation of Compost Program

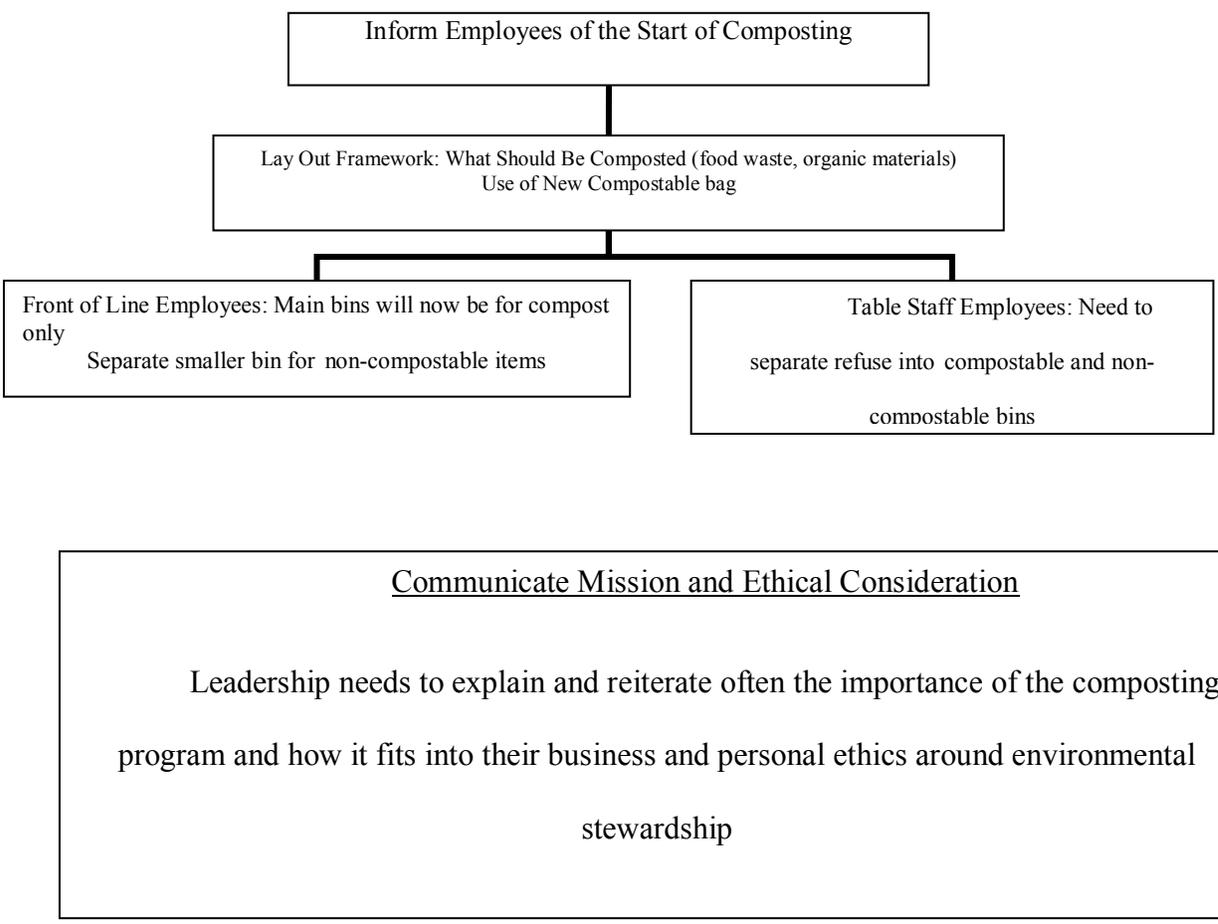


Diagram 1. Plan of action for the compost program

Conclusions

Creating a change to an organization is never an easy or immediately concluded task. The need for change for the restaurant in how it manages its waste is important not just to the betterment of the business economically but has implications to the rest of the community and the greater environment. The growing importance and management of organic waste and the negative environmental impact is known. By starting a composting program, the restaurant will help to alleviate its impact on the environment. Much of the groundwork has been set for sustainable efforts as well as the knowledge of the need for such efforts. Activities such as recycling and conscious waste reduction through better disposal and informed purchases of products that have minimal waste have helped to instill the importance of waste reduction. With that knowledge, the restaurant is poised to succeed in its program of organic waste composting.

Through the leadership level of the business, much positive support can be given to the employees. Using the transformational leadership style, the value and moralistic reasoning that the ownership has towards composting can be realized. Both setting the stage and motivating the employees to see not just the task, but the greater purpose behind composting can have a resounding impact. Transformational leadership as devised by Bernard Bass sets a framework that the leadership of the organization can follow to present values, translate their vision, stimulate others, encourage participation and focus in on individual needs of each employee. In this manner, the proposed program can change the employee's thinking about composting and waste reduction behind their own actions outside of the work place as well. Creating a new program of organic waste composting will be a

challenge to both the leadership and the employees. However, given the level of commitment shown by the everyone at the organization, it will be a doable one.

Further research and analysis of compost programs in the field of restaurant and hospitality businesses is needed. Though composting in business, home and public settings have become more numerous, research into parameters to what constitutes the best systems and best approaches to operating a compost program limited. More tests of different styles of systems would be beneficial to the field of composting in a business setting. Application of leadership theory to compost programs would also greatly enhance the field by determining which theory or theories would play a significant role in greater promotion of such programs.

References

- Baldwin, C., Wilberforce, N., & Kapur, A. (2011). Restaurant and food service life cycle assessment and development of sustainability standards. *The International Journal of Life Cycle Assessment*. 16, (1). 40-49.
- Barrett, J., Chow, L., Ferris, L., Ho, A., Leeman, L., Samia-Lindemauer, C., & Tsui, D. (2007). University of British Columbia Food Systems Project: Increasing education awareness, participation and effectiveness in composting on campus. UBC Social Ecological Economic Development Studies (SEEDS) Student Reports.
- Bass, B.M. (1985). *Leadership performance beyond expectations*. Academic Press, New York.
- Bass, B.M., & Avolio, B. (1990) Transformational Leadership and organizational culture. *Public Administration Quarterly*. 17. 112-121.
- Bass, B.M. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist*, 52, (2), 130-139.
- Bass, B.M., & Steidlmeier, P. (1999). Ethics, character and authentic transformational leadership behavior. *Leadership Quarterly*. 10, (2), 181-217.
- Bauhotal, J., & Rollo, K. (October 1996). Composting...because a rind is a terrible thing to waste. Cornell Waste Management Institute. Department of Crop and Soil Sciences.
- Burns, J.M., (1978). *Leadership*. New York: Harper & Row.

- Cristobel, J., Castellani, V., Manfredi, S., & Salsa, S. (2018). Prioritizing and optimizing sustainable measures for food waste prevention and management. *Waste Management*, 72, 3-16.
- Ebreo, A., & Vining, J. (2001). How similar are recycling and waste reduction? Future orientation and reasons for reducing waste as predictors of self-reported behavior. *Environment and Behavior*, 33 (3), 424-448.
- Farrell, M. (2004, November 1). Composting at the world's largest natural foods supermarket. *Biocycle*, 45, (11), 28.
- Freeman, E. (April 2011). Restaurant industry sustainability: Barriers and solutions to sustainable practice indicators. Thesis project-master's in science, Arizona State University.
- Heikkilä, L., Reinikainen, A., Katajajuri, J., Silvennoinen, K., & Hartikainen, H. (2016). Elements affecting food waste in the food service sector. *Waste Management*, 56, 446-453.
- Gunders, D. (2012). Wasted: How America is losing up to 40% of its food from farm to fork to landfill. Natural Resources Defense Council. (IP 12-06 B).
- Kwon, S. (2009). Investigating food waste management in college and university foodservice operations. (Doctoral Dissertation, Texas Women's University, 2009). *Proquest Dissertations*.
- Lee, J., Alamanza, B.A., Jang, S., Nelson, D.C., & Chisell, R.F. (2013). Does transformational leadership style influence employee's attitudes toward food safety practices. *International Journal of Hospitality Management*, 33, 282-293.

- Looman, M. (2008). *The effect of human advertising on the composting rate at UC Berkeley restaurants.*
- Mourad, M. (2016). Recycling, recovering and preventing "food waste": competing solutions for food system sustainability in the United States and France. *Journal of Cleaner Production.* 126, 461-477.
- Reed, M.G. & Christie, S. (2009). Environmental geography: we're not quite home-reviewing the gender gap. *Progress in Human Geography.* 33. 246-255.
- Shepard, C. (May 2, 2011). Sustainable urban composting: Determining best practices for organic acute management in Burlington, Vermont. Thesis project, University of Vermont Environmental Program.
- Sussman, R. & Gilford, R. (2011). Be the change you want to see: Modeling food composting in public places. *Environment and Behavior.* 45 (3). 323-343.
- United States Department of Agriculture. (2015). USDA and EPA join with private sector, charitable organizations to set nation's first food waste reduction goals. (No. 0257.15) USDA Office of Communications.
- United States Compost Council. (2011). *Greenhouse Gasses and the Role of Composting.* Retrieved April 20, 2013, from <http://compostingcouncil.org/admin/wpcontent/uploads/2010/09/Greenhouse-Gases-and-the-Role-of-Composting.pdf>.
- United States Environmental Protection Agency. (2011). Resource Conservation - Food Waste Food Recovery Resources for Service Providers. Retrieved August 25, 2013, from <http://www.epa.gov/epawaste/conserves/foodwaste/fd-service.htm#venue>.

United States Environmental Protection Agency. (2013). Reducing Food

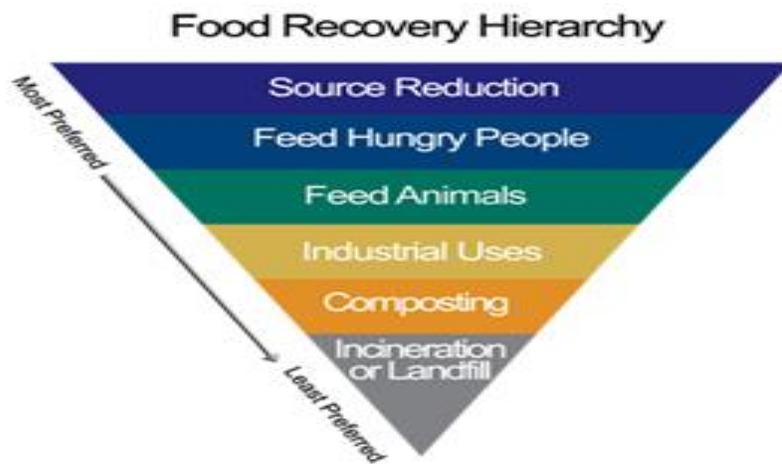
Waste for Businesses. Retrieved May 20, 2013, <http://www.epa.gov/foodrecovery/>.

United States Environmental Protection Agency. (2012). Wastes-What You Can Do;

Reusable Vocabulary. Retrieved August 25, 2013,

<http://www.epa.gov/epawaste/wycd/catbook/you.htm>).

Figure 1- EPA Pyramid for Food Waste



source: www.epa.gov/epawaste/consERVE/foodwaste

Appendix A

Items which are compostable

All food (fruits, vegetables, coffee grounds, meat, nuts, animal fats)

Any organic materials

Non-recyclable paper products (waxed wrapping tissues, waxed paper boxes cardboard trays, drinking cups, napkins, coffee filters, paper hand towels, sugar packets, egg carton material)

Plant-derived containers (cups, straws, to-go boxes, clear lids)

Items which are not compostable

Recyclable paper

Glass

Non-recyclable Petroleum plastic products (honey packets, plastic cling wrap, plastic food bags, Styrofoam,

Metals (including aluminum cans and wrappers)

Non-compostable or recyclable – “trash” (twist ties, plastic and vinyl gloves, rubber bands, tape, bandages,

Appendix B

Survey Question Form

Questions for staff of the restaurant regarding Composting and Renewables

What is your definition of composting? Can you define what composting is?

Where have you learned information about composting and recycling?

How much have you learned from these sources? A lot, some, a little (circle one)

1. Do you compost at home? Yes or No
 - a. If so, what materials do you put into your compost?
 - b. If not, would you consider composting where you live? Yes or No
2. Do you recycle? Yes or No
 - a. If so, are you able to recycle where you live?
3. Do you recycle items not picked up where you live? Yes or No
 - a. If so, what items do you bring for recycling and where?
4. Do you or have you ever volunteered your time for composting or other resource renewable efforts? If so, where and for what?
5. Please rate the following statements from 1 to 5. (circle the number of each statement)
 - a. Recycling is important to me.
1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree
 - b. Composting is important to me.
1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree
 - c. When making purchasing decisions, I consider if the item/packaging can be recycled.
1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree
 - d. Composting is something everyone should do.
1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree
 - e. Knowing that composting is happening at 'Charlie's' inspires me to compost at home.
1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree
 - f. I will encourage others to compost and do what I can to participate in the composting program.
1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree, 5 strongly agree
6. Are you aware that the restaurant is going to start composting waste material?
7. In considering the new composting programs, would you be willing to monitor composting in your department and encourage others as well?

Appendix C

Latte Employee Survey Findings.

Table I. Table showing survey results of employee questionnaire about involvement in composting and recycling

	Yes	No	No Response
Do you compost at home?	26%	65%	8%
Do you recycle at home?	95%	4%	Na
Do you recycle at locations other than home (i.e. drop-off cites)	56%	Na	Na
Do you volunteer for renewable/recycling efforts	8%	73%	Na
Are you aware of compost efforts at work?	48%	48%	4%

Table II. Table showing results for employee's personal actions and feelings towards composting

	Recycling is important	Composting is important	Packaging effects purchase decisions	Everyone should compost organics	Does composting at work inspire me to compost at home
Strongly agree	47%	17%	13%	17%	8%
Agree	26%	35%	43%	35%	35%
Neither agree or disagree	13%	39%	13%	35%	30%
Disagree	Na	8%	30%	4%	13%
Strongly Disagree	Na	17%	Na	4%	8%

Table III. Table showing results of anticipated participation and monitoring of compost program questions

	I will encourage others to compost	I will monitor composting to help effectiveness
Strongly agree	22%	Na
Agree	56%	91%
Neither agree or disagree	22%	4%
Disagree	Na	Na
Strongly disagree	Na	Na



May 31, 2013

Re: Permission to conduct research at Café Latte.

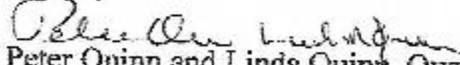
We give Christopher Audette permission to conduct a research study with the employees of Café Latte regarding their perceptions and personal behavior surrounding recycling and composting. We acknowledge that this research is part of a fulfillment for a Masters degree in Leadership from Augsburg College, in Minneapolis, Minnesota.

It will be permissible for him to supply a short paper survey to the employees in the common break area for the employees to complete during their personal time.

We also agree to take part in an interview regard composting and sustainable activities as a part of the research project.

Additionally, we will supply reasonable data pertaining to waste activities at Café Latte to be used as part of the research study and paper.

Signed,


Peter Quinn and Linda Quinn, Owners of Café Latte

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Author(s) of Work(s): Christopher Audette

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