

case study

Challenges and Benefits of Implementing Green Practices at a Restaurant

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Introduction

Green Restaurants

With the increasing consumer demands for products and services that are healthy, sustainable, and environmentally friendly (DeWald, Bruin, & Jang, 2014), implementing green practices is now a crucial factor for businesses to last and thrive across domains (Hu, Parsa, & Self, 2010). The term “Green practices” has been defined as actions that protect the environment (Wolfe & Shanklin, 2001) or efforts that reduce the impact on the environment (DiPietro & Gregory, 2012; Tzschentke, Kirk, & Lynch, 2004; 2008).

Restaurants have been identified as one of the largest energy consumers among commercial outlets. A restaurant consumes more than two times energy per square foot compared to a typical office-type business (Feygin, 2018). The restaurant industry has recognized the problem and adopted green practices in an effort to initiate environmentally friendly contributions (Hu et al., 2010; Tzschentke et al., 2008). Common green practices for restaurants include utilizing energy-efficient equipment, purchasing local or organic ingredients, offering healthy menu items, banning disposable cups and polystyrene containers, training employees for green practices, recycling and composting, and reducing pollution (Dutta, Umashankar, Choi, & Parsa, 2008; Schubert, Kandampully, Solnet, & Kralj, 2010).

A restaurant that employs green practices is called a “green restaurant” (Jang, Kim, & Bonn, 2011), and some of the green restaurants have promoted their green initiatives by achieving a certification for being green. Numerous green restaurant certifications exist such as Leadership in Energy and Environmental Design (LEED), Green Restaurant Association (GRA) Certification, GenGreen Certification, Certified Green Commercial Kitchen, and Green Seal Certification. These certification programs and organizations offer consultation and evaluation services to restaurants striving to become green. Consumers perceive green-certified restaurants as high quality (Jeddi & Zaiem, 2010).

Despite the potential benefits that green practices bring to the restaurant, some restaurants do not adopt green practices. Therefore, this case study addresses the potential benefits and challenges of obtaining the GRA certification from the perspective of the general

manager, back of the house manager, and front of the house manager at a mid-sized independent restaurant. Through this case study and related activities, undergraduate students will be able to:

- Identify restaurant green practices;
 - Explain the seven environmental categories of the GRA certificate standards;
 - Evaluate the benefits and challenges of becoming a green restaurant;
 - Develop a strategy to overcome the challenges and maximize the benefits;
 - Compose a strategic plan for becoming a green restaurant applicable to the case; and
 - Apply the GRA certification standard to an existing independent restaurant.
- In addition to the learning objectives for undergraduate students, graduate students will be able to:
- Categorize and prioritize green practices to compose a step-by-step implementation plan; and
 - Evaluate marketing efforts of a restaurant’s implementation of green practices.

Business Background

Restaurant Javier’s

Javier’s is an independent American-cuisine casual-dining restaurant located in the central business district (CBD) of West Palm Beach, Florida, a pedestrian friendly urban city, with a bus stop right in front of the entrance. The restaurant owner, Javier acts as the general manager, with one additional front of house (FOH) manager (Steven) and one chef (Lisa) who also manages the back of the house (BOH). There are approximately 40 employees working for the restaurant throughout the operation.

The dining room has twenty tables and a bar that seats 10, giving the restaurant a seating capacity of 100 guests and a check average of \$20 when combining both lunch and dinner. The tables are covered with tablecloths and cloth napkins are used. Menus are provided to the guests as they are seated, and ordering is done through iPad-based POS systems with standard printers and printer ink for both the checks and the orders to the kitchen. Because the menu changes with the seasons, the menu boards are printed in house with updates as needed. The menu generally consists of a daily soup, three salads, and ten entrees, and four dessert options. The desserts change weekly, requiring a separate menu.

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Because of the restaurants' location, the majority of the lunch patrons are young business professionals from the surrounding area. Dinner and weekend patrons include tourists and families coming to the CBD for local events and attractions. Business for the restaurant is good. It averages about 200 guests daily Monday through Thursday and on the weekends the numbers increase to 300 per day. However, Javier, the owner, thinks that there is room for increased business.

The facility is in good overall working condition. However, as with most restaurants constructed in 2009, the kitchen equipment is not Energy Star rated with the exception of the ice machine that was purchased last year. Lighting consists of incandescent bulbs throughout the facility including the kitchen, dining room and service areas, and the bathrooms. The restaurant currently does not have any water saving devices on the sinks, dishwashing facilities, or in the bathrooms.

The City of West Palm Beach

West Palm Beach is dedicated to addressing environmental issues and promoting sustainability. The city of West Palm Beach Sustainable Advisory Committee (SAC) focuses on advancing the sustainability goals of the city which include: (1) reducing greenhouse gas emission and waste, increasing energy efficiency, conserving water, and employing environmentally responsible products and technologies, (2) promoting the use of environmentally friendly methods, systems, and materials, (3) encouraging the growth of green businesses and green jobs, (4) informing city residents of ways to adopt a sustainable lifestyle, (5) leading green practices as a green municipality, (6) cooperating with organizations, institutions, and governments regarding sustainability, (7) integrating sustainability into the future development of the city, (8) developing and implementing a city-wide sustainable action plan ("Sustainable Advisory Committee," n.d.).

The West Palm Beach Mayor's Office of Sustainability (WPBMOS) collaborates with West Palm Beach city departments, non-profit organizations, schools, businesses and citizens to achieve their mission to be an environmentally leading, sustainable, and healthy city. The WPBMOS provides a vast amount of information via the city website, about sustainable gardening, recycling, green tips, green products and rebates, and water conservation. A periodic newsletter published by the WPBMOS, "Rethink Paradise: West Palm Beach", aims to encourage green practices by providing information about the High Efficiency Toilet Voucher Program, Green Business Challenge, and Water Conservation Challenge.

In a 2014 study, Zadrozny declared West Palm Beach to be America's 23rd greenest city in terms of the percentage of people who think and act in an eco-conscious way. The study measured the percentage of people who make a conscious effort to recycle, the number of public transportation trips per capita for 2013, and the number of energy efficient buildings per capita. Specifically, the results indicated that 58.0% of West Palm Beach residents were eco-conscious, and 64.1%

of them were recycling-conscious. There were 116.9 trips per capita made using public transportation, and there were 0.16 energy efficient buildings per 1,000 residents (Zadrozny, 2014).

The environmentally friendly initiatives of West Palm Beach and the results of Zadrozny's research (2014) suggest that the residents in West Palm Beach are knowledgeable about environmental issues. In relation to green practices, one's knowledge about ecological issues is a significant causal factor of one's positive behaviors toward the environment (Chan, 2000; Tilikidou, 2007). For example, people who know more about the seriousness of global warming might be willing to do more recycling in their personal lives.

This relationship can be applied to the consumers' decision-making process regarding green restaurants. Customers' knowledge of green restaurants and the impact of green restaurants on the environment positively influence their patronage to the restaurants, and customers who possess knowledge about environmental issues and green restaurants are even willing to pay more for green restaurants (Hu et al., 2010). For these reasons, green restaurants should emphasize green components when promoting their businesses. Hu et al. (2010) suggested several marketing implications for green restaurants: (1) green restaurants should differentiate themselves from non-green restaurants by marketing their green practices, (2) consumers should know that patronizing a green restaurant can significantly contribute to the environment and local community, (3) marketing should emphasize to consumers that they are responsible for environmental protection and can help fulfill this responsibility by patronizing green restaurants, (4) The positive impact of a green restaurant on the environment should be reported/promoted on a regular basis.

Owner Reasoning for Implementation of Green Practices

Restaurants are one of the most inefficient businesses from a sustainability perspective (Horovitz, 2008). In a restaurant both heating (e.g., cooking) and cooling (e.g., refrigeration and HVAC) systems are working against each other to accomplish their separate goals. Javier, the owner, has adopted sustainable practices at home and after understanding how inefficient restaurants are, decided to expand his sustainable practices both professionally and personally by, to start, achieving the Green Restaurant Certification from the Green Restaurant Association.

The GRA was established in 1990 with the mission of generating a sustainable restaurant industry. In 2009, GRA developed the standards for the Green Restaurant Certification (GRC) based on the international standards of environmental management by the International Organization for Standardization [ISO 14001] (Green Restaurant Association, n.d.), which consist of seven environmental categories for the certification assessment as follows:

1. Water efficiency
2. Waste reduction and recycling
3. Sustainable durable goods and building materials

4. Sustainable food
5. Energy
6. Reusables and environmentally preferable disposables
7. Chemical and pollution reduction

Each category consists of sub-items measuring green practices or the status of a restaurant relative to environmental friendliness (See Table 1). Green Points are assigned to those sub-items based on designated attribute-specified criteria. According to Green Points, a restaurant receives the Green Certification from a one- to five-star rating, of which the highest rating has been termed SustainaBuild™.

In order for a restaurant to receive two-star rating Green Certification from the GRA, the restaurant must perform prerequisite activities including recycling, composting, annual employee education, and forbidding

any use of polystyrene foam. The restaurant then needs to acquire ten points from each of the seven categories. For example, the simplest way of achieving ten points in the Water Efficiency category would be to replace the steamer and dishwasher with Energy Star qualified ones which is worth 6 and 4.25 points, respectively. Additionally, maintaining a two-star rating requires the facility to earn 130 Green Points by the end of year three, and 160 Green Points by the end of year six.

When asked why Javier has become committed to a sustainable lifestyle, his response was simply, "It is the right thing to do! It is a contradiction to adopt solar heating systems, energy efficient cooling systems, electric transportation, and recycling at home and then operate a conventional restaurant without regard to the environment. Becoming green will require an initial investment but it will be a tre-

Table 1

Green Restaurant Certification Categories

Categories	Sub-Items
Water efficiency	Landscaping Kitchen Restrooms Other
Waste reduction and recycling	Recycling and composting Construction recycling Waste reduction (office/disposable products and packaging/food)
Sustainable durable goods and building materials	Furnishings Building materials
Sustainable food	Vegetarian entrée Certified organic produce item Certified naturally grown produce item Items sourced within 400-mile radius Certified bird friendly/certified organic/certified biodynamic beverage
Energy	Heating, cooling, and ventilation Water heating Lighting Kitchen equipment (cooking and refrigeration) Annual maintenance Office equipment On-site energy production and renewable energy credits Miscellaneous
Reusables and environmentally preferable disposables	Reusables Food service disposables & packaging Other recycled paper items
Chemical and pollution reduction	Transportation Site selection Storm water management Petroleum and chemical reduction Pest management, Light pollution Chemicals Building materials

Note. Adopted from "Green restaurant certification standards," by Green Restaurant Association (2016). In the public domain.

mendous marketing tool to differentiate us from the competition.” The initial investment Javier mentioned includes, as he described, utilizing Energy Star qualified equipment and appliances, water catchment and reuse systems, LED lighting, waterless urinals and touchless faucets, and adopting a food waste composting system.

Javier also noticed that the city of Coral Gables, Florida, located one hour away from West Palm Beach by car, banned retailers from using plastic bags and polystyrene products beginning July 1st, 2017. He believes this initiative will soon become the norm throughout the state and the progressive implementation of green practices will help his business to stay compliant and competitive in the long-term perspective. Additionally, the Green Market, an annual showcase where local vendors demonstrate their organic produce at the downtown West Palm Beach Waterfront Commons, has grown exponentially. The market currently encompasses more than 90 vendors including 15 new vendors that signed up for the 23rd Green Market in 2018. Javier said the Green Market could be a promising opportunity to expand his vendors for procuring local and organic produce.

In addition, Javier is considering joining the Rethink Business: Green Business Challenge to market his restaurant’s green practices. Every year, the friendly competition chooses leaders of green businesses operating in the city and those leaders are recognized and promoted by the city. The Green Business Challenge assesses a business’s eco-friendliness in three categories: lighting and HVAC, equipment usage, and waste handling. Participating in the challenge will not cost more because Javier is implementing changes already, and earning the two-star rating certification from the GRA would be a boost for the restaurant.

Javier anticipates positive marketing potential by changing to a green restaurant model and elevating the brand image of his restaurant as green (“A Jolt of Sustainability, 2015). Brand image, defined as “anything that is linked in memory to a brand” (Aaker, 1991), has been found to be a critical factor of an organization’s financial success especially for restaurants (Kim & Kim, 2004). Additionally, building a restaurant’s image as being green can attract tourists and make the restaurant highly competitive (Hu & Wall, 2005).

Javier’s business is healthy and profitable. Sales and guest counts have increased each of the past ten years the restaurant has been in business. Javier believes that achieving the GRA certification will positively affect sales and the initial costs will be offset by improved efficiency and attracting additional eco-conscious guests. Namkung and Jang (2013) asserted that consumer behavioral intentions, such as revisit intentions and positive word of mouth, are enhanced by a restaurant’s green practices. The concept of behavioral intention is often alternatively used instead of brand loyalty as the proximal cause of behaviors (Shim, Eastlick, Lotz, & Warrington, 2001). Aaker (1991) defined brand loyalty as “the attachment that a customer has to a brand”. Brand loyalty affects a restaurant’s market share positively, and

customers are more amenable to the relative price point (Chaudhuri & Holbrook, 2001). Additionally, Javier expects that price increases will be less than 10% and supported, if needed, by his patrons.

Chef and Front of House manager

The chef, Lisa, considers herself as an eco-conscious person. At home, she has a rooftop greenhouse that produces fresh herbs and is functional twelve months a year. She also has implemented some green practices in her home kitchen. She purchases eggs, milk, and cream from a local dairy store, and as an eco-conscious chef, she has explored opportunities to expand her green practices to the restaurant. Lisa, thus, agrees with the owner’s decision to make Javier’s a leading green restaurant in the CBD of West Palm Beach. She thinks it would be ideal if there were also a rooftop greenhouse at the restaurant.

Lisa supports the idea of turning Javier’s into a certified green restaurant. Since there are no other certified green restaurants in the CBD, Lisa thinks that being a pioneer green restaurant will bring some competitive advantages to the restaurant. She said, “It is time to implement the green practices to our restaurant. I am sure that laws and regulations will be updated soon becoming stricter for more eco-friendly outcomes. Luckily, the circumstances are promising. Our local organic agriculture is growing, and the city is doing its best to promote environmental awareness to the people in West Palm Beach and the community will react.”

While the chef supports the sustainable initiatives, Steven, the FOH manager, has concerns about the costs and challenges of implementing the green practices, especially about the owner’s desires to earn the GRA’s two-star certificate. Steven’s concerns are specific. First, he worries about cost-efficiency and price increases. He understands that most customers are willing to pay more for products of business organizations that are environmentally and socially responsible (Parsa, Lord, Putrevu, & Kreeger, 2015). A recent study suggested that more than two-thirds of restaurant customers were willing to pay extra money for green restaurants (Namkung & Jang, 2017). Nonetheless, considering that the business is relatively small, Steven doubts the capability of Javier’s to bear the cost and price increase that is associated with green practices because environmentally friendly products are generally more expensive. Steven’s second concern is about employee training and education. He knows that environmental education and training for employees is critical for the successful implementation of green practices. However, he believes that it is not feasible to motivate employees because most of them are part-timers. In the U.S. foodservice industry, it is known that part-time employees are less likely to be committed to the organization than full-time employees are and an organizational green vision like Javier’s may not improve part-timers’ commitment as much as full-timers’ (Joung, Choi, & Taylor, 2018).

On top of that, currently the management is not familiar with educational techniques, programs, and strategies regarding green practices

in the restaurant business setting. Acquiring and retaining a local and organic supply chain is another concern of his. He believes that organic ingredients are too costly for small restaurants like Javier's to be profitable because small restaurants do not have enough buying power. Steven also does not agree with Javier's idea to join the Green Business Competition of West Palm Beach because the restaurant is too small to be competitive regarding environmental innovation and thus benefit from being one of the first-adopters. Lastly, being in contact with the guests on a daily basis, he has not noticed any eco-conscious demands from the existing customers. Steven is also concerned that they might even lose customers due to increased prices caused by green practices.

Considering the current position of the restaurant and the contrasting opinions regarding becoming a green restaurant among the owner, front of the house manager, and back of the house manager, should the restaurant become a green certified restaurant? Present your opinion after providing answers to the following discussion questions:

- What challenges would you expect during the process of implementing green practices throughout the restaurant?
- Do you expect a change in the restaurant's clientele if the restaurant becomes a green restaurant? Explain your reasoning.
- Would the restaurant's brand image change if the restaurant becomes a green restaurant? Explain your reasoning.
- Would the restaurant's revenue change if the restaurant becomes a green restaurant? Provide your reasoning.
- Javier is considering participating in the Green Business Challenge run by the city of West Palm Beach. What would be the benefits to the restaurant of entering and possibly winning the competition to the restaurant?
- What other benefits/challenges do you anticipate if the restaurant becomes a green restaurant?
- Javier and Steven have contrasting opinions toward Javier's becoming a green restaurant. Which position do you support? Explain your reasoning.
- As an owner, Javier can implement his plan of making the restaurant a green certified restaurant. If this happens, what would be the impact of the decision on the existing employees including Steven?

Additional Readings

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