

**Climate Change: Restaurant and Employee Awareness Through the Use of
Tutorials**

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Abstract

Restaurants have a profound affect on climate change because of the large amounts of water and food that is discarded by the food industry on a daily basis. Most restaurant employers are not educated enough about food waste and its affect on climate change; so, these employers do not educate their employees on the best practices to avoid food waste. However, many companies use multimedia learning to train employees on menu offerings, company policies, payroll or other pertinent information, but do not use the opportunity to educate employees and customers about the food industry's affects on climate change.

Tutorials with infographics are a large part of multimedia learning because it offers a way for learners to do things, such as, self-interact, read, solve problems, and answer questions. With distance learning becoming more and more popular, tutorial style teaching is as well. Multimedia learning aids are cost-effective for restaurants because it accommodates multiple learning styles while covering a lot of material at once. As demonstrated by this project's website, tutorials and infographics, when used in a multimedia setting, can motivate restaurant employees to learn about important issues, like climate change. This paper seeks to find, and to discuss, what restaurants are doing to educate employees about climate change, what the significance of climate change means to a restaurant's best practices, and how multimedia learning can educate and influence restaurant employees to move toward best practices which will then help reverse the effects of climate change.

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Climate Change Introduction

Climate change and the controversy surrounding it makes news daily; however, it still is not a concern or an everyday problem for most Americans like cancer or other life threatening diseases despite the alarming headlines. “Climate change has fueled an onslaught of droughts, floods, and fires that have buffeted the world, killing tens of thousands and causing billions of dollars in damage”(organic consumers, 2015). The increase in temperatures are affecting crops and other food sources, which in turn supply our restaurants. According to the FAO (The Food and Agricultural Organization), “A temperature increase of 2-4 degrees celsius over pre-industrial levels could reduce crop yields 15-35 percent in Africa and Asia and 25-35 percent in the Middle East” (organic consumers, 2015).

Temperature fluctuation changes the way crops grow, the way animals are raised, and how each are processed into food products. These extreme temperature fluctuations are becoming more frequent. With frequency comes the uncertainty of crop growth, distribution, and consumer intake. “Preliminary analysis suggests the risk of a once-in-a-century food production shock, in which harvests of key crops such as wheat, maize, rice, and soy could fall by around 5% to 7%, could become 3 times as likely by 2040” (BreakingNews, 2015).

As food travels through the supply chain, it contributes to climate change. Once food reaches the restaurant, it continues to burden the climate. The problem begins well before supplies reach the restaurant. Many products come from places that do not practice

sustainability. For example, the food from human food waste ends up in landfills and creates methane gases which evaporate into the atmosphere. The meat industry produces large amounts of methane gas through the production of bacteria that decomposing organisms emit when the waste material remains in damp places with little or no oxygen. (NASA, 2015). The release of human methane gas is increasing and is more abundant within restaurants where large amounts of these food types, such as, beef, are prepared and disposed of by employees and customers as waste. “Currently, over half of atmospheric methane comes from human-related sources, such as, livestock, rice farming, landfills and leaks of natural gas” (NASA, 2015).

The Restaurant Industry's Impact On Climate Change

Many still are not paying enough attention to the idea. “When most of us think about global warming, we think of companies like Ford, GM, Toyota, Exxon Mobil...” (organic consumers.org) as the polluters; we do not think of Applebee’s, McDonald’s, or Taco Bell.

On an average day, restaurant employees are not thinking that the food they are serving or the water that they are wasting is causing emissions gas to evaporate into the air contributing to climate change. A solution for changing this behavior could be to hang an infographic in the restaurant that shows employees ways to limit waste (*See figure 2*). “The food we eat accounts for anywhere between 15- 50 percent of global climate emissions...things like methane emitted in meat and dairy production, food waste, fertilizer, transportation and cooking contribute to climate change” (Greenaway, 2015). Restaurants have a unique obstacle when discussing climate change. On one hand, their

profit sustainability is dictated by the quality of crops and meats they receive, yet they are a huge contributor to the problem. As stated above, restaurant waste is contributing to the methane gas being released into the atmosphere and affecting the very products that they depend on for profits. “The industry is highly exposed to climate related impacts, but at the same time a major contributor to increasing global greenhouse gas GHG emissions levels- particularly agricultural production...” (Way, 2015). The financial impact is huge for most of the industry in this predicament because it costs money to make the necessary operational changes. Right now the financial aspect is dictating what restaurants do by way of sustainability. New ovens, refrigeration or better quality ingredients that are coming from sustainable places, such as, local, and in season products, cost more to buy. For corporate restaurants this poses a problem because their practice is not to buy local, but to buy in bulk, at a lower cost.

Restaurants and Sustainability Efforts

Restaurants can enhance or better enforce basic best practices within the restaurant to limit their environmental footprint. Restaurants can reduce restroom waste, be mindful of sourcing and shipping, use green cleaning products, buy local, and use water saving techniques (Buzztime 2013). Although it may be expensive to convert to “green” appliances and cleaning products, all restaurants can take a first, easy step by eliminating excessive food waste. As shown in the *Restaurant Food Waste* infographic (Figure 2), \$161 billion is wasted on uneaten food. This food ends up in landfills and creates the process of emission gas release. To combat this problem, employees could suggest smaller dishes based on customer needs, offer doggy bags, suggest carafes of

water instead of individual waters to large parties, and make sure food is being recycled and not thrown in the trash.

In researching this topic, it was found that there are not any concrete guidelines for reducing a restaurant's environmental footprint. Many scholarly journal contributors, scientists, and industry experts offer many suggestions and ideas, but these ideas are not always conducive to each company's needs. "There is no clear guidance for responsible food service, so the efforts put forth by a restaurant may not have the environmental impact intended" (Baldwin, Wilberforce & Kapur, 2010).

Restaurants that Measure Up

Nestlé is one of a few large corporations making significant efforts to reverse climate change not only for their financial well being, but for the well-being of the world's people. "Sustainability is not only making sure our business model is able to survive but that society is in harmony with what we want our business to be," says Nestlé's Executive VP, Jose Lopez (Ferdman 2014). Nestle believes that as a company, they have to be in tune with what society is asking for in order to survive.

According to Lopez, technology is a huge part of the change. "Society now demands transparency...we have to take responsibility for the things in the past we did not feel we had the legitimacy to" (Ferdman, 2014). Corporations can no longer hide their actions because visual technology exposes best and worst practices. Consumers all over the world can see what a company is doing. Thirty years ago consumers did not demand to see how Nestlé obtained cocoa. Now, whether you log on to their website or conduct a Google search, there are many ways to find how cocoa is harvested or purchased by

companies, including Nestlé. In addition, the science and information we have is “sufficient to tackle the pressing issues that the planet earth is facing” (Ferdman, 2014). With all of these advancements, climate change has become more visible because the visual effects are more readily available through Web sites, social media, and other multimedia.

Nestlé, as a whole, sources a lot of raw material such as cocoa and coffee. Lopez believes that the next change will be consumers understanding that food is not where one should try to save money anymore. Consumers should not be looking for the 2 for 1 deal in the local grocery aisle, rather, adjusting individual finances to allow for more income to purchase sustainable foods, is a more sustainable practice. Unless behaviors move toward efforts to reverse climate change, farmers will not survive, food will become limited and more expensive, and access to restaurants will be restricted. Every day consumers buy products far from home. If consumers were more educated about the production of organic, green, and local produce as a way to participate in a healthy lifestyle and to save the Earth at the same time, more people would be willing to participate. Restaurants can be an important place to educate the public on the environment and food waste because of the large population such entities reach every day.

Sustainability costs more. And, that is where restaurants and consumers often stop listening. For example, consumers should buy foods from local farmers rather than buy what is shipped from China to the grocery store. Right now local meats in many cities cost 50-100 percent more if organically grown. Most consumers and many

restaurants do not buy the items because of the cost; however, small farm-to-table restaurants are popping up everywhere. If corporate restaurants were practicing this, these smaller restaurants wouldn't be considered rare or innovative and the larger restaurants could help bring the prices down. At a local Wegman's, for example, a ClubPack (eight breasts of chicken) can be bought for about \$9.00. The local, organic, and much smaller package (two breasts) costs approximately \$15. This is a 75% difference in cost for consumers, but an even bigger cost for high volume restaurants because of the quantity they would need and the higher prices they would be forced to charge.

As for teaching employees about sustainability, Nestlé is above average because it offers fully embedded training for all employees.

By 2014 – Creating Shared Value is fully embedded in all courses at our international training centre in Switzerland (reaching approximately 3,000 current and future leaders annually), e-learning designed and made available to all employees, and a new leadership course piloted.

By 2015 – For Nutrition Quotient (NQ) training, our company-wide commitment is to have all Nestlé employees trained at least once on the NQ Foundation Module by the end of 2015, including an e-learning module.

By 2016 – Strengthen our ability to meet our commitments through environmental awareness sessions for our employees. Environmental awareness training will be run in all countries by 2016. (retrieved from Nestle Global

<http://www.nestle.com/csv/our-people/training-learning>)

In addition to this extensive commitment to training, Nestle is in partnership with an e-learning company called [SkillSoft](#) to further its efforts in tutorial training.

McDonald's is another company that is changing its efforts toward sustainability. McDonald's owner-operators are offered eco-friendly appliances, such as, dryers and coolers that reduce energy consumption. On a corporate level, McDonald's has a convention each year to teach hundreds of vendors and businesses how to plan sustainable events that can be transferred into the restaurant (Palmer, 2013).

McDonald's is also changing many aspects of their best practices such as food sourcing (creating direct suppliers), minimizing waste, and water stewardship. In addition, it signed the [White House Climate Pledge](#). Their website offers an extensive explanation, and a report on the efforts McDonald's is taking to change its sustainability practices. (<http://www.aboutmcdonalds.com/mcd/sustainability.html>).

McDonald's journey toward sustainable sourcing begins with our direct suppliers and extends to a complex network of indirect suppliers that source ingredients for our menu items. We recognize that the impacts of a large, global supply chain like ours are significant. In fact, the majority of environmental impacts to air, land and water, occur in the McDonald's supply chain. That's why the Company works with its direct suppliers who are committed to doing business responsibly in their own supply chains and making sure that they meet our requirements for ethics, environmental responsibility and economic viability — what we call the Three Es. (retrieved from

<http://www.aboutmcdonalds.com/mcd/sustainability/sourcing.html>)

Restaurants and Food Waste

The restaurant industry in general uses online tutorials that include multiple choice, term matching, video, and question/answer to conduct the teaching of new menu items, best practices and any change to state, federal or local laws pertaining to sanitation, food safety, benefits and payroll topics.

At this point in time, however, most of the food service industry are not doing enough to find ways to reduce the role that restaurants have in contributing to global warming. The industry itself seems challenged, stifled, and helpless as a whole when having to change a large part of their best practices in order to combat their environmental impact. It seems that making the customer happy is trumping the increasing need to save the planet. Restaurants are not saying “no” to customers’ demand for larger portions or requests for food give-aways because of complaints. The idea of saying “no” to a customer is a bad word within the industry. Ironically, saying “no” may need to become the norm if restaurants are going to become environmentally friendly. Every year a third of all the food consumed is wasted. Twenty-eight percent of the world’s land that is used to grow crops, plus the people, the tools, the natural resources, and the marketing to sell the products are also wasted (FAO.org 2013) because of landfill use. The wasted food contributes to all the aforementioned resources.

According to a study done on food waste within a restaurant (where employees gave feedback to the researchers) researchers found that, “Through interviews, it became clear that the emphasis was more on the guest experience rather than preventing food waste...the opinion is projected onto the employees by corporate governance”

(Charlebois, Creedy & von Massow, 2015). The customer understands this hierarchy and takes advantage of receiving more food than can be consumed. The study showed that the restaurants being observed could easily have avoided waste through more careful planning and potentially saying no to a guest (Charlesbios et. al., 2015). Thus, the culture of “the guest is always right” needs to change toward educating the guest on saving food rather than appeasing them with larger and larger portions, plus free meals.

On the other hand, a growing number of companies are changing the way they use food waste, by disposing of frying oils through recycling programs. Frying oils can be given to local farmers as fuel, and food waste can be sent to a local farm to feed animals and to create compost for crops.

Tools Available to Educate Restaurant Employees

The National Restaurant Association (NRA) offers tools, tips and teaching methods for various aspects of the restaurant operation. One area of the NRA called [Conserve](#), is a page the organization created to assist restaurant owners and corporations in teaching sustainability best practices within their establishments. Everything about sustainable practices that a restaurant would need to know is there to follow, but through this research, and firsthand experiences, none of the proposed ideas, tutorials, and procedures are utilized to the fullest. Many of the ideas offered on [Conserve](#) could be downloaded, printed, and posted in stores as tools to teach climate change and sustainability to employees. At the very least, the ideas could be recreated with little management involvement.

Multimedia, Tutorials, and Info-graphics as Learning Aids

Research on this topic has shown that there is no consensus by large or small corporations within the restaurant industry about climate change and what types of learning tools should and can be used to inform employees. There are companies that are changing each other through collaboration, but it is not an industry wide effort. And, at the individual store level, there is very little, if any, collaboration. Some companies have standards and state/local rules one should follow; however, short cuts are always taken when employees get busy, and unfortunately, food and water management are the practices that fall to the wayside during these peak times.

Depending on the cultural environment and the morale in the restaurant, the motivation to learn about climate change may be low. There is often conflict, blame and little accountability within the restaurant staff that often includes management. For example, communication is low between the Back of House (BOH) and the Front of House (FOH), often resulting in each blaming the other for what went wrong. These types of practices need to be changed before sustainability can be implemented.

The implementation of online multimedia learning tools may increase motivation if the presentation is interesting and thought provoking as well as interactive. If this type of learning can create collaboration instead of conflict, it may turn bad or spotty practices into best practices. Infographics placed in stores are learning tools employees must walk by during each shift. Seeing the problem, and a solution may influence an employee to take action by scraping off plates into compost bucket. Tutorials can reinforce the message of an infographic or vice-a-versa. Both of these learning tools can also be

useful because they accommodate all learning styles. Everyone can learn, including the customers.. (Charlesbios et.al., 2015).

Types of Tutorial Learning: What is Best for Restaurant Employees?

The difference in learning styles is being recognized more and more today. There isn't just a visual learner or an auditory learner. Often each learner is a combination of both. "It is not surprising that promising concepts such as 'active learning', 'constructivist learning' and 'student-centered' have become increasingly popular..." (Herrmann, 2014).

Individual learning styles have a big impact on the type of tutorial a design needs. For example, visual learners need to see what is being done while they are doing it. Multimedia learning is popular because of its ability to individualize (Alessi & Trollip, 2001). Most software offers one type of learning. "Better software adapts to many types of learning styles. Motivation is important to designing a learning space because not all learners see the same lesson as interesting. "What interests one learner may be boring to another" (Alessi & Trollip, 2001). Tutorial learning offers many types of learners the same benefits by allowing the learner to be independent. This could work well in a restaurant setting because there are so many different people working together and motivation needs to work for all employees.

The restaurant industry requires thought provoking and engaging forms of instruction because most of the time employees are in a hurry. They are told about a tutorial they need to finish as their shift is starting. During this time the employee is preoccupied and not interested. Usually this promotes the action of having one employee

complete the tutorials for the whole staff just to check it off the list and electronically let corporate know the assignment was “completed” by each individual. Leadership is necessary to effect change. Managers need to model consistency in behaviors and hold all employees to the same standard. This is hard to combat as a manager because some managers follow procedure and others do not. This creates a very dysfunctional place of business and no accountability. Many managers stop trying because of constant conflict, this is when best practices are not used. Tutorials that are interesting and relate to the hurried employee could alleviate some of these conflicts.

Prior Knowledge and Mental Models

There is the idea that people learn as far as they have experienced; that people know more or less about a subject depending on the experiences they have had or the life they have lived. With that said, this means that there are many different life experiences that teachers, institutions, employers, and designers should consider when thinking about effective educational tools.

Alessi & Trollip (2001) say, “Mental models refer to a representation in working memory that can be “run” by the learner...”. Learners of all types have mental images from previous experiences or previous life experiences. These experiences influence what a learner thinks is the process for carrying out a task. Designers should keep in mind when creating tutorials, the learner’s mental model and try to mold it into a new one that may alter what they have previously known, which is what the goal is when teaching employees about climate change. “...When learners must understand complex skills, the formation and refinement of mental models is crucial” (Alessi & Trollip, 2001). For

example, the importance of learning about climate change may not have been known by the restaurant employee. A video tutorial will show the importance of creating new mental models when learning about climate change. Perhaps the learner did not have prior knowledge of restaurants affecting the environment. In that case, a tutorial would offer a visual image that may move the learner to scrape off plates into the compost bucket rather than the garbage can.

Linear vs. Branched tutorials

A linear tutorial is considered the easiest or most logical type to use. It is sequential and explains a concept from start to finish, in chronological order, followed by the testing of each concept before moving on to the next. A linear tutorial would be a great tutorial for restaurant employees to learn about climate change because it can show the events in chronological order. Tutorials and infographics can provide a linear approach because there are many facts, information and procedures to follow when learning about what employees can do to contribute. Using a step-by-step approach allows restaurant employees to learn without being overwhelmed. Most employees are overwhelmed daily, especially during peak times. Adding extra steps to their daily routine can cause frustration if not explained thoroughly.

Although basic in concept and more of a lecture style than interactive, linear tutorials can also be a great starting point for creating a more interactive style of learning. In *Multimedia for Learning* by Alessi & Trollip, concepts such as feedback, question and response, and short answer evaluations within the tutorial becomes more interactive.

Linear tutorials are similar to a lecturer working through a series of PowerPoint slides. The advantage of this layout is that it ensures that all of the material is presented using an organizing scheme that may help the student better encode the information (38). The disadvantage is that it does not allow the student to determine the direction of the instruction according to his or her own prior knowledge and learning needs. (Pusic, Leblanc, Miller 2007).

This information is given in a lecture format where a student would be note taking and memorizing information based on the lecture. There isn't interaction within this type of tutorial. Linear tutorials are more suited for the *surface approach*, according to Alessi & Trollip (2001).

Branched tutorials are much more interactive and require more independent learning, thus being more suited to the *deep approach*. "Here the student can access any frame of material at any time, in any order. The student can create any path through the material (including a linear comprehensive one) according to his or her needs" (Pusic et.al. 2007). Branched tutorials allow the learner to pick the categories they believe need more attention and work. It creates a learning environment where the learner becomes the teacher in part because they are familiar with their own strengths and weaknesses.

For students who are uncomfortable revealing shortcomings, it allows for self-management, self-awareness and self-learning without feeling inadequate. With the repetition of a tutorial allowing the learner to take control, the learner gains confidence and, thus, is more interested in the topic. In this case, climate change is what employers

want employees to learn. In the tutorials created for this project, video tutorials, quizzes and infographics are used to engage employees. In creating a website where employees can decide which topic they want to review, it creates a more interesting learning experience. Learners are not limited to what is on the page. Companies can display links, create pod casts or apps for on the go learning. Restaurants are increasingly using Hot Schedules for communication, where pod casts, and links to learning tutorials are currently available for access. There is not a link to topics such as sustainability or climate change.

Restaurant Employees and Infographic/Tutorial Education

Changing the focus and motivation of an employee is not easy, especially if they are not being guided. Since motivation may not come from management or other places of authority, having a positive approach to learning through tutorials can help change employees mental model about sustainability. Tutorials can teach employees to take matters in to their own hands by understanding the importance of climate change. Some management teams may not offer motivation or support, on the topic of climate change but if corporations are offering it through multimedia learning, it can ensure employees are becoming aware of the issue. It just takes one individual to influence the behavior of another.

Methodology

Review of Scholarly Articles

To determine what the food industry was doing in terms of climate change, research of scholarly articles was the primary source used. Articles from industry journals

were used to determine if there was data collected on subjects such as food/water waste, food source supply, and other sustainability efforts being conducted by the industry.

Articles were also used to determine if there was literature collected on corporations using online learning to inform and/or teach employees on the subject of climate change

Review of Corporate Websites

Government websites such as NASA.gov, corporate websites such as Nestlé and McDonald's, as well as newspaper organizations such as [The Guardian](http://TheGuardian) and the [New York Times](http://NewYorkTimes) were reviewed as secondary sources. These sources provided a closer look at specific companies and what they were doing to change the way they do business and inform the restaurant community about the need for sustainability programs.

Other research was done through Web sites such as, the [NRA \(National Restaurant Association\)](http://NRA(NationalRestaurantAssociation)) and its affiliate Conserve, as well as Skillsoft, which is an online learning company Nestlé uses to create their online learning tools for employees. The NRA offers useful tips, guidelines and industry information that span all topics.

Mock Up of Tutorial/Infographics

A series of infographics featuring climate change basics, water/food waste and economic impacts for a restaurant applying sustainability efforts are shown as a possible learning tool for the everyday actions of an employee. Infographics if placed throughout the “back of house” can be looked and reviewed throughout the day or shift.

Secondly, a tutorial was created through WordPress <https://myidthesis2015.wordpress.com> to show a possible series of questions a company could use for employee e-learning. This shows a more interactive approach in teaching

restaurant employees about the subject. Examples of the infographics are below. If an employee was using the website (<https://myidttthesis2015.wordpress.com>) created for this project, they would be able to customize their experience by choosing from the different types of tutorials offered. They are not in chronological order or locked until the employee answered, thus allowing individual access.

Motivation and Social Learning Theory

Motivating restaurant employees to care about climate change can be a daunting task. Employees in restaurants are mostly motivated by tips, which are the main source of job satisfaction. Since most restaurants do not offer many other motivating factors, it is difficult to engage employees. Restaurants are notorious for high turnover rates and lack of loyalty. Employees need to feel involved with daily operations, as well as be given the power to make decisions. Involving employees with changing best practices, asking for their input and using their suggestions can be a motivating factor. If employees are given the opportunity to a part of the process; a move to sustainability can be an easier one. If employees know they have a hand in creating change, implementing the change is not seen as a new rule to follow. Instead of being told to change a practice, which most often is a burden, employees can make the decision to change.

There is a form of motivation in many learning theories, Social Learning Theory is one of them. Social Learning Theory as defined by Albert Bandura (its inventor) "...emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others. Bandura (1977) states: "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their

own actions to inform them what to do” (instructionaldesign.org). Motivation must have a trickle down affect, where corporations and management teams are on board with modeling the behavior of changing best practices. A way to engage employees to follow their lead is to give them the power to make decisions. Employees can now be motivated by accountability and to have a vested interest on the restaurant succeeding. To succeed means to combat Climate Change.

In addition to allowing employees to be part of the process, providing innovative multimedia platforms to continue educating and motivating employees is necessary. In the prototype created for this thesis, it suggests that the creation of website with infographics, tutorials, and multiple types of learning aids can assist in keeping employees engaged. As stated in the body of this thesis, providing ways for employees to learn on their own and not be constricted by having to complete a tutorial before their shift, can take stress off the employee, and focus more on implementing sustainable changes to every shift. One principle of Bandura’s Theory is “individuals are more likely to adopt a modeled behavior if it results in outcomes they value” (instructionaldesign.org). Accountability gives employees a tangible value to the benefits of having a sustainable restaurant. Many employees are turned off by classroom and traditional online training. Infographics provide a quick and easy way to be informed. a website with tutorials and social media options provide those who learn creatively to be engaged as well.

Collaboration in relation to Social Learning Theory can also be achieved within the restaurant when motivation occurs.

“An important factor in social learning theory is the concept of **reciprocal determinism**. This notion states that just as an individual’s behavior is influenced by the environment, the environment is also influenced by the individual’s behavior.^[8] In other words, a person’s behavior, environment, and personal qualities all reciprocally influence each other” (Wikipedia.com).

Design principles

Principles or Design are important to motivating employees as well. Placement, color and, amount of words are all important to creating the right infographic or tutorial to attract attention. In researching infographics used for restaurant employees, trending color schemes include blues, greens, oranges and yellows; which are mostly used when discussing climate change and food waste. Most infographics use percentages and quick facts along with an image to describe the topic. The design principles used for the focus of this project are Hierarchy of Needs and Color.

- *Hierarchy of Needs* principle says that a design must serve the lower level need, such as function, before for the higher level needs can be addressed (Lidwell, Holden, &Butler 2010). Functionality, Reliability, Usability, Proficiency and Creativity are the components within the hierarchy of needs. “Good designs follow the hierarchy of needs principles..” (Lidwell 2010). The most basic principle, functionality, is met through the use of infographics. The infographics in this project, function as a basic starting point, to inform restaurant employees about climate change and food

waste. Both the Climate Change Basics (Figure 1) and Food Waste (Figure 2) Infographics provide preliminary information about the topic. This principle is useful because the infographics provide a reliable and useful tool for employees to change behaviors without having to (for example) take a course. Usability of a tool according to Lidwell, should not be too difficult and must be tolerant of mistakes. Infographics do not discriminate or provide a grade. They simply meet a need to reinforce an idea or concept. Employees can revisit the infographic at any time without any consequence.

- *Color* “ is used in design to attract color attention, group elements, indicate meaning, and enhance aesthetics” (Lidwell 2010). The color scheme used for the infographics in this project were chosen based on colors and elements researched on Conserve and the NRA websites. Earth tones such as green, blue, yellow, and orange are the focus because the environment and natural resources are seen through these colors. For instance, vegetables are green, while elements of the environment are blue. As the Color principle suggests, color can make the design more visually interesting, and can reinforce the meaning of the subject. In both of the infographics created for this project, the color combinations were chosen based on adjacent colors within the color wheel. For example, in Figure 1; a yellow, blue, and green color scheme was used to coincide with idea that climate change revolves around the earth and its prosperity.

Conserve, the NRA sister site to sustainability in restaurants, uses these colors frequently on their website

(<http://conserve.restaurant.org/Best-Practices/Reducing-Food-Waste>).

Conclusion

With so many factors involved in creating positive working and learning environments for restaurant employees, all of the literature found on the restaurant industry's response to climate change and sustainable practices; the opinions vary on what the food industry should, and can be doing. It seems that the food industry has been operating in a way (like many industries) that is not environmentally friendly, and, it is not changing fast enough. People still live day to day without making it a priority. People do not believe climate change is happening because it is not happening in front of them or they just do not believe it is serious because it is not a tangible problem. This is especially true for restaurant employees. Through the hustle and bustle of the day, throwing food off a plate, running the water to defrost meat or filling glasses of water that will not be used is just a necessary evil that is difficult to change. The lack of leadership is not helping the cause. Companies and their employees believe that there is no moral or ethical obligation to do anything about climate change. It is just another terrible event like terrorism, AIDS or hunger, which ends up feeling overwhelming and seemingly unattainable, so people shrug it off. Consumers see these issues as values that correspond to one's personal life style, i.e., individual support for a cause that is based on one's personal beliefs. Climate change has been placed in this category. Values are

negotiable, and within the food industry/restaurant culture, climate change is no exception.

Inconsistency and varying practices among restaurants are issues within the industry that impacts the industry's ability to reform. There is no consistent learning tool proved practical enough to create employee awareness about climate change. In addition to the various attempts to raise awareness about sustainable best practices by some in the food industry, each company decides what and how far they want to contribute to the issue. There is no law or regulation requiring a minimal amount of effort by each food industry business. Some companies are doing everything they can, in every aspect of their businesses to reverse climate change, while other companies are choosing one or two areas such as food waste to focus on.

Yes, a small percentage of companies are increasing efforts, but the industry as a whole is not doing enough to engage employees and to make climate change just as important as customer service. There cannot be some restaurants helping in the fight; it has to be the food industry as a whole or the issue will become increasingly more difficult to change. And, as the evidence has shown, the issue demands immediate attention. Since there is little research done on how the food industry is working to change its behaviors toward sustainable practices through the use of multimedia, the website created for this project (if implemented) could become a new way to engage employees while taking the labor intensive and financial pressure off employers. Restaurants have many daily operational tasks, which is why important subjects like climate change are not part of the daily routine. If a tutorial based website is implemented, restaurants can do their part for

sustainability while focusing on daily operations because it gives employees more flexibility and a more enjoyable experience.

Tutorials and infographics can easily fit into the lifestyle of a restaurant. It can make climate change a priority rather than an obstacle. As a long-time employee of the restaurant industry, I believe that in addition to moving the corporate level toward sustainability, using online interactive platforms and infographic materials within each restaurant can change the thinking of employees on a daily basis within the life of the restaurant. Changing policies that lack best practices to combat climate change is difficult, inconvenient, and time consuming. It is difficult enough to make individual changes, but changing culture, requires collaboration and leadership. All of these things are not conducive to a restaurant's culture. The industry has created a culture where customers control whether a restaurant succeeds or fails by demanding unreasonable portion sizes and free meals. Restaurants are held hostage, so to speak, because now customers can go to social media to report subjective assessments and complaints that can ruin the restaurants reputation, and reduce profits. Because of this, employees are pushed to be faster, smarter and no mistake is acceptable. Information overload, rude customers, lack of community, and lack of support by corporate offices are creating negative work environments. None of these things lead to employee motivation or learning about the environment; it creates the opposite. Until these areas are changed, the restaurant industry may never fully accept sustainability.

It is possible, if corporations like Nestle can maintain positive work environments, care for its employees, and provide training on climate change, then there

is hope for the rest of the industry. Restaurants that are creating a positive atmosphere by using learning tools such as tutorials and infographs, can close the gap between knowledge and accountability within a restaurants best practices. The WordPress site created for this thesis offers ideas to expand on, and, includes sample tutorials to implement these types of changes.

Figure 1/ Infograph I - Climate Change Basics

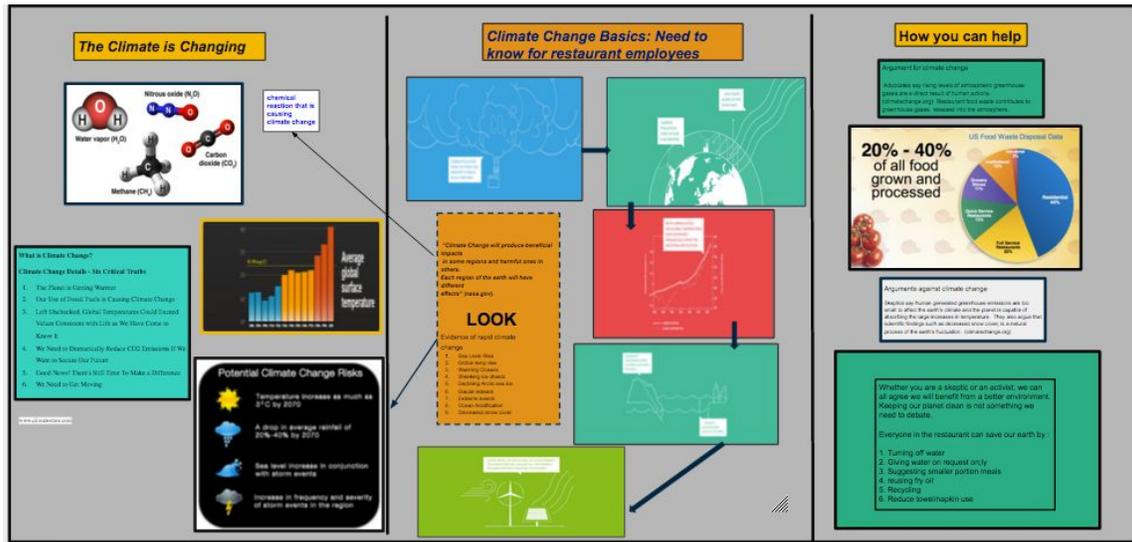


Figure 2/ Infograph II- Food Waste in Restaurants

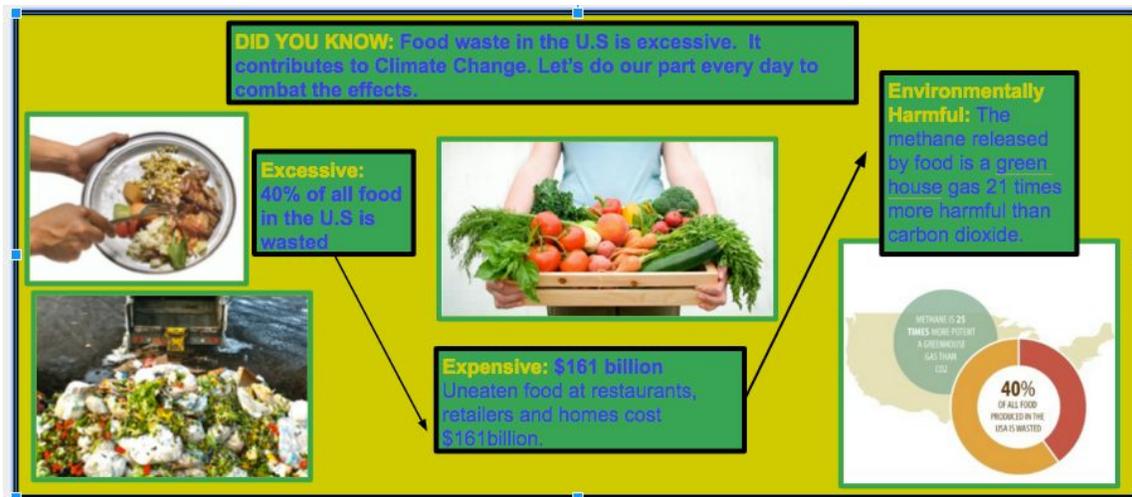


Figure 3: Website Mockup page I

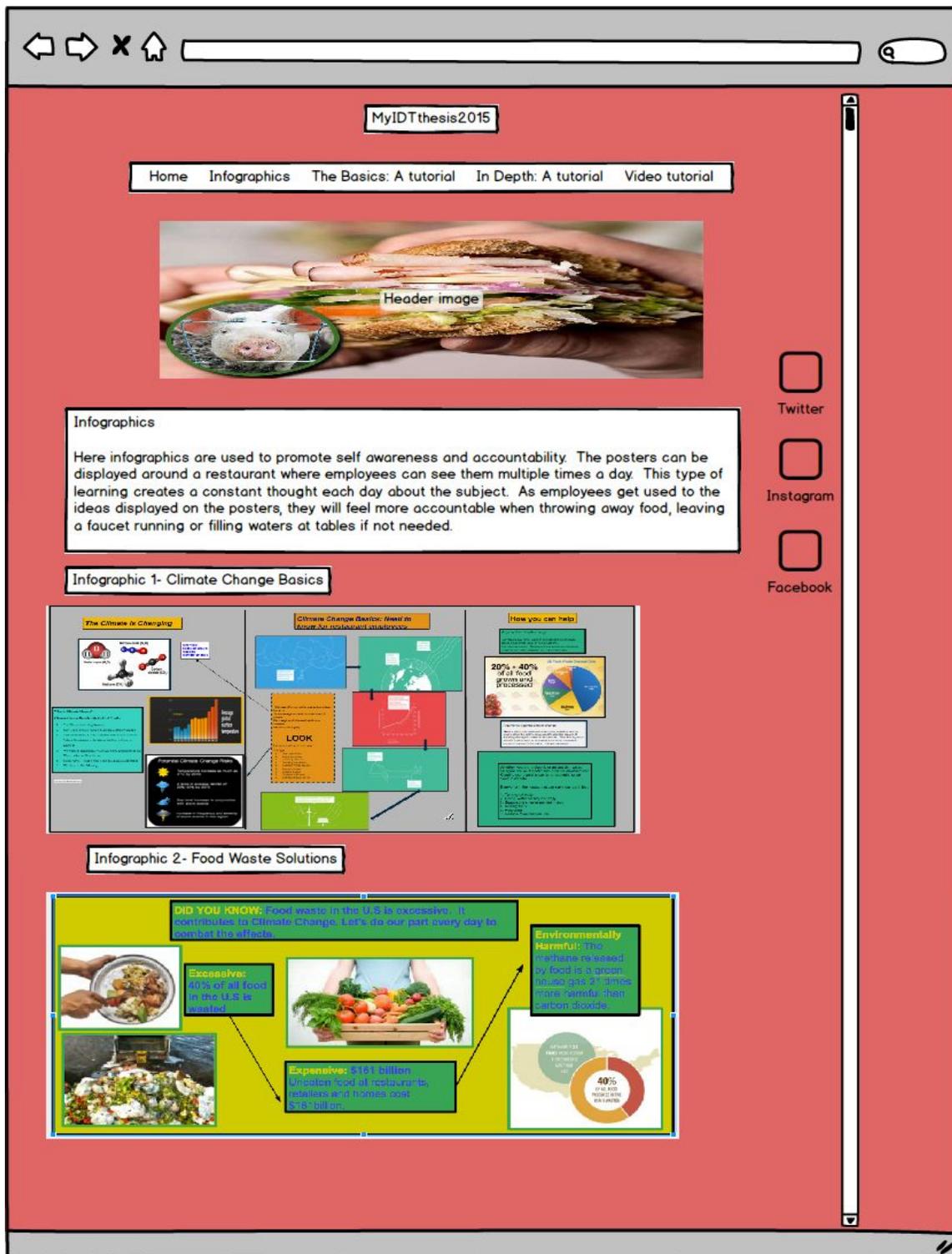
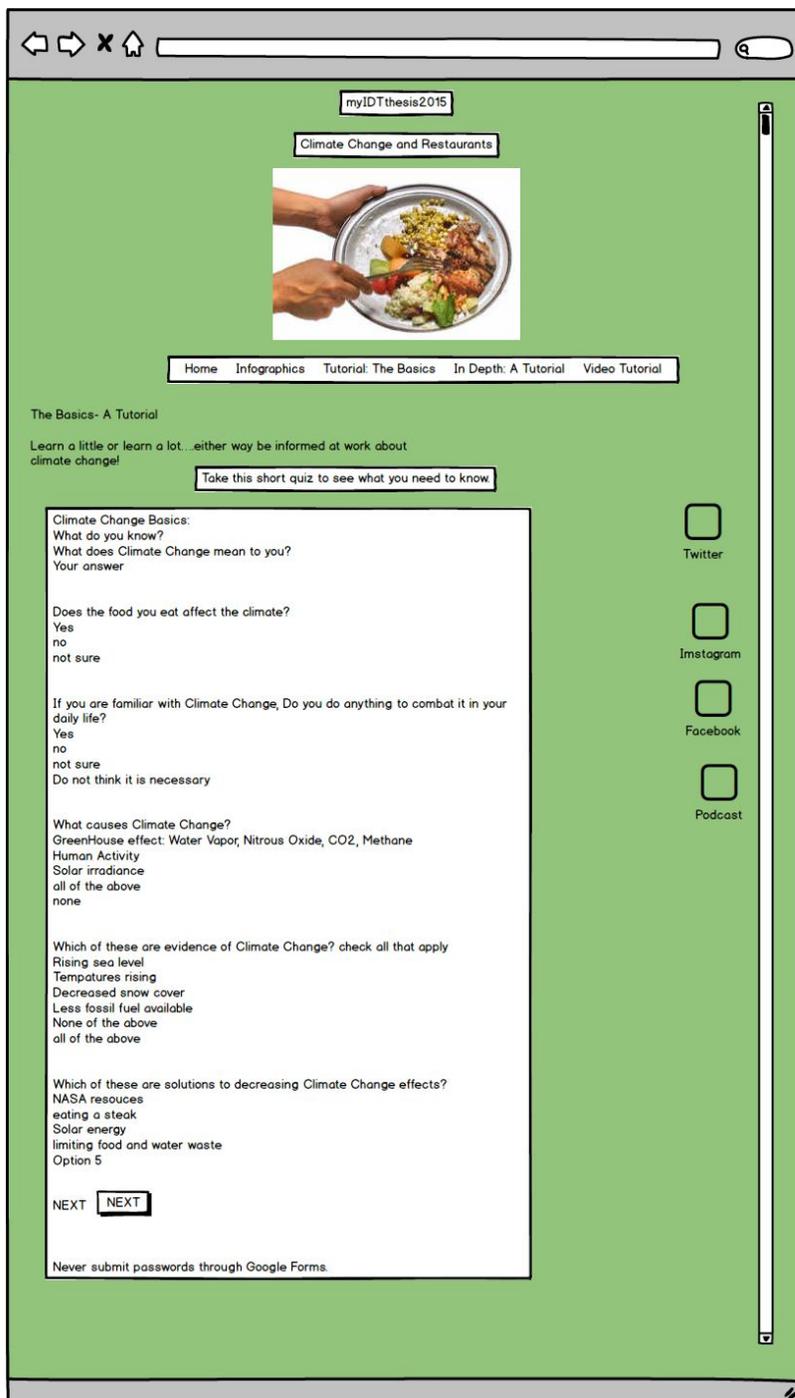


Figure 4: Website Mockup Page II



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****NOTE: A resource of my own personal experience as a restaurant server, bartender, FOH Manager and Assistant Store Manager was also considered and used when creating this project.*

