UBC Food System Project

Scenario 2: Exploring Ways to Lighten AMS Food and Beverage Department's Ecological Footprint

Group 8: Focus-Pendulum

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Abstract

The UBC Food System Project (UBCFSP) is a collaborative, community-based action research project, where the main goal is to improve the sustainability of the UBC food system, and to ultimately become a sustainable campus. The goal of Group 8 was to lighten the Ecological Footprint (EF) of the AMS outlet, The Pendulum. A literature review was initiated using various academic databases as well as previous AGSC 450 reports. In addition, the group met at the Pendulum to assess how their ecologically friendly menu items were being marketed to attract customers. As a result of this research, we decided to conduct a survey with Pendulum customers to assess whether their existing LOV items were being properly marketed. Results showed that Pendulum customers are interested in lowering their ecological footprint, but were unaware of the existing menu items available at the Pendulum. After discussing the survey results and ideas with our AMS stakeholders, our group designed a marketing strategy to promote the existing LOV items available at the Pendulum. As per the request of our stakeholders, our proposed marketing strategy will not cause further "sign pollution" around the SUB. In addition, we included recommendations to future AGSC classes and our community stakeholders to continue our pursuit towards a sustainable UBC. Through our efforts, we hope that the findings and recommendations we made can be implemented to reduce the EF of The Pendulum as proposed under the AMS Lighter Footprint Strategy, thereby contributing to the ecological sustainability of UBC food system and beyond.

Introduction

The University of British Columbia Food System Project (UBCFSP) is a collaborative community-based project that involves the numerous parties that make an impact on the food system on campus. As a key part of the 4th year agricultural sciences 450 (AGSC 450) course, the UBCFSP is an ongoing project that has been developed through 7 generations of students, building on previous project findings in order to continue the sustainable development of the food system on campus (Richer et al, 2009). The main objectives of the UBCFSP can be

summarized as the goal of transitioning the University of British Columbia's (UBC) current food complex towards a sustainable system while addressing social, ecological and economical issues (Richer et al, 2009). This paper will focus on our work with the Alma Mater Society (AMS), the student society of UBC that is heavily involved with student services including the administering of many food outlets located in the student union building (SUB) on campus.

Our research project began with an introduction to the UBCFSP. Through literary reviews of previous AGSC 450 projects related to the AMS, as well as an analysis of current initiatives in place at the SUB, we decided to direct our efforts towards improving sustainability marketing and awareness programs in the Pendulum restaurant. An outline of the food system marketing issues and their relation to a broader food sustainability concern was constructed into a clear problem definition and vision statement. The methodology of our plan of action was laid out, and community research was performed through surveys of Pendulum customers and consultations with the key Pendulum and AMS community partners. A number of solutions were generated based upon our findings and discussions, as well as recommendations to lay the groundwork for future efforts towards improving the AMS food system.

Problem Definition

The earth is currently at a stage where the effects of human consumption have placed the environment in a critical position. The world's human population has reach 6.7 billion, and will continue to grow, surpassing 9 billion by 2050 according to the United Nations (UN department of Public Information, 2007). As the human population increases, the demand for resources will increase as well. Through high rates of consumption, the world is currently experiencing an ecological overshoot where the rate of resource consumption exceeds the ability of the Earth to

regenerate it (GFN, 2009). In 1996, a concept called the Ecological Footprint (EF) was developed where one would be able to measure the amount of productive land and marine area needed to produce the resources consumed by an individual or group of people and absorb the resulting waste (Doherty, 2007). The EF is now a common tool in gauging the impact of one's consumption habits. Based on the global EF, It is estimated that 1.3 Earths are required to sufficiently supply the amount of resources used today, in other words it would take the Earth one year and four months to reproduce what the human population uses annually (GFN, 2009). The overshoot ultimately leads to depletion and degradation.

Current food production practices have been identified as a significant contributor to the global EF. Meat and fish products are made from intensive operations that result in large footprints. For instance, the production of meat has many detrimental impacts on the environment, including a poor ratio between the feed inputs required and meat produced (Palmer, 1999). In 1999, the United States (US) beef footprint was 0.9 hectares per capita, which was drastically higher than 0.007 hectares for vegetables (Palmer, 1999). With world beef consumption predicted to grow by 21% between the years 2005-2015, the beef footprint can be expected to grow as well (Brown, 2008). Other factors to consider include the distance our food travels, as transport contributes to greenhouse gas emissions (EPA, 2008). Ultimately, food choice can greatly affect ecological sustainability.

Many universities and colleges have joined the sustainability movement by undertaking ecological initiatives, and the student society at UBC is no exception. As an answer to the growing ecological problems facing society and in order to reduce its own EF, the AMS created the Environmental Sustainability Policy, which called for the creation of a strategy for

sustainability that the AMS would follow (AMS, 2008). The result of the policy was the establishment of the AMS Lighter Footprint Strategy (AMSLFS), (AMS, 2008). One of the major internal and interactive targets of the AMSLFS is to reduce the EF of the food outlets operating under the AMS (AMS, 2008).

Within the UBCFSP are several scenarios that focus on different aspects of the UBC food system. Students in AGSC 450 are divided into groups within these scenarios, all working on different projects with diverse objectives but striving towards the unifying goal of food sustainability. As group 8, we had been assigned to work under scenario 2. Scenario 2 outlines the general goal of exploring ways to reduce the EF of the AMS Food and Beverage Department, specifically through types of food offered at the outlets. As part of the class planning process, we narrowed our focus down to the Pendulum restaurant. At the onset of the project, there were already a number of initiatives at the Pendulum that aimed to reduce its EF. Lighter footprint items are routinely featured and signage such as labels and posters market the benefits of eating more ecologically sustainable foods (Guimaraes and Toogood, 2009). However, many of the Pendulum's top-selling foods are made from ecologically unsustainable ingredients such as meat or cheese, indicating room for improvement (Group 29, 2008). Furthermore, there has been little published proof of the effectiveness of the marketing tools currently used at the Pendulum. By analyzing these issues as a group, we identified the effectiveness of current marketing and labelling tools in conjunction with aiding the Pendulum in transitioning to more ecologically friendly ingredients as our main topics of focus.

Vision Statement

As part of the Land and Food System's *Land, Food and Community series*, we as AGSC 450 students view a sustainable food system as not only being able to ensure the safety, reliability and reproducibility of an ecosystem but to improve social equity and wellbeing for those affected by this system. Through several guiding principles developed by the UBCFSP partners these aforementioned goals can be reached. However, our group has felt more strongly towards certain principles than others, and have differed in opinion over one the principles as well.

First, we generally agree with the seven principles. As our project involved working with the Pendulum partners, our goal was to implement the AMS Lighter Footprint strategies, including trying to provide local, organic, and vegan (LOV) foods to the Pendulum's customers. Therefore, we strongly identify with the principle that states "providers and educators promote awareness among consumers about cultivation, processing, ingredients and nutrition, [and] feel more principles that directly involve the consumer are needed" (UBCFSP Vision Statement, 2008). Our group has made this principle the guiding focus of our project – to enhance what already exists in the way of marketing ecologically friendly foods so that consumers can make informed food choices. As a group we decided to determine the consumer's wants and needs and how the AMS food providers could meet these in a cost-efficient manner, without hindering business. As the customer base at the Pendulum is largely student based, food prices must be kept low.

Although our group mostly agreed with the seven principles, we were divided in our position on one in particular. The third principle states that "food is ethnically diverse, affordable, safe and nutritious" (UBCFSP Vision Statement, 2008). Being that the members of

this group were quite diverse in their backgrounds, we see through different "lenses". As a result, we differed in our ideas about what affordability means. For example, all members felt it was important that the costs of ecologically friendly food items be affordable so all people could follow the Lighter Footprint Strategy. However, some members felt that ecologically friendly items will always cost more than their alternatives, and therefore there will always be consumers who cannot afford them, and they will continue to purchase less sustainable foods. Conversely, other group members felt that people who are motivated to lead an ecologically friendly lifestyle will pay the price it takes to consume lighter footprint foods. We feel that this is one principle that could either help or hinder the implementation of the AMS Lighter Footprint strategy, particularly in the way of enhancing sales of LOV items sold at the Pendulum – higher costs could eventually lead to a decline in sales and cancel out the hard work the AMS and AGSC 450 students have put in.

Our value assumptions as a group have used a fairly narrow "flashlight beam", as all of our group members are LFS students and we are more aware than most other students on campus of the importance of sustainability. Furthermore, our focus was limited to marketing low ecological footprint items and the use of the LOV labels at the Pendulum. As a result, our group brought its own biases into the project – we think that all students are motivated to lower their ecological footprint, which is probably not true. Furthermore, as we were focused on the Pendulum only, it was natural to lose sight of the "bigger picture", and how to relate our project to global sustainability.

Through the course of this project we have assumed that all people care about choosing ecologically friendly items and that food items that possess the LOV labels will indeed positively

impact our ecological footprint. As our work on this project has come to an end, we leave this project in hopes that we will be a model not only for the rest of UBC food providers, but for other universities nationwide and globally. Furthermore, we hope that our passion for nutritious, sustainable foods will permeate any barrier encountered in order to allow for a more ecologically friendly world.

Methods

The community based action report was used by our group as the basis of our research and as the foundation of our project. Our project aimed to work with the UBC community, which includes but is not exclusive to guest speakers, organizations, community partners, classmates, and professors. By combining all these resources we will be able to create recommendations that will not only help the local business, but also help the campus become more sustainable and serve as a model for other organizations.

Our research methods that were used to complete this project are as follows:

Guest Speaker

On March 25th, 2009, Nancy Toogood was featured as a guest speaker for the AGSC 450 students. In this lecture, we learned about the AMS' Lighter Footprint Strategies and its involvement with the Pendulum. The lighter footprint label and its relation to reducing the UBC ecological footprint were also discussed. This lecture also discussed the "LOV" labels, also known as, the Local, Organic, and Vegan labels that are currently being used at the Pendulum.

Finally our group used a report from the 2008 UBCFSP (Groups 28 and 29, of the 2008 UBCFSP), which looked at the general concepts of the eco-footprint, and its relevance to the Pendulum consumers by way of the products they purchased and consumed from this retailer.

Group 29 (2008) concluded that the Pendulum customers would be receptive to an eco-footprint incentive, and would give importance to low eco-footprint options being offered. Building on this, our groups wanted to focus on whether the promotion of the items themselves was effective enough, and if more could be done to market these low eco-footprint menu items.

Survey

To assess whether the patron's of the AMS Pendulum restaurant were in fact aware of the eco-friendly options i.e. advertising was doing its job, and whether the eco-friendly value of a food would influence their choice, our group designed a survey. Dr. Peplow, and Sophia Baker-French helped with our survey by providing us with their feedback. Based on this feedback, the survey was amended and deemed ready to use (See Appendix A for the UBCFSP Group 8 survey).

We met with Rick Kellough, the manager of the Pendulum and attained permission to hand out our surveys his Pendulum customers. Rick was extremely cooperative, friendly, and very receptive to our ideas. Following his approval, the group delivered the surveys to 95 Pendulum patrons throughout lunch time (11am-2pm) of the week of March 10th-13th. Survey recipients were chosen at random. Following UBC regulations, all participants were given a consent form along with the survey to sign and read indicating their permission to use their answers for our research. We were successful at retrieving a random sample of patrons from different points in their academic career (Undergrad, grad, PhD, and faculty), as well as a representation from diverse faculties. The survey consisted of 12 questions that were designed to investigate 4 primary issues:

1. Are the Pendulum customers aware of the AMS Lighter Footprint strategy?

2. Are the pendulum customers aware of the eco-friendly menu options available daily at the Pendulum?
3. If yes, how were they made aware of these options, i.e. is the advertising affective?
4. Is the foods ecological footprint an important factor for the students who purchase food from the pendulum restaurant?

Meetings

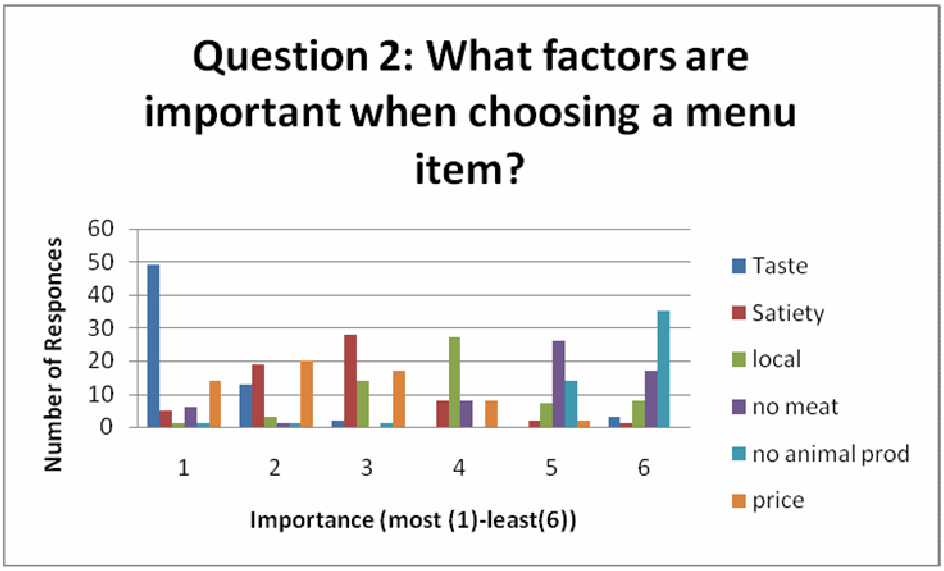
Using a combination of both the survey results and the lecture information, we scheduled a second meeting with Rick Kellough to discuss the key marketing changes we were interested in introducing. At this meeting, our new templates for the LOV hearts (see Appendix C) were well received, as Rick himself was not a huge fan of the existing LOV designs. He felt that the existing labels did not contain enough space to include the list of ingredients and found that they did not catch the eye of his customers. In addition, we also shared with him our ideas to spice up the existing website, create a Facebook group, and better utilize the blackboard space to advertise LOV items. While Rick approved of all our suggestions, he was not sure if he had the authority to pass them. Thus we were planning to schedule a meeting with Nancy to discuss this potential barrier.

On April 1st, our group were originally going to meet up with Nancy Toogood, however due to unforeseen circumstances this meeting was cancelled.

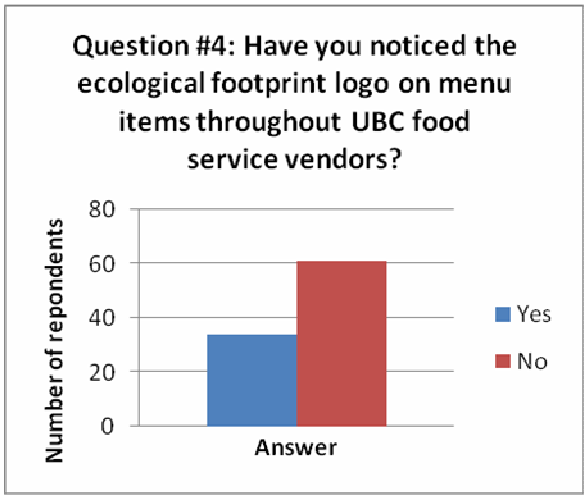
Findings

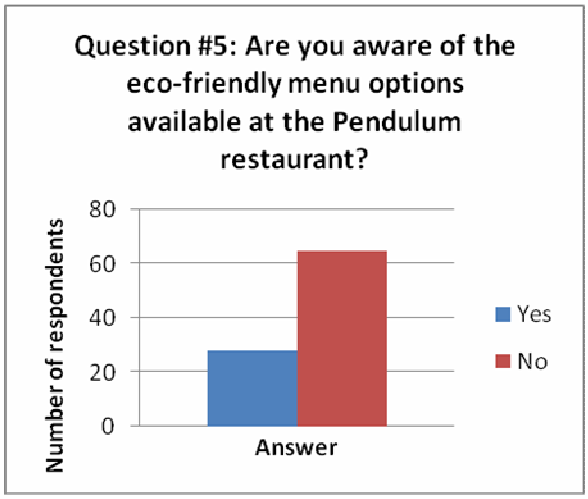
For an overview of the entire survey results and calculation examples please refer to Appendix B. The survey developed by the group was done by a random sample of 95 Pendulum restaurant patrons; and each question was answered by at least 93 people, or 98% of the sample. The sample population also expressed varying frequencies of AMS food purchases from “almost never” to “twice/ day every day.” This is probably an adequate reflection of the varying incidences of purchases by UBC patrons within the campus population. The survey was filled out by a wide variety of the UBC community, 51 Females, 42 Males and 2 unspecified, and included undergraduate, graduate, PhD candidates, and UBC Faculty from a range of disciplines.

The responses to the first 3 questions were meant to gauge the consumer’s efforts and willingness to adopt eco-friendly activities, as well as to get an idea of what was the most important factor that went into a food item purchase. From the responses for questions 1 and 3, only 7% of those interviewed do not make an effort to reduce their carbon footprint, while 32% do not make an effort to reduce their footprint by choosing eco-friendly food options. In question number 2, the majority of patrons surveyed indicated that taste, and prices were the most important factors when choosing a food item.

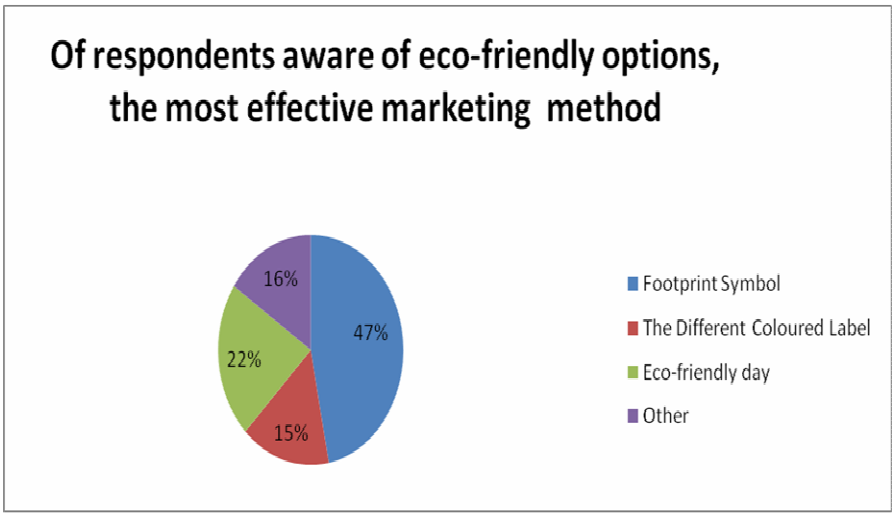


On the other hand, whether the dishes contained meat or animal products were the least important on average. The following graphs depict the responses from questions 4 and 5. For question 5, assuming that everyone who purchases food at the Pendulum sees the eco-friendly marketing currently up, the null hypothesis states that all pendulum customers are aware of the eco-friendly menu options at the Pendulum restaurant. In this case we can reject the null hypothesis, $X^2_{critical} = 3.84 << X^2_{calculated} = 45.43$; $\alpha = 0.05$; d.f. = 1, suggesting that not every customer is aware of the eco-friendly options. For question 4, 64% of those surveyed indicated that they have not noticed eco-friendly options throughout the AMS Food Services and for question 5, 70% had not noticed eco-friendly options at the Pendulum. A chi-square analysis should be performed after the new marketing plan is in place to determine its effect on consumer identification of eco-friendly menu options, using an expected value of 30%.





Of those who we aware of the Pendulum eco-friendly options, the results suggest the footprint symbol was the most recognized marketing intervention. A chi-square test was performed to determine if there was a preference for the answer. Using a 95% confidence interval we can reject the null hypothesis as $X^2_{critical} = 7.82 \leq X^2_{calculated} = 9.46$; $\alpha = 0.05$; d.f. = 3(H_o – There is no preference for how respondents answer the question; H_a – There is a preference for how respondents answer the question). However, a 99% confidence interval does not allow the null hypothesis to be rejected, indicating that there is weak consumer preference for specific answers ($X^2_{critical} = 11.35 > X^2_{calculated} = 9.46$; $\alpha = 0.01$; d.f. = 3).



For question 7, 61% of the Pendulum customers interviewed indicated that they would like to see more ecologically friendly options at the pendulum, 2% do not, and 37% do not care. Question 8 indicated that 57% would be interested in learning more about the AMS lighter footprint label. Question 9 asked if the patron would specifically order a item because of its eco-friendly value, and 48% indicated that they would in fact specifically order an item because it was more eco-friendly. Of particular interest was that although 30% of the patrons had indicated that they were aware of the eco-friendly options at the Pendulum, but only 24% indicated that they knew whether the meal they ordered on survey day was eco-friendly or not, 76% circled the “I don’t know” response option. Question 10 asked if there was a preference for types of food, although the answers were varied, and therefore not statistically significant. The survey also incorporated an “additional comments” section, and therefore qualitative data was also available. One of the comments on a survey was, “I think I know the Pendulum is generally more environmentally friendly/local-ingredients based, but nothing formally informing me, catches my eye except the free range eggs used on the board.” This supports the development of a more obvious marketing approach explained further in the Discussion section.

Overall, the survey would suggest that majority of Pendulum customers do care about their own ecological footprint. Also, as we expected from our first site visit, the survey also suggested that the advertising mechanisms for the Pendulum's eco-friendly options have not been successful.

Discussions

Through a review of previous AGSC 450 papers and personal communications with Nancy Toogood our group decided that investigating the effectiveness of marketing strategies for eco-friendly food items would be more beneficial for the Pendulum than the creation of a new menu item. The AGSC 450 group that conducted research on the Pendulum in 2008 (Group 29) suggested that a new label to identify eco-friendly foods in the display case would be valuable for increasing awareness of existing menu items that met lighter footprint criteria (Gavin, Rennie, Simpson, Tanumihardja, Winkelaar & Yeung, 2008). Since previous groups have worked extensively with the Pendulum to create new eco-friendly menu items, our group felt that drawing attention to the existing eco-friendly items was necessary. Implementing new ways to improve the security of the UBC food system can only be successful when members of the community are aware of the positive choices they can make and are equipped with the knowledge needed to make those decisions. Personal communication with Nancy Toogood further confirmed the notion that promoting the items already meeting the local, organic or vegan (LOV) criteria would have the greatest positive impact on the Pendulum at this time. To confirm the perceived lack of customer awareness of LOV menu items we took the question to Pendulum customers in the form of a survey.

Every attempt was made during the administration of the survey to ensure that a random sample of the Pendulum clientele was obtained. By distributing questionnaires over a period of five days we hope to have reached a section of Pendulum patrons that is representative of the overall customer base.

The survey successfully demonstrated the fact that people eating at the Pendulum do care about their own ecological footprint, and would be interested in further reducing their footprint through the food they eat. The other issue raised by the results of the survey was that people were not aware of the eco-friendly choices available to them at the Pendulum, or even whether what was on their plate was a low-footprint item or not. From the results of the survey it can be seen that while people are interested in taking responsibility for their own ecological footprints through the food they eat, they lack the information needed to make eco-friendly choices at the Pendulum. People are interested in more information on what eco-friendly menu items are available to them, as well as additional information on the AMS lighter footprint strategy. We hope to provide this information to interested customers by means of a more effective marketing campaign that promotes local, organic and vegan menu items.

A concern that had been expressed by both Nancy Toogood and Pendulum manager Rick Kellough was that a new marketing strategy may contribute to the "sign pollution" currently experienced by the AMS outlets in the Student Union Building. Our challenge was to identify ways of calling attention to LOV items without creating an excess of additional posters or pamphlets to clutter the walls, detracting from the effectiveness of the posters. The following marketing strategies were developed to promote current LOV items in a way that did not contribute to signage clutter within the Pendulum:

1. Improving on the existing LOV display case label was a priority as it was felt that the existing label did not successfully catch the eye of the consumer. (See appendix C for comparison). After collaborating with Kellough, a new label was developed that incorporated his expressed desire for more space to identify the ingredients of a particular dish. It was decided that the new label would be hot pink to catch the eye of the customer, and in the shape of a heart to further promote the *LOV at the Pendulum* campaign (Appendix C).
2. A portion of the large menu boards which advertise the Pendulum's daily features should be dedicated to identifying the LOV items available each day.
3. Collaboration with Kellough led to the development of an information piece designed to sit on the tables of the Pendulum and explain the LOV label (Appendix D). The Pendulum has a unique opportunity to reach its customers with the lighter footprint message as many of its patrons sit and eat their meals in the restaurant. Most of the other AMS outlets operate on a primarily take-out basis, so there is less opportunity to reach clients with key messages. The table cards provide a simple explanation of the LOV label, and direct the reader to additional information sources should they desire to learn more. On the suggestion of Kellough, the table cards were designed to lay flat on the table (versus as a tent) as table space is an issue. The table card was also designed to be read by both persons sitting at the table (i.e. from both directions). The website of the AMS Lighter Footprint Strategy, as well as the Pendulum's own website are provided for any that wish to further investigate the issue.
4. The Pendulum's website was identified as another means of promoting the eco-friendly items that are already part of the menu. The current website lacks an eye catching message about the LOV menu items, and could have the potential to both identify and promote these items.

5. In addition to the official Pendulum website, we suggest a group be created on the social networking website Facebook. The group would simply be called *"LOV at the Pendulum"* and aim to promote eco-friendly food choices to the broader UBC community. This hopes to draw a new clientele to the Pendulum of diners looking to decrease their ecological footprint at on-campus venues.

Unfortunately, due to lack of time, our group was not able to see our suggestions implemented at the Pendulum before the end of our term. While we received very positive feedback from Rick Kellough, we remain uncertain as to whether our updated marketing strategies will be employed at the Pendulum.

Recommendations

The findings of our study have fuelled many recommendations for our project stakeholders. In consideration of the limited time frame and the narrow scope of our project, we suggest ways to improve the existing marketing strategy for the Pendulum, with room for expansion into the AMS, as well as new areas of research for future AGSC students as well as our project stakeholders.

<u>The Pendulum</u>:

- Increase awareness of existing LOV products by adopting our proposed marketing strategy:
    - Implement new LOV labels in display cases
    - Table cards describing the LOV labels
    - Highlight daily LOV items on the chalk board

    - Update Pendulum website to include LOV items
    - Create a Facebook group called “LOV at the Pendulum” to raise awareness campus-wide and beyond
    - Enlist an employee to take responsibility for online marketing ventures (perhaps a marketing student) and to keep website and Facebook group up to date
- Explore revamping existing popular menu items to become more ecologically friendly
- Educating employees regarding LOV labels, Eco-Friendly Days in the SUB and criteria for vegan, local and organic foods
- Use local and/or organic ingredients, including farm produce, whenever possible

Future AGSC students:

- Re-evaluate our marketing strategy, if implemented, to assess whether it has resulted in increased awareness for the AMS Lighter Footprint Strategy and Eco-friendly/LOV menu items at the Pendulum
- If implemented, and deemed successful, expand the LOV signage to other outlets within the AMS – and perhaps even campus-wide?
- Incorporate another LOV item to the Pendulum menu
- Provide education on what criteria is needed for an item to become a LOV item – there seems to be confusion over what can get the label and what cannot

AMS Food Outlets:

- Adopt and implement LOV labelling at the Pendulum and expand beyond to other AMS outlets
- Promote the Facebook group page during Eco-Friendly Day

Food Project Coordinator(s):

- Include a new scenario that coordinates and integrates all marketing strategies for the AMS food outlets. This will:
    - Bring awareness to the many LOV options available in AMS outlets
    - Adopt a consistent appearance among all AMS outlets
    - Incorporate marketing strategies that are proven effective to students

Conclusion

The main objective for this community based action research project is to achieve a sustainable food system at UBC campus. Our group, along with the other AgSc 450 groups are working together to achieve this goal. As there are many problems that still need to be overcome, our group was chosen to work with enhancing the sustainability of the AMS food outlets, and in particular with the Pendulum. As the Pendulum is a benchmark food outlet in the sense that it already incorporates many Lighter Footprint Strategies and has many existing LOV menu items, our group felt it could be most useful by creating a marketing strategy that could help Pendulum customers make more informed food choices, thereby lowering their ecological footprint and bringing UBC one step closer to sustainability.

Our hope is that the marketing strategy will be adopted by the Pendulum, and if proven to be successful, will spread to the rest of the AMS food outlets and beyond. We recognize that reducing the ecological footprint of the AMS and UBC is only a small step towards sustainability, and the ultimate goal towards sustainability is a worldwide issue. Our group feels

that bringing awareness to this issue through appropriate marketing strategies can have a profound effect that will travel beyond the confines of UBC. By finding solutions to lowering UBC's ecological footprint through these various AgSc 450 projects, we have become a leader in the community, and our hope is that we can be a model for other communities worldwide in our pursuit for global sustainability.

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Appendices

Appendix A: Pendulum Survey

AGSC 450 UBC Food Systems Project 2009: Exploring the Ways to Lighten the AMS Food and Beverage Department's Ecological Footprint

Mission: To use a survey to assess the Pendulum restaurant customer's knowledge of the eco-friendly options available.

Please fill out, and/or circle any of the answers that best apply to you.

- Gender: _____
- Program:_____
- Year _____
- Frequency of UBC food systems purchase:_____

Please circle all answers that apply to you.

1) Do you make an effort to reduce your own carbon footprint?
    a. Yes, through transportation (i.e. transit, biking, walking, etc.)
    b. Yes, around my home (i.e. energy efficient appliances, turning off the lights, fluorescent light bulbs, etc.)
    c. Yes, through food (i.e. local, organic, vegan, little to no meat, etc.)
    d. Yes, through other ways (please specify): _____

e. No

2) What factors are important when choosing a menu item (rate them in order of importance from 1 (most important) to 6 (least important)?
    a. Ingredients I like/ taste _____
    b. Satiety/how full it will make me _____
    c. If the ingredients are local _____
    d. If the ingredients do not contain meat _____
    e. If the ingredients do not contain animal products (such as dairy or eggs) _____
    f. Price _____

3) Do you make an effort to reduce your ecological footprint by purchasing eco-friendly food?
    a. Yes, I eat local
    b. Yes, I eat organic
    c. Yes, I don't eat much meat
    d. Yes, I have a garden
    e. Other: _____
    f. No

4) Have you noticed the ecological footprint logo on menu items throughout the UBC food service vendors?
    a. Yes
    b. No

5) Are you aware of the eco-friendly menu options available at the Pendulum restaurant?
    a. Yes
    b. No

6) If you answered YES to #5, what alerted you to their eco-friendly value?
    a. The footprint symbol
    b. The different coloured label
    c. I know the third Thursday of every month is the AMS eco-friendly day, and therefore on that day the pendulum promotes an eco-friendly option
    d. Other: _____

7) Would you like to see more ecologically friendly, i.e. local, vegetarian, and/or organic menu items at the Pendulum?
    a. Yes
    b. No
    c. I don't care

8) Would you be interested in learning more about the AMS lighter footprint strategy?
    a. Yes
    b. No

9) Would you specifically order a product because it had the ecological footprint label?
    a. Yes
    b. No

10) What kind of food are you more likely to buy when you eat out?
    a. Italian
    b. Chinese
    c. Deli food/sandwiches
    d. Japanese
    e. Vegetarian
    f. Other: _____

11) Was the menu item you ordered today from the Pendulum restaurant eco-friendly?
    a. Yes
    b. No
    c. I don't know

12) Additional Comments:

_____
_____
_____
_____
_____
_____

Thank you for your time!

Appendix B: Pendulum Survey Responses and Mean Response Values for Survey

Responses:	Q1	Q3
Yes	93%	68%
No	7%	32%
Number of responses	95	95

Responses: Q2						
	Most important (1)	2	3	4	5	Least important (6)
Taste	49	13	2	0	0	3
Satiety	5	19	28	8	2	1
Local	1	3	14	27	7	8
No Meat	6	1	0	8	26	17

No Animal Products	1	1	1	0	14	35
Price	14	20	17	8	2	0

Responses:	Q4	Q5
Yes	36%	30%
No	64%	70%
Number of responses	95	93

Responses:	Q6
Footprint Symbol	48%
Different colored Label	16%
AMS eco-friendly day	23%
Other	13%
Number of responses	31

Responses:	Q7	Q8	Q9
Yes	61%	57%	48%
No	2%	43%	52%
I don't care	37%		
Number of responses	93	93	93

Responses:	Q10
Italian	32
Chinese	18
Delhi/sandwiches	29
Japanese	50
Vegetarian	23
Other (Thai, Canadian)	3

Responses:	Q11
Yes it was	8%
No it wasn't	16%
I don't know	76%
Number of responses	92

Comments Section:

- "Anything made with food from the UBC Farm should be identified"

- "I think I know the Pendulum is generally more environmentally friendly/local-ingredients based but nothing formally informing me, catches my eye except the free range eggs used on the board."
- "I buy local groceries as much as possible but do not think about it as much when I'm eating out."
- "I use the composting frequently and think that it is a very good idea. More of them needed, for example at Woodward you can only use the compost when the snack bar is open, restricted hours."
- "Food at the Pendulum is great."
- "While eco-friendliness is not the deciding factor when choosing between two options, I would be more likely to choose the eco-friendly option."
- "eco-friendly costs more"
- " Survey tool needs work"
- "Cool, thanks!"
- "Pendulum uses compost (happy face), recycles its plastic glasses and salad containers"
- "There are economic issues here."

Sample Calculations:

1) Percentages:

   Eg. Question 4: Number of respondents for "yes"/ Total number of respondents = %

   $$34/95= 36\%$$

2) Chi-Square Analysis: $(\text{observed-expected})^2/(\text{expected})$

   E.g Question 4: Null Hypotheses: Everyone who purchases food from the Pendulum is aware of the eco-friendly menu options.

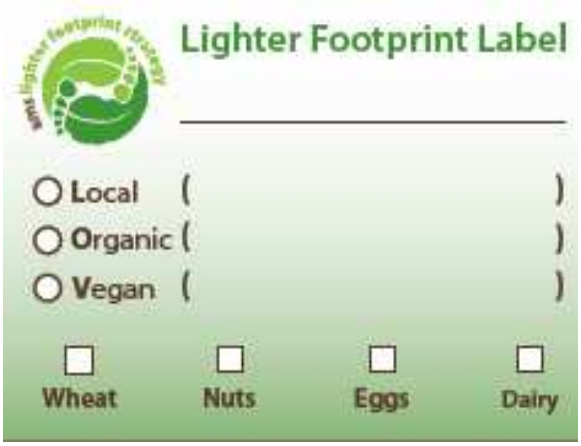
   $$X^2 = (28-93)^2/(93)$$

   $$=$$

   Compare with Chi-Square table using P=0.05 value.

Appendix C: Old & New LOV Label

Old



NAME OF FOOD ITEM

List of food item ingredients

☐ **L**ocal

☐ **O**rganic

☐ **V**egan

$ Price

NAME OF FOOD ITEM

List of all food item ingredients

Appendix D: LOV Table Card

See attached pdf file.