Keeping Students in the Green:
Examining Social Media as a Tool to Improve
Communication with University Students

A Thesis

Presented in Partial Fulfillment of the Requirements for
The Degree Master of Fine Arts in the
Graduate School of The Ohio State University

By
AnneMarie Abell, BSME
Graduate Program in Industrial, Interior, and Visual Communication Design

The Ohio State University
2009

Thesis Committee:
Carolina Gill, Advisor
Dr. Elizabeth B.-N. Sanders
Paul Nini
Copyright by
AnneMarie Abell
2009
ABSTRACT

This study discusses the importance of improving communication between university students and the administration, as related to university sustainability initiatives. The Ohio State University was used as a case study. At the beginning of the study Ohio State had several sustainability initiatives in place on campus but it was hypothesized that the students were not being fully informed about the initiatives. To investigate this matter, several participatory design research activities were conducted with the intent to determine the students’ views and their unmet needs in terms of sustainability initiatives at Ohio State. Participatory research methods were chosen due to the involvement of the students in the research and design process, ensuring that the final result will meet the unmet needs of the students in a way that is appropriate to the student lifestyle.

The goal of this project was to design an improved system of communication to bridge the gap between the administration and the students. During the course of the study it became apparent that social media played a significant role in how students communicate with one another (for social and
academic reasons), thus directing the project’s focus to the use of social media as a tool to improve communication between administrators and students.

This study presents background information on: The Ohio State University; recent sustainability issues and ‘green’ trends in society, and at the university level; and social media, including case studies of unexpected but positive ways in which social media has improved communication, in society and at the university level.
Dedicated to my grandma Melva Cicero,
who admittedly knows nothing about the internet or social media
and prefers to keep her Amish ways.
ACKNOWLEDGMENTS

I would like to thank Carol Gill, my advisor, for showing me that design is about more than just attractive products and that sustainability is about more than just using recycled plastic. Thank you for your support and patience with my project.

Thanks to my committee members, Dr. Liz Sanders and Paul Nini, for their continual support and guidance with my project, even as it changed direction several times.

A big thank you to my grad school friends for their support with teaching, fun times at Evening Seminar, and for sticking it out together when thesising got tough: Catalina Naranjo, Mercé Graell-Colas, Annie Maclean Neumer, Erik Evensen, Erika Svanoe, Rob Strouse, Louis Miller, Beth Albright, George Gantzer, amongst many others.

A special thank you goes to my cousin Brian Reynard who introduced me to design, and who, through his amazing mentoring, has helped me become the expert nerd I am today 😊

Finally, I would like to thank my parents, Dale and Natalie Abell, and my sister Katie for their continual support throughout my many years as a lifetime student and for always reassuring me that, yes, everything will work out in the end.
VITA

1982 ..........................................................Born – Minneapolis, MN

2005..........................................................B.S. Mechanical Engineering, Valparaiso University

2006-2009 ...............................................Graduate Teaching Associate, The Ohio State University

FIELDS OF STUDY

Major Field: Industrial, Interior, and Visual Communication Design
# TABLE OF CONTENTS

ABSTRACT ................................................................................................................................. ii
DEDICATION ............................................................................................................................... iv
ACKNOWLEDGEMENTS ................................................................................................................ v
VITA ................................................................................................................................................ vi

CHAPTER 1 PROJECT OVERVIEW AND TIMELINE ................................................................. 1
  1.1 Project Overview ................................................................................................................ 1
  1.2 Events Timeline ................................................................................................................ 3

CHAPTER 2 RECENT TRENDS IN GREEN PRODUCTS, GREENWASHING, AND CONSUMER INFORMATION ................................................................................................................. 9
  2.1 Emergence of Green Products and Greenwashing ............................................................... 9
  2.2 Sustainability Approaches from the Corporate Level and the Product Level .................. 18
    2.2.1 Strategy 1: Reduced Packaging: ................................................................................... 20
    2.2.2 Strategy 2: Switching to eco-friendly ingredients ......................................................... 21
    2.2.3 Strategy 3: Energy Savings ............................................................................................ 25

CHAPTER 3 THE SCOPE OF ENVIRONMENTAL ISSUES AT THE UNIVERSITY LEVEL .............................................................................................................................. 27

CHAPTER 4 INFORMATION SHARING THROUGH TECHNOLOGY AND SOCIAL MEDIA ........................................................................................................................ 33
  4.1 Introduction ......................................................................................................................... 33
  4.2 Technology as a tool for communication ......................................................................... 33
  4.3 Evolution of Social Networking ......................................................................................... 35
  4.4 Facebook .............................................................................................................................. 37
    4.4.1 Development ............................................................................................................... 37
    4.4.2 User Profile and Information Sharing ......................................................................... 38
    4.4.3 Statistics ...................................................................................................................... 52
  4.5 Twitter ................................................................................................................................. 54
    4.5.1 User Profile and Information Sharing ......................................................................... 54
  4.6 Case studies of social media on and off campus ............................................................... 65
CHAPTER 5 THE IMPACT OF THE INTERNET ON COMMUNICATION .......... 78
  5.1 Internet Communication................................................................. 78
  5.2 Information Richness........................................................................... 84
  5.3 Institutional Communication ............................................................ 86

CHAPTER 6 AN OVERVIEW OF OHIO STATE STUDENT LIFE AND SUMMARY OF
RECENT CAMPUS SUSTAINABILITY INITIATIVES......................................... 88
  6.1 Introduction ......................................................................................... 88
  6.2 Overview of the Ohio State University ................................................ 89
  6.3 The Ohio State First Year Experience Program .................................... 91
    6.3.1 Orientation.................................................................................... 93
    6.3.2 Leadership Collaborative .............................................................. 94
    6.3.3 Buckeye Book Community............................................................. 95
    6.3.4 Success Series.............................................................................. 96
  6.4 University Housing............................................................................. 98
  6.5 Transportation..................................................................................... 100
  6.6 Dining Services................................................................................... 103
  6.7 Off Campus Student Life ................................................................. 107
    6.7.1 Off-Campus Student Services...................................................... 107
    6.7.2 Differences Between On-Campus and Off-Campus Life ............ 108
  6.8 Summary of Sustainability Initiatives at Ohio State ............................ 110
    6.8.1 The President’s Council on Sustainability.................................... 111
    6.8.2 Scarlet, Grey, and Green............................................................... 112
  6.9 Green Student Organizations on Campus ......................................... 120

CHAPTER 7 INVESTIGATING STUDENT AWARENESS AND NEEDS REGARDING
CAMPUS SUSTAINABILITY ISSUES THROUGH SURVEYS .......... Error! Bookmark not
defined.
  7.1 Introduction ..................................................................................... 124
  7.2 Initial Student Survey........................................................................ 125
    7.2.1 Responses from Initial Student Survey....................................... 126
    7.2.2 Observations From Initial Student Survey................................. 129
  7.3 Survey to Student Staff Members .................................................... 132
    7.3.1 Responses from Student Staff Survey....................................... 133
    7.3.2 Observations.............................................................................. 137
  7.4 Survey of Communications of Green Student Groups ..................... 140
  7.5 Research of Sustainability at Other Schools .................................... 143
    7.5.1 Sustainability Information at the University of Florida................ 144
    7.5.2 Sustainability Information at the University of California, Berkeley 145
    7.5.3 Survey to Administrators of Other Schools................................. 148

CHAPTER 8 PARTICIPATORY WORKSHOPS............................................... 150
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1 Timeline of significant events</td>
<td>5</td>
</tr>
<tr>
<td>Figure 1.2 Timeline of significant events</td>
<td>6</td>
</tr>
<tr>
<td>Figure 1.3 Timeline of significant events</td>
<td>7</td>
</tr>
<tr>
<td>Figure 1.4 Timeline of significant events</td>
<td>8</td>
</tr>
<tr>
<td>Figure 2.1: The ENERGY STAR label.</td>
<td>14</td>
</tr>
<tr>
<td>Figure 2.2: Timberland Nutritional Label</td>
<td>16</td>
</tr>
<tr>
<td>Figure 2.3: ARM &amp; HAMMER Essentials</td>
<td>24</td>
</tr>
<tr>
<td>Figure 2.4: ARM &amp; HAMMER Essentials Refill Cartridges</td>
<td>25</td>
</tr>
<tr>
<td>Figure 4.1: Annotated view of a user's 'Wall'</td>
<td>41</td>
</tr>
<tr>
<td>Figure 4.2: A user's Home page</td>
<td>44</td>
</tr>
<tr>
<td>Figure 4.3: The Stream on a user's Home Page</td>
<td>45</td>
</tr>
<tr>
<td>Figure 4.4: Highlights on a user's Home Page</td>
<td>46</td>
</tr>
<tr>
<td>Figure 4.5: Filters on a user's Facebook Home Page</td>
<td>47</td>
</tr>
<tr>
<td>Figure 4.6: Using the Facebook Connect System</td>
<td>50</td>
</tr>
<tr>
<td>Figure 4.7: Publishing a story via Facebook Connect</td>
<td>51</td>
</tr>
<tr>
<td>Figure 4.8: Screen shot of stream of Twitter updates from co-founder Biz Stone</td>
<td>55</td>
</tr>
<tr>
<td>Figure 4.9: A Twitter user's home page with updates only from chosen contacts</td>
<td>56</td>
</tr>
</tbody>
</table>
Figure 4.10: The Twitter Public Timeline .............................................................. 58
Figure 4.11: The advanced search function of Twitter ........................................ 60
Figure 4.12: Tagged tweets from the IDSA Mideast Conference .....................61
Figure 4.13: Instances of selected words used on Twitter during a September
2008 U.S. presidential debate ........................................................................... 63
Figure 4.14: Instances of selected words used on Twitter during an October 2008
U.S. presidential debate. Note the increase in volume compared to one
month prior ...................................................................................................... 64
Figure 4.15: Twitter stream for Wayne State ..................................................... 71
Figure 6.1: Ohio State University Enrollment Statistics for Academic Year 2008-
2009 ............................................................................................................. 91
Figure 6.2: Information on waste produced from a typical meal at an Ohio State
University dining facility ................................................................................ 106
Figure 8.1 Students participating in Workshop 1 .............................................. 154
Figure 8.2 Workshop 1: Administrators completing Phase 1 discussions ......... 154
Figure 8.3: Student Discussion 1A: Student Mindmap: “Remembering Your
Freshmen Year” ............................................................................................ 156
Figure 8.4 Student Discussion 1B: Student Event Matrix ................................. 159
Figure 8.5: Discussion 2A: Matrix of how students expect people to communicate
....................................................................................................................... 161
Figure 8.6 Student Discussions 3B and 3C Student List of Sustainability Initiatives, with voting for most and least successful. Green stickers indicate most successful, red least successful. .................................164

Figure 8.7 Administrator Discussion 1A, examining events offered to first year students ..........................................................................................................................................................169

Figure 8.8 Administrator Discussion 1B, Events and activities and how they are advertised ...........................................................................................................................................................................172

Figure 8.9 Administrator Discussion 2, Communication Methods for each type of person...........................................................................................................................................................................173

Figure 8.10 Administrators Discussions 3B and 3C: List of sustainability initiatives ...........................................................................................................................................................................177

Figure 8.11 Took kit for Phase 2.................................................................................................................................................................................................180

Figure 8.12 Workshop 1, Phase 2: Students and administrators working together to create a timeline...........................................................................................................................................................................183

Figure 8.13 Workshop 1 Timeline 1 .................................................................................................................................................................................................184

Figure 8.14 Timeline 1, Detail Section 1 .................................................................................................................................................................................................185

Figure 8.15 Timeline 1, Detail Section 2 .................................................................................................................................................................................................186

Figure 8.16 Workshop 1 Timeline 2 .................................................................................................................................................................................................189

Figure 8.17 Timeline 2, Detail Section 1 .................................................................................................................................................................................................190

Figure 8.18 Timeline 2, Detail Section 2 .................................................................................................................................................................................................191
Figure 8.19 Timeline 2, Detail Section 3 ..............................................................192
Figure 8.20 Workshop 2 Timeline....................................................................... 198
CHAPTER 1

PROJECT OVERVIEW AND TIMELINE

1.1 Project Overview

Ohio State University, like many other schools, institutions, or companies has been changes in an effort to be more environmentally friendly or lessen their environmental impact. These changes have come in the form of university-wide policies to reduce resource consumption, programs to educate students, and efforts to increase recycling, amongst several other initiatives. The existing initiatives are all making positive changes, but to maximize impact of Ohio State’s sustainability efforts it is critical that the University promote a cultural change in the campus community to one that deeply values sustainability, by adopting a system that seeks to involve all members of the campus community, particularly students.

Students are arguably the most important part of any university, and most young people today are aware of the challenges our society is facing in terms of sustainability, climate change, and natural resource depletion. Many young people want to contribute to the solution, if only by adopting more environmentally friendly lifestyle practices and making the right choices in their
everyday life. Many opportunities lie in the University life to promote the adoption of environmentally friendly practices and choices, and when small changes in lifestyle are considered at the scale of a large university like Ohio State, each person’s small choices can add up to make one big impact.

Furthermore, the role of a university is to educate, inspire, and impart to young people the professional skills necessary to become future leaders in their fields. Sustainability is a very complex problem of the future, and the solutions to it will involve many different fields: engineering, business, medicine, government, design, and the sciences, just to name a few. Therefore, as universities train students to one day run businesses, make policy, cure diseases, and plan cities, the universities also have a duty to teach students the skills necessary to help solve the environmental problems we are facing as a society (Creighton, 1999, 5). Because of this, it is critical that the University not only expands their sustainability initiatives, but also does so in way that ensures students are fully informed and engaged in all stages of planning and implementation of the initiatives.

As mentioned, Ohio State does have sustainability initiatives in place, but it is hypothesized that they are not being fully utilized by the student body, not due to a lack of interest on the students’ part, but rather because the students are not being fully informed about the initiatives. To verify and further investigate this matter, several participatory design research activities were conducted with the intent to determine the students’ views and their unmet needs in terms of sustainability initiatives (if and how they are using and learning about them) at
Ohio State, with the end goal of designing an improved system of communication to bridge the gap between the administration and the students. Participatory research methods were chosen due to the involvement of the students in the research and design process (ensuring that the final result will meet the unmet needs of the students in a way that is appropriate to the student lifestyle).

This research was carried out through surveys to Ohio State students of various academic backgrounds, and subsequently to Ohio State student employees and members of green student organizations, and through a participatory workshop that engaged Ohio State students and administrators in critical discussion and brainstorming about how to improve the communication practices between administrators and students in terms of campus sustainability. From this research an improved communication method was proposed in the form of recommendations for the University to use to effectively communicate with students about campus sustainability and to actively engage students in discussion, planning, and implementation of sustainability initiatives.

1.2 Events Timeline

Over the course of this study, which was started in autumn of 2007, the direction was altered appropriately to reflect the findings at each stage of research. Perhaps the most significant change to the direction of research came after the first survey was distributed to Ohio State students. The results of this survey indicated that the participants naturally communicate with friends and roommate often, but they also rely very heavily on their peers for information.
about University events and sustainability initiatives. Additionally, this first survey (and the subsequent surveys) indicated that the participants used email and Facebook more often than other methods of communication. This fact led to a new focus of this study, to investigate the ways in which social media could play a role in improving the information sharing system between the University and its students.

Social media and Internet communications have been changing and expanding rapidly over the past few years, as have trends in being environmentally friendly. Because of the dynamic nature of these subjects, the state of affairs has changed and evolved quite a bit from the time of initial research up until the writing of this document—and changes will no doubt continue to occur in the coming months and years.

To set the scene for the story of this project, following is a timeline with significant events and changes relevant to social networking, specifically Facebook and Twitter, and Ohio State’s sustainability practices. The timeline starts in 2003, which is when social networking in its current form was introduced, and also when Ohio State started one of its mainstream sustainability initiatives: using Biodiesel fuel in campus busses.
Figure 1.1 Timeline of significant events
Figure 1.2 Timeline of significant events
Figure 1.3 Timeline of significant events
Figure 1.4 Timeline of significant events
CHAPTER 2

RECENT TRENDS IN GREEN PRODUCTS, GREENWASHING, AND CONSUMER INFORMATION

2.1 Emergence of Green Products and Greenwashing

‘Eco-Friendly’, ‘Sustainable’, and ‘Carbon Footprint’ have become household phrases in our society over the past few years with the popularity of the green movement. This green movement, whether it is a passing fad or a permanent cultural change, has inspired many people to try to make choices that will help them live a more environmentally-friendly lifestyle. And there are many choices for these eco-conscious citizens to make now that Green has become the trend. A vast array of eco-friendly products and services are now available anywhere you look.

‘Green’ products are popping up everywhere and are becoming available in virtually every product category, and as Dawn Danby mentions in WorldChanging, “demand for truly eco-friendly products is now growing so fast designers can’t keep up” (Danby, 2006, 114-115). A quick trip to the store reveals cooking utensils made of bamboo, energy-efficient light bulbs, beauty products made from natural minerals, organic cotton sheets, and a whole host of organic, natural, or sustainably farmed foods. Many stores, even the big chains, now also
sell reusable grocery bags to carry these environmentally friendly products and foods home in. Purchasing green products has become the new trend. Whether it is shaped by concerned consumers looking to make positive environmental choice, or by those looking to keep up appearances, the trend is green products. Organic food sales in the United States grew by 25.6% in the year leading up to December 2007, contributing to $22.75 billion worldwide sales in 2007 (CNNMoney.com).

Companies know that consumers want environmentally friendly products so naturally every opportunity is taken to advertise any green aspect of a product, from purpose to packaging. With so many products being marketed as green, and so many corporations and businesses declaring a devotion to ‘sustainability’ it is often hard for consumers to tell which products or companies are truly environmentally friendly (Bergson, 2008). The term ‘greenwashing’ was coined in the 1990s to describe the way companies mislead consumers into thinking that they were environmentally responsible but did not have the practices to back up the claims (Makower 2006, 38-39). This greenwashing still occurs today as part of a vicious cycle: consumers create a demand for environmentally friendly products and services, so companies market their products and services as such (which is sometimes truthful, sometimes false) to try to win over the customers—but when it seems that practically every company is claiming to be eco friendly customers cannot know who to trust.

There has been such an explosion of green marketing that the Federal Trade Commission started a revision process in 2007 to update their Guides for
the Use of Environmental Marketing Claims (the “Green Guides”). The Green Guides aim to set regulations about the green marketing of products to make sure that consumers are not provided with false information or otherwise mislead about the environmental claims of a product packaging, or service. As discussed by Bergson, a 2007 report by TerraChoice Environmental Marketing, Inc. concluded that the majority of green marketing claims are “demonstrably false” or “risk misleading intended audiences” (Bergson 2008). With the increasing frequency and complexity of these green marketing claims it becomes harder for consumers to decipher which claims are substantive and which are just another case of greenwashing. Rarely are consumers educated enough to assess a product’s claims about things such as its manufacturing, recyclability, or carbon footprint (Bergson 2008). In the same manner, it is hard for consumers to tell if businesses are making claims of environmental and social responsibility to gain a competitive advantage or because there is truly ‘a sea change in corporate social governance’ (Snyder, J. and Muir, A. 2005). With this lack of substantive, verified information, it can be hard for consumers to know where and how to spend their money in a way that is certain to make a difference.

Information plays a very important role in helping consumers make environmentally friendly choices. When consumers are educated about the impact of a product or service they can make a more informed purchase. Unfortunately though, often the manufacturer is the sole source of information on a product, which can mean that the only thing the consumer hears is
greenwashing. To make a good choice, consumers need the right information from a credible source (Cheung, Lee, and Rabjohn 2008, 231).

To counteract this trend of greenwashing, there are sources on the Internet that aim to guide consumers who are trying to make responsible choices. Though not regulated or governed by any third-party organizations, many of the sites are operated by respected organizations and companies such as Consumer Reports and National Geographic. For example, greenerchoices.org, operated by Consumer Reports, allows consumers to access information on a wide array of products from cars to cosmetics to food and beverages. There is even a section on this site that attempts to de-mystify many of the environmental claims made on product packaging, however, it only addresses claims that have been regulated or certified; this does nothing to help consumers clear up confusion of unregulated claims, nor does the website assist consumers when they are in the store comparing two products.

There are also of course many web sites that allow consumers to directly review or state their opinions about products, which has both positive and negative aspects. The Internet allows anyone to publish almost any thought and on review sites one often has the ability to remain anonymous (Cheung, Lee, and Rabjohn 2008, 243). The upside of this is that opinions on these sites are often frank and honest but the downside is that the opinions and reviews are often coming from everyday consumers and as previously mentioned, it is not often that a consumer is educated enough on technical matters to assess issues related to a product’s environmental impact (Bergson 2008).
Ideally, information about the environmental impact of a product would come from an officially recognized third party, or be independently certified, like the Federal Trade Commission hopes to do with its Guides for the Use of Environmental Marketing Claims. However outside of the market of food, independent certification of products seems to be rather limited. One rare but successful example of a long term effort to provide consumers with third party information is the ENERGY STAR® program.

With ENERGY STAR, the U.S. Department of Energy and U.S. Environmental Protection Agency (EPA) have teamed up to help consumers and homeowners better understand and compare the energy efficiency and operating costs of various products. The program sets strict standards on energy efficiency for products in the home including electronics, appliances, heating and cooling, and lighting; recently, the ENERGY STAR program has also set efficiency standards for homes and buildings as a whole. The energy efficiency standards vary for each category of product, appliance, or home system, but generally an ENERGY STAR certified product will consume 10-50% less energy than a standard comparable product. A product meeting these standards is labeled with the Energy Star label (see Figure 2.1: The ENERGY STAR label.) to alert consumers of its energy efficiency. Appliances and HVAC equipment that are ENERGY STAR certified are required to be labeled also with an Energy Guide tag. This Energy Guide tag estimates the predicted annual operating cost of the appliance based on the national average cost of electricity, and explains how
much energy the appliance will likely use annually compared to similar products (Energystar.gov).

According to a publication released by the Environmental Protection Agency in 2008, 60% of Americans recognize the ENERGY STAR and of that group, 89% “believe a qualified product uses energy more efficiently than a conventional product” (Using the ENERGY STAR Identity to Maintain and Build Value 2008). Additionally, more than half of American households knowingly purchased an ENERGY star product in the 12 months leading up to the EPA’s publication; in 60% of those purchases were influenced by the presence of the ENERGY star label (Using the ENERGY STAR Identity to Maintain and Build Value 2008). With the ENERGY STAR rating and regulated Energy Guide tag, consumers can be certain that the products will help them save energy.

Figure 2.1: The ENERGY STAR label.
Another notable effort to arm consumers with information about products comes from the footwear brand Timberland. In this case, it is the corporation taking initiative to inform consumers; the efforts do not appear to be influenced or certified by any third parties. Timberland started taking steps to inform consumers about the environmental impact of their manufacturing processes and products starting in 2006, with the addition of ‘nutritional labels’ on each shoe box. The label is similar in format to the standard “Nutrition Facts” label found on all food packaging, but outlines and quantifies the effect of manufacturing on the climate and community, where the shoes were manufactured, and the amount of energy to manufacture the shoe, as well as what portion of that energy is renewable, as seen in Figure 2.2: Timberland Nutritional Label (Timberland Corporation 2006). This nutritional label on Timberland packaging is intended to give customers “the ability to make value judgments at the point of sale”, according to Timberland’s chief executive Jeffrey B. Swartz (Crotese 2007).
It is important to note that the information present on Timberland’s nutritional label is based on global manufacturing data, so each shoebox is labeled with the same information about environmental and community impact, regardless of the particular style of shoes contained within the box.

Timberland has recognized the need for product-specific information and is implementing an additional initiative called the ‘Green Index™ rating’, which rates the environmental impact on a scale of 0 (best) to 10 (worst) of a particular
shoe. The rating takes into account climate impact, chemical use, and resource consumption involved in manufacturing the shoe (Timberland Corporation 2006). This Green Index™ information will be included on each shoebox in addition to the nutritional label and will allow consumers to compare the impact of one Timberland shoe to another. Currently the Green Index™ rating is included with only five shoes in select line, but Timberland hopes to include it with all shoes by 2010 (Timberland Corporation 2006).

Timberland has taken a lot of initiative to educate consumers on the environmental impacts and their efforts to empower consumers with information is certainly commendable. However, this information, including both the nutritional label and the Green Index™ rating, is not doing much to empower the customer unless similar information is available from other shoe manufacturers. Knowing that a particular pair of Timberlands rate a 4 on climate impact is interesting, but that numerical rating isn’t very useful without the ability to compare the Timberlands to other brands (Cortese 2007).

Furthermore, because the facts and information Timberland presents to consumers is backed up by research done entirely by Timberland and is not certified by an independent third party, customers cannot be absolutely certain that the claims are reliable. No evidence has been found to indicate that any of Timberland’s information or claims are false, but without certification from a third party there is no guarantee that the claims are credible- which is true for any company producing goods that claim to be environmentally friendly.
2.2 Sustainability Approaches from the Corporate Level and the Product Level

With consumer demand for greener products, companies are attempting to demonstrate to the public their commitment to sustainability. These claims of environmentally friendly business policy are becoming so frequent that it is hard to know if there is actually a sweeping change in practices of companies across the market, or if companies are just creating an image of environmental responsibility to respond to the pressure of consumers or environmental groups (Snyder and Muir 2005, 32).

As part of this effort to advertise environmental responsibility, many companies large and small are making available Corporate Social Responsibility (CSR) reports to publicize their dedication to sustainability. In addition to environmental responsibility, the reports often include information about the companies’ community involvements, commitments to diversity and inclusion, statements to economic accountability, and dedication to improving working conditions for employees around the world.

Retail giant Target publishes a yearly CSR report covering Social, Environmental, and Economic responsibility within in their brand. Their upbeat report is punctuated with cheery pictures of trendy and ethnically diverse people and bright images of environmentally friendly product offerings. In the 2007 report, the section on Environmental Responsibility the report outlines that Target stores across the nation aim to eliminate waste and use resources wisely. And highlights the sale of Method brand cleaning products as a way to offer
consumers “healthy, eco-friendly choices” and additionally notes that Target GiftCards\textsuperscript{SM} are made from biodegradable and natural materials (Target Stores 2007). The report states, “By encouraging systematic solutions, caring about the environment becomes an essential part of every business decision. As a result, making an eco-conscious choice becomes second nature” (Target Stores 2007).

In Target’s 2008 report environmental awareness and friendliness seem to be emphasized even more than the previous year, including an extensive section on the selection of organic, natural, or otherwise environmentally friendly product offerings available in each section of the store, from doormats to clothing to cleaning supplies. The report also outlines the stores’ efforts to reduce or improve packaging of proprietary brand products, and tells of several new stores that have been opened on brownfields across the country.

However, in the 2007 CSR report Target outlines its goals for corporate growth and intentions for future expansion:

“One hundred thirteen new stores opened in 2006, as well as three new distribution centers to support system growth. Our forecasts envision adding 100 net new stores every year for the foreseeable future, potentially doubling the number of stores from our current 1,500 to 3,000 stores by 2022 (Target Stores 2007)

Goals such as these likely make good business sense for expanding the brand, increasing revenues, and increasing Target’s share of the retail market, but these expansion goals do not fall in line with the environmentally friendly message being pushed in the CSR reports. Increasing the amount of retail outlets
just continues to promote a lifestyle of consumption. And even if a selection of environmentally friendly product offerings are available in each department of the store, it does not necessarily mean that consumers will choose these products. It is likely that consumers will continue to shop for conventional products in Target as well as the organic or natural ones.

In addition to changes at the corporate level, many companies are employing strategies at the product level to create greener choices for consumers. There are several strategies emerging that have become the trends. This is by no means an exhaustive list or explanation, but the following are several popular strategies being employed by companies:

2.2.1 Strategy 1: Reduced Packaging:

One major strategy to make products more environmentally friendly is to address the packaging of the product, by using more recycled or biodegradable materials, or by reducing the quantity of the packaging. Reducing the amount of packaging can often be clearly apparent to the consumer, who can then tell that this product with reduced packaging is a better environmental choice than one with excessive packaging.

An example of a product type that has had a noticeable reduction in packaging recently is laundry detergent, with many brands now offering concentrated versions of their product. In 2004 Method was the first company to launch concentrated detergent and used innovative package design and label
design as a strategy to market the new product and attract customers (Sustainableisgood.com). Soon after, major brands followed suit and parent companies Proctor & Gamble and Unilever started releasing concentrated versions of their major label detergents, such as All, Tide, Cheer, etc. (Sustainableisgood.com). These new detergents are two to three times more concentrated than the original detergent so not only is the detergent packaging smaller but the concentrated formula requires less liquid to be shipped to the consumer, saving resources in both production and shipping.

2.2.2 Strategy 2: Switching to eco-friendly ingredients

Many specialized brands exist that are dedicated to delivering products that are made exclusively with environmentally friendly materials or ingredients, but unfortunately these brands are not available in all markets and often the environmentally friendly products are more expensive than a comparable conventional product. Recently numerous mainstream companies have developed their own lines of environmentally friendly products to compete with the specialized brands. Many of these mainstream companies have done so in response to consumer demand for green products, or in an effort to make affordable green products available at a lower price point.

Looking at the product category of household cleaners, environmentally friendly brands such as Method, Seventh Generation, and Mrs. Meyer’s have created positive brand reputations and have become available at supermarkets
and department stores nationwide. And because the demand for environmentally friendly cleaning products is on the rise, mainstream brands have responded by providing their own green products; Clorox, known and trusted for its highly effective (yet chemically based) cleaning products, was one of the first to do so. The Clorox GreenWorks™ line was introduced in January 2008 and includes a family of household cleaners that are employ plant-based surfactants and other biodegradable cleaning agents, with each product having an ingredient list comprised of 99% natural substances (Treehugger.com). An informal survey of online reviews of GreenWorks™ products at sites such as about.com, treehugger.com, and greendaily.com shows that reviews are generally positive and customers seem to find GreenWorks™ cleaners as effective at removing dirt and stains as conventional chemically-based cleaners. Additionally, the GreenWorks™ website reports that since the product launch in January 2008, the market for natural cleaning products has more than doubled and GreenWorks™ is now the best-selling environmentally friendly line of cleaning products and holds a 42% market share (GreenworksPressKit.com).

The ARM & HAMMER® brand has embraced multiple strategies of greening their Essentials™ line of household cleaning products, including drastically reducing the necessary packaging and using environmentally friendly cleaners, however, they have taken it one step further than any of the aforementioned products by changing the product delivery system. The product family consists of a starter kit and refill cartridges that are filled with a highly concentrated cleaning solution. The starter kit includes an empty spray bottle
outfitted with a specialized opening and one cartridge of highly concentrated cleaning formula (See Figure 2.3: ARM & HAMMER Essentials and Figure 2.4: ARM & HAMMER Essentials Refill Cartridges). The consumer fills the empty spray bottle with tap water and then twists the cartridge on to the bottle’s specialized opening to release the concentrated cleaning solution into the bottle. When the original product is used up, the consumer can purchase more cleaning solution cartridges with which to refill the original spray bottle.

This change in the product delivery system (filling and refilling the spray bottle at home) has a significant positive impact on the environment. According to an article in Packaging Digest in September of 2008, the reusable spray bottles will save 18 million gallons of fuel and prevent 40 tons of CO₂ from being produced because fewer bottles will be shipped, and producing refill cartridges instead of more spray bottles uses 82 percent less petroleum per ton and 82 percent fewer trees per ton (Packaging Digest Blog 2008).
Figure 2.3: ARM & HAMMER Essentials

(Photo from: http://www.sustainableisgood.com/blog/2008/10/armhammer.html)
2.2.3 Strategy 3: Energy Savings

Another major strategy used by companies to make products more environmentally friendly is to design products to consume less energy during their useful life. Products that consume less energy benefit the environment by depleting fewer natural resources, and benefit consumers by reducing energy costs. All types of energy saving products have become available in recent years,
including light bulbs, major home appliances, and home and office electronics (Energystar.gov). Compact fluorescent light bulbs (CLF bulbs) have been on the market since the 1990s. Initially they were not so popular, but in recent years sales have taken off incredibly due to their drop in price and improved light quality output that is now comparable or superior to incandescent bulbs. The CFL bulbs consume approximately 70 percent less energy than an incandescent bulb of comparable brightness; if the average household in the U.S. switched to all CFL bulbs, that could result in a energy bill savings of approximately $180 per year (Masamitsu 2007).
CHAPTER 3

THE SCOPE OF ENVIRONMENTAL ISSUES AT THE UNIVERSITY LEVEL

Institutions of higher learning teach students the “professional and intellectual skills they need to cure disease, run businesses, lend money, and legislate policy” (Creighton 1998, 5) in the real world, so it is logical to assume that these same institutions would also teach students the skills necessary to help solve the environmental problems we are facing as a society. As Creighton points out, “Universities can both teach and demonstrate environmental principles and stewardship by taking action to understand and reduce the environmental impacts that result from their own activities” (Creighton 1998, 5).

As institutions of higher learning are often on the forefront of research and trends, it is not surprising to find that many colleges and universities have taken steps to become more environmentally friendly and sustainable institutions, in practice and in what they teach to students. Universities that have a top administrator interested in implementing sustainable initiatives usually have a
better success rate and wider campus participation than schools that have uninterested administrations (Creighton 1998,13-14).

At the Georgia Institute of Technology, the goal is to have each student take at least one course in sustainability. There are more than 100 courses offered across all departments of the university. Additionally, 40% of the food served in the campus dining halls is locally grown, and their Dining Services has reduced the use of Styrofoam take-out containers and other food packaging by 85% (GATech.edu).

The University of New Hampshire has been a leader in sustainability in higher education since opening their University Office of Sustainability in 1997—the first American college or university to do so. In an informative pamphlet about their sustainability efforts, The University of New Hampshire points out that the school is on track to become the first university in the United States to equip all residence halls to be EPA Energy star rated, and to become the first university to be powered almost entirely by methane gas captured from landfills.

Harvard University, in addition to traditional reduce-reuse-recycle method, has taken an innovative approach to one area of campus sustainability: starting a ‘Green Campus Loan Fund’. This fund is used to support campus conservation and sustainability projects, such as the installation of motion light sensors in classrooms (Campos, F. and Lei, C. 2006). According to the website of the Harvard Green Campus fund, the guidelines for eligible projects state that the funds will pay for up-front capitol to implement the projects, and departments will repay the loan within five to ten years with savings based on the
implementation of the project, such as reduced energy consumption or waste reduction.

According to the Green Campus Loan Fund website, as of November 2007 the projects funded by Green Campus Loans have significantly reduced the amount of resources the Harvard campus community has consumed, with a reduction of water consumption by approximately 15 million gallons, a greenhouse gas reduction of more than 33,000 metric tons of CO$_2$, and waste reduction of 200,000 lbs.

The sustainable initiatives taken by these and other universities are important not only because they good for the environment; students are taking note of what colleges and universities are doing to reduce their carbon footprint. Just like consumers interested in shopping for environmentally friendly products at the grocery store, incoming college students are interested in what their school is doing to make a difference. The Princeton Review, which publishes widely read rankings of colleges and universities in terms of academics and campus life, released in July of 2008 a ‘Green Rating’ of 534 colleges and universities. According to the Princeton Review website, the rating was based on “environmental practices, policies, and course offerings” of the schools during the 2007-2008 school year; the ratings were released on the Princeton Review website and appeared in the 2009 editions of its review publications such as its well known title, ‘The Best 368 Colleges’. According to an article appearing in The Washington Post in June of 2008, The Princeton Review “did a survey asking prospective [college] students what they want from their school. Two-thirds said
they would value a commitment to the environment, and nearly a quarter said it would strongly influence their choice” (Kinzie 2008)

In the same article in *The Washington Post*, Kinzie writes:

“The environmental fervor sweeping college campuses has reached beyond the push to recycle plastics and offer organic food and is transforming the curriculum, permeating classrooms, academic majors and expensive new research institutes... What was once a fringe interest, perhaps seemingly a fad, has become fully entrenched in academic life, university officials say, affecting not just how students live but what they learn and, as graduates, how they will change workplaces and neighborhoods. (Kinzie 2008)”

Because of this enthusiasm brought by students, students are often a great resource in bringing sustainable initiatives to a campus. They can bring an energetic approach to solving campus environmental problems, researching issues in a very detailed manner, and finding new resources to help the campus environmental cause. Despite this, students are often overlooked as a resource by the school administration (Creighton 1998, 15-16). This is an unfortunate situation because students are of course an integral part of any university, and as customers of the university, they can have an influence on which environmental issues the university chooses to tackle. As Creighton writes in ‘*Greening the Ivory Tower*’,
“Students and their activities result in the purchase of goods, the generation of wastes, and the use of resources, including water and energy. Since many students live on campus, their living habits are [sic] choices influence the college’s own environmental footprint. Studies of waste form student residences show that its makeup is similar to that of the university as a whole (about 50 percent paper) but that it varies a great deal depending on the day of the week and with the time of year. Student preferences influence food choices; colleges where more students live and eat off campus tend to have more take-out eating establishments and thus more solid waste from dining services. Lights, heat, and water are used lavishly in nearly every college dormitory.” (Creighton, 1998, 257)

However, despite students’ interest in green issues it can be hard for them to act on their concerns. The complexity of our global environmental problems can prevent a student from seeing his or her own relationship to the big picture and thus discourage him or her from taking action because there is no clear result to be seen (Creighton 1998, 257). Additionally, on a smaller scale, students can be uninspired to take steps towards a greener campus because they feel that the high cost of campus living entitles them to as many resources as they care to use (Creighton 1998, 257). When students paying a flat fee for housing, with all costs lumped in to one bill, they do not get feedback on how much electricity or water or heat is costing the university, or on what impact their own energy usage habits have on the bill or on utility usage.
The Association for the Advancement of Sustainability in Higher Education (AASHE) is an association formed in 2006 that works towards creating a more sustainable future through promoting sustainability in all areas of higher education and by providing schools with resources and support for their sustainable initiatives (aashe.org). Over 1,700 schools from across the U.S. and Canada have joined AASHE. Member schools and their employees can benefit from conferences, online resource centers, and various professional development activities offered by AASHE.

AASHE is also providing backing for colleges and universities that have signed The American College and University Presidents Climate Commitment, which is a “high-visibility effort to address global warming by garnering institutional commitments to neutralize greenhouse gas emissions, and to accelerate the research and educational efforts of higher education to equip society to re-stabilize the earth’s climate” (presidentsclimatecommitment.org). The Ohio State University is a member of both AASHE and the American College and University Presidents Climate Commitment.
CHAPTER 4

INFORMATION SHARING THROUGH TECHNOLOGY AND
SOCIAL MEDIA

4.1 Introduction

This chapter will discuss recent advancements in technology that allow us to communicate in an ever-increasing number of ways, with a focus on the Internet and social media, or social networking. Included in this chapter are explanations of the online social media sites Facebook and Twitter, followed by a discussion of case studies in which Facebook and Twitter have been used in unexpected but positive ways as a tool for information sharing.

4.2 Technology as a tool for communication

As technology progresses we are presented with an increasing number of ways to communicate with one another. These newer technologies help remove
previous limits as to where and how quickly we can communicate with others, and how much information we can share.

Mobile phones allow us to take phone calls practically anywhere. We can stay up to date on work matters when we are away from the office and keep in touch with friends and family even when we are away from home. Mobile phones have become a primary source of communication for many people, especially college students, and often a mobile phone is the primary ‘information and communication technology’ that college students use to stay in touch with family members (Chen and Katz 2009, 184).

Similarly, the Internet has greatly enhanced the way we communicate and the amount of information we share. Through the Internet, email allows us to stay in touch with friends, family, and coworkers from practically anywhere but it additionally it provides a method of communication that is less intrusive to others. For example, making a phone call to schedule an event demands the immediate attention of the recipient, but sending an email allows the recipient to consider the matter at a time that is convenient for him or her. A study for the Pew Internet and American Life project in 2002 found that the majority of college students agreed that the Internet has had a positive impact on their educational experience and that they use email to contact professors to report absences and ask questions about grades. Almost half of the students surveyed said that contacting a professor via email “enabled them to express ideas... that they would not have expressed in class” (Jones 2002).
Online communities and social media (also called social networking) have also largely influenced the way that Internet users, particularly college students and other young adults, communicate and share information. The following sections outline the evolution of social media, explains the way two social networks work that are popular amongst college students and recent alumni, and discusses several case studies that illustrate the positive impacts of social networking as information sharing.

4.3 Evolution of Social Networking

Ever since the Internet has been available to the public, people have been using it to connect and share information with others who have similar interests. In the 1980s before the World Wide Web existed as we now know it, users could read and publish posts (or articles) to forums, download or upload files, and send messages to others through online communities such as USENET and the Bulletin Board Systems. These online communities offered different subgroups, or ‘newsgroups’, to allow users to have discussions and share information about specific topics of their interest, and also let users find and learn from other people around the world who shared similar interests.

These online communities evolved along with the Internet and became popular with certain subsets of users based on specific interests. In the mid-1990s, more advanced sites like Geocities popped up that allowed members to create their own customized web page and join chat rooms and interact with
other users. Software and other web tools also became available to everyday people that allowed them to create their own web pages. People could fill their Web pages with whatever content suited them, including commentary on the author’s topic of choice. This led into the concept of blogging, or keeping an online journal of thoughts, updates, or current events. Sites such as Blogger and Xanga let anyone create a blog and gather friends from within the site. Members could post comments on the blog entries of others, but that was about the extent of the interaction users had.

However, in 2002 Friendster appeared as the first of a new breed of social online communities, now known as social networks. Friendster was the first social network to use the ‘Circle of Friends’ model, as coined by computer scientist Jonathan Bishop. This model for social networking, which has become the standard for today’s top social networking sites, connects users to their actual friends or acquaintances; previously online social networks most often connected users with strangers (Rosen 2007, 17). With this modern type of social networking users share information not only about topics they are interested in, but also create a profile page about themselves, share photos, music, videos, and web links. Friendster was wildly successful in its first year and attracted millions of users who, by design, invited their own friends and acquaintances to join them on the network. However, in 2003 a new social networking site called MySpace was launched, which shortly eclipsed Friendster as the top social network. MySpace originally started by amateur musicians as a vehicle to share their music
but the site quickly grew to be the social networking choice for millions of users around the world (Rosen 2007, 17).

4.4 Facebook

This section covers the history of the social networking site Facebook and explains the ways in which the site has evolved to bring new ways for its users to connect with others, interact on Facebook and with other sites, and share information with friends collected on the site. Facebook was chosen for this discussion because it is very popular with college students and recent graduates, and is also currently expanding its user base of adults over age 35 at a very rapid pace; recently Facebook signed up its 200 millionth member. Facebook has been an innovator on the social networking scene but has kept information sharing at the core of its values.

4.4.1 Development

Facebook was developed in 2004 by a then-Harvard University student Mark Zuckerberg. This network was originally only for Harvard students but quickly expanded to include networks for students at other colleges and universities around the country. This network was named after the so-called printed ‘facebook’ popular at many colleges- a booklet containing pictures of and brief information about incoming freshmen and distributed to the class to help them more easily get to know their fellow freshmen. This new online Facebook
had similar motivation; it was a more high tech way for students to learn about their peers and more easily make social connections. It gave students the ability to create an online profile for themselves and fill out information including their interests, major, current class schedule, etc. and compare this information with their friends’ profiles. Currently it is the most popular social networking site.

In its infancy, the site had very limited features for users to interact on the site, but Facebook’s popularity exploded despite this. Facebook expanded the site to eventually allow students from all colleges and universities across the United States to join, and in 2005 allowed access to high school students and students from international universities. The site grew to be so popular that finally in 2006 the network opened up to the general public. Since inception the Facebook community has grown exponentially and at the time of writing it has over 200 million active users; the most recent 50 million of whom joined between January and April of 2009 (Facebook Press Room 2009).

4.4.2 User Profile and Information Sharing

Facebook’s developers describe the company as “…a social utility that helps people communicate more efficiently with their friends, family and coworkers” whose “mission is to give people the power to share and make the world more open and connected” (Facebook Press Room). After joining Facebook users accumulate ‘friends’ who are typically actual friends or acquaintances from the user’s offline social circle. Facebook allows users to join networks pertaining
to their college, employer, or city. These networks allow users to easily connect with others who are at the same school, in the same company, or even down the street. Using networks fosters a sense of community amongst the ever-expanding user base.

In addition to sharing personal information and interests, Facebook allows users to share photos, videos, and external links, as well as publish ‘notes’ (similar to a blog entry) and send messages to friends via the internal email-style messaging system. One then-unique feature to Facebook that came about in 2006 is the ‘Status’. When introduced, the Status was a one or two sentence update from a user, telling friends what he or she was actively doing or thinking about. Initially it had a very literal tone: ‘Kevin is at the library’, or, ‘Ellen is going to class, and excited for the party tonight’. However, like all other features of the site, the Facebook Status has evolved over the years and has actually become a central part of the Facebook experience. Instead of updating their Status in such a literal sense, users began to use the Status as a way to broadcast information to all of their friends, spread the word on spontaneous events, ask questions and pose questions to multiple friends.

Whenever a user updates his or her Status that information is published to a portion of the Facebook profile called the Wall, as well as to the stream of the News Feed (discussion on News Feed to follow). The Wall is a dynamic place in a user’s profile where stories on the user’s Facebook activities are automatically published, where the user can post photos, videos, or links to outside Web sites he or she finds interesting, and where friends can leave messages or comment on
any of the user’s stories published on the wall, as seen in is an example of a user’s wall (Facebook 2009); this particular one belongs to Mark Zuckerberg, founder of Facebook, and the various features of the Wall are highlighted.
Figure 4.1: Annotated view of a user's 'Wall'

Aligning with the same goals as the original online communities, Facebook users can find others who share similar interests and create or join groups accordingly. Each specific group has its own page where members can hold discussions, post links, and share photos, videos, and opinions related to the particular topics of the group.

Perhaps the feature most critical to Facebook’s accomplishment of revolutionizing the world of social networking is the News Feed. The News Feed was introduced in 2006 and provided users a continuously updated stream of information on their home page, telling them what their friends have been doing on the site- what updates they have made, what photos they have shared, who they have added as friends, etc. Each user’s News Feed displays different information because it gathers stories specific to the actions of a user’s friends. Users who have many mutual friends might see many of the same stories in their News Feed. When first introduced the News Feed was slightly controversial in that many users did not want their every move on Facebook to be automatically published to all of their friends’ News Feeds. In response to this Facebook provided privacy settings that allowed users to control which type of stories were published to the News Feed.

The visual display of the News Feed, and the type of stories that it publishes, has advanced in the years since it was introduced, to accommodate the ever-evolving ways in which users interact on Facebook. The Winter 2009 site redesign introduced a new format for the News Feed, which was renamed the “Stream”. The Stream works in a similar way as the old News Feed, but is more
up to date, displaying information in real time. Even though the format has changed, the concept of using feeds to push information out has remained central to the heart of Facebook’s philosophy of connecting people and creating new and better ways for users to share information.

The new Stream appears on a user’s Home page and publishes short ‘stories’ (usually just a few lines) of what friends have been up to or which friends have updated their profiles, uploaded pictures, added an external application, written on a friend’s Wall, etc. The Stream automatically delivers to each user a chronological summary of his or her friends’ latest activities on the site; Clive Thompson of the New York Times has likened a user’s Stream or News Feed to a “social gazette from the 18th century, deliver[ing] a long list of up-to-the-minute gossip about their friends, around the clock, all in one place” (Thompson 2008).

The new Home page (an sample courtesy of the Facebook Press Room appears in Figure 3-2) with the Stream also contains other feeds. There is a Highlights feed that shows items that are most popular, but not necessarily the most current, amongst the user’s friends, and there is a feed to show the user’s upcoming events and friends’ birthdays. The Facebook Press Room provides annotated photos to explain the Stream, Highlights, and Filters available on the Home page, as seen in the following figures: Figure 4.2: A user’s Home page; Figure 4.3: The Stream on a user’s Home Page; and Figure 4.4: Highlights on a user’s Home Page.
Figure 4.2: A user’s Home page

Figure 4.3: The Stream on a user’s Home Page

Figure 4.4: Highlights on a user’s Home Page

The use of feeds offers a streamlined method of displaying updates and informing users about their friends’ latest activity on Facebook. They have made the site more efficient for users because they can find all of the updated information in one place, which has created a significant change in the way that people interact online. By automatically publishing stories, feeds push
information out to users, who no longer have to go digging for the latest information about what their friends or contacts are doing, or about what changes they have made to their profile. Feeds also publish stories containing information about events and activities that users have coming up, or what events a user’s friends are going to. Through the Stream, users can know what friends did on vacation, which activities friends plan to attend this weekend, and perhaps even what a friend’s mood is, all without actively contacting them by phone, email, or even Facebook messages. A user just has to log in to Facebook to see the latest photos, events, status updates. Social scientists call this phenomenon of connecting to friends passively ‘ambient awareness’ (Thompson 2009).

As the user base of Facebook has been growing, so have the capabilities of the social network, or ‘social utility’ as Facebook developers call it. In 2007 Facebook opened up to allow outside developers to create smaller applications to integrate directly with Facebook. The new applications allow users to not only tailor their profiles to more accurately reflect their personalities but also to enhance online communication with their friends and share information and new and increasingly intricate ways (Taft 2007).

Now users can post video messages to friends’ walls or, for example, add the ‘Visual Bookshelf’ application to their profile to let friends know what books they are currently reading. The added applications enhance communication, which strengthens the connection between users. “If others build [applications] to take advantage of those connections, Facebook can become more useful for its users,” Facebook’s Chief Executive Mark Zuckerberg said in an interview from
the Wall Street Journal on May 21st, 2007. Allowing access to these outside applications was big step for Facebook and the world of online communities; before this, social networks had been closed off to outside developer influence and therefore (unintentionally) limited the ways in which users could interact or share information.

Going one step further than allowing outside applications to run within Facebook, in 2008 the company introduced Facebook Connect, a system that lets outside software developers connect their third party sites to Facebook, meaning that users can log into these third party sites using their Facebook account information and maintain the same privacy settings and friend connections that they have on Facebook (as seen in Figure 4.6: Using the Facebook Connect System). Information on a user’s activity at the third party site can be shared through Facebook and distributed by way of news feeds to the user’s friends. For example, if a user chooses to connect his account to the third party site Citysearch.com (a popular Web site for rating a city’s restaurants and attractions), any reviews he posts to Citysearch can be published as stories to appear on his own profile and in his friends’ feeds (as seen in Figure 4.7: Publishing a story via Facebook Connect). Users can choose how much information is included in each published story, or choose not to publish certain stories to Facebook at all.
Figure 4.6: Using the Facebook Connect System

This Connect system was motivated by the belief of the Facebook developers that “…community innovation can give people the tools, and the power, to share and communicate in ways that Facebook can't build on its own,” said Mark Zuckerberg in an interview with PR Newswire on July 23, 2008. Zuckerberg continued, “We're confident that the changes we're presenting today help developers build more meaningful social applications that enable users to share more information”. This is a significant advancement in the world of social networking because the way users interact and share information is no longer
limited by what the company offers within the site. Facebook Connect allows users to literally connect their profile to and share information about more than 8,000 websites (Facebook Press Room 2009), and with this program Facebook is one step closer to achieving their goal of becoming a “social operating system” for users on the web and emerge as the central hub through which users interact on the internet (Stone 2007).

4.4.3 Statistics

It appears as though Facebook, and social networking in general, is becoming a very important and prominent part of how young adults communicate. A study was done in 2008 about ‘Adults and Social Network Websites’ as part of the Pew Internet & American Life Project that found “The share of adult internet users who have a profile on an online social network site has more than quadrupled in the past four years- from 8% in 2005 to 35% in December 2008” (Lenhart, Adults and Social Network Websites 2009). Here, adults are classified as those 18 years and older, but the same study showed that 75% of college-aged adults (age 18-24) have a profile on a social network; 89% of this group use their online profile to keep up with friends, and 59% use their profiles to make plans with others (Lenhart, Adults and Social Network Websites 2009). Facebook currently has over 200 million members, which means that if Facebook were a country it would be the eighth most populous in the world (Mark Zuckerberg, the Facebook Blog, posted January 7, 2009). Collectively, the
members of Facebook each month create more than 2.5 million events, upload over 8 million videos and 850 million photos, and share over 4 billion pieces of information (news stories, links, articles, notes, etc) with their friends. One hundred million Facebook users log into the site at least once a day and 20 million users update their status at least once a day. Facebook is fully accessible from mobile devices like the iPhone, Blackberry, and other smart phones and 30 million users access Facebook through their mobile device. These mobile users are 50% more active than users who only access Facebook from the Web (Facebook Press Room 2009). There is a lot of information sharing happening on Facebook.

In addition to keeping members of current social circles connected, Facebook has done quite a bit to help users reconnect old friends or distant family members. There are over 200 million active users of Facebook and the fastest growing demographic is those over 35 years old (Facebook); with this many people on the network, it is inevitable that someone searching the network for childhood friends, a high school sweetheart, or distant cousins will be met with some success. Based on anecdotal evidence, the 35 and older demographic tends to use Facebook more often for reconnecting with old friends than for perpetually communicating and sharing information with current friends. The site is also instrumental in allowing geographically distant friends to remain in close contact. Even if a friend lives on another continent, a user can still keep up to date on the friend’s latest activity through all of the features on Facebook.
4.5 Twitter

This section covers the history and workings of the social networking and microblogging site Twitter. Twitter is a relatively new site that was only popularized in 2007, but it offers a very different take on information sharing and has been exploding in popularity in the past year, allowing many new and unexpected uses to appear with the expanded user base. This section will discuss the basics of how Twitter works, and the next will examine the uses for Twitter.

4.5.1 User Profile and Information Sharing

Twitter is a radically different type of social networking site from the other major online communities such as Facebook or MySpace. It may at first appear to have limited features, but the possibilities for information sharing so far seem to be virtually limitless. Twitter allows users to stay in contact with their friends, family, or colleagues by simply asking the question “What are you doing?” To answer this question users send out repeated updates as frequently as they choose but must keep it brief; there is a 140 character limit— including spaces and punctuation— to each update, called a ‘tweet’.

The site catalogs each update and displays a chronological timeline of a user’s tweets on his or her profile page, an example of which can be seen in Figure 4.8: Screen shot of stream of Twitter updates from co-founder Biz Stone. Each Twitter user also has a unique home page, which shows a stream of updates from only the users he or she chooses to follow, or track (as seen in Figure 4.9: A Twitter user's home page with updates only from chosen contacts).
Figure 4.8: Screen shot of stream of Twitter updates from co-founder Biz Stone

(Image from www.twitter.com)
Figure 4.9: A Twitter user's home page with updates only from chosen contacts

(Image from www.twitter.com)
With Twitter a user collects contacts or friends in a slightly different way than on Facebook, though the two sites share the core philosophy of bringing people together and sharing information. With Twitter one can choose which other members to follow, but this is not reciprocal. For example, if User X chooses to follow User Y, Y is not automatically enrolled to receive the tweets of X. This is different from the way one collects friends on other social networking sites, but this feature allows users to choose to receive only the information they are most interested in or to only engage in conversation with the people a user is interested in most (Regan 2009). Users of Twitter can also choose to view a stream of the most recent tweets from all users of Twitter on the ‘Public Timeline’ page (as seen in Figure 4.10: The Twitter Public Timeline). When writing an update, a user can reply to or mention others in their tweet. This is done by placing an ‘@’ symbol followed by the tagged user’s screen name (as the user ‘awe_yeah’ has done in the first update in the public timeline in Figure 3-10). Adding the ‘@’ flags the tweet and directs it to the inbox of the user receiving the reply, and facilitates a back-and-forth exchange of information between two users. Interestingly, these replies and mentions are also displayed in a user’s normal stream so they do not create a private message, but it does allow for a specific conversation to be created and singled out from all of the tweets in a user’s stream.
Figure 4.10: The Twitter Public Timeline

(Image from www.twitter.com)
Twitter has a search function that lets users search for tweets based on fairly advanced criteria such as searching for tweets that contain a certain word, that were sent from a certain city, or that reference a certain user (as seen in Figure 4.11: The advanced search function of Twitter). A user can also search for tweets that all have been tagged with the same code. An update can be flagged to indicate that it is about a certain topic, which is done by including a “hashtag” in the post, which is the # symbol followed by a predetermined code (eg, #osu123). Adding a hashtag allows users to form themselves into groups of sorts, and create a collection of tweets all on the same topic, even though those tweets might not contain the same word. For example, participants of the Mideast Conference of the Industrial Designers Society of America in May 2009 chose the hashtag ‘#idsame’ prior to the conference and alerted the participants. The participants who chose to use Twitter throughout the conference tagged their tweets with the hashtag so other interested Twitter users could easily find an aggregate of conference-related tweets (see Figure 4-.12). Using the hashtag let all of the Twitter users at the conference get updates from others on speakers or events that were happening without having to sign up to ‘follow’ all of the other participants of the conference. This is another way that Twitter allows its users to receive only the information most relevant to them, and filter out anything they do not want.
Figure 4.11: The advanced search function of Twitter

(Image from www.twitter.com)
Figure 4.12: Tagged tweets from the IDSA Mideast Conference

(Image from www.twitter.com)
Twitter started out a way for users to keep in touch with people they already knew, such as friends and family, but since the site has grown in popularity so too has its user base; now public figures, companies, and even city offices have Twitter accounts and use them as a way to keep their fans, customers, or residents informed or up to date on the latest news. With this, several unexpected uses for the site have come up in politics or emergency services (Regan 2009), as will be discussed later in this chapter.

Individually, these concise messages may seem to be insignificant fragments of someone’s day, but the stream of incoming messages allows a user to passively collect information on what friends and contacts are doing or what news events are happening in the world. Each small snippet of information is not necessarily important but when they are put together it can create a picture of someone’s life, and establishes an ambient awareness of a user’s friends’ lives- it allows the user to feel closer to friends and keep up to date on their lives without actively contacting them.

Users can send and receive tweets from the web, instant messaging software, mobile texting, mobile web software, and an array of third party applications that can be installed on one’s computer. Because Twitter can be accessed from so many technologies, it “makes it easy for folks to stay connected” (Twitter).

By tracking key words on Twitter during certain events, trends can be found about what users are ‘talking’ about. Twitter did a few studies of the frequency certain key words were ‘twittered’ during the 2008 U.S. presidential
debates, noting how certain words jumped in popularity with certain candidates’ remarks. It is also interesting that there was a significantly higher volume of tweets during the October debate than the September debate.

Figure 4.13: Instances of selected words used on Twitter during a September 2008 U.S. presidential debate

(Image from www.twitter.com)
Figure 4.14: Instances of selected words used on Twitter during an October 2008 U.S. presidential debate. Note the increase in volume compared to one month prior.

(Image from www.twitter.com)

The number of Twitter users has been growing rapidly, according to the Twitter Blog, with membership increasing 900% from 2008 to 2009, to 14 million active users as of April 2009. As more members join and use Twitter more, the more value the service has. As discussed, Twitter is currently proving to be useful for many aspects of real time information sharing, including tracking
trends, gaining consumer insight, and connecting users with questions to users with answers. However, as the user base grows, and with it the knowledge base, Twitter has potential to become a legitimate tool for scientific and academic research (Miller 2009).

### 4.6 Case studies of social media on and off campus

This section examines selected case studies of the unintended uses for Twitter and Facebook. Both were developed as social media but have proven to be very useful and sometimes critical tools for rapidly sharing information with a broad audience. The examples discussed here are just a few of the many new and unique uses for social networking; many more uses for social networking exist but for brevity were not included in this study. The selected examples all pertain to Twitter or Facebook.

Much of the information sharing that happens on Facebook and Twitter is social in nature, but many instances have occurred demonstrating that because of its ability to quickly share information with a broad audience social networking can be a useful tool in academia, for scientific or market research, and even in emergency situations when traditional methods of communication are nonfunctional.

Twitter’s ease of communication combined with mobility has been key in allowing Twitter to be used in many unexpected yet useful and positive ways. Interestingly, Twitter has proven to be critically useful in spreading real-time information in times of crisis since the service can be accessed from a number of
different devices (many of them mobile) and technologies, which is important when phone or internet networks go down. Users of Twitter often have messages delivered to their cell phones or other mobile devices via SMS (Short Message Service); a text message via SMS can make it through to areas with weak reception, whereas a phone call might not make it (Moulds 2008).

The U.S. Department of State has started using Twitter as a way to keep international travelers actively updated on any travel advisories or other security threats that may happen in the country where they are staying. Anyone who has a Twitter account can simply sign up with the State Department to receive updates relative to the country or region to which they are traveling. (Howard 2008). Of course, travelers have been able to receive similar notices by email or phone for some time now but the Twitter alerts offer several advantages to both the State Department and the travelers. Distributing alerts through Twitter is free for the State Department and to some extent alleviates the need for the State Department to update a list of which travelers would or would not like to receive alerts- the travelers are the ones responsible for signing up for or discontinuing updates. And the significant advantage to the travelers is that they can receive updates on their mobile device wherever they go, as long as there is a signal for SMS. The Assistant Secretary for Consular Affairs, Janice Jacobs said in an interview with the New York Times in 2008, “We believe Twitter and other social networking sites offer us a cutting-edge way to share information on international travel more broadly, especially among young American travelers.” (Howard 2008).
Local governments and police and fire departments across the country are also finding Twitter to be a useful (and cost effective) way to spread real-time information about police activity, natural disasters, or crimes. In Mountain View, California the police department started using Twitter to update interested residents about events, street closures, and crimes. In an October 2008 interview with the Mountain View Voice, police spokeswoman Liz Wylie said that Twitter allows her to keep the community updated about things like street closures before they happen, and that she is able to update Twitter regardless of where she is—previously she had to ‘go back to her office and send out press releases, which [were] often outdated by the time they reach the media’ (Weiss 2008).

The Washington State Department of Transportation (WSDOT) also uses Twitter as a way to notify residents of road closures or traffic alerts, or major weather events and employees find that it helps with the “continuity of operations” said WSDOT spokesman Lloyd Brown in an interview with Matt Williams of the website Government Technology. Brown explained, “In an emergency, people will come to our Web site en masse to the point that it overwhelms our servers” but Twitter can help alleviate this by sending information out to the citizens’ mobile devices or computers. WSDOT started using Twitter in July of 2008 when there were three serious traffic accidents in one day, causing the department’s informational Web site to get so many visitors that it almost crashed. Says Brown, “Our Web guru started ‘tweeting’ on the situation and suddenly the number of people who were following us went from
20 to 160” which not only helped keep citizens informed, but helped keep the Web site up and running (Williams 2008).

Twitter has also proven to be useful in connecting users to collaborate on common problems. The millions of users of Twitter collectively make up a vast knowledge base that can be accessed from virtually anywhere a user goes with his or her mobile device. A user traveling to a new city may want to know where the best coffee shop is. He or she can send a tweet from their mobile device with this question, and those who follow his or her stream, or those viewing the live stream of everyone’s tweets could send an answer to the user in real time. The value of using Twitter as a travel concierge service of sorts has been noticed by the online travel company, GoSeeTell Network. The owner of the company, Martin Stoll has set up the “Portland Twisitor Center” (Miller 2009), which is exactly what it sounds like: a Twitter-based visitor center that can help visitors (and locals) navigate the city, receive restaurant or shopping recommendations, or get information about events and attractions. Twitter travelers visiting Portland can send a tweet with a designated tag to identify it to the Twisitor Center, and a direct reply is sent back to the user as soon as the Twisitor Center employees are able to provide useful information (Travel Portland).

Existing business are also finding Twitter to be useful to gather public opinion on their products or services by tracking certain keywords. Companies can see how often their products are mentioned and if the tweets are good or bad, gaining insight about customer opinions on their products or services. Dell
recently tracked comments about their Dell Mini 9 laptop and found that customers were complaining about the spacing or arrangement of keys on the keyboard. Dell used this information to make improvements on the Dell Mini 10 (Miller 2009). At this time businesses can access Twitter and track key words or trends for free, like any other member of Twitter can, but Twitter is considering in the future charging companies who use the service to learn and connect with their customers (Miller 2009).

Along the same lines as Dell and other business tracking their customers’ comments on Twitter, Wayne State University in Michigan set up a Twitter account to communicate with their current students and gather insight on what students might be saying about the University, good or bad. The administration’s motivation to use social networking was twofold. They wanted to A) keep students better informed about events happening on campus and knew that social networking was extremely popular amongst the student body; and B) better understand students’ perceptions of the university as a tool for improving their ‘customer service’ (Nick DeNardis, The Wayne State University Communications Blog, posted September 10, 2008). The Wayne State University Twitter account was started by the administration’s marketing and web communications department in the summer of 2008. They chose Twitter “not because all of our students are on it but because its viability to listen globally outside of our network and to respond to students without feeling invasive into their network,” said one employee of the office (DeNardis 2008). The terms ‘wayne state’ and ‘wsu’ were tracked from all tweets and the administration
started responding to student comments, complaints, or concerns, though the conversation went slowly at first. Before school started for the Fall semester of 2008 and with no advertising other than putting the Twitter updates on the school home page, the ‘waynestate’ account had 120 followers. At the time of writing, seven months later, the account has nearly 800 followers who receive real-time updates on deadlines, events, and activities on campus. A snapshot of the waynestate stream as it appeared one day in April 2009 can be seen in Figure 4.15: Twitter stream for Wayne State.
Figure 4.15: Twitter stream for Wayne State

(Image from www.twitter.com/waynestate)

71
Wayne State has capitalized on Twitter’s ability to hold a two-way conversation and encouraged questions and comments from the students. Those following the account could direct a tweet to Wayne State with any questions they had; the administrators made it a priority to respond to each question and help them in any way they could, from answering the question directly to connecting the student to other resources. This is proving to be a successful way for the administration to ‘add value’ to the student experience at the university and to make the administration more transparent to the students.

Facebook, like Twitter, has also proven to be useful to share information during emergency situations. In February 2008 a tornado struck Union University in Tennessee, damaging the campus- and its Website, a critical point of information distribution. As reported at UniversityBusiness.com in April 2008, students, parents, and community members all went to the University’s website looking for answers when they heard news of the tornado, but the campus network was down. However, Union University soon started publishing frequent updates with news and photos on its official Facebook page and linked to a blog that sprang up to help answer questions from concerned parents or direct offers of help to the correct volunteer organization. With the use of Facebook and the blog, and the popularity of social networking amongst students, the communications team at Union University was able to get the necessary news out even though the campus community was in a time of crisis (Joly 2008).
Social networking can also bring geographically distant people together in ways that were never before possible. An article in the October 2008 edition of *Drug Discovery Today* outlines the ways in which social networking has allowed drug researchers and developers to share information faster than ever, boosting the speed of their research. The use of Facebook, and other social networking sites, has facilitated faster peer-to-peer networking than traditional methods. The authors note,

“Traditional means of networking, such as telephoning, sending emails, or attending conferences, are still very vital but... can be much less efficient. The contacts established through social networking sites are also more likely to be productive because each member has voluntarily signed up to the same community and operates with the same rules of engagement” (Bailey and Edwards 2008, 865).

By joining the groups available on Facebook, these researchers are able to make connections with others across the country and around the world who are working on similar problems. The colloquial and democratic nature of Facebook allows members of the groups to overcome “many of the inhibitions traditionally encountered within more hierarchical professional groups” and can facilitate collaboration in ways that were not previously possible (Bailey and Edwards 2008, 865).
Facebook, which began as a social networking utility for college students, has been on the campus scene a while now so it should be no surprise that as the technology has evolved new uses have been found for it on college campuses, by students as well as administrators. Just as students use the site to find others with similar interests and share information with other students, university administrators and faculty at some schools are finding that Facebook is a very effective way for them to communicate and share information with their students- sometimes the only effective way. Most college students log in to Facebook several times each day to send messages, share photos and information, check out the profiles of new friends, and keep up to date on social happenings by responding to event invitations (Rosen 2007).

At Southern Illinois University at Carbondale the School of Business has been using Facebook as a tool to communicate with current students and alumni by creating groups to disseminate information. The school of business is using the Facebook groups to post photos, announcements, and recruitment information, and has found it to be an easy yet highly successful method of sharing information with their students, at almost no cost to the school. Assistant professor of marketing David Campbell reported in an interview with the online magazine BizEd, “For many of our students, Facebook has replaced traditional email - in fact many rarely even check their email anymore... [email is] definitely becoming less effective” (BizEd 2007). Campbell also finds Facebook makes the faculty seem more approachable to the students, and that is also a great way to
keep in communication with alumni and “to build a sustainable virtual community that stretches beyond the four-year experience” (BizEd, 2007).

Other universities have also found that social networking is the key to keeping in contact with alumni and some are even creating their own online communities for this purpose, though many of the schools’ efforts have been met with mediocre response from the tech-savvy alumni who already use Facebook. The universities aim to provide a functional platform to stay in contact with alumni about, for example, reunions or donations, but they also use the online community as a way to automatically update their database of alumni information- when a user updates his or her address on the online community that information is automatically transferred to the university’s database (Hermes 2008). Some universities have created Facebook groups to keep in contact with alumni, but find that these groups are less beneficial to the university because there is no way to gather information, like addresses or phone numbers) from the members of the group.

However, many recent college alumni across the nation are eschewing the university-sponsored alumni communities because they function in a redundant way to Facebook, which they already use to keep in contact with their college friends. Scott Mory, the University of Southern California’s Associate Senior Vice President for Alumni Relations, said in an interview with The Chronicle of Higher Education, “Students are training themselves to use Facebook. For us to try to retain them to use another tool that almost all of their friends can’t use who
Numerous colleges and universities across North America are also using social networking as a tool to communicate with prospective students by integrating Facebook into their existing sets of recruitment tools. For example, Mount Allison University in New Brunswick, Canada has commissioned students to work with the school’s admissions staff to create Facebook groups, YouTube videos, and blogs to share information with prospective students in a modern fashion (Church 2007). The administrators at Mount Allison realize that their ‘best recruiting force is students’ and have found that Facebook and other online tools to be a relatively low cost yet highly effective way to reach out and help give to prospective students (Church 2007). The same story is playing out at other universities too as they also try to reach prospective students in as many ways possible. As Rob Steiner, assistant vice president of strategic communication at the University of Toronto said in an interview with The Globe and Mail, “The ongoing challenge for any university is that there is a massive generation gap between the people that do the recruiting and the people you are recruiting” (Church 2007).

Applications and tools have also been developed to run within Facebook that allow users who are applying to college to rank their college choices and share that information with their friends, which could allow colleges and universities to follow the trends of the prospective students. Ken Steele of Academica Group, which developed some of these college-ranking applications,
acknowledges that Facebook has become one of the most effective ways to prospective college students. Steele also says, “there are more young people using it than any other single vehicle. You just can’t ignore it,” but also admits that his company is apprehensive about seeming like “an unwanted salesman” on Facebook (Church 2007).
CHAPTER 5

THE IMPACT OF THE INTERNET ON COMMUNICATION

5.1 Internet Communication

With the proliferation of social networking and the Internet in general, anyone who can get online can take an active part in the story of information sharing, and there is practically no limit to the amount of information that one can access or create. It would indeed be hard to overstate the importance of the impact that the Internet has had on our society’s ability to communicate with one another. Clay Shirkey, an Interactive Telecommunications professor at New York University, writes in his book *Here Comes Everybody*,

“More people can communicate more things to more people than has ever been possible in the past, and the size and speed of this increase, from under one million participants to over one billion in a generation, makes the change unprecedented, even considered against the background of previously revolutions in communications tools.” (Shirkey 2008, 106)
The Internet has fundamentally changed the way that people are able to communicate, providing the grounds for people to share information and have ‘conversations’ amongst many people. It used to be that to distribute information to a large audience, one needed significant money and resources. Now, practically all it takes is time and an Internet connection.

There are, of course, people all over the world with limited means who therefore cannot use the Internet to communicate. There are many barriers worldwide preventing people from accessing the Internet. Some of these barriers are regional- in remote or non-industrialized regions there may not be the infrastructure to support Internet connections. Some barriers are economic- Poor people in every country, industrialized or not, may not be able to afford the luxury of Internet access nor the computer equipment to access it. Barriers can be political– The ruling parties of some countries strictly limit their citizens’ access to the Internet and vigilantly filter and censor internet content. Barriers can also be educational– Those who have grown up without computers and technology in their lives may not have the skills to operate a computer or navigate the Internet.

While it is acknowledged that many people worldwide are left out from the communication revolution that is the Internet, the discussion in this paper will pertain to the segment of the population that is able to access the Internet freely.

Before the prevalence of the Internet, as a society we only had two categories for media, which Shirkey defines as ‘Broadcast Media’ (newspapers, television, movies, magazines, etc) and ‘Communication Media’ (telephone calls, faxes, telegrams, etc). With these, there were two types of conversations
happening: one-to-many conversations between broadcast media and its many recipients, and one-to-one conversations via Communications media between one sender and one intended recipient (Shirkey 2008, 86-87). Now that the Internet is accessible to practically anyone, group conversations (many-to-many) are feasible and allow for the quick sharing of information and quick response from a potentially large audience.

The Internet has allowed everyone to have an active part in the story of information sharing, with social networking, blogs, product review sites, photo-and video-sharing sites (like Flickr and YouTube), and interactive news sites. There are very few limits, short of time, to the amount or kind of information one can publish online, and also very few limits about how widely the information can be distributed (Lavan 2008). In a way, this has leveled the playing field between everyday people and the publishing and media professionals as we used to know them. A teenager who uploads a video to YouTube has an equal chance of creating content that is wildly successful as any marketing professional (Lavan, 2008).

With the ubiquity of the Internet, everyday people can reach broad audiences- sometimes faster than the media can. This has been demonstrated in recent years, especially in catastrophe or emergency situations: during the 2005 London Transport bombings citizens in the subway tunnels posted pictures to Flickr in near real time from their mobile phones, before the news could report on the events (Shirkey 2008); in 2008, citizens in Mumbai, India sent out messages via Twitter in real time to alert relatives and community members and
to trade information about the situation happening around them when the news media was cut off; and in 2009 a passenger on a ferry in the Hudson River in New York City photographed the scene of the US Airways plane landing in the river moments after it occurred, sent the photo out from his iPhone via Twitter, and the photograph was circulated to thousands of people around the world before the news reporters could even locate the site along the Hudson (BBC News Online 2009).

Shirkey writes in *Here Comes Everybody*,

“Communications tools don’t get socially interesting until they get technologically boring. The invention of a tool doesn’t create change; it has to have been around long enough that most of society is using it. It’s when a technology becomes normal, then ubiquitous, and finally so pervasive as to be invisible, that the really profound changes happen, and for young people today, our new social tools have passed normal and are heading to ubiquitous, and invisible in coming. We are living in the middle of the largest increase in expressive capability in the history of the human race.” (Shirkey 2008, 105)

The Internet has now been a communication tool for many years and the number of ways in which a person can share his or her opinion has only been increasing. As discussed, it allows regular people to have a voice and share their opinion on practically anything and everything; it allows regular people to be
come experts, in a sense, and has created what Jay Adelson, founder of the website Digg, calls a ‘digital democracy’ (Lavan, 2008).

There are many types of social media available through which people can participate in the digital democracy and share information as well as their views and opinions. Authors Dr. K. Chandra Sekharaiah and Abdul Muqsit Khan identify and succinctly outline six types of social media in their study entitled “Towards Merit for Social Computing”. They describe the six types as follows:

**“Social Networks”:** these sites allow people to build personal web pages and then connect with friends to share content and communication. The biggest social networks are MySpace, Facebook, and Bebo.

**Blogs:** perhaps the best known form of social media, blogs are online journals, with entries appearing with themost recent first.

**Wikis:** these websites allow people to add content to or edit the information on them, acting as a communal document or database. The best-known wiki is Wikipedia, the online encyclopedia which has over two million English language articles.

**Podcasts:** audio and video files that are available by subscription, through services like Apple iTunes.
Forums: areas for online discussion, often around specific topics and interests. Forums came about before the term "social media" and are a powerful and popular element of online communities.

Content Communities: communities which organise and share particular kinds of content. The most popular content communities tend to form around photos (Flickr), bookmarked links (del.icio.us) and videos (YouTube)

Microblogging: social networking combined with bite-sized blogging, where smalla mounts of content ('updates') are distributed online and through the mobile phone network. Twitter is the clear leader in this field. (Sekharaih and Khan 2009, 1087)”

Each of these aforementioned types of social media allows people to contribute and share in a different and unique way. An additional type of social media not outlined by Sekharaih and Khan are online review sites. Online reviews provide a platform for people to share their opinions and personal experiences with products, services, restaurants, etc. Online reviews can appear in a number of different categories of websites, including independent sites and sites that also sell products. Some well-known independent sites include Yelp.com, Epinions.com, and CitiGuide.com. Popular sites that integrate reviews
into the sales of products include Amazon.com and epinions.com. On these sites and others, it is possible to find reviews on practically anything, good or bad, and it has been shown that these reviews and opinions, collectively called ‘electronic word of mouth’ by some, “[have] become permanent elements[s] of the online marketing mix by contributing a great deal to the purchasing decisions of online consumers” (Cheung 2008, 231), and a 2007 survey by ACNeilson found that online shoppers perceive product or service reviews at these review sites to be “as trustworthy as the brand web sites” (Cheung 2008, 230). With the pervasiveness of these websites, and because practically everyone can write a review, it can be reasonably assumed that the some reviews will contain false or low-quality information (Cheung 2008, 232). Despite this though, user interaction with these sites remains high and electronic word of mouth continues to be a sought by online shoppers on a regular basis.

5.2 Information Richness

Just as high-quality information is important for effective communication (Cheung, 2008, 230) so is the appropriate form of communication and media, or ‘information richness’ (also called ‘media richness’). It is accepted that the first academic investigations of information richness were conducted by Richard Daft and Robert Lengel, amongst others, 1980s; the studies examined the methods and effectiveness of communication media in workplace settings, from which Daft and Lengel developed the ‘Information Richness Theory’. This theory
“examined the idea that different types of media, or communication tools, have varying degrees of importance or richness, and that the selection of a particular medium for the transmission of a certain type of message can make a difference in the way in which this information may be processed by receivers of the message” (Stein, 2006, 251). The richness of communication media differ based on a number of criteria including feedback potential, communication channels used, variety of language, and personal connection, and the “more a medium incorporates these characteristics, the richer it is” (Suh 1999, 296). It is understood that face-to-face communication is the richest medium of communication because it permits immediate feedback from the recipient, and is likely to employ casual or natural language. Telephone calls, memos or letters, and bulletins or unaddressed reports all follow face-to-face communication in descending order of information richness (Suh 1999, 296). In the original studies conducted by Daft and his collaborators found that managers in the workplace often selected face-to-face communication to project informality or trust, and written communication was used to convey authority or formality (Stein 2006, 252)

As technology advances of course more means of communication in the workplace have become utilized, the most notable and highly utilized of which may be email. Since the original information richness studies in the 1980s, when email was not yet used by many people had not yet permeated the workplace, few studies have been conducted on the matter of placing the medium of email communication on the information richness scale; studies that have been
completed, though, suggest that email might fall just below face-to-face communication and above telephone communication in terms of information richness (Stein 2006, 253).

5.3 Institutional Communication

In institutional settings there are three major categories of communication amongst individuals: top down, bottom up, and side-to-side. Often in institutions language and communication is highly regulated by the “top”, which creates a very structured and one-way conversation (Van Norstren 2004,).

In the setting of a university community, top down communication occurs from administrator to students. Students at every university are likely to receive this type of communication in a variety of ways from a variety of administrative roles: emails, brochures, posters, or newsletters may be distributed from the offices of housing, the registrar, financial aid and fees, dining services, admissions, etc. Administrators may be sharing news on any number of topics, including university regulations and policies, events, deadlines, or breaking news. Email has come to replace much communication formerly carried about by the telephone or face to face exchanges. However, administrators may hold meetings with students to address a large group face to face about issues that are more important, or for the administrator to ensure that the students receive the information.
Bottom up communication occurs when students contact administrators. Students occasionally need to contact administrators about concerns related to course enrollment, financial aid, meal plans, housing, etc. It is likely that over the course of an individual student’s studies at a university that he or she will receive communication from administrators more often than he or she will actively communicate to the administration.

Side-to-side communication happens amongst students in a university. This is likely the most frequently occurring of the three categories of communication, as students interact in both educational and non-educational settings (e.g., home, work, social settings). Students communicate amongst each other on any number of topics, educational and not, in a wide variety of ways including face to face, phone calls, email, texting, and social networking.
6.1 Introduction

This chapter will give background information about The Ohio State University and its student body as well as about the sustainability efforts taking place on campus. An overview of student life will be given, with attention paid to first year students who live in University Housing. The lives of first year students are highly influenced by the University—the students and are required to take part in many activities and use many services that that older students or off-campus students do not utilize. The first year students are at Ohio State, important lifestyle habits can be picked up that can stick with them for the remainder of their life at Ohio State— and beyond.

Described in this chapter are many University-sponsored initiatives and programs that help first-year students adjust to life at Ohio State. The programs are comprehensive and offer support and guidance for almost all aspects of a
first-year student’s life— but in their current form the programs have many missed opportunities to educate, inform, and engage students on issues related to sustainability. Also described in this chapter are separate sustainability initiatives recently implemented by the University, some of which have been met with great success but many of which could be vastly enhanced by improved communication to the students (particularly the impressionable first year students). To truly integrate sustainability into the culture of the University it is critical to engage the students from their first day on campus and to continue to integrate sustainability education into all forms of the students’ education and guidance.

In the following sections after examining the programs and initiatives offered by the University, deficiencies and opportunities will be discussed to integrate sustainability into each topic. In the following chapters of the document, the issues of student awareness and effectiveness of these initiatives will be explored further in the discussion of research.

Unless otherwise noted, all information in this chapter comes from the official Ohio State University website.

6.2 Overview of the Ohio State University

The main campus of The Ohio State University was founded in Columbus Ohio in 1870 as a Land Grant College. Classes began in 1873 and the first graduating class was in 1878, which was the same year that the University received its present name. Currently, Ohio State is one of the biggest college
camps in the United States by enrollment, often ‘competing’ with the University of Florida and Arizona State University for the top ranking each year. As of Autumn 2008 enrollment figures, Ohio State was the largest campus in the nation and had broken even their own records: student enrollment was up by two percent for the 2008-2009 school year with 53,715 students attending the Columbus campus alone. Including all five branch campuses, Ohio State’s total enrollment was 61,568 students, which is also a record-breaking number (Dayton Business Journal, 2008). Specifics can be seen in Figure 6.1: Ohio State University Enrollment Statistics for Academic Year 2008-2009. Ohio State is one of the nation’s well-respected public research institutions and offers 167 undergraduate majors, 130 master’s degree programs, 103 doctoral degree programs and 7 professional degree programs. Despite the intimidating size of the campus, many students choose Ohio State because of its size and the numerous options in terms of academics. There is something for everyone at Ohio State.
The Ohio State First Year Experience Program

For the 2008-2009, Ohio State’s freshmen class consisted of 6,041 students (Dayton Business Journal Online), which is larger than the total student body at many other colleges and universities. To ensure that incoming students don’t feel lost, Ohio State has several programs and policies in place that help
students get involved with organizations, interact with new people, and form communities.

First Year Experience (FYE) is the name of the overarching program that helps students at Ohio State find their place and get involved during their first year. The FYE website states,

“Through research and our own experience, we know that the foundations built during the first year are key to a student’s success. Once you’re admitted to Ohio State, First Year Experience (FYE) picks up where Admissions leaves off—you’ll see us at orientation, summer programs, and initiatives throughout the first year” (OSU First Year Experience).

The FYE team includes several full-time professional staff members who are degreed in areas such as Educational Policy and Leadership, Guidance and Counseling, Psychology, Student Affairs, and College Student Personnel. There is also a group of sophomore students who are selected to serve on FYE’s “First-Year Connections Team”, who help coordinate events and activities through FYE and act as liaisons between the staff members and first year students. These sophomore students appear at each FYE event, answering questions of the first year students and acting as an accessible point of contact to the administrators.

[Information in this section is from http://fye.osu.edu/index.html]

From the array of successful programs coordinated by FYE, it appears that the University has an elaborate effective system in place to engage first year students in the campus community and get them thinking about critical issues
related to current roles as a student and their future careers. With such a comprehensive system already in place to help students find their place and adopt good habits in their first year, there are likely missed opportunities to incorporate themes of sustainability issues into many of the programs. Currently students participate in programs on time management, financial budgeting, and leadership, which are all important skills for young people to cultivate as they find their place in the world, but surprisingly absent from these programs is the topic of sustainability— which is becoming an increasingly more important issue to society, as discussed in chapters two and three. Including sustainability in first-year education would seem to be particularly important at a time when the University is looking to adopt more “green” policies and programs and improve their image as a sustainable campus.

Following are explanations of each of the existing FYE programs, as well as descriptions of opportunities to incorporate sustainability within each program.

6.3.1 Orientation

FYE events begin at orientation the summer before a student starts courses at Ohio State. At orientation, incoming students can meet with advisors, schedule their classes, obtain a BuckID (Ohio State’s student ID card), learn about university housing, and much more about life in and out of the classroom at Ohio State. Orientation includes informational sessions for parents as well as several social activities for students to meet each other and familiarize themselves with campus. Orientation is intended to help students have a smooth transition
into a life at Ohio State. [Information in this section is from http://fye.osu.edu/orientation.html]

As stated, orientation is an event that introduces new students to many aspects of Ohio State from academics to social activities to dining options, which makes it a prime event at which to set the tone for Ohio State’s sustainability goals. The students are already attending meetings and gathering information on many other subjects, so it would be ideal for the students to also receive information on Ohio State’s sustainability initiatives, the programs that exist, and how they can get involved or learn more.

6.3.2 Leadership Collaborative

The Leadership Collaborative is a program for 70 selected incoming freshmen students. Acceptance into the program is competitive, and through it students will learn how to sharpen their leadership skills and how to be effective in a group setting. The Leadership Collaborative is a year-long program that kicks off at the beginning of the academic year with a four-day retreat and conference, at which students have the opportunity to meet and learn from “key leaders at Ohio State and the community.” Throughout the school year leadership opportunities are offered in the form of monthly activities and programs, courses for credit, and mentoring with professional leaders. [Information in this section is from http://fye.osu.edu/LC.html]

The structure of this program could be expanded to include a sustainability focus. Here, the University is helping students prepare to be
leaders in their communities and at their jobs, and to effectively lead others in success. Students trained in leadership with regards to sustainability could be effective at spreading the word and effecting change on campus and in their future careers. Future leaders will need to tackle some of the big issues related to sustainability and global warming.

6.3.3 Buckeye Book Community

The Buckeye Book Community is a program for all incoming first year students that starts the summer before the freshmen year. At orientation, students are assigned a book to read over the remainder of the summer. In the fall, the students meet up in groups to discuss the book and attend a lecture and discussion by the book’s author. Some years all incoming students will read the same book, other years different books are assigned to students based on their concentration. Recent titles include *Three Cups of Tea* by Greg Mortenson and David Oliver Relin, *What is the What* by Dave Eggers, *Fast Food Nation: The Dark Side of the All-American Meal* by Eric Schlosser, and *Copenhagen* by Michael Frayn. [Information in this section is from http://fye.osu.edu/bbc.html]

The book club could be an excellent way to get students talking about sustainable issues, and to introduce the topic to students who may not be that familiar with environmental issues. The recently book club titles seem to be on current issues in society, so surely a title related to sustainability would be appropriate.
6.3.4 Success Series

The Success Series is a program that has components throughout the entire academic year and aims to help students learn how to utilize resources on campus, solve problems, and live life to the fullest while at Ohio State while succeeding academically. The success series does this by “offering short courses on the common concerns and questions first-year students have during their transition to a university life” (OSU FYE WEB). Freshmen are required to attend a certain number of sessions in the success series, but they may choose from a wide variety of topics each quarter- in autumn quarter alone there are over 300 courses offered. The sessions cover almost anything imaginable that is relevant to college life, and the topics are grouped into nine theme areas. The topics and offerings may vary each quarter. Following are the nine theme areas and a few selected topics from or an explanation of each theme area:

**Academic Engagement and Exploration:** Improving study and note-taking skills, Exploring career options, Tackling procrastination, Study abroad opportunities.

**Alcohol and Other Drug Awareness:** These sessions educate students on the effects and consequences of drugs and alcohol use, define and encourage responsible drinking, and correct misconceptions regarding drug and alcohol use in the Ohio State campus community.
Anxiety and Mental Health: Positive coping skills, Stress management, Overcoming test anxiety, and Dealing with prejudice and discrimination.

Current Issues: Government and legal issues, International affairs, Politics and elections, even Controversies related to sports and athletes’ use of performance-enhancing drugs.

Diversity: How diversity affects individuals or groups, Race, Ethnicity, religion, Sexual orientation, and Gender.

Financial and Debt Management: These sessions educate students on the reality of financial issues such as student loans and credit card debt. Sessions aim to help students establish responsible spending and saving habits and explore the consequences of credit card debt.

Health and Wellness: Wellness activities and daily practices, Making healthy choices, Health resources available on Ohio State’s Campus.

Leadership: Here leaders from the local, state, and national level come to speak at the sessions to share their own experiences and accomplishments with the students. Sessions are also held to help students develop their own leadership skills.

Sexual Health: These sessions focus on choices related to sexual activity, the dangers of sexually transmitted diseases and how to prevent them, and how drugs and alcohol can affect decision making related to sexual activity.

[Information in this section is from http://fye.osu.edu/successseries.html]
These nine theme areas cover a wide variety of important topics pertinent to the life of a first year student, but again the noticeably absent topic is sustainability. Sustainability and the impact that the human population has on the environment are becoming increasingly more prominent and can factor into every part of a person’s life, from the choices one makes as citizen and consumer to the career path that one selects. Seminars in this series could be created to discuss various sustainability issues (e.g., ecology and biodiversity, alternative fuels and green building, social choices, urban living and public transport, agriculture, design and architecture, ‘green’ investments and carbon trading, public policy, etc).

6.4 University Housing

As is the case at many colleges, freshmen students at Ohio State are required to live in University residence halls for their first year (unless they live locally with family). Students may also choose to live in residence halls beyond their first year. Ohio State has 37 residence halls on the Columbus campus, several of which are dedicated to housing first-year students. Room options vary from single-occupancy rooms all the way up to suites for 8 people. Each hall is equipped with in-room cable TV and Internet connections and all residents get a mean plan for campus Dining Services. Living in residence halls allows students to be close to their classes and other campus activities.
Certain residence halls or portions or halls are dedicated to learning communities, which offer “unique educational residential experiences that create learning opportunities both in the classroom and across campus” (OSU University Housing). The learning communities are based on academic interests and allow students to have an in-depth educational experience that extends to the residential life, and helps the students foster a strong sense of community amongst a small group of peers within the larger setting of the University.

All residence halls have at least one full-time professional hall director whose job is to oversee all residence hall staff and students. Within each hall there are several Resident Advisors (RAs), usually one per floor or wing. The RAs are a valuable resource for the first year students, and are key players in helping students connect with one another in the residence hall as well as connect with events and activities in the campus community. The RAs organize events for residents on any number of topics: craft nights, multicultural events, educational speakers, parties, games, etc. [Information in this section is from http://www.housing.osu.edu]

The residence hall presents many missed opportunities to encourage students to live a more environmentally friendly lifestyle. Residence halls are where students first connect with each other socially and find others with similar interests. As mentioned, the RAs facilitate opportunities for students to come together to work on projects or have social events, and it would seem that the RAs could play an instrumental role in helping like-minded students collaborate on sustainability projects within the residence halls. In terms of energy and utilities,
it is very hard for students living in residence halls to know how much energy they are using in their daily life. The utility costs of the residence halls are rolled into the flat room and board fee, paid to the University each semester, so students get no feedback on their energy usage affects the utility bill, or their room and board bill. Furthermore, the freshman year in the residence halls is the first time most students have lived on their own, so they may likely be unaware of the cost of leaving lights on excessively or taking long showers even in a home setting.

6.5 Transportation

First year students living in residence halls are not permitted to bring a car to campus; Parking is at a premium at Ohio State due to the large number of students, staff, and faculty, and limited availability of parking spaces. Even for the rest of the student body, the staff, and the faculty who are permitted to park on campus, parking is competitive and can be very expensive depending on the type of parking permit purchased. However, Ohio State has many alternative transportation options available to help students get around campus and the surrounding community.

The Campus Area Bus System (CABS) offers several routes around Ohio State’s campus and nearby park-and-ride areas. CABS is a free service for all members of the Ohio State community and it runs seven days a week, 24 hours a day. During weekday peak hours several routes circle the campus and shuttle
passengers to and from the medical center, the west campus parking area, or the nearby student residential neighborhood east of campus. Overnight and on the weekends, one route runs around central campus to the west campus parking area to ensure that residential students have access to their cars anytime.

The CABS service can be used as a connection to Columbus’s public bus system, COTA. CABS and COTA share several stops on Ohio State’s campus, and many popular COTA routes run through or adjacent to the campus. Each quarter as part of their mandatory fees, Ohio State students pay a nine dollar COTA fee, which affords them unlimited access to all COTA busses. Students just need to show their valid school ID when boarding a bus and they may make as many rides as they want. COTA busses offer frequent service to many popular destinations and neighborhoods in Columbus and can be a way for students without a car to get around the city.

Another transportation alternative for students who do not have a car on campus is to use Ohio State’s car sharing service provided by Connect by Hertz. Students, faculty, and staff may enroll in the service, which allows them to rent a car by the hour or by the day. Members pay an annual fee in addition to the hourly rate, but do not have to pay for insurance, maintenance, or gas. The ten vehicles available for use by Connect members are located throughout the Ohio State campus and can be reserved online. Members each have a keycard that will unlock a vehicle at the reserved time. Keys for the vehicle are stored inside; after a member is done with the trip, he or she parks the car back in its designated spot and leaves the keys inside for the next driver. There is also a gas card in each
vehicle that customers may use to pay for refueling the vehicle. Members are asked to leave the tank one quarter full so the next customer does not run out of gas. Cars are available to rent 24 hours a day and are a cost efficient option for students to make trips around town that may not be so convenient by bus.

The car sharing system is an excellent solution for students who need a vehicle for short trips, like to pick up a bulky item at a department store or to go to a medical appointment across town. However, since the car sharing service charges by the hour, this is likely not a cost-effective choice for a student who needs to go to work across town for several hours, or a student who wants to take a weekend trip to another town. For these students, a different car sharing model would be better, perhaps one that charges users by the mile, instead of by the hour, or one that allows users to make one-way trips with the vehicles.

The CABS bus system is a very useful and popular way for students to get around the campus area, but the COTA bus system is less popular amongst students, even though all rides are free with a student ID. It is true that students often utilize a few of the COTA routes, but these are routes that run frequently and directly through campus. COTA has routes that traverse the greater Columbus area, but to get to many places within Columbus by bus can take a long time and several transfers. For example, to get to Easton Town Center (a popular outdoor shopping mall 12 miles away but within the 270 loop) from campus by car takes approximately 20 minutes. Taking the COTA bus there from campus takes at least one hour and requires a transfer in downtown Columbus (which is geographically out of the way from the shopping mall). Furthermore, there is
little information distributed by COTA to the students about where the bus lines can take them. COTA brochures are distributed at the Activities Fair at the beginning of the school year, but they do not contain information on which particular bus routes go to which neighborhoods or to which destinations.

One transportation option not thoroughly supported by Ohio State or the city of Columbus is bicycling. Many students choose to bike to campus because driving is prohibitive and it is quicker than walking, or because they choose bicycling as an environmentally sound mode of transportation. Whatever the motivation, there are many cyclists on campus each day but they have no designated cycling lanes. Bicycling is technically prohibited on sidewalks but many students still do it because they feel unsafe riding on the streets with traffic, and because the sidewalks provide a more efficient path to their destinations. Bicycling on the sidewalk may prevent the cyclist from getting in an accident with a vehicle, but can pose a hazard to pedestrians and often interrupt pedestrian traffic. Providing designated bike lanes or paths would help eliminate some of these dangers, and perhaps even cut down on the amount of vehicle traffic in the campus area.

6.6 Dining Services

Ohio State’s campus Dining Services operates 20 dining locations across campus and offers many different meal choices and styles of dining. There are traditional ‘all you care to eat’ dining halls, fast food style ‘grab and go’ locations,
coffee shops, sandwich and smoothie shops, cafés, a vegetarian and vegan dining hall, a pizza parlor (with delivery!), fine dining locations, and even grill carts around campus. With this many locations and options, students have a lot of choice in what they eat.

Students who live in residence halls are required to purchase a meal plan through dining services but can customize the size of their meal plan based on their own eating habits. Dining services offers meal plans based on “swipes” - one swipe is equivalent to a meal. Students use their BuckID card for all meal transactions (hence the term swipe), and as long as they have their ID they do not need to carry cash at any of the dining locations.

Each location has a different formula for what constitutes a swipe, but generally it is one entrée, a side, and a beverage. At the all-you-care-to eat locations, one swipe gets a student as much food as he or she wants. Most meal plans also come with a certain amount of money on the BuckID as well, so a student can choose to purchase items ala carte now and then. If a student finds that he is running out of swipes at the end of the quarter he can purchase more, but extra swipes do not transfer from one academic term to another. However, if a student has a monetary balance leftover from the meal plan, that balance will transfer to the next term. [Information in this section is from http://www.diningservices.osu.edu]

Unfortunately, OSU Dining Services has only four traditional dining halls left that use china plates and actual silverware and do not allow take-out containers. The rest of OSU’s 16 dining establishments use a convenience dining
model and serve all meals in disposable or “to go” containers, with plastic silverware and individually portioned and packaged side dishes and condiments. The food at these establishments is available only in this “to go” style disposable packaging— even if the student plans to eat his or her meal at the dining hall. Furthermore, a standard meal swipe comes with a fountain soft drink, which would mean that if 6,000 freshman students eat two meals a day, 12,000 disposable cups are used and thrown away each day by freshmen.

This fact and others are presented in Figure 6.2: Information on waste produced from a typical meal at an Ohio State University dining facility. The information and figure are from a project entitled Convenience Culture: A Dining Experience conducted in 2007 by Annie Abell, Sara Demetroff, Chris Meierling, and Dena Snyder (all students at Ohio State) and presented at the Heading for a Green Bauhaus: Designing Sustainable Livelihoods conference in Loccum, Germany. The project examined the American cultural shift towards convenience dining, and the ecological and social implications of this shift at Ohio State’s campus eateries.
Figure 6.2: Information on waste produced from a typical meal at an Ohio State University dining facility.
6.7 Off Campus Student Life

Though some students continue to live in residence halls their second year, most choose to move off campus to rent a house or apartment. The residential neighborhoods adjacent to North and East sides of Ohio State’s central campus are collectively known as the University District and are very densely populated with rental properties that several thousand students choose for their homes each year.

6.7.1 Off-Campus Student Services

Ohio State’s office of Student Life has a department of Off-Campus Student Services (OCSS) that is dedicated to providing “programs and services to meet the needs of off-campus and commuter students and to address the needs of persons wishing to live and engage in the University District and local community.” The OCSS has a very comprehensive website to help students who are moving off campus connect with area landlords, search for housing, find roommates, and engage with the community. The OCSS also offers services specific to students who commute to campus from outside of the University District, which include: on-line ride share and carpool listings to help connect students to others who may be offering or in need of a ride to campus; a on-campus commuter student lounge that offers a place for commuter students to relax or do homework between classes, complete with lockers, a microwave, and refrigerator; and publishing a commuter student news letter each quarter.
OCSS also helps facilitate the Community Ambassadors program, which was initiated by students. The program is “financed through landlords, businesses and community groups to promote a safer, more collaborative community in the off-campus area with students serving as resources for other students, landlords and the university (Off-Campus Student Services).”

Student ambassadors are chosen from each street of the University District and act as a contact point for the other residents of that street and the ambassadors work together to plan projects or activities residents of the University District and help foster peer-to-peer relationships and an overall sense of community amongst the off-campus residents.

6.7.2 Differences Between On-Campus and Off-Campus Life

When students move off campus and away from the residence halls, many of them may be presented with host of new lifestyle options and choices. Life in the residence halls comes with much oversight and regulation and fewer choices for students to make, but the trade off for this is that many services and amenities are provided to students automatically. Students (or their parents) pay a single room and board fee each academic term and the students receive housing- with utilities, internet and cable, janitorial services included), are provided with prepared meals for the term, and have easy access to many services provided by University Housing such as academic tutoring, cultural events, and social activities.
Students who move off campus do not have these things provided for them and have many new lifestyle choices to make from the big down to the very small. They have to choose which type of housing they will live in, and are also now responsible for paying for the energy and utilities they use at their home, and choose at what temperature the thermostat is set, and choose whether or not to turn on the air conditioning or perhaps just open a window. They now are responsible for buying groceries and household products, and for disposing of their household waste— they must choose if they will throw it away, or recycle it. Since they are now permitted to take a car to campus, they have to choose how they will get to class, whether it is driving, walking, or taking the bus. All of these, and the many other choices they make on a daily basis, are significant in shaping the lifestyle an off-campus student chooses to live.

In addition to being influenced by one’s family’s lifestyle, it is likely that the choices a student makes in his or her off campus life can be directly affected by living experiences from the first year at Ohio State’s residence halls. Even though the University is no longer officially responsible for students’ living habits once they move off campus, the off-campus students are still an active part of the University community and their actions collectively have a large impact on the University District. To this end, there are many additional ways in which the University could support and educate off-campus students and help them make positive choices in regards to sustainability. The most prominent opportunity may be with recycling. In the University District curbside recycling services are not provided by the city so residents must take their recyclables to designated
drop-off locations around the city. Information on the location of recycling drop-off areas is not widely distributed so many students simply do not recycle, using the (weak) excuse of not knowing where to take the recyclables. Because of the number of students living in the University District, the impact of off-campus students not recycling could be very large. Recycling is of course just one example of many environmental choices an off campus student makes, and one that could and should be influenced in a positive way by the University. If the University is dedicated to being sustainable and promoting environmentally friendly behaviors amongst students, faculty, and staff, surely the University should consider the daily lives of their largest population: off-campus students.

6.8 Summary of Sustainability Initiatives at Ohio State

This section will outline many of the current sustainability practices and initiatives at The Ohio State University. It is important to remember that the field of sustainability is very dynamic and has been rapidly growing and changing over the last several years. The concepts of sustainability, carbon footprints, and ‘going green’ have became very popular very quickly during the past year or so, as discussed in chapter two. It might seem like it could be hard to bring about change in an institution like Ohio State because of its size. However, it appears that many key players in the Ohio State community- from administration to faculty to students- recognize the importance of integrating sustainable practices
into everyday campus life. Following is a look at the sustainable initiatives currently in place as well as the goals for the future.

6.8.1 The President’s Council on Sustainability

On September 15, 2008 Ohio State University President Gordon Gee signed the American College & University President’s Climate Commitment (ACUPCC). The main goal of the ACUPCC is for university presidents and chancellors to “to address global warming by pursuing climate neutrality for their campuses and [develop] the expertise of their students to help society do the same” (American College & University Presidents Climate Commitment 2008). Presidents who sign the commitment and their schools are required to create and implement a comprehensive action plan that includes, among other things, short term and long term sustainability goals, annual reporting of greenhouse gasses for the school, and specific targets and dates to achieve climate neutrality on campus. Signatories are required to submit an initial implementation plan two months after signing, the first greenhouse gas report one year after signing, and a climate action plan two years after signing.

Upon signing the commitment President Gee formed The President’s Council on Sustainability, which consists of nine members of the university community including faculty, administrators, and one undergraduate and graduate student each. According to the President’s Council on Sustainability website, the council has outlined short term and long term goals and gave a presentation to the faculty senate in March 2009 to help gain support and
involvement from more areas of the university community. In this presentation, it was noted that the two main avenues towards sustainability (referred to as “The Big Two”) are Culture and Communication. The Long and Short Term goals can be seen in Appendix A in their entirety.

Unfortunately though, according to the ACUPCC 2008 annual report, as of December 31, 2008, Ohio State had not fulfilled its first set of ACUPCC commitments by the required two-month deadline for submitting the compulsory materials. (The ACUPCC 2008 Annual Report also stated that over 75% of signatories were in compliance with commitments and deadlines.) Of course signing the ACUPCC is a step in the right direction, but it will be interesting to see the scope of the impact it has on changing the culture of the University community and the attitudes of the institution toward sustainability.

6.8.2 Scarlet, Grey, and Green

In November of 2008 the ‘Scarlet, Grey, and Green’ initiative was officially launched at Ohio State. The three main tenets of the initiative are to conserve energy (by metering buildings and conducting energy audits), to reduce CO₂ and other greenhouse gas emissions, and to implement new sustainability projects on campus. Scarlet, Grey, and Green is led by Aparna Dial, an administrator in the Office Energy Services and Sustainability who has a background in engineering. Ms. Dial has worked at Ohio State for several years and understands the enormous amount of energy, and costs, that it takes to run an institution like
Ohio State, but also recognizes the opportunity for Ohio State to be an innovator and leader in sustainability.

Currently, Ohio State’s energy budget is approximately $58 million per year, which, according to the President’s Council on Sustainability, has nearly doubled in the past five years alone. The Scarlet, Grey, and Green initiative hopes that this trend of exponentially increasing utility and energy costs can over time be halted by changing the way we use energy on campus. Conserving energy in just one dorm room or one office may not make a very large impact in the overall utility expenditures, but if the energy conservation efforts of all of the departments in and for all of the buildings on campus are combined, the potential reduction in utility costs could be very large. Under the Scarlet, Grey and Green initiative, energy audits are being conducted for each building on campus to discover the ways in which energy can be conserved in the lighting, plumbing, and heating and cooling systems; often simple solutions can be easily implemented, such as adding pipe insulation (Scarlet, Grey, and Green Video 2008).

These initiatives to audit the University’s currently energy usage and to conserve energy consumption are of course commendable, and are very actionable ways that the University can implement change. However, aside from this, it is not clear to the University community what else the Scarlet, Grey, and Green initiative encompasses, how it is helping the University be more environmentally friendly, or how one could take action and get involved in any initiatives. The University is using Scarlet, Grey, and Green as the unified ‘brand’
for sustainability at Ohio State, but unless students and employees know what it means and how they can get involved, the potential of the efforts will not be reached.

To date there have been multiple sustainability initiatives or projects implemented at Ohio State, which may have been facilitated or executed by various departments but are now encompassed under Scarlet, Grey, and Green. Following are brief explanations of some of the most widespread or visible projects.

**Biodiesel Fuel in CABS Vehicles:** Since Autumn 2006 all of the CABS transit fleet circulating campus have run on B20 Biodiesel. This mix of 80% diesel fuel and 20% soybean oil reduces carbon dioxide emissions from the vehicles by 15%. The use of the fuel has facilitated Biodiesel research opportunities with several departments on campus. CABS gives 3 million rides each year. CABS vehicles have decals by the entry doors indicating that they run on Biodiesel.

**Car Sharing:** Ohio State has offered a car sharing program since Autumn 2007. The service providers have changed a few times but the concept remains the same: students, faculty, and staff sign up for a yearly membership with the program and then can access any of ten vehicles stationed around campus. Vehicles can be reserved anywhere from an hour to several days. Members pay an hourly rental fee but do not pay for fuel, insurance, or maintenance for the vehicles. Whenever changes occur in the car sharing program (e.g., new service provider, different vehicles, etc), information is posted
on the OSU website and included in the weekly e-newsletters. The program is also promoted with ads in the campus busses, and the available vehicles are visible around campus. As discussed in the section on campus transportation, this type of car sharing is a very useful model for those making short trips around town, but because hourly rates are charged, it may not be a cost effective choice for those looking to take a weekend trip or have transportation to work.

Recycling: Ohio State has had prominent campus-wide recycling efforts for several years. Currently there is a single stream recycling system in place that prevents the need for sorting recyclables. All-in-one recycling bins are available in every building throughout campus, including residence halls, and in mid 2008 the number of outdoor recycling receptacles was dramatically increased- there is now a recycling receptacle next to almost all outdoor trashcans. Across campus, the recyclable waste is consolidated to recycling dumpsters in a similar manner to the non-recyclable waste. The waste collection service of Facilities Operations and Development picks up recyclable and non-recyclable waste on alternate days, using the same trucks for both types of waste, which has actually caused some visual confusion for some students when they see a “garbage” truck picking up the recycling. A new segment of the recycling program was put into place in 2007 to recycle waste at home football games, both in the stadium and in the tailgating lots. The program has been rather successful in its first years. In the 2008 football season alone, 81 tons of waste was recycled from the stadium and 38 tons from the tailgate lot (Scarlet, Grey & Green Video 2008).
The recycling program is “advertised” more heavily in the residence halls, where RAs and hall directors can give students specific information, post signs about which types of waste are acceptable for all-in-one recycling bins, and coordinate recycling competitions among residence halls, and even the RecycleMania contest—an annual recycling contest in which college campuses across the nation participate (in the 2008 contest over 500 schools participated by recycling or composting over 69.4 million pounds of waste). For the members of the campus community who do not live in residence halls, there is limited information available about the campus recycling program. The recycling bins are visible around campus, in buildings and outdoors; many of the bins are labeled “all in one” to indicate that recyclables don’t need to be sorted, but the vast majority of the bins do not have any information about which particular materials are recyclable in the OSU system. The University website does not offer much information at all about the recycling program, which materials are recyclable, or where the waste is sent to be recycled.

**Green Building Policy:** Developed in 2008, Ohio State’s Green Building Policy sets standards for renovation, new building construction, and energy efficiency. The policy is pertinent to all new building projects that were designed after July 1, 2008 and have a budget of at least $100,000. On larger new building projects that have a budget of $4 million or more, the policy states that the buildings must achieve a U.S. Green Building Council LEED silver certification. The first building on Ohio State’s campus to achieve basic LEED certification was the Nationwide and Ohio Far Bureau 4-H Center, built in 2007,
before the Green Building Policy was set. The 4-H Center uses approximately 35% less water than a conventionally designed building would, utilizes geothermal heating and cooling, and has the ability to report real-time data on energy consumption (Minnema 2009).

**Recycled Office Paper:** On July 1st, 2008, the University instituted a policy to purchase only recycled copy paper (at least 30% post consumer waste) for all departments and offices. According to an article in the Columbus Dispatch on March 28th, 2008, this switch to recycled paper will save approximately 8,000 trees and prevent 382,000 lbs of landfill waste each year. Ohio State uses almost 500,000 reams of paper each year and previously only 35,000 reams had been recycled paper. The Office of Business and Finance notified all of the appropriate employees about this recycled office paper policy, but there is not much need to notify all students, faculty, and staff since they do not need to take action.

**Residence Hall Sustainability Chairs:** The office of Student Life is implementing a program in 2009 to have a Sustainability Chair in each residence hall. This would be one student in each hall that would have the following duties, as outlined by Student Life:

1. Be responsible for raising awareness of sustainability issues in the residence hall including acceptable materials for recycling, energy efficiency, etc.

2. Raise awareness for one specific sustainability issue per quarter through an event for the entire hall
3 Set up an Eco-Bulletin board in their residence hall and post information

4 Conduct audits of the trash and recycling bins in their building

5 Go door to door, talking to students

6 Conduct energy audits of light bulbs and appliances in residence halls

7 Conduct surveys about ecological issues

8 Attend monthly meetings to plan activities and provide feedback to the RHAC Sustainability Chair

9 Be responsible for knowing the policies of The Ohio State University on recycling and other sustainability issues.

10 Attempt to make recycling available for all Hall events.

The topics planned to be addressed by the sustainability chairs are: Recycling and solid waste, transportation, electricity, food, water, composting, consumption, climate change, and arts and celebrations.

**Eco-Reps:** The Office of Student Life is also implementing a program internally for each unit of the office to have an “Eco-Rep”. This person would be the lead in their department for acting on sustainability initiatives and have the following duties, as outlined by Student Life:
1. Be responsible for raising awareness of sustainability issues within your Student Life unit; including, but not limited to: acceptable materials for recycling, energy efficiency, OSU Principles & Practices, and current events.

2. Represent the Student Life “Green Office” initiative within your unit, providing guidance and subtle reminders to staff as needed.

3. Raise awareness for one specific sustainability issue per quarter through an event for the entire unit.

4. Set up and maintain an Eco-Bulletin Board in your specific Student Life unit.

5. Conduct audits of the trash and recycling bins in your unit’s facility or facilities.

6. Conduct informal and formal surveys about ecological issues within your unit.

7. Be responsible for knowing the recycling and sustainability policies of The Ohio State University and The Office of Student Life.

8. Attempt to make recycling available for all of your Student Life unit’s events.
Attend a quarterly Student Life Sustainability Council meeting.

Encourage walking to meetings and taking the stairs when appropriate.

Lead by example.

These outlined duties for the Eco-Reps and residence hall Sustainability Chairs are all positive actions but seem to be low impact in terms of effecting institutional or department change. However, the Eco-Rep and Sustainability Chair programs are brand new and are still in the early stages of planning and implementation; it is the hope that these programs will develop further and with that integrate more duties and initiatives that allow the Eco-Reps and Sustainability Chairs to actively engage their peers and influence changes in the behavior and culture of their department or residence hall.

6.9 Green Student Organizations on Campus

Ohio State has several official student organizations dedicated to promoting awareness of sustainable issues and making the campus a ‘greener’ community. Most of the organizations are small (50 members or fewer) and each hold their own events and sponsor their own programs. The one event that appears to draw multiple organizations together is the Scarlet, Grey, & Green Fair held each fall since 2006.
Interestingly, the two main groups recognized by Ohio State (Students for Recycling and Students for a Sustainable Campus) hold their weekly meetings at the same time, making it difficult for students to participate in both groups should they feel so inclined. Because the groups are small and focus their energy and resources on completely different projects, it can be hard for these groups to be effective at creating change on campus. Ideally the groups would coordinate efforts to work towards similar sustainability goals on campus, and speak to the University administrators with a unified voice about their ideas, concerns, and goals. Following is a description of three of the most prominent student groups and the projects that they currently sponsor:

**Students for a Sustainable Campus:** This group’s goal is to work with faculty, staff, and students to achieve environmental sustainability on campus. Members participate in a variety of sustainability events and informational campaigns on campus and in the community, but the main programs sponsored by Students for a Sustainable Campus are the “Scarlet, Grey & Green Fair” and the “Green Beans: Ecology and Coffee” speaker series. The Scarlet, Grey & Green Fair has occurred each fall since 2006 and is an informational event often held in the South Oval. Environmental organizations from the campus and the community gather at the fair to raise awareness of environmental sustainability issues and share information on their organizations or causes. A wide variety of organizations attend, covering topics from agriculture and food, energy conservation, green building, public transportation and biking, waste disposal (recycling and composting), etc. This informational fair has been
very successful and continues to grow each year. The Green Beans speaker series occurs monthly, at which an invited speaker talks on a chosen environmental topic. The Green Beans events have been held since February of 2008.

(Information from the Students for a Sustainable Campus website: http://www.osussc.com/)

**Students For Recycling (SFR):** This group’s goal is to educate the campus community on the importance of recycling and promote awareness of recycling opportunities. They sponsor three major events each year: OSU Recycles Day, RecycleMania, and Dump & Run. OSU Recycles Day happens each fall, during which the group distributes recycling information to students on the Oval, gives away prizes, and displays information about Ohio State’s recycling progress. SFR’s biggest activity each year is coordinating Dump & Run, which is essentially a massive rummage sale for all of Ohio State’s student body that has been held each year since 2004. Each June during move-out week SFR collects usable items from students that might otherwise be thrown away—clothes, furniture, appliances, electronics, and other household items. The items are organized and stored over the summer, and then during move-in week in the fall the rummage sale is held. This has been a very successful event that has helped keep thousands of usable items out of the landfill, and helped thousands of incoming students obtain quality secondhand goods. (Information from the Students For Recycling website: http://recycling.org.ohio-state.edu/index.html)
Free the Planet OSU: This organization is not officially recognized or sponsored by the University but the membership consists of students who wish to create change on the Ohio State campus. According to the mission statement, Free the Planet “promotes and teaches student activism and advocacy in the areas of environment, social responsibility, and cooperation. Free the Planet believes strongly in collective action and active participation in order to achieve goals”. The group has been working to bring change to campus since 2003. They have been successful at getting Ohio State to offer fair trade coffee and were instrumental in bringing the recycled paper purchasing policy to campus.

(Information from the Free the Planet website:
http://freetheplanet.arawakcity.org)

In addition to the official student organizations, there are many sustainability related research projects happening on campus that are tied to courses or for academic credit. These projects include the Solar Decathlon competition, the Buckeye Bullet electric car, and the EcoCAR competition. These academic projects are an effective way to engage students who might not otherwise be interested in sustainability, and can help spread the word about environmental sustainability at Ohio State.
CHAPTER 7

INVESTIGATING STUDENT AWARENESS AND NEEDS REGARDING CAMPUS SUSTAINABILITY ISSUES THROUGH SURVEYS

7.1 Introduction

This study was conducted to investigate how Ohio State students and administrators communicate and share information about sustainable initiatives and programs happening on campus. The focus of this research was to find out how the current generation of undergraduate students communicate with each other, how they would like the University to support and facilitate living an environmentally friendly lifestyle, and finally, how administrators communicate with students. This research was conducted through the use of surveys, online research of other colleges and universities, conversations with Ohio state administrators in person and over email, and culminating in a participatory workshop involving Ohio State students and administrators.

Throughout the course of this study, the research plan was modified based on the results of each step; the findings in the surveys greatly influenced the planning of the participatory workshop at the close of the research. As the
following sections will discuss, the results of the first survey given to Ohio State students indicated, quite unexpectedly, that participants often rely on friends and roommates as a source of information about University events and initiatives. The survey also indicated that participants use email and Facebook much more than other methods of communication. These discoveries helped shape the subsequent research and bring Facebook and social media to the center of the investigation. Additionally, because of the recently increasing interest in sustainability (by the University and community in general), the state of affairs on campus and in terms of technology and social media have changed, as can be seen in the timeline in chapter 1.

7.2 Initial Student Survey

The research began in early 2008 with an investigation of the sustainable initiatives and programs happening on Ohio State’s campus at that time; An explanation of those programs and initiatives on campus, and newer ones that have been added over the past year, are thoroughly outlined in Section 6.8. Based on the findings, a short online survey was created to be distributed to current students at Ohio State. The overall goals of this survey was to discover how aware students were of sustainable initiatives on campus, what additional initiatives or support they would like to see from the University, how they learn about sustainable initiatives on campus, and how they share and receive information on a day to day basis. It was anticipated that the survey would show that the
students were not fully aware of all of Ohio State’s major sustainability initiatives and that they preferred communicating in ways that were different from what the University administration was using.

Ninety-three undergraduate and graduate students, 58% of whom were female and 42% were male, from a variety of academic departments participated in the survey. The responses to the survey are represented within this chapter but the full responses can be seen in APPENDIX B.

7.2.1 Responses from Initial Student Survey

1. Academic Majors of Survey Participants

<table>
<thead>
<tr>
<th>Major</th>
<th>Percent</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design:</td>
<td>36%</td>
<td>34</td>
</tr>
<tr>
<td>Architecture:</td>
<td>12.9%</td>
<td>12</td>
</tr>
<tr>
<td>Engineering:</td>
<td>11.8%</td>
<td>11</td>
</tr>
<tr>
<td>Sciences:</td>
<td>10.8%</td>
<td>10</td>
</tr>
<tr>
<td>Business:</td>
<td>6.5%</td>
<td>6</td>
</tr>
<tr>
<td>Psychology:</td>
<td>4.3%</td>
<td>4</td>
</tr>
<tr>
<td>Art:</td>
<td>3.2%</td>
<td>3</td>
</tr>
<tr>
<td>Other:</td>
<td>12.9%</td>
<td>12</td>
</tr>
</tbody>
</table>

2. Number of students who agree with the statement, “OSU encourages and supports students to live an environmentally friendly lifestyle.”

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percent</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree:</td>
<td>4.5%</td>
<td>4</td>
</tr>
<tr>
<td>Agree:</td>
<td>19.1%</td>
<td>17</td>
</tr>
<tr>
<td>Neutral:</td>
<td>48.3%</td>
<td>43</td>
</tr>
<tr>
<td>Disagree:</td>
<td>23.6%</td>
<td>21</td>
</tr>
<tr>
<td>Strongly Disagree:</td>
<td>4.5%</td>
<td>4</td>
</tr>
<tr>
<td>Skipped Question:</td>
<td>4.5%</td>
<td>4</td>
</tr>
</tbody>
</table>
3. Number of students who are aware of the following sustainable initiatives on Ohio State’s campus:

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zipcar Vehicle Sharing</td>
<td>76</td>
<td>84.4%</td>
</tr>
<tr>
<td>All-In-One recycling bins</td>
<td>71</td>
<td>78.9%</td>
</tr>
<tr>
<td>CABS busses w/ Biodiesel fuel</td>
<td>48</td>
<td>53.3%</td>
</tr>
<tr>
<td>Recycling at football games</td>
<td>21</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

4. Number of students who actively seek out information or stumble upon information about sustainability programs at Ohio State:

<table>
<thead>
<tr>
<th></th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seek out</td>
<td>10</td>
<td>11.1%</td>
</tr>
<tr>
<td>Stumble Upon</td>
<td>85</td>
<td>94.4%</td>
</tr>
</tbody>
</table>

5. Methods through which students get information on sustainability initiatives at Ohio State:

<table>
<thead>
<tr>
<th>Method</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends/Roommates</td>
<td>51</td>
<td>58.6%</td>
</tr>
<tr>
<td>OSU Website</td>
<td>36</td>
<td>41.4%</td>
</tr>
<tr>
<td>Email</td>
<td>34</td>
<td>39.1%</td>
</tr>
<tr>
<td>Info in Residence Halls</td>
<td>31</td>
<td>35.6%</td>
</tr>
<tr>
<td>Class</td>
<td>27</td>
<td>31.0%</td>
</tr>
<tr>
<td>E-Newsletter</td>
<td>24</td>
<td>27.6%</td>
</tr>
<tr>
<td>Coworkers</td>
<td>13</td>
<td>14.9%</td>
</tr>
<tr>
<td>Department Office</td>
<td>8</td>
<td>9.2%</td>
</tr>
</tbody>
</table>
6. New initiatives, or improvements to existing initiatives, as suggested by students:

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>More recycling bins</td>
<td>15</td>
</tr>
<tr>
<td>Eliminate/Reduce disposable items (Dining services)</td>
<td>6</td>
</tr>
<tr>
<td>Recycling dumpsters in community for off-campus students</td>
<td>5</td>
</tr>
<tr>
<td>Reduce energy consumption (General)</td>
<td>5</td>
</tr>
<tr>
<td>Increased information/education from University</td>
<td>5</td>
</tr>
<tr>
<td>Increased use of Carmen/Discourage excess printing</td>
<td>5</td>
</tr>
<tr>
<td>Green/Solar Energy</td>
<td>4</td>
</tr>
<tr>
<td>Green building techniques</td>
<td>4</td>
</tr>
<tr>
<td>Bigger recycling bins</td>
<td>4</td>
</tr>
<tr>
<td>Introduce composting for waste</td>
<td>3</td>
</tr>
<tr>
<td>Offer sustainability courses</td>
<td>3</td>
</tr>
<tr>
<td>Extend Bus routes</td>
<td>3</td>
</tr>
<tr>
<td>Increased outreach to campus students</td>
<td>3</td>
</tr>
<tr>
<td>Accept more items for recycling (electronics/ink)</td>
<td>2</td>
</tr>
<tr>
<td>Eliminate Styrofoam</td>
<td>2</td>
</tr>
<tr>
<td>Add organic options (Dining services)</td>
<td>2</td>
</tr>
</tbody>
</table>

7. Number of students who use the following methods to communicate or gather information on an everyday basis:

<table>
<thead>
<tr>
<th>Method</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>83</td>
<td>92.2%</td>
</tr>
<tr>
<td>Facebook</td>
<td>72</td>
<td>80.0%</td>
</tr>
<tr>
<td>Phone</td>
<td>57</td>
<td>63.3%</td>
</tr>
<tr>
<td>Text Message</td>
<td>50</td>
<td>55.6%</td>
</tr>
<tr>
<td>Newspaper (print)</td>
<td>34</td>
<td>37.8%</td>
</tr>
<tr>
<td>Newspaper (online)</td>
<td>34</td>
<td>37.8%</td>
</tr>
<tr>
<td>News Feeds</td>
<td>24</td>
<td>26.7%</td>
</tr>
<tr>
<td>Blogs</td>
<td>15</td>
<td>16.7%</td>
</tr>
<tr>
<td>MySpace</td>
<td>15</td>
<td>16.7%</td>
</tr>
<tr>
<td>Newsletters</td>
<td>12</td>
<td>13.3%</td>
</tr>
<tr>
<td>Brochures</td>
<td>7</td>
<td>7.8%</td>
</tr>
<tr>
<td>Written Letters</td>
<td>5</td>
<td>5.6%</td>
</tr>
<tr>
<td>Twitter</td>
<td>1</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Other (Write-in): Instant messaging, Face-to-face conversation, Television, Radio, Wikis, Magazines, Campus postings, Friends
7.2.2 Observations From Initial Student Survey

Overall, the participants in this survey had diverse backgrounds in terms of academic area but the areas of Architecture, Design, and Engineering were strongly represented (combined, they represented 60% of the total participants). These are all fields in which sustainability has been an area of significant concern, discussion, and action. After all, it is architects, engineers, and designers who have given us new green building techniques to make our homes more energy efficient, hybrid cars to reduce our fuel consumption, and home electronics that with battery lives that are longer than ever. In education, these disciplines (in addition to many others) are now frequently integrating sustainability into the curriculum. Even when it is not the main focus of the course, many students in these disciplines will take it upon themselves to consider sustainability or environmental impact of their proposed designs.

Because of this, one might reasonably assume that these same students would be interested in sustainability in their everyday campus lives. However, it was surprising to see that the responses to question 4 indicated that only 11% of participants actively sought out information regarding sustainable initiatives.

In question 3 the most recognized of the four listed initiatives was Zipcar Vehicle sharing, which is not surprising because though it is a relatively recent addition to the OSU campus, the Zipcar vehicles are prominently parked at busy areas of campus; regardless of whether students see University-sponsored promotional emails, posters, etc for Zipcar, most students will see the cars or the
designated parking spots on campus. Responses from question 3 also indicate that recycling at tailgating and football games was the least recognized of the four options, perhaps because at the time of the survey this particular recycling initiative had only been in place for one season of football, or perhaps this is because the participants of this survey do not attend OSU football games or tailgating.

Also related to recycling, it is interesting to note that 21% of students surveyed did not know that Ohio State has all-in-one recycling bins throughout campus. This is interesting because, from responses to other survey questions, it would seem that recycling is a sort of ‘lowest common denominator’ of student awareness and interest in recycling efforts—That is to say, it is often what one thinks of in terms of ‘going green’ and in the campus community recycling is heavily promoted in the residence halls and dining facilities. However, in summer 2008, a few months after the survey was given, the University added a significant number of outdoor all-in-one recycling receptacles next to prominent outdoor trashcans. Perhaps if the same students were surveyed again a higher percentage of respondents would be aware of the all-in-one recycling receptacles since so many have now been placed outdoors.

When asked how much they agreed with the statement, “OSU encourages and supports students to live an environmentally friendly lifestyle,” only 4.5% percent of those who responded indicated that they ‘strongly agree’ with the statement, but another 4.5% selected ‘strongly disagree’. Slightly more students chose ‘disagree’ (23.6%) than ‘agree’ (19.1%), which indicates that the
participating students are just about split on the issue. Nearly half of the respondents indicated that they felt ‘neutral’ about the statement, which could have a variety of meanings. It may mean that those students feel that Ohio State supports an environmental lifestyle in some ways but not in others, or that they do not know enough about Ohio State’s environmental initiatives to agree or disagree with the statement, or it could mean that they are not interested in sustainable initiatives on campus.

When asked which programs the University could improve or add to the current lineup of sustainability initiatives, 29 of the 54 participants who responded mentioned improving or expanding University recycling efforts. This may be because recycling is already one of the more prominent sustainability programs on campus and it is generally known, especially amongst the younger generations, that recycling is one small thing we can control in terms of environmental impact.

Finally, questions 5 and 7 provided perhaps the most influential responses from this survey and helped shape the methods for subsequent research. The responses to question 5 indicated that the most frequent method for students used to learn about current sustainability initiatives was through friends and roommates (58.6%), which was surprising. This was not the anticipated response, but the outcome enforces the notion that social connections play an important and prominent role in spreading information and news. After friends and roommates, the second and third most frequent methods for learning about campus sustainability initiatives were email (39.1%) and the OSU Website.
(41.4%), which indicates that the students utilize the Internet as a major resource for receiving information. Question 7 polled students on the methods they use to communicate on an everyday basis and the results showed that the most frequently used methods were also rooted in Internet communication. Email was the most frequently used at 92.2%, followed by Facebook at 80.0%. It was expected that the Internet and social networking would be prominent, but it was surprising to see the vast difference in the usage of the two social networking sites, Facebook and MySpace, at 80.0% and 16.7% respectively.

Together, the responses from Questions 5 and 7 show that the students use the Internet for a significant amount of their communication and rely heavily on their peers for the spread of information, whether by email, phone, or social networking. These results set the direction of the subsequent research to focus on investigating the opportunities presented in social networking and in peer-to-peer communication of students. The sparked the idea that student employees of the University may be useful players in spreading information on sustainability initiatives to their student peers.

7.3 Survey to Student Staff Members

After the analysis of the initial student survey, this survey was developed with the goals of gauging the level of interaction of Ohio State student staff with their coworkers in and out of the office, and determining the awareness level of student staff about sustainability initiatives in their department and campus in
general. The survey was distributed online in July of 2008 to student staff members of Ohio State Department of Recreational Sports (Rec Sports), which employs several hundred students for work-study positions and internships each quarter.

Sixty-nine undergraduate and graduate students from a variety of academic backgrounds participated in this survey. Participants had worked for Rec Sports for an average of 1.5 years. The response data is presented below with responses represented by number and percentage, but the survey can be viewed in its entirety in APPENDIX C.

7.3.1 Responses from Student Staff Survey

1. Academic areas of surveyed student staff members

<table>
<thead>
<tr>
<th>Academic Area</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity &amp; Education Services</td>
<td>15</td>
<td>21.7%</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>10</td>
<td>14.5%</td>
</tr>
<tr>
<td>Business</td>
<td>10</td>
<td>14.5%</td>
</tr>
<tr>
<td>Education</td>
<td>6</td>
<td>8.7%</td>
</tr>
<tr>
<td>Humanities</td>
<td>5</td>
<td>7.2%</td>
</tr>
<tr>
<td>Biology</td>
<td>5</td>
<td>7.2%</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>26.1%</td>
</tr>
</tbody>
</table>

2. Approximate amount of time student staff members have worked for Rec Sports

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than 1 Year</td>
<td>24</td>
<td>34.8%</td>
</tr>
<tr>
<td>One Year</td>
<td>15</td>
<td>21.7%</td>
</tr>
<tr>
<td>Two years</td>
<td>16</td>
<td>23.2%</td>
</tr>
<tr>
<td>Three Years</td>
<td>10</td>
<td>14.5%</td>
</tr>
<tr>
<td>Four Years</td>
<td>4</td>
<td>5.8%</td>
</tr>
</tbody>
</table>
3. Frequency with which student staff members interact with other student staff on the job

<table>
<thead>
<tr>
<th>Frequency of Interaction</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>57</td>
<td>82.6%</td>
</tr>
<tr>
<td>Weekly</td>
<td>10</td>
<td>14.5%</td>
</tr>
<tr>
<td>Monthly</td>
<td>1</td>
<td>1.4%</td>
</tr>
<tr>
<td>Quarterly</td>
<td>1</td>
<td>1.4%</td>
</tr>
<tr>
<td>Do not interact</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

4. Frequency with which student staff members interact with NON-student staff on the job (does not include supervisors)

<table>
<thead>
<tr>
<th>Frequency of Interaction</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>23</td>
<td>33.3%</td>
</tr>
<tr>
<td>Weekly</td>
<td>21</td>
<td>30.4%</td>
</tr>
<tr>
<td>Monthly</td>
<td>2</td>
<td>2.9%</td>
</tr>
<tr>
<td>Quarterly</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Only coworkers are other student staff</td>
<td>23</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

5. Methods student staff use to communicate with student coworkers outside the ‘office’

<table>
<thead>
<tr>
<th>Communication Method</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Person</td>
<td>53</td>
<td>76.5%</td>
</tr>
<tr>
<td>Email</td>
<td>45</td>
<td>66.2%</td>
</tr>
<tr>
<td>Facebook</td>
<td>45</td>
<td>66.2%</td>
</tr>
<tr>
<td>Phone</td>
<td>41</td>
<td>60.3%</td>
</tr>
<tr>
<td>Text Message</td>
<td>41</td>
<td>60.3%</td>
</tr>
<tr>
<td>MySpace</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Do not communicate outside the job:</td>
<td>5</td>
<td>7.4%</td>
</tr>
</tbody>
</table>
6. Methods student staff use to communicate with NON-student coworkers outside the ‘office’

<table>
<thead>
<tr>
<th>Communication Method</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>23</td>
<td>34.3%</td>
</tr>
<tr>
<td>In Person</td>
<td>22</td>
<td>32.8%</td>
</tr>
<tr>
<td>Phone</td>
<td>17</td>
<td>25.4%</td>
</tr>
<tr>
<td>Text Message</td>
<td>11</td>
<td>16.4%</td>
</tr>
<tr>
<td>Facbook</td>
<td>9</td>
<td>13.4%</td>
</tr>
<tr>
<td>MySpace</td>
<td>1</td>
<td>1.5%</td>
</tr>
<tr>
<td>Do not communicate outside the job:</td>
<td>29</td>
<td>43.3%</td>
</tr>
</tbody>
</table>

7. Interest level of student staff members in living an environmentally friendly lifestyle

<table>
<thead>
<tr>
<th>Interest Level</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Interested</td>
<td>34</td>
<td>50.0%</td>
</tr>
<tr>
<td>Somewhat Interested</td>
<td>9</td>
<td>13.2%</td>
</tr>
<tr>
<td>Neutral</td>
<td>11</td>
<td>14.7%</td>
</tr>
<tr>
<td>Not Very Interested</td>
<td>10</td>
<td>14.7%</td>
</tr>
<tr>
<td>Not At All Interested</td>
<td>4</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

8. Number of student staff members who care about “issues pertaining to the environment, global warming, sustainability, etc.”

<table>
<thead>
<tr>
<th>Response</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Care</td>
<td>60</td>
<td>87.0%</td>
</tr>
<tr>
<td>Do Not Care</td>
<td>9</td>
<td>4.3%</td>
</tr>
<tr>
<td>Unsure</td>
<td>6</td>
<td>8.7%</td>
</tr>
</tbody>
</table>

9. Number of student staff members who could answer definitely on whether or not Rec Sports is involved with sustainability initiatives on campus

<table>
<thead>
<tr>
<th>Response</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, Rec Sports is involved</td>
<td>19</td>
<td>27.5%</td>
</tr>
<tr>
<td>No, Rec Sports is not involved</td>
<td>5</td>
<td>7.2%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>46</td>
<td>66.7%</td>
</tr>
</tbody>
</table>
9a. Of students who answered ‘Yes’, the following initiatives were listed:

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling</td>
<td>12</td>
</tr>
<tr>
<td>Energy Efficient Lights</td>
<td>2</td>
</tr>
<tr>
<td>Use of Cloth Towels</td>
<td>1</td>
</tr>
</tbody>
</table>

10. Number of student staff who are aware of Rec Sports making environmentally friendly choices in the following areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling</td>
<td>39</td>
<td>56.5%</td>
</tr>
<tr>
<td>Overall Waste Reduction</td>
<td>11</td>
<td>15.9%</td>
</tr>
<tr>
<td>Energy Conservation</td>
<td>9</td>
<td>13.0%</td>
</tr>
<tr>
<td>Responsible Use of Products</td>
<td>7</td>
<td>10.1%</td>
</tr>
<tr>
<td>Purchasing</td>
<td>2</td>
<td>2.9%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.4%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>34</td>
<td>49.3%</td>
</tr>
</tbody>
</table>

11. Number of student staff members who are aware of their department having an appointed person in charge of sustainability:

<table>
<thead>
<tr>
<th>Aware</th>
<th>Unaware</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>50</td>
</tr>
</tbody>
</table>

| Aware | 1.4% |
| Unaware | 26.1% |
| Don't Know | 72.5% |
12. Ways in which student staff members are informed about sustainable initiatives on campus:

<table>
<thead>
<tr>
<th>Method</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>21</td>
<td>30.9%</td>
</tr>
<tr>
<td>Campus Newspaper</td>
<td>20</td>
<td>29.4%</td>
</tr>
<tr>
<td>In Class</td>
<td>19</td>
<td>27.9%</td>
</tr>
<tr>
<td>Friends/Roommates</td>
<td>19</td>
<td>27.9%</td>
</tr>
<tr>
<td>OSU Website</td>
<td>18</td>
<td>26.5%</td>
</tr>
<tr>
<td>Coworkers</td>
<td>8</td>
<td>11.8%</td>
</tr>
<tr>
<td>E-Newsletter</td>
<td>8</td>
<td>11.8%</td>
</tr>
<tr>
<td>Academic Dept</td>
<td>2</td>
<td>2.9%</td>
</tr>
<tr>
<td>Work Supervisor</td>
<td>1</td>
<td>1.5%</td>
</tr>
<tr>
<td>Phone</td>
<td>1</td>
<td>1.5%</td>
</tr>
<tr>
<td>Unaware</td>
<td>15</td>
<td>22.1%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7.3.2 Observations

The overwhelming majority (82.6%) of the surveyed participants interact with other student staff on a daily basis while on the job, and exactly one third (33.3%) of the participants interact with non-student staff on a daily basis. This clearly indicates that there is a lot of frequent interaction among staff members, which could facilitate communication in the office and foster relationships. Out of the office, most student staff members keep communication up with other student and non-student coworkers. Only 7.4% of participants do not communicate with student coworkers outside the office, and only 43.3% of participants do not communicate with non-student coworkers outside of the office.
The most frequent methods to communicate with student coworkers are in person (76.5%), Facebook (66.2%) and email (66.2%). When communicating with non-student coworkers the most frequent methods are email (34.3%), in person (32.8%), and by phone (25.4%). These results are consistent with findings in the previous survey, in that the majority of students are using email and Facebook to communicate with one another. Though Facebook is used to contact non-student coworkers, it is with significantly less frequency (13.4%). This is not surprising, as Facebook is a network where users most often connect with people of their own peer group, and non-student coworkers are likely to be of an older age group and thus less likely to use Facebook. These results again indicate a strong predilection of the students to stay in touch and share information with their peers through Facebook.

Most of the participants (72.5%) did not know if Rec Sports had a specific person or people appointed to head up sustainability issues, even though there has been at least one person appointed to focus on sustainability in Rec Sports since Spring 2008.

When asked if they knew whether or not Rec Sports was involved with any sustainable initiatives on campus, two-thirds (66.7%) of the participants answered that they did not know. Only nineteen participants (27.5%) answered ‘yes’, and of those students twelve listed recycling as Rec Sports’ only involvement in sustainable initiatives. When asked if they were aware of Rec Sports making environmentally friendly choices in specified areas within the department, nearly half (49.3%) of the participants answered that they did not know. Among those
who were aware of environmentally friendly choices in the department, the most frequently selected answer was recycling (56.5%) followed by waste reduction (15.9%) and energy conservation (13.0%).

When it comes to learning about campus-wide sustainability initiatives, the participants reported that they receive information most frequently from email (30.9%), followed by the campus newspaper (29.4%), friends and roommates (27.9%). These responses are similar to those of the initial survey to Ohio State students, which reinforces the fact that a student’s social connections are key in spreading information around campus. It is also important to note that in this student staff survey 22.1% of participants indicated that they were unaware of any sustainable initiatives on campus.

From these survey questions, it is clear to see that a significant portion of participants were completely unaware of many sustainable initiatives or environmentally friendly practices happening at Ohio State, whether in their department or on the campus as a whole. Since Ohio State has several sustainability initiatives established on campus- of which recycling may be the most well known- there must be a problem in getting the word out about the sustainability initiatives. The participants of this survey are all employees of the University and therefore would be more likely to be ‘in the know’ about University operations or programs. Regardless of knowledge of general campus events or initiatives, these student employees should at the very least be well informed about the sustainability practices of their department, but it seems that
the message and information from the University is not being delivered in a clear and consistent manner.

Furthermore, this issue is particularly noteworthy because the survey also shows that the students express interest in or concern for sustainability issues; When asked about their interest level in living an environmentally friendly lifestyle, 50% of the participants said they were ‘very interested’ and an additional 13.2% reported they were ‘somewhat interested.’ When asked if they cared “about issues pertaining to the environment, global warming, sustainability, etc.,” 87% answered ‘yes.’ So, in general, these students are interested in sustainability yet are largely unaware of their department’s policies or initiatives. It would be likely that these students would take note if they were to learn of a sustainability program—regardless of whether they would actively participate in the program.

7.4 Survey of Communications of Green Student Groups

After gathering information from the administrators at other universities, a survey was created for members of the ‘green’ student organizations on campus. The goal of the survey was to learn more about the ways in which Ohio State’s administrators support the activities and functions on campus. The survey was conducted online with surveymonkey.com, and a link to the president of each group (Students For Recycling, Free The Planet, and Students for a Sustainable Campus) to distribute to their members. Only four participants provided
responses to the survey so the sample size is quite small, but the responses did provide some interesting insight into the communication situation.

The four participants came from two student groups, Free The Planet (FTP) and Students For Recycling (SFR). (It should be noted that Free The Planet is not an officially sanctioned student organization, but the group has been involved in creating change on campus and influencing some of the University’s policies related to sustainability.) Many of the questions were open ended; the full survey responses are not presented here but quotes are used in discussion. The full responses can be seen in APPENDIX D.

When asked what the goals of the organization were, the SFR students reported that their goals were “to promote recycling and other sustainable practices through education” and “improve recycling efforts on and off campus through education,” and that they “hope to educate people about what can be recycled, and where they can recycle as well as other ways they can reduce waste.” When asked in what ways the University administration helps the group meet their goals, the SFR participants reported that the administration is very supportive in several ways, including providing facilities for office and meeting space and assisting in several ways with their annual Dump & Run event. Additionally, the participants report that the group’s advisors “provide guidance about how to go about achieving our goals and facilitate communication with other university staff members.”

These positive reports were different than the responses from the participants with FTP. When asked how the University administration helps their
group meet their goals the response from one student indicated that in the past FTP had “taken a more adversarial role with the administration” and the second student simply said, “They say they are interested.” The differences in responses from the two groups is not surprising though, as SFR is a group that is supported by and cooperates with the University; FTP is not an official student group, and they frequently and openly voice their concerns and grievances with the University.

However, when asked how the University could improve to better support the student organizations’ goals, one of the participants from FTP responded, “Ideologically, the administration could shift towards being more concerned with environmental and social issues instead of conservative business concerns,” which the student pointed out would help the University and FTP have a better working relationship.

In terms of communication, the survey indicates that student organizations generally receive communication from the administration on a weekly basis; All four participants indicated that the administration contacts them via email, phone, and in person, and one student indicated that they received information via a ListServ. When asked how the administration shared information with them about general campus sustainability events, all four participants answered that they receive information by email and in person. Unfortunately, no participants responded when asked how they would ideally like the University to share information with them, so a comparison cannot be made between the current situation and the ideal situation.
Finally, the participants were asked how they communicated with other members of their student organization about group-related matters (not social matters). All four of the participants answered that they use Facebook, email, the phone, and ListServs, three participants answered that they speak in person, two use text messaging, and one indicated the use of e-newsletters. No participants answered that they use MySpace. These results are consistent with other two surveys given to Ohio State students and student employees; the vast majority of each participant group has answered that they use email and Facebook to communicate or organize events with their peers.

7.5 Research of Sustainability at Other Schools

Next, an informal examination of sustainability efforts at other universities was conducted. Information was found by searching the websites of various schools and academic publications. The University of Florida and the University of California at Berkeley were chosen for a more in-depth look because of their large size, their interests in further advancing campus sustainability, and most importantly, their comprehensive plans for informing the campus community about sustainable initiatives. This information helped shape the questions for an online survey that was given to sustainability officers or administrators of universities that had a positive track record with campus sustainability.
7.5.1 Sustainability Information at the University of Florida

The University of Florida, in Gainesville, Florida has approximately 51,000 and has taken a very streamlined and upfront approach to informing their campus community about sustainability initiatives on campus. The prominent Office of Sustainability, founded in 2006, operates a website that contains a fully comprehensive array of information and resources for students, faculty and staff to reference. At one website, there is information on: current and upcoming sustainability-related events on campus, course offerings and related majors, a list of all involved faculty and their contact information, discussion boards for students and faculty alike, an archive of campus sustainability report cards (self-issued annually since 2005), links to outside resources, as well as information on exactly how students and faculty can get involved with campus sustainability initiatives, including the campus “Green Team Network” (a campus-wide effort to involve campus community members at all levels and from all departments to work towards common sustainability goals).

Additionally, the Office of Sustainability produces an annual ‘Green Gator Guide’ that is distributed to students at the beginning of the school year. This guide is an extremely comprehensive resource for students living on and off campus. It includes information on ALL things sustainable as it relates to student life: how and where to recycle in the city of Gainesville; how to reduce waste, save water, and conserve electricity in residence halls and in off campus residences; where to ‘eat and shop green’ in the campus area; how to get involved with student organizations or find a sustainability internship; and lists of academic
courses and majors available related to sustainability; and finally a list of current sustainability initiatives on campus. It is interesting to note that the Green Gator guide was conceived and created entirely by student interns from the UF Office of Sustainability.

With the single Office of Sustainability Website the ability to have “one stop shopping” for all of the campus sustainability information is presumably very useful to interested campus community members. It takes the guesswork out of wondering what, if anything is happening or of having to dig for information on how to get involved. This likely helps get more campus community members involved, and keeps them there, because the information is presented up front and in one location— it is almost effortless to stay informed. Additionally, it is clear that the administration in the Office of Sustainability values the input of the UF students; From the sustainability discussion boards, heavy encouragement to be involved with the Green Team Network, and the campus-wide distribution of the student-initiated Green Gator Guide, it is clear that the University is sending one cohesive message to the students, and that the students can easily get involved and be active in UF’s sustainability initiatives.

7.5.2 Sustainability Information at the University of California, Berkeley

The student body of UC Berkeley is, in general, very engaged in activism and promoting positive change. There are over 30 student groups on the Berkeley that are dedicated to sustainability issues and activities. Additionally, there are
two official University committees related to sustainability in which students are actively involved. First is the Chancellor’s Advisor Committee on Sustainability (CACS), which “promotes environmental management and sustainable development on campus.” The committee is comprised of administrators, faculty, staff, students, and alumni, and directly advises the University Chancellor on sustainability issues as they relate to the UC Berkeley campus. CACS was formed in 2003 and has been influential in the steering of campus policies and activities; in 2008 CACS was instrumental in forming the Office of Sustainability and hiring the school’s first Director of Sustainability. The second University committee is the University of California Climate Action Partnership (CalCAP), which was formed in 2005 by an undergraduate student and faculty members with the goal of taking responsibility for and reducing the campus greenhouse gas emissions. The committee currently consists of 25 students, faculty, staff, and administrators that set targets for emissions reductions and leads research on ways in which the University can meet these targets. Both CalCAP and CASC are very prominent and influential components of UC Berkeley’s sustainability plan, and both have active student involvement to make sure that all of the voices of the campus community are heard.

UC Berkeley, like the University of Florida, has also taken a very streamlined approach to sharing information on sustainability with their campus community. The Web resources available are very comprehensive, with one main website as the central “gateway to sustainability resources and operation practices.” The website contains a substantial amount of information about past
sustainability successes, current sustainability programs and practices, and future goals. Information is available for the University’s practices in several sustainability categories, such as Climate & Energy, Land Use, Transportation, Water, Food & Dining, etc. Prominent links are provided to the Berkely Institute of the Environment (an academic research institute), CACS and CAICAP, as well as the Office of Sustainability. In addition to all of this information about the University, the main sustainability website also offers links to related programs happening nearby in the community and to statewide programs on climate action.

UC Berkeley’s main website also has unique sections for students and for faculty and staff, each one listing pertinent information to its user group. The section for students gives an overview of all of the ways in which students can get involved on campus: service learning, academic courses and degrees, student action in campus committees, grant opportunities for campus projects, listservs for sustainability issues, as well as campus and community internships. The section for faculty and staff provides information on green department and event certifications (recognizes departments or events that have taken steps to reduce their environmental impact), grants for on-campus sustainability projects, and also provides an overview of what students are doing on campus.

UC Berkeley’s approach keeping students informed and including them in the planning process of campus sustainability initiatives is commendable and ensures that the voices of the University’s ‘customers’ are heard and their needs are met.
7.5.3 Survey to Administrators of Other Schools

Based on the findings of positive sustainability initiatives and communication practices at the aforementioned schools (and others), a short online survey was created and sent out to several sustainability officers or administrators of various schools, but the response rate was very low—only five responses were gathered from the approximately fifteen administrators contacted. The responses are integrated into the discussion here, but the full survey is available in APPENDIX E. The survey was distributed online through surveymonkey.com in May of 2008. For privacy, the participants were not asked to identify themselves or their school. Two participants came from schools with approximately 20,000 students, and the other three participants came from schools of approximately 50,000, 20,000, and less than 2,000 respectively.

Based on the responses of the survey, recycling seems to be at the forefront of these five schools’ sustainability efforts. One administrator reports, “We’ve all begun to expand the recycling program in both material type and locations” and another reports that the recycling services office is the biggest ‘Sustainability Champion’ on the campus. All five participants indicated that their schools have recycling programs, which is not surprising because, in general, recycling is a relatively cheap campus project compared to other possibilities, such as retrofitting and overhauling utilities systems, installing environmentally friendly technologies such as solar panels, or constructing new green buildings. When asked what the most successful sustainability initiative was on campus, one participant points out successful recycling takes a “campus-wide effort and
involves decision makers at every level”—all the way from top administrators determining the budget down to individual students who choose to recycle their waste or not.

Since this survey was given in May of 2008 so it is not surprising that none of the participants used Twitter at the time, but only one of the administrators polled indicated that they used Facebook, which, despite the small sample size, is still proportionally much less than the students’ answers. However it is not at all surprising that all five of the participants indicated that they communicate via email, as the participants were largely high-level administrators at their universities. Several of the participants indicated that they use news feeds, blogs, or online newspapers in addition to email, so that is encouraging in the sense that these technologies are being used by academic administrators. Additionally, the survey shows that a few of the administrators are using some of these technologies to help inform students about sustainable initiatives.

When asked which departments or organizations in the campus community give the most support for sustainability initiatives, the answers of ‘Residential Life/ Housing’ and ‘Buildings/Facilities’ were each selected by four of the five participants. Facilities is an area in which Ohio State is also starting to make significant improvements with the Scarlet, Grey & Green initiative, as discussed in chapter 6. Also discussed is the RecycleMania competition, which the schools of the survey participants likely compete in through measuring the amount of waste recycled in residence halls.
CHAPTER 8

PARTICIPATORY WORKSHOPS

8.1 Introduction

Based on the information collected in the surveys, and on the previous research about Ohio State’s existing sustainability initiatives and existing programs for first year students, it was determined that there was a communication problem on Ohio State’s campus: the University had sustainability initiatives and policies in place, but all too often students were unaware of them, or unsure of how to get involved. To this end, a participatory workshop was developed to engage Ohio State students and administrators in critical discussion and brainstorming about how to improve the communication practices between administrators and students in terms of campus sustainability. The workshop also focused only the life of first year students; Ohio State has existing programs to support first year students and encourage them to get involved in campus life. Additionally, the first year of college is where many new habits and lifestyle choices are adopted.
The workshop was conducted two separate times, October 3rd and October 17th, 2008. Workshop 1 was conducted in its full length with students and administrators both participating; Workshop 2 was conducted in an abbreviated fashion due to time restraints, and involved only students participants.

8.2 Pre-Workshop Homework

Before the workshop, participants were asked to complete a homework packet covering topics similar to those that would be discussed in the workshop. The participants were given the homework packet one week in advance, as a way to help participants organize and prepare their thoughts and to help the workshop discussion flow smoothly. Different homework was given to students and administrators; the full content of the homework packets for the administrators and the students can be seen in 0 and APPENDIX G, respectively.

The student homework led students through questions about sustainability and about their freshman year at Ohio State. Students were asked identify sustainability initiatives on campus, take photographs of sustainable successes and problems on campus, and discuss why they thought these initiatives were or were not working. Additionally, students were asked to think back to their freshman year at Ohio State and recall the different events and activities they learned about, and the ways in which they learned about them.

The administrator homework asked questions about sustainability and about the current ways in which the administrator’s department communicates with students about activities, events, or services. Like the students, the
administrators were asked to discuss sustainable successes and problems on campus and document these with photographs.

8.3 Workshop 1

Workshop 1 was held with the participation of six students and two administrators. Approximately 12 student participants were recruited from various majors and from within the student organizations Students For Recycling and Students for a Sustainable Campus, but despite commitments from these students, only six showed up to participate in the workshop; No participants from Students For Recycling or Students for a Sustainable Campus attended. Eight administrators were recruited, based on their involvement in sustainability and in the affairs of first year students, from various offices and departments of the University, including the Residential Life, Dining Services, Energy Services and Sustainability, Student Activities, Facilities Management, and Student Life. Four administrators committed to participating, but only two attended, from Student Life and Residential Life.

Generally speaking, the students participating workshop 1 were very enthusiastic and interested in sustainability environmental issues, and most of the students were familiar with brainstorming and mindmapping activities and with participatory research, which helped them jump right in to the discussions and activities and produce creative, thoughtful results. Additionally, some of the students were classmates, which helped them work well as a group. The two
administrators, though interested in sustainability and in this workshop, were not familiar with mindmapping or participatory research, nor familiar with each other, so it is understandable that at times they were hesitant with some of the discussions or activities. Also, during Phase 1 of the workshop they worked separately from the students so their discussion group was comprised of only two people, which meant that they generally produced less information or discussion.

8.3.1 Workshop 1, Phase 1: Discussion and Brainstorming

In the first hour-long phase of the workshop, students and administrators worked separately on three directed discussions that covered topics similar to those in the homework packet. Participants were given paper, pens, and markers for mindmapping, listing, and otherwise recording their discussions. Following are excerpts from the discussion guides handed out during Phase 1 of the workshop, along with photos of the participants in action and the documented results of each stage.
Figure 8.1 Students participating in Workshop 1

Figure 8.2 Workshop 1: Administrators completing Phase 1 discussions
Student Discussion Guide, Phase 1

The first phase of this forum will consist of three separate discussions. You will combine some of your homework answers and discuss topics related to sustainability and communication as seen from the point of view of a student at Ohio State. After each discussion you will share your results with the student group, as well as hear what the administrator group came up with in their similar discussion. We have one hour to complete this first phase of the forum so it is important to stay on task and complete each discussion in the allotted time.

Student Discussion 1A: Remembering your Freshman Year...

As a group, brainstorm about your freshman year at Ohio State considering the following questions, as well as those presented in the homework booklet. Create lists, mind mapping webs, or even draw some pictures!

- What did you do in your freshman year?
- How did you learn about activities?
- How did you join groups?
- How did you meet people?
- What were the most memorable First Year Experience activities?
- What did you want to learn about on campus?
- What did you find most useful about orientation?
- What information or meetings did you find to be useless?
- How was dorm life influential in what you did or learned about?
- High Points? (in terms of campus life/activities)
- Low Points?
Figure 8.3: Student Discussion 1A: Student Mindmap: “Remembering Your Freshmen Year”
Observations of Student Discussion 1A

In this first discussion, and in the related homework questions, student participants recounted the positive and negative aspects of learning about activities, events, and programs on campus. They generally noted that at orientation they learned about dining services and using the ‘swipes’ of the meal plan, and about school spirit and traditions, and that the information was presented to them in packets of paper and through large lecture hall meetings. They also mentioned that this information at orientation was overall not very memorable to them. When asked what was the most memorable, one student answered: “none, to tell you the truth” but other participants cited “the location of important places on campus,” and “the amount of credit card offers.” The participants were also asked what they learned about later in their college life that they wish they would have known freshman year. Student clubs or organizations were a common answer, and one student response indicated that the participant did not know about the involvement fair until too late, which would put a damper on finding out about most campus programs, events, or activities. It came out in discussion that orientation and the beginning of the freshman year involved a lot of information thrown at them all at once, which had positive and negative impacts: the students had numerous opportunities to get involved, learn new things, and meet new people, but there was also an element of “information overload” in terms of information coming from the University.
When there was too much information coming at them everything involved in student life, it caused the students to overlook some of it and potentially miss out on important information. However, the students pointed out that their friends and roommates (and the residence halls in general) were a very useful part of keeping them informed about campus information.

**Student Discussion 1B: Events & Activities you learn about vs. How you learn about them**

Take a look at your “Events & Activities” Matrix from your homework. As a group, tally your answers on to the larger matrix provided. Place one hash mark in each square on the larger matrix for each student’s answer (e.g., if three students recall that they received brochures on student clubs, place three hash marks in the box for Student Clubs/Brochures).

Discuss your answers and add additional events or methods of communication as you think of them. Feel free to update your answers from the homework to the large matrix if you think of something new. When you’re finished, examine your results. Which boxes have the most tally marks? The least? Do you see any trends? Record any noteworthy observations.
Figure 8.4 Student Discussion 1B: Student Event Matrix

**Observations of Student Discussion 1B**

Here, it appears that the students most commonly learn about the majority of events and activities through email, posters, and friends or roommates. This is not surprising, as the previously conducted surveys also indicated that email and friends or roommates were a strong component in
spreading info around campus. It is not surprising that posters are also a common communication method, as they are a very frequent advertising method around campus.

The students expanded the matrix with several of their own categories, adding “bus,” “involvement fair,” “chalkings,” and “online/website” to the ways in which they learn about activities, and added “student organizations” to the activities they learned about.

**Student Discussion 2A: How you Expect People to Communicate**

*Use the large matrix provided to mark which methods of communication you would expect each type of person to use when conveying information to you. Again, put one hash mark in each square for each person’s answer.*
Observations of Student Discussion 2A

To improve the University's communication methods with the students, first it must be discovered how students expect certain types of people to communicate with them– in order for the message to be effective it must come through the right medium from the right person. For example, if a student does
not expect to receive communication from their RA by email, they might miss out on information because they are not looking for it in their email inbox.

This matrix shows that the participants generally expect to receive email from anyone, which reinforces the idea that email is ubiquitous— but may also be a source of information overload because it is used by all types of people for all types of reasons. On the opposite end of the spectrum, News feeds and newsletters (both online and in print) were not identified by any participants as a method of communication they expect to see used by anyone, which may indicate that information being sent out in newsletters is likely not being received (or retained) by students.

The participants expected friends to communicate in the largest number of ways, including by email, phone calls, letters, text message, blogs, Facebook, MySpace, and face-to-face communication. Roommates, classmates, and parents were also expected to communicate in numerous ways. An interesting trend is that students expect to receive information in significantly fewer forms of communications from their superiors than they do from their peers. Perhaps this is due to the fact that communication from a superior is usually more formal, or the fact that superiors are likely to be of an older generation and thus may not use some methods of communication technology (such as Facebook or text messages, for example).

Additionally, it is interesting to note that communication via Facebook was expected from six different types of people and selected a total of 19 times, while MySpace was only selected by one participant as the expected
communication from a friend. This is consistent with other results from the surveys that indicate Facebook is *much* more frequently used that MySpace by all survey and workshop participants.

**Student Discussion 3A: Sustainable Successes and Problems on Campus**

Discuss with each other your answers to the sustainability questions from the homework. Record your answers to each question on the respective pages. Before you begin, share with your group the photos you’ve brought in. Label each photo before you spread them out on the table (e.g., Annie’s Success Photo 1: Recycling Bin).

**Student Discussion 3B: “Which sustainable initiatives are you aware of on campus?”**

Create a master list of all of the sustainable initiatives, activities, or events on campus that you are aware of. On the list, note how many of you are aware of each initiative.

**Student Discussion 3C: “Which of these initiatives or programs do you think is the most/least successful?”**

Looking at the previous question and using the colored dot stickers provided, each person should place a green dot next to the initiative they think is most successful and a red dot next to the one they regard as least successful. Discuss and record on this page why you think the initiatives may be successes or failures.
Figure 8.6 Student Discussions 3B and 3C Student List of Sustainability Initiatives, with voting for most and least successful. Green stickers indicate most successful, red least successful.
Observations of Student Discussions 3B and 3C

Similar to the discussion, students were asked in the homework which sustainability initiatives they were aware of and which they perceived as the most and least successful. The majority of participants discussed recycling as being a prominent initiative but had mixed feelings on its success. Some students thought recycling was a success because it is a campus-wide program that is well-used in the residence halls, yet others stressed the need for more education to students about the recycling program, as well as a strong need for consistency in recycling containers across the various buildings and facilities on campus. One participant noted that recycling containers were often prevalent in new buildings but sometimes scarce in older buildings. Furthermore, several participants expressed concern that off-campus students receive little to no information about recycling and thought that the University should take a greater role in educating off campus students about recycling facilities in the community. In the discussion, two students selected “off campus recycling” as the least successful area.

Another sustainability concern as noted in the homework and discussion was energy consumption on campus. The participants were aware that, as a large campus, Ohio State consumes a lot of energy each day and that there were obvious ways to reduce this energy consumption, as the participants had all witnessed things such as lights on in buildings in the middle of the night. One student wrote in the homework that she hoped that Ohio State was working on reducing energy consumption but she “[hadn’t] heard anything about it,” which is
notable because since summer of 2008 Ohio State has been implementing a plan to audit, assess, and reduce energy use in numerous facilities across campus; in fact reducing energy consumption is one of the main tenets of the campus wide Scarlet, Gray & Green sustainability initiative.

When selecting from the list of sustainability initiatives that they thought were most and least successful (denoted with a green or red sticker, respectively), over half of the students indicated that they thought the use of Carmen (OSU’s online course management system) and email were the most successful. This is interesting because email and Carmen have been adopted as technologies to enhance communication the learning experience. Though the technologies were not adopted specifically for the sustainability benefits, they most likely have helped students and faculty at Ohio State reduce the amount of paper they use to communicate, and thus could be retroactively considered a ‘sustainability initiative’ by some.

**Student Discussion 3D: “What opportunities do you see in our campus community to improve sustainability?”**

*Combine your ideas to create a list of all of the opportunities/problems you’ve thought of. Spend time brainstorming as a group if you were not able to think of many in the homework. Use the photos of problems and successes that you have in to help spark new ideas, and use the large paper if you need more room.*
**Student Discussion 3E: “How could these improvements be implemented?”**

Consider your answers from the previous questions. Could any of your ideas be easily implemented at Ohio State? If so, how? If you think the improvements would be hard to turn into reality, what challenges might stand in the way? Discuss and record your thoughts here.

[Note about Discussions 3D and 3E: these topics were not completed in Phase 1. Due to time constraints that became apparent during the workshop, participants were asked to roll these discussion questions into their brainstorming activity during the next phase of the workshop.]

**Administrator Discussion Guide, Phase 1**

The first phase of this forum will consist of three separate discussions. You will combine some of your homework answers and discuss topics related to sustainability and communication as seen from the point of view of an administrator or ‘decision maker’ in the University community. After each discussion you will share your results with the student group, as well as hear what the student group came up with in their similar discussion. We have one hour to complete the first phase of the forum so it is important to stay on task and complete each discussion in the allotted time.
Administrator Discussion 1A: A Student’s Freshman Year

Think about your communications with first-year students. Do you use particular methods for first-year students that you do not for other students? Do you find that first-year students are more apt to respond to certain communications?

If you do not differentiate first-year students as a separate audience, do you have other specific audiences that you target? Student organizations or clubs? Students living in residence halls? Honors students? When you communicate with these specific audiences do you use specific types of communication for each group? Create lists or a mind map on the provided paper recording your discussion.
Observations of Administrator Discussion 1A

The administrator participants were not familiar with mindmapping so they created lists to organize their ideas. The activities and events for the first year students are as follows:

- Recycle energy competition
- Green energy scholars program
- All-in-1 recycling
- Dump Run
- Orientation signage
- Around during welcome week
- Green Fair
- T Storm dining

Positive:
- Incentives
- Food
- Prizes (shirts, bags, etc.)
- Competitions
- Fun
- Interest

Negative:
- No investment

Figure 8.7 Administrator Discussion 1A, examining events offered to first year students
year students that administrators noted were similar to those noted by the students when asked an analogous question. The administrators did not discuss whether specific methods of communication work best with specific groups, but they did stress that having incentives (food, free stuff, etc.) at events or holding competitions were both excellent ways to get students involved. They also said that students were less likely to be involved or invested with activities if the students did not see the value in it or understand the benefits.

Administrator Discussion 1B: Events and Activities vs. Communication

Take a look at your “Events and Activities” Matrix from your homework. As a group, tally your answers on to the larger matrix provided. Place one hash mark in each square on the larger matrix for each person’s answer (e.g., if three of you recall that you, say, sent out brochures about guest speakers, place three hash marks in the box for Guest Speakers/Brochures).

Discuss your answers and add additional events or methods of communication as you think of them. Feel free to update your answers from the homework to the large matrix as you think of new ideas.

When you’re finished, examine your results. Do similar types of programs from different departments use similar communications? Do you see any correlations or inconsistencies in your results? Discuss and record these observations on the paper next to the matrix.
Observations of Administrator Discussion 1B

On this matrix the two participants did not distinguish their answers from one another– the hash marks on the matrix do not differentiate if one or both of the participants agreed with the answer. The matrix shows that posters and word of mouth are the most popular ways to get information out to students, which matches what the student participants said about how they receive information about events. However, it would be interesting to know if the administrators plan on word of mouth communication as an advertising method, or if it is something that just happens naturally on a college campus. The communication methods that were selected the least often were ‘department newsletter’ (selected zero times), ‘in-class presentation’ (zero times), ‘brochures’ (one time), and email (two times). It is not surprising that department newsletters or in-class presentations were not indicated selected, as those are controlled by the academic departments and not the office of Student Life, but it is quite surprising that email was selected only twice because the students participants- in this workshop and with the surveys- indicated that email is one of the ways in which they most frequently get information about events and activities on campus. (Additionally, the student participants indicated that they often learned about sustainability events through classes.)
**Figure 8.8 Administrator Discussion 1B, Events and activities and how they are advertised**

**Administrator Discussion 2A: How You Communicate**

Use the large matrix provided to mark which methods of communication you would use to communicate with each type of person. Again, put one hash mark

<table>
<thead>
<tr>
<th>Event/Activity</th>
<th>Email</th>
<th>Poster</th>
<th>Brochure</th>
<th>Film</th>
<th>Promotion</th>
<th>Newsletter</th>
<th>Website</th>
<th>Personal Invitation</th>
<th>Letter</th>
<th>Webinar</th>
<th>Social Media</th>
<th>Meeting/Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welcome Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Fair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trayless Dining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
in each square for each person’s answer. Look over your results to see if you find any trends. Are certain types of people more likely to respond if you communicate with them in a certain way?

![Figure 8.9 Administrator Discussion 2, Communication Methods for each type of person](image)

Figure 8.9 Administrator Discussion 2, Communication Methods for each type of person

173
Observations of Administrator Discussion 2A

The results of this discussion show that email, phone, and face-to-face communication were overwhelmingly the most commonly used for all types of people listed (except for communicating with a dean). One participant indicated that they used newer social media, like MySpace, Facebook, and text messaging, however, these were only used to communicate with people from the participant’s peer group: friends, acquaintances, and grad students. The second administrator appeared to use email, phone, and face-to-face communication exclusively to contact all people.

Administrator Discussion 3A: Sustainable Successes and Problems on Campus

Discuss with each other your answers to the sustainability questions from the homework. Record your answers to each question on the respective pages. Before you begin, share with your group the photos you’ve brought in. Label each photo before you spread them out on the table (e.g., Annie’s Success Photo 1: Recycling Bin).

Administrator Discussion 3B: “Which sustainable initiatives are you aware of on campus?”

Create a master list of all of the sustainable initiatives, activities, or events on campus that you are aware of. On the list, note how many of you are aware of each initiative.
Administrator Discussion 3C: “Which of these initiatives or programs do you think is the most/least successful?”

Looking at the previous question and using the colored dot stickers provided, each person should place a green dot next to the initiative they think is most successful and a red dot next to the one they regard as least successful. Discuss and record on this page why you think the initiatives may be successes or failures.

Observations of Administrator Discussions 3A, 3B, 3C

The participants were able to come up with an extensive and detailed list of Ohio State’s sustainability initiatives, as one administrator was the director of sustainability for the Office of Student Life. In addition to many current initiatives, the homework responses described many future initiatives that were still in the early planning stages.

When asked which they thought were most or least successful, both participants indicated they thought the recycling programs in the residence halls were most successful; one participant thought efforts of campus dining halls were the least successful and the other participant thought outdoor recycling efforts were the least successful. It seems that the issue of recycling on campus is a very polarizing one; participants have given extremely positive responses about the program and it has often been named as the most successful program on campus, but interestingly it also one of the most bemoaned. This could be rooted in the
fact that the recycling program does not appear to be consistent across campus: bins look different in different buildings, the location of the bins are not constant, people do not know what recycling items can be put in the bin, or even if the recycling waste they put in the bin will make it to the recycling center. (Many people are under the misconception that the campus recycling dumpsters are emptied into the garbage truck, but really they are emptied into a waste collection truck that is only collecting recycling on that day.)

Another interesting comparison between the student and administrator responses to this portion of the discussion is that the administrators seemed to have a very positive outlook on the state of campus sustainability (one going so far as to say “I believe [the sustainability initiatives] are or will be all very successful”), while many of the student participants did not have such a positive view about things and were quick to point out many of the University’s perceived shortcomings.
Figure 8.10 Administrators Discussions 3B and 3C: List of sustainability initiatives
**3D:** “What opportunities do you see in our campus community to improve sustainability?”

Combine your ideas to create a list of all of the opportunities/problems you’ve thought of. What might some of the solutions be to these problems? Spend time brainstorming as a group if you were not able to think of many in the homework. Use the photos of problems and successes that you have in to help spark new ideas, and use the large paper if you need more room.

**3E:** “How could these improvements be implemented?”

Consider your answers from the previous questions... Could any of your ideas be easily implemented at Ohio State? If so, how? If you think the improvements would be hard to turn into reality, what challenges might stand in the way? Discuss and record your thoughts here.

[Note: Discussion topics 3D and 3E were not completed; due to time constraints that became apparent during the workshop, participants were asked to roll these discussion questions into their brainstorming activity during the next phase of the workshop]

---

8.3.2 Workshop 1, Phase 2: Timeline Creation

In Phase 2 of the workshop, students and administrators worked in mixed teams. Two groups were created with three students and one administrator each.
The goal of the second phase was to have the groups create a timeline to tell two stories of a student’s first year at Ohio State: the current story, and an ideal future story. The current story was to give a brief outline of the current state of affairs in terms of sustainability initiatives and communication; this was intended to help the participants see the big picture of what was happening on campus and thus be able to create an ideal future story more easily. Participants were to focus more on the ideal future story, and the ways in which Ohio State could improve sustainability initiatives and the ways in which the information is shared with students. Following is the information from the handout given to students with detailed information on each part of Phase 2.

To create the timeline, each group was given a supply kit (pictured) containing:

- Photographs of: Ohio State’s campus, academic/collegiate scenes, students collaborating, recycling bins, public transportation, etc
- Stickers of various communication methods: phone, email, blog, RSS feed, Facebook, MySpace, computer, newspaper, etc.
- “Events To Consider”: Orientation, Move-In Day, First Day of Class, Finals Week, Activities Fair, Spring Break, etc.
- Index cards, on which to write details about programs, initiatives, events, or activities.
**Phase 2 Timeline Directions, for Students and Administrators**

During the second phase of this project you will work in mixed teams of administrators and students to create a timeline that tells the story of a student’s first year at Ohio State.
The timeline will have a current story and a future story and you will use your answers and ideas from the Phase 1 brainstorming for a base to create your stories.

**The Current Story**

First use the lower portion to give a rough outline of the current strategy of sustainable communication in place at Ohio State. When you’re creating your story, check out the “Events to Consider” words for some ideas on major freshman year events you might include in your timeline, and use the stickers and photos as inspiration on what methods of communication are used and where on campus they are happening. You can use the photos and words for the future story as well...

**The Future Story**

The top portion of the timeline is where you will focus most of your time and ideas. In this area you will lay out your idea of the ideal strategy to inform the future student of all sustainable initiatives /events/programs/activities that will take place on campus. Use the ideas from Phase 1 to help your team create the future story. Think of what would be possible five years from now- take a ‘blue sky’ approach and run with ideas even if they seem a little wild! Since this is only brainstorming we don’t have to worry about what exactly it would take or how much it would cost to put your ideas in place at Ohio State!
Timeline Details

For the future story, use the provided index cards each time you are describing an event, activity, program, or initiative. On each card, tell us key pieces of information about the event, activity, etc:

- What will it involve?
- Who will sponsor it?
- When will it be held?
- How are students informed about it?

Also use the provided communication stickers to tell us about the event—place the appropriate stickers on each card or on the timeline to help explain how students will be informed about the event, activity, etc.

Presentation

At the end of the hour each group will present their results to the other group. After both groups have presented and the stories have been discussed, each participant will place a sticker on one of the timelines next to the idea they consider to be the best—it could be an idea from your own group or from the other group.
Figure 8.12 Workshop 1, Phase 2: Students and administrators working together to create a timeline
Figure 8.13 Workshop 1 Timeline 1
Figure 8.14 Timeline 1, Detail Section 1

185
Figure 8.15 Timeline 1, Detail Section 2
Observations for Timeline 1

Many of this group’s idea centered on reducing resource consumption, with a clear emphasis on ‘going paperless.’ One of the most interesting ideas was that students could receive a flash drive at orientation that would contain digital copies of all of the information that has usually been distributed on paper. The same flash drive could be used at later points in the school year to collect other information that is normally handed out on fliers. For example, currently at the student activities fair, visitors can be inundated with an overwhelming amount of fliers and pamphlets as they visit tables for various organizations, clubs, or events- often students get home and realize they don’t need or want most of the information they collected because it was pushed upon them. In the ideal paperless scenario, students could take their University-supplied flash drive to the activities fair to obtain digital files, and gather as much information as they like without producing any paper waste.

Other paperless ideas from this group were to increase the capacity of email and other online storage, and expand the use of Carmen for online course management. The motivation to do these things is to reduce the amount of paper used in class and for class assignments; instructors would post syllabi, assignment sheets, and other course materials on Carmen only, and if a student would like a paper copy he or she can choose to print it out. In addition to using online course materials, this group suggested that online textbooks be used. This was an attractive idea to the students not only because it would likely save them
money, but also because courses almost always require the newest version of textbooks (which seem to come out at least once a year), which caused the old textbooks to be unsalable and thus they essentially become garbage.

Timeline 1 also heavily promoted the use of Facebook to spread info about various initiatives, particularly about recycling, citing that it was extremely useful for putting students in touch with others who have similar interests. The group also suggested Facebook be used to facilitate a ridesharing or carpooling program for students who live off campus.

This group was also thought the University should actively promote bicycling instead of driving as an option for students to reduce their carbon footprint. Their idea was that students could sign a pledge that they would not bring a car to campus for the year, and in return they would get the use of a bicycle for the year, along with a lock, helmet, and lessons on cycling in the city.

As with the other group, the end of the timeline is less detailed because participants took a while to get into the activity, and then did not allocate their evenly enough to discuss all parts of the timeline with equal detail.
Figure 8.16 Workshop 1 Timeline 2
Figure 8.17 Timeline 2, Detail Section 1
Figure 8.18 Timeline 2, Detail Section 2
Figure 8.19 Timeline 2, Detail Section 3
Observations for Timeline 2

An overarching theme with this timeline was education. The group proposed a substantial increase in sustainability education and information throughout the first several weeks of the year based on the philosophy of: if there’s going to information overload, it might as well be good information! Additionally, the group pointed out the importance of informing the students early so they could use the knowledge all year long. For example, have intensive education on recycling at orientation for incoming students, and then wherever they are on campus (sporting events, residence halls, dining halls, classrooms, etc) for the rest of the year they will know what to do about their recyclable waste. Additionally, this group stressed the need to educate students on recycling and other sustainability information at the end of the freshman year (or whenever students move off campus) because it seemed that once students live off campus no one knows what to do with their recycling so it is just thrown out.

In addition to education, this timeline heavily promoted bicycling, and notably, classes on bicycling and a ‘bicycle license’ for all riders. The group suggested that, based on their personal observations that many current bike riders are not safe or do not seem to know the rules of the road, and if the University were to promote more bicycling it should be promoted in a way that maximizes safety and education. This timeline also suggested that the University expand its current rent-a-bike program to more locations around campus (currently there are a limited number of bicycles available for short term rental at the RPAC). Similarly, it was also suggested that the price of parking be
significantly increased as a deterrent for students to drive or bring cars to campus, but at the same time increase the amount of ZipCar (or Hertz Connect) shared vehicles for students to access.

8.4 Participatory Workshop 2

A second version of the participatory workshop was held on October 17th, 2008. This time the participants were all students recruited from a senior level design seminar related to sustainability. The five students worked as one group for the duration of Workshop 2; no administrators participated this time. Due to time constraints of the class, the agenda of the workshop was modified slightly. The participants were given the homework packets to complete before the workshop, but discussions 1, 2, and 3 of Phase 1 (which had similar content to the homework) were formally eliminated and participants were instead led in a less in depth group discussion of the questions in their homework packet. Phase 2 was conducted in a very similar manner to that of the prior workshop, but to save time and keep to the allotted schedule participants were asked to create a timeline of only the ideal future story.

Observation on Workshop 2 Homework Responses

Of the five students in Workshop 2, one was an international student and two were transfer students so they did not have the classic ‘freshman year experience’ to reflect on for the homework questions. Nevertheless, all of the students attended an orientation session of some sort and were asked to recall
their first year at Ohio State to answer the questions. However, most participants in this group did not remember much about the types of activities or events they learned about at orientation. One student said, “I don’t remember much except that I got a meningitis shot at the health center.” Another participant recalled that he received a lot of packets of paper on various subjects, which he “thought strange because [he] was told how OSU is working so hard to become a paperless university.” A third participant noted that because she was inundated with so much information through hall meetings, FYE programs, the involvement fair, and orientation, that was really hard to process it all at the time.

In discussing sustainability initiatives on campus, all five students said they were aware of recycling on campus, but a few listed it as one that had room for improvement, citing the need for more education on what is recyclable, the need for more prominent bins outdoors, as well as the need for a cultural shift to one that truly values recycling and environmentalism. However, one participant asserted that recycling was the most successful initiative on campus because it is ubiquitous and almost everyone is aware that it exists. When asked what the least successful initiative on campus was, this same participant said “the rest of the programs” because “they are not advertised enough and people have no chance to get information about the programs,” which seems to summarize the overarching problem quite well.
Observations on Workshop 2 Timeline Creation

Compared to the participants of Workshop 1, the participants of Workshop 2 were considerably less extroverted in the discussion and activity, which became very evident when it was time to create the Timeline. Luckily, one participant was very enthusiastic about brainstorming and about sustainability issues so he took charge of the group and led them in the Timeline creation. Additionally, the participants of Workshop had considerably less time to work on the Timeline, because of time constraints associated with their class period, which is another reason their timeline contains significantly less detail than those of Workshop 1. Nonetheless, the participants made astute observations and came up with innovative ideas for future activities or programs.

This timeline starts before orientation, the suggested starting event. The participants thought it was important for the University to have a comprehensive and cohesive message about Ohio State and sustainability, which should start when recruiting students; when prospective students come on tours of the campus, guides could tell them about all of the sustainability efforts occurring. Additionally, the group suggested that the University use Facebook and MySpace to round out the message on sustainability when recruiting students. It was also noted that the University should use social media and other “tech ways” to communicate with current students on a regular basis, as the participants agreed that this was the direction that students were moving towards. They also agreed that Ohio State should have a major presence on social networking, or create their own version of it to create a campus community online.
The participants suggested that at orientation or move-in week the incoming students be given a ‘sustainable survival pack’ that would contain reusable items such as travel mugs, dinnerware, and cloth grocery bags that students could keep and use throughout the school year(s). It was also suggested that the travel mug from this pack be used as a standard drink size in campus dining halls (or nearby fast food restaurants), which could make an impact on the amount of disposable beverage cups used each year.

Another proposed program was to create classes for academic credit about sustainability in the FYE (First Year Experience) seminars and classes. The participants recalled seminars on things such as ‘study skills’ and ‘time management’, but none offered on the important issues of sustainability. It was suggested that a mandatory FYE course be created on the topic of campus sustainability because, generally speaking, students will pay attention to anything that can affect their grade and their GPA. If the students are graded by participating in various sustainability programs around campus, then they will likely to get involved in significantly more ways that they do now. Additionally, a course such as this one would not only help the students pick up ‘green’ habits early on in their college career, but it will help reduce the environmental impact of the University community as a whole.
Figure 8.20 Workshop 2 Timeline
8.5 Summary of Key Outcomes From Surveys and Workshops

1. Students do not receive a consistent message from the University on campus sustainability

Ohio State has been creating more and more sustainability initiatives in the past few years, but a lack of a consistent message about these initiatives can hinder student involvement. Campus recycling is a prime example of this type of problem. The vast majority of survey and workshop participants knew that Ohio State has a recycling program and it was consistently listed by participants as a ‘sustainable success.’ However, it was also consistently named as the program that was in need of the most help. Most of the participants who felt this way did so because they did not understand how the entire recycling program worked, or because they did not receive information on recycling once they moved off campus.

Though recycling is a campus-wide effort that is overseen by the Office of Facilities Operations and Development, the participants noted that oftentimes it can seem as though recycling is handled at the building-wide or even department level. Those who have visited multiple buildings on campus would likely be able to tell you that the recycling bins are not at all consistent in appearance or location. Additionally, the housekeeping staff- which can vary from building to building in terms of contractor-collects the recyclable waste and transfers it to a specified dumpster. A nearly identical handling process is used for the non-recyclable waste. The housekeeping staff plays a critical role in the success of the
recycling program. If a member of a department’s housekeeping staff does not keep recyclables separate from non-recyclable waste, or throws it in the wrong dumpster, then the whole department’s recycling efforts are, quite literally, wasted.

2. Students are interested in environmental issues and would like to be involved, but do not have easy access to information and from this they can become under or misinformed.

The surveys and workshops indicate clearly that students are interested in sustainability and environmental issues, but also that students are unable to see the big picture of all of the University’s efforts. When they cannot see the big picture, they can get frustrated and negative and feel that the University is not supporting them in being environmentally friendly. When students are not able to access information on all of Ohio State’s goals and efforts, it is plausible that the students could see an institution that is impossibly large and stuck in its ways instead of what actually is: an institution that is striving to make changes to be a leader in sustainability.

3. Students use the Internet and social media heavily.

Though it was not surprising to learn that students are using social networking, or Facebook, so heavily, it was interesting to learn that the student population uses Facebook significantly more than MySpace— in each survey and workshop it was clear that the students prefer Facebook. The results of the
workshops also made a clear statement that the students want to incorporate Facebook into official University communication, whether to use it for organizing carpooling or for recruiting. Facebook is highly capable with efficiently organizing events and groups and facilitating conversation amongst group members (it is common for Facebook to be used by students to plan events and send invitations via Facebook for not only social events but also academic events and group meetings). The students are already using Facebook as one-stop-shopping for information sharing, so it is only natural that they would want to use it for academic reasons too.

Ohio State has already adopted the use of a Facebook page as a way to share information, however it is for the University community as a whole and not very specific to any one issue or audience, which detracts from the value of the message being sent and creates a lot of ‘noise’ on the page. Creating a specific Facebook page for OSU sustainability issues (or for any other specific campus issue) would allow a focused set of information to be shared with a narrower audience, ensuring the right information gets to the right parties.

4. Students’ peers play a very significant role in communication and spreading information.

With each survey and workshop, the students reported that received a large portion of information through friends, roommates, and classmates about all kinds of campus activities and events, from sustainability to sports. Whether it is because the administration’s current communication methods are not reaching
the students, or the students are ignoring them, a student’s peers seem to be the best way to help get the message across.
CHAPTER 9

CONCLUSION AND RECOMMENDATIONS

9.1 Project Summary and Objectives

The goal of this project was to design an improved communications strategy for Ohio State that will keep students informed and engaged in active participation of campus sustainability initiatives at all stages from planning to implementation. Currently, Ohio State has in place, or will soon be introducing, many positive sustainability initiatives on campus, but students are not being fully informed about the initiatives.

To verify and further investigate this matter, research was conducted on the current sustainability policies, practices, and initiatives at Ohio State and on the ways in which students learn about events on campus, how they communicate with one another, and how aware and interested they are in campus sustainability. This research was carried out through surveys to Ohio State students of various academic backgrounds, and subsequently to Ohio State student employees and members of green student organizations. Finally, a participatory workshop was developed to engage Ohio State students and administrators in critical discussion and brainstorming about how to improve the
communication practices between administrators and students in terms of campus sustainability.

9.2 Conclusions

From the preceding discussions, it is known that Ohio State University considers sustainability an important issue and has taken action in several ways. It is also known that the students of Ohio State have an interest in sustainability issues as it relates to their campus life and future careers. However, there is a discontinuity between the administration and the students in terms of the ways the administration shares information on sustainability initiatives. Students are not receiving enough information, or the right information, about campus sustainability initiatives.

This can have two effects on the students: They do not know how to get involved, or they perceive that the University is not actually making changes and simply greenwashing their operations. Students are like the University’s customers. When customers are looking to purchase a green product or service, they need sufficient information or feedback to be assured that they are making a positive choice or that the intended result is happening. Similarly students need to know not only what initiatives Ohio State is implementing, but also that the initiatives are creating positive change. It is important for Ohio State to avoid greenwashing— or even a situation where students would perceive there is greenwashing. Students, naturally, make up a large and important part of the
Ohio State community so it is critical to create an environment that fosters their trust and involvement.

The majority of students who participated in this study expressed interest in sustainability issues but did not know about all of the initiatives that Ohio State was taking. Additionally, students who want to get involved often have a hard time taking action because information on sustainability issues can hard to find even when actively seeking it out.

This communication problem can create missed opportunities for the University to truly engage students in this critical subject of sustainability and environmental responsibility. This can be addressed in two ways: by sending out accurate and quality information from a centralized source, and by using a method of communication is effective in reaching students.

The way that students communicate now is not the same as it was 20, 10, or even 5 years ago. The Internet and social media tools have taken a very prominent role in the lives of young people, which has trained them share and gather information in a new and different way than people of previous generations. Since their teenage years, most college students have had cell phones, used text messaging, maintained profiles on social networking sites, and used the Internet for entertainment, news, and research.

This notion that college students are accosted to communicating, interacting, and participating online, combined with the fact that they are interested in learning more about and getting involved with sustainability issues on campus, creates an opportunity to effectively inform and involve students.
through these media channels that they are already using for everything else in their lives. It would behoove the University to stay up to date on this rapidly changing scene of communications technology to let the administration communicate with and relate to the student body, and provide their ‘customers’ with the best service possible. Of course, the University currently has several positive sustainability initiatives and programs (and has goals to implement many more) that aim to make Ohio State a more environmentally friendly place, however, these efforts may not be fully realized if students are not informed in a way that they can relate to.

Students are very engaged with their friends and peers, both online and off. Social networking is a utility that helps people connect, share ideas and information, organize, and find others with similar interests, so it is logical to suggest that social networking be used to use in this application to keep students informed about campus initiatives and to engage them in discussion, planning, and action related to campus sustainability. Social media has proven to be a tool that allows people to collaborate and solve problems in new and unprecedented ways; the collaboration has helped people come together to solve large or complex problems that were previously perceived to be out of the range of capability of everyday people. Using social media to tackle problems of information and action at Ohio State could potentially bring the campus community together to work towards common goals in away that was not before possible.
9.3 Relating to Design

**Participatory Research**

Several participatory design research activities were conducted during this project with the intent to determine the students’ views and their unmet needs in terms of sustainability initiatives (if and how they are using and learning about them) at Ohio State. In the participatory workshops students were asked to create a story of the ideal scenario of sustainability at Ohio State—what type of support they would like from the University, which programs they would like to have expanded or improved, and how they would like the University to share information with them. It is important to go directly to the students for this information and involve them in the idea generation process because no one else can have insights about being a student, better than a student. There is opportunity within this subject matter to continue using participatory research to delve more deeply into the individual topics of sustainability initiatives or communication and information sharing.

**Systems Thinking**

This project involved many inter-related systems. The issue of sustainability is not a simple one, and the solution certainly will not be either. As with many complex problems, a key element of working towards a solution is facilitating communication amongst all involved parties. In this case, social
media is one solution to improving communication between at least two of the involved parties. Social media is itself a complex system, so extra attention must be paid to using it appropriately in a way that works for both students and administrators.

When looking at sustainability in the context of a large institution at Ohio State, each time a sustainability initiative or program is added to the roster of ‘solutions’, it is critical to examine how that initiative fits into the larger systems of the University. It is inherent to the issue of sustainability that the solution is going to be approached from many disciplines within the University, with many small initiatives and small changes that may not be directly related to the others. Even if an initiative might be genius and well thought out, if it does not work with the University’s existing system of initiatives, then it cannot succeed within the context of the University. Similarly, if the communication methods do not work to effectively share information about an initiative, it will not be able to grow and be utilized to its full potential.

9.4 Recommendations for Ohio State to Improve Communication with Students Regarding Campus Sustainability

To move towards sustainability at The Ohio State University, it is critical to promote a cultural change at the University, by adopting a system that seeks to involve all members of the campus community, particularly students. The university can do this in part by providing more opportunities to engage students
in campus sustainability initiatives by bringing the initiatives to all aspects of campus life, and by ensuring that the communications being sent out to students are sent through the appropriate source as to be properly received, and are of sufficient quality to fully inform and engage the students.

Most young people are aware of the challenges our society is facing in terms of sustainability, climate, change, and natural resource depletion, and many young people want to contribute to the solution, if only be adopting more environmentally friendly lifestyle practices and making the right choices in their everyday life. Many opportunities lie in the University life to promote the adoption of environmentally friendly practices and choices, and when small changes in lifestyle are considered at the scale of a large university like Ohio State, each person’s small choices can add up to make one big impact.

Furthermore, the role of a university is to educate, inspire, and impart to young people the professional skills necessary to become future leaders in their fields. Sustainability is a very complex problem of the future, and the solutions to it will involve many different fields: engineering, business, medicine, government, design, and the sciences, just to name a few. Therefore, as universities train students to one day run businesses, make policy, cure diseases, and plan cities, the universities also have a duty to teach students the skills necessary to help solve the environmental problems we are facing as a society.
Recommendation #1:

Create a Cohesive, Centralized Message from the University About Sustainability

1. The University should centralize all sustainability information, references, and resources to facilitate easy and intuitive access for students.
   a. A website is recommended as the central source of information, as most other University student services are operated through the web (class registration, fee payment, BuckID management, etc) and students are used to looking to the Internet for information.
2. It is recommend that Ohio State centralize information and policies at the University level to create continuity of operations across all offices, academic departments, and organizations. This will create one consistent message to ensure that the sustainability goals of the University are clear to students (and other members of the University community), and will facilitate collaboration and among offices and departments.
3. The location and sources of information should be logical and easily accessible to students.
4. Facebook should be used as an additional channel of communication to keep students informed and engaged.
Recommendation #2:

*Use Social Media to keep students informed and engaged with campus issues*

1. Students use social media to communicate with one another, and the University should capitalize on the many opportunities social media offers to keep students informed, involved, and active in planning and participating in sustainable initiatives. Currently, Facebook and Twitter offer the most opportunities.

2. It is recommended that Ohio State create a Facebook page specifically for Sustainability, which could be used as a central source of information for all sustainability information. This could easily fall under the branding of the Scarlet, Grey & Green initiative and offer a central area to share information with students.
   a. Facebook offers many useful means of communication and engages students in discussion, planning, and information sharing, and to organize students to action.
   b. Students who become a “fan” of the page will receive information and updates in their individual news feeds whenever they log in.
   c. Facebook is not just for students- it can reach out to interested faculty, staff, and community members, too.
3. Use Facebook to hold discussions of sustainability issues on campus, in the community, and in society at large. This will allow students from different organizations to speak and discuss in one centralized area.
   a. Engage diverse student audiences that might not otherwise come together face-to-face.
   b. Many students may feel more comfortable speaking online than in person, so more voices can be heard.

4. Create Facebook events through the Facebook page for all sustainability initiatives on campus, and for events of the green student organizations.
   a. This allows for one central location to organize all green events
   b. Fans can share events with friends who are not involved with the OSU sustainability page, spreading the word.

5. Post links to topical news stories of sustainability on campus, in the community, or society.

6. The Facebook page should become a “fan” of the pages of existing green organizations on campus (such as the student groups) which will create a link on the page, helping students discover new information.

7. It is recommended to create an OSU sustainability Twitter account to send out small messages to student followers. Potentially, several accounts could be set up for specific purposes to ensure that students receive only the information they want. Tweets can be received on the web as well as on a mobile phone, allowing them to reach students wherever they are.
   a. Send out reminders on the day’s upcoming green events.
b. Allow students to ask questions regarding sustainability initiatives or events.

c. Up-to-date information regarding contests (such as RecycleMania) can be sent out to motivate and inform students.

d. Send feedback to students (via Twitter and Facebook) on the past week’s sustainability, such as: How much trash was produced? How much waste was recycled? How much electricity was used?

e. Information specific to residence halls can be sent out to those residents only (regarding energy usage, recycling contests, events, meetings, or other feedback on their habits).

[NOTE: See the Wexner Center as example of a university-related organization that is effectively using Facebook and Twitter to inform and engage students and other members.]

Recommendation #3:

Get students involved on multiple levels including education, planning, information sharing, and action.

1. It is recommended to heavily involve students in planning for every new sustainability initiative or program, including seating them on all planning committees in significant numbers to have a voice (i.e., not just one select student with 25 administrators and faculty members).
a. Gather broad student input through surveys, interviews, or discussion groups. Show them you value their input and it will likely result in action on the students’ part.

2. Ask students their opinions and engage students in discussion about campus sustainability issues via Facebook. This can bring together more voices in one forum and may encourage some students to speak up than would be likely with a face-to-face meeting,

3. Educate and empower key students to assist in officially sharing information with the student body about sustainability initiatives

   a. Students already gather a lot of information from their peers about sustainability initiatives. Improve this process by arming their peers with official, factual, comprehensive information.
   b. Use leaders of student organizations (green and otherwise) to share information with their group members.
   c. In the residence halls, create duties for RAs to assist in educating their residents on campus sustainability.
   d. Student employees in all departments (academic and non-academic) can receive information to share with peers on each of their departments’ specific sustainability practices.

4. Residence hall EcoReps must make it a priority to gather input from their residents on what their needs and expectations are from the University.

   a. Facebook can be used to distribute surveys.
b. EcoReps should meet with one another to compare notes and practices, and with Student Life sustainability chairs to coordinate activities.

5. Regular meetings should be held with these listed student leaders to discuss and process the input received from the student body.

Recommendation #4:

*Integrate sustainability into normal campus activities, and focus on the first year students to promote education and adoption of environmentally habits early on.*

1. Environmentally friendly attributes must be present in mainstream activities and integrated into everyday life in order to adopt a culture of sustainability at the university.

2. To encourage early adoption of environmentally friendly habits by students, there must be mandatory involvement and education for all first year students. Many opportunities lie in the existing catalog of extensive first year programs, including the following suggestions:
   a. Orientation: Give students information on all sustainability initiatives and Ohio State’s sustainability goals and culture, direct them to the central sustainability website, encourage environmentally friendly choices when purchasing for dorm life.
i. Distribute all information and forms electronically, on USB drives and house all files on the web for later access.

b. Create an FYE seminar class to engage students in sustainability initiatives from the start
   i. Tie students’ grades to their involvement in initiatives to maximize adoption.
   ii. Educate students on actual impacts of their choices and impacts of campus life (For example, waste produced and energy consumed on campus before and after sustainability programs were put in place).
   iii. Employ brainstorming activities and participatory research methods to find areas of student sustainability needs on campus.
   iv. Use student projects to create new campus initiatives and/or solve problems on campus.
   v. For student projects that may come to fruition, offer future independent study credit with the appropriate faculty.
   vi. Invite guest speakers from community organizations and OSU departments to share their expertise on a wide variety of sustainability topics.

c. Buckeye Book Club: Assign readings on sustainability as related to each field.
d. Dining Services: Give incentives to students for choosing non-disposable or eat-in locations over the locations that are to-go only.

e. FYE Leadership Collaborative: expand efforts to include a focus on leading others in getting involved with campus initiatives.

3. At end of first year, begin to educate students on off-campus sustainability issues and services, and continue throughout all four years

   a. Create network of support with community ambassadors: older students help newer students connect with resources in the community.

   b. Provide comprehensive resources about community recycling programs, energy consumption reduction tactics, etc.

   c. Continue to keep off-campus students informed of on-campus initiatives, programs, and policies as appropriate.

**Recommendation #5:**

*Cultivate a positive image and relationship with the students by maintaining transparency and open channels of communication, and by making sure information is shared in a student-friendly manner.*

1. Student feedback must be a top priority, to show their opinions are valued.

2. All policies and decision-making procedures should be advertised to students to allow interested students to comment or observe.
3. Employ ‘ambassadors’ to foster open communications and transparency between students and administration, and to ensure that social media is being used in a ‘culturally appropriate’ way, as not to make the University appear out of touch.

4. The ambassadors must:
   
   a. Understand communication technology, online culture, nuances of student life and be familiar with social media,
   
   b. Understand culture of academia, and how departments and offices interact at a large institution,
   
   c. Promote student and administrator understanding of the ‘other culture’ (needs, constraints, etc.)
   
   d. Be able to maintain a professional yet student-accessible presence on Facebook and Twitter that supports Ohio State’s overarching sustainability goals,
   
   e. Encourage administrators to use social media, and advise them on appropriate methods to get involved.
APPENDIX A:

OHIO STATE UNIVERSITY’S PRESIDENT’S COUNCIL ON SUSTAINABILITY

Note: All information presented here is directly from


Past Successes
1. Recruited and retained world-class faculty in the fields of energy, agriculture, climate, and environment. Established leading research centers on sustainability, including (but not limited to) the Institute of Energy and Environment; Center for Energy, Sustainability, and Environment; Center for Resilience; and Center for Auto Research.

2. Eliminated trays in dining halls, reducing 70% of food waste while saving water and energy. Currently developing and implementing reusable bags and biodegradable bags, trays, plates, and utensils at various Dining Services' locations.

3. Installed additional recycling containers and increased the percentage of waste recycled on campus from 16.8% in 2004 to 21.2% in 2008. During football season, 47% of the waste at Ohio Stadium is recycled.
4. Purchased 3.3 million kWh of green electricity in 2008, enough to power Hagerty Hall.
5. Achieved high energy efficiency (LEED certification) for new buildings, including the state-of-the-art Nationwide 4-H building. Formulated Green Build and Energy Policy.
6. Partnered to sell Dining Services' used cooking oil as biodiesel fuel.
7. Established sustainability coordinators for residence halls.
8. Switched all campus buses to biodiesel.
9. Installed low-flow showerheads in RPAC, saving 20% in water and heating costs ($40,635/yr ).
10. Encouraged use of public transportation with CABS, van pooling, and reduced-rate COTA service.
11. Implemented a campus-wide policy to use a minimum of 30% recycled computer and copy paper.
12. Received numerous awards, grants, and journal and book publications on sustainability research while continuing to develop new sustainability courses.
13. Made sustainability a part of future strategic planning and building.
14. Put in place an environmentally responsible purchasing policy.
15. Took steps to ensure that Ohio State's print shop will be Forest Stewardship Council (FSC) certified by the end of 2009.
16. Leveraged our purchasing power to encourage sustainability by vendors.

**Short Term Goals (12 months)**

1. Support and encourage curriculum on sustainability and the development of a GEC class.
2. Develop a plan, including action items and interim goals, for climate neutrality.
3. Implement a "turn off the lights" drive to change behaviors and culture (estimated annual savings: $700K). Reduce building energy consumption by
changing temperature settings for both heating and cooling, and by powering
down in off-peak times (estimated annual savings: $4,000-20,000 per
building).
4. Encourage green computing practices (e.g., using hibernation and powering-
off monitors).
5. Improve access to recycling bins and educate students, staff, faculty, and
community on best recycling practices. Improve access to recycling in the
residential areas surrounding the University. Pursue a policy to make
recycling mandatory at campus events.
6. Appoint a University Sustainability Officer through the Office of the
President to coordinate and build bridges across the university in
sustainability efforts.
7. Raise awareness of sustainability initiatives at Ohio State through multi-
channel communications: a new website, improved campus signage, fairs,
Welcome Week, employee and student incentives, etc.
8. Reduce water usage by installing more low-flow showerheads and other
water-saving devices.
9. Pursue policy for the purchase of Energy Star-certified products where
appropriate.
10. Complete comprehensive inventory of all greenhouse gas emissions and
report results annually.
11. Conduct energy and environmental audits, and develop campus operating
guidelines.
12. Compost food from dining halls.
13. Expand the use of green cleaning products.
14. Pursue travel tax/carbon offsets as part of a travel policy.
15. Support the University Energy Conservation Initiatives proposal.
16. Adopt a plan to meet House Bill 251 requirements, which includes targeted
reductions in energy use by 2014 and a 15 year plan for energy efficiency.
**Long Term Aspirations and Goals**

1. Sustain the momentum of Ohio State's sustainability efforts, and achieve long-term cultural change on the Ohio State campus, through improved communications and integrated practices.

2. Expand the university's renewable energy portfolio by purchasing more green energy and increasing its generation on campus (solar, wind power, and geothermal).

3. Add HEV and PHEV cars and buses to fleet, improve public transportation, reduce campus traffic, encourage carpooling, create a more pedestrian and bike friendly campus, and reduce the number of state vehicles on campus.

4. Expand energy metering and publish energy usage for each building on the web. Invest in improving the energy performance of our existing buildings.

5. Improve collaboration among various campus constituencies working on sustainability issues.

6. Expand the purchase of green cleaning products.

7. Install automatic sensor light switches, where appropriate.

8. Support and encourage the improvement and development of undergraduate and graduate curriculums in energy, environment, and sustainability.

9. Improve and enhance interdisciplinary research programs in energy and sustainability.

10. Design and implement new ways to make units more responsible and accountable for their energy use.

**Council Members**

Doug Alsdorf, Assoc Professor, Math and Physical Sciences  
Laura Christobek, Undergraduate, Mechanical Engineering  
Kathy Dillow, Special Assistant to the VP, Business and Finance  
Greg Gostetler, Graduate Student, FAES  
Jay Kasey, Assoc VP for Health Services, University Hospitals
Bern Kohler, Professor, College of Math and Physical Sciences
Karen Patterson, Director, University Communications
Rick Price, MD/PhD Fellow, College of Medicine
Kate Wolford, Chair, Assistant to the President & Director of Operations, Office of the President
APPENDIX B

COMPLETE RESPONSES OF THE SURVEY TO OHIO STATE STUDENTS

Initial Student Survey: Complete Responses
Responses were gathered online at www.surveymonkey.com in April 2008. All 93 respondents were current students at Ohio State's main campus. On average the respondents had been at Ohio State for 3 years.
Response rate is displayed in percentages, with number of responses displayed in parentheses.

What is your major?
- Design: 36% (34)
- Architecture: 12.9% (12)
- Engineering: 11.8% (11)
- Sciences: 10.8% (10)
- Communication/Business: 6.5% (6)
- Psychology: 4.3% (4)
- Art: 3.2% (3)
- Other: 12.9% (12)

Gender:
- Male: 41.9% (39)
- Female: 58.1% (54)
1. On a scale of 1 to 5, how much do agree with the following statement?
“OSU encourages and supports students to live an environmentally friendly lifestyle.”

Strongly Agree: 4.5% (4)
Agree: 19.1% (17)
Neutral: 48.3% (43)
Disagree: 23.6% (21)
Strongly Disagree: 4.5% (4)
Skipped Question: 4.5% (4)

2. Did you know that OSU...

Has Zipcar vehicle sharing?
Yes: 84.4% (76)
No: 15.6% (14)

Has ‘All-In-One’ recycling bins throughout campus?
Yes: 78.9% (71)
No: 22.2% (20)

Uses Biodiesel fuel in the CABS busses?
Yes: 53.3% (48)
No: 47.8% (43)

Offers recycling at football games?
Yes: 23.3% (21)
No: 76.7% (69)

Skipped Question: 3.2% (3)

3. Do you actively seek out information about these services, or do you stumble upon information? (Select one or both)

Seek out information: 11.1% (10)
Stumble upon information: 94.4% (85)
Skipped Question: 3.2% (3)
4. Through what channels do you get this information?

<table>
<thead>
<tr>
<th>Channel</th>
<th>Percentage</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends/Roommates</td>
<td>58.6%</td>
<td>51</td>
</tr>
<tr>
<td>OSU website</td>
<td>41.4%</td>
<td>36</td>
</tr>
<tr>
<td>Email</td>
<td>39.1%</td>
<td>34</td>
</tr>
<tr>
<td>Info posted in residence halls</td>
<td>35.6%</td>
<td>31</td>
</tr>
<tr>
<td>Class</td>
<td>31.0%</td>
<td>27</td>
</tr>
<tr>
<td>E-newsletters</td>
<td>27.6%</td>
<td>24</td>
</tr>
<tr>
<td>Coworkers</td>
<td>14.9%</td>
<td>13</td>
</tr>
<tr>
<td>Department Office</td>
<td>9.2%</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>17.2%</td>
<td>16</td>
</tr>
</tbody>
</table>

Posters on busses, Green student organizations, Facebook groups, Posters/Flyers around campus, Internet, Lantern

Skipped Question: 6.4% (6)

5. If you are interested in living an environmentally friendly lifestyle, what other related services or programs you would like to see offered by OSU?

(54 Responses total, 39 skipped question)

- More recycling bins (15)
- More info/education from the University (6)
- Eliminate/reduce disposable items (6)
- Recycling dumpsters for off-campus students (5)
- Increased use of Carmen/ Discourage printing (5)
- Reduced energy consumption (general) (5)
- Green building techniques (4)
- Green/Solar energy (4)
- Bigger recycling bins (4)
- Composting for food/biodegradable waste (3)
- Offer sustainability courses (3)
- Extended bus routes to places near campus (3)
- Outreach to campus students (3)
- Accept more recycling items (electronics, inks) (2)
- Discontinue use of Styrofoam (2)
- Organic options at Dining Services (2)
6. In general, what methods do you use to communicate or to share/gather information?

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>92.2%</td>
<td>(83)</td>
</tr>
<tr>
<td>Facebook</td>
<td>80.0%</td>
<td>(72)</td>
</tr>
<tr>
<td>Phone</td>
<td>63.3%</td>
<td>(57)</td>
</tr>
<tr>
<td>Text Message</td>
<td>55.6%</td>
<td>(50)</td>
</tr>
<tr>
<td>Newspaper, printed</td>
<td>37.8%</td>
<td>(34)</td>
</tr>
<tr>
<td>Newspaper, online</td>
<td>37.8%</td>
<td>(34)</td>
</tr>
<tr>
<td>News feeds</td>
<td>26.7%</td>
<td>(24)</td>
</tr>
<tr>
<td>Blogs</td>
<td>16.7%</td>
<td>(15)</td>
</tr>
<tr>
<td>MySpace</td>
<td>16.7%</td>
<td>(15)</td>
</tr>
<tr>
<td>Newsletters</td>
<td>13.3%</td>
<td>(12)</td>
</tr>
<tr>
<td>Brochures</td>
<td>7.8%</td>
<td>(7)</td>
</tr>
<tr>
<td>Written Letters</td>
<td>5.6%</td>
<td>(5)</td>
</tr>
<tr>
<td>Twitter</td>
<td>1.1%</td>
<td>(1)</td>
</tr>
<tr>
<td>Other</td>
<td>8.6%</td>
<td>(8)</td>
</tr>
</tbody>
</table>

- Instant Messenger, Face-to-face conversations, Television, NPR.org, Radio, Wikis, Magazines, Campus postings, Friends

*Skipped Question: 3.2% (3)*
APPENDIX C

COMPLETE RESPONSES OF THE SURVEY TO OHIO STATE STUDENT STAFF

Survey for Student Staff: Complete Responses
Responses were gathered online at www.surveymonkey.com in July 2008. All 63 respondents were student staff members with Ohio State University's Rec Sports program and had been at Ohio State for an average of one and a half years. Response rates are displayed in percentages with frequency of responses in parentheses.

What is your major?
- (15) Physical Activity & Educational Services
- (10) Social & Behavioral Sciences
- (10) Business
- (6) Education
- (5) Humanities
- (5) Biology
- (18) Other

Approximately how long have you been working with Rec Sports?
- Less than one year: 34.8% (24)
- One Year: 21.7% (15)
- Two Years: 23.2% (16)
- Three Years: 14.5% (10)
- Four Years: 5.8% (4)
In your job, do you interact with other Rec Sports student staff members? If so, how often?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>82.6%</td>
<td>57</td>
</tr>
<tr>
<td>Weekly</td>
<td>14.5%</td>
<td>10</td>
</tr>
<tr>
<td>Monthly</td>
<td>1.4%</td>
<td>1</td>
</tr>
<tr>
<td>Quarterly</td>
<td>1.4%</td>
<td>1</td>
</tr>
<tr>
<td>Do not interact</td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>

In your job, do you interact with other Rec Sports NON-student staff members? If so, how often? (Non-student coworkers does not include supervisors or other in authority positions)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>33.3%</td>
<td>23</td>
</tr>
<tr>
<td>Weekly</td>
<td>30.4%</td>
<td>21</td>
</tr>
<tr>
<td>Monthly</td>
<td>2.9%</td>
<td>2</td>
</tr>
<tr>
<td>Quarterly</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>My only coworkers are other student staff:</td>
<td>33.3%</td>
<td>23</td>
</tr>
</tbody>
</table>

If you communicate with student coworkers outside of the ‘office,’ how do you do it? (Please check all that apply)

<table>
<thead>
<tr>
<th>Communication Method</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Person</td>
<td>76.5%</td>
<td>53</td>
</tr>
<tr>
<td>Phone</td>
<td>60.3%</td>
<td>41</td>
</tr>
<tr>
<td>Text</td>
<td>60.3%</td>
<td>41</td>
</tr>
<tr>
<td>Email</td>
<td>66.2%</td>
<td>45</td>
</tr>
<tr>
<td>Facebook</td>
<td>66.2%</td>
<td>45</td>
</tr>
<tr>
<td>MySpace</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>I do not talk with student coworkers outside of my job:</td>
<td>7.4%</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>1.4%</td>
<td>1</td>
</tr>
</tbody>
</table>
If you communicate with NON-student coworkers outside of the ‘office,’ how do you do it? (Please check all that apply)

- **In Person:** 32.8% (22)
- **Phone:** 25.4% (17)
- **Text:** 16.4% (11)
- **Email:** 34.3% (23)
- **Facebook:** 13.4% (9)
- **MySpace:** 1.5% (1)
- **I do not talk with Non-student coworkers outside of my job:** 43.3% (29)
- **Other:** 0% (0)
- **Skipped Question:** 2.9% (2)

How interested are you in living an environmentally-friendly lifestyle?

- **Very interested:** 50.0% (34)
- **Somewhat interested:** 13.2% (9)
- **Neutral:** 16.2% (11)
- **Not very interested:** 14.7% (10)
- **Not at all interested:** 5.9% (4)
- **Skipped Question:** 1.4% (1)

Do you care about issues pertaining to the environment, global warming, sustainability, etc?

- **Yes:** 87.0% (60)
- **No:** 4.3% (9)
- **Unsure:** 8.7% (6)

Is Rec Sports involved with any sustainable initiatives or events on campus?

- **Yes:** 27.5% (19)
- **No:** 7.2% (5)
- **Don’t know:** 66.7% (46)

If yes, please list the initiatives here:

- Recycling (12)
- Energy efficient lights (2)
- Use cloth towels (1)
Are you aware of Rec Sports trying to make environmentally friendly choices in any of the following areas? (Please check all that apply)

- I don’t know if they are: 49.3% (34)
- Purchasing: 2.9% (2)
- Transportation: 4.3% (3)
- Energy Conservation: 13.0% (9)
- Responsible use of products (such as 2 sided printing): 10.1% (7)
- Overall Waste Reduction: 15.9% (11)
- Recycling: 56.5% (39)
- Responsible use of products (such as 2 sided printing): 10.1% (7)
- Other: 1.4% (1)

Avoiding paper waste

Does your department have a person appointed to be in charge of sustainability of environmental affairs?

- Yes: 1.4% (1)
- No: 26.1% (18)
- Don’t know: 72.5% (50)

How are you informed about sustainable or environmentally-friendly initiatives on campus? (Please check all that apply)

- Unaware of sustainable initiatives on campus: 22.1% (15)
- In class: 27.9% (19)
- Academic Dept.: 2.9% (2)
- Email: 30.9% (21)
- Work Supervisor: 1.5% (1)
- Coworkers: 11.8% (8)
- E-newsletter: 11.8% (8)
- Campus Newspaper: 29.4% (20)
- Friends/Roommates: 27.9% (19)
- OSU Website: 26.5% (18)
- Phone: 1.5% (1)
- Posters: 66.2% (45)
- Other:
APPENDIX D

COMPLETE RESPONSES OF THE SURVEY TO MEMBERS OF
GREEN STUDENT ORGANIZATIONS

Survey for Student Organizations: Complete Responses
Responses were gathered online at www.surveymonkey.com in August 2008. There was a very poor response rate, only four students participated.

1. Which student group are you associated with?
   Free The Planet: 2
   Students for Recycling: 2

1. What are the goals of your group?
FTP: “Affecting environmental change at OSU and around the country”
   “The goals are to promote and enforce environmental justice on campus and in our communities.”

SFS: “To promote recycling and other sustainable practices through education and programs like Dump and Run.”
   “Our goal is to improve recycling efforts on and off campus through education and promotion of recycling. We hope to educate people about what can be recycled, and where they can recycle as well as other ways they can reduce waste.”
3. In what ways does the university administration help you group meet your goals?

FTP: “They say they are interested”

“In the past, our group has taken a more adversarial role with the administration; however, we did actively participate in the environmentally responsible purchasing task force, a consortium of students, faculty, and administrators that make recommendations on environmental practices to the University.”

SFR: “They give us space to work (office, meeting space). If we need to ask them questions about what they’re already doing or what’s happening, we can do that. Dump and Run really shows the amount of help that we receive from the administration. FOD drops off everything collected in the dorms. Real Estate gives us storage space for a VERY discounted rate. Student Affairs helps out with some pickups and the sale.”

“Our group’s advisors are extremely helpful in providing knowledge, and assistance in helping us communicate to the student body as well as put on our events. They provide us with guidance about how to go about achieving our goals and facilitate communication with other university staff members.”

4. In what ways (other than monetarily) could the university administration improve to help your student group better meet your goals in the future?

FTP: “Not green-wash policies.”

“Ideologically, the administration could shift towards being more concerned with environmental and social issues instead of conservative business concerns. If the University were to really consider its impact on the environment and the people that live there in a holistic way, we could have a better working relationship.”

SFR: “I feel like we've been treated exceptionally well by the administration, but I know that other student groups aren't quite as well connected (thank god for Stacey Renker).”

“This past year in particular the university administration has increased contact with student groups like ours as the university has initiated a greater focus on sustainable issues. It is imperative that the administration continue to welcome students into the decision making process concerning sustainability issues, because these decisions impact the whole university community.”
5. What event does your student group normally stage on campus during the school year?
FTP: “Earth Day, Rallies, Meetings, Conferences, Direct Action”
“We used to host Earth Day each year in the spring, but we have recently become more campaign oriented and only hold events that bring us toward our bigger goals such as sit-ins, demonstrations, tabling, and trainings as needed.”
SFR: “Dump and Run, Recycle Mania, various smaller events”
“Our main event is Dump and Run. During move out at the end of spring quarter we collect items people would normally throw away (furniture, clothes, electronics, etc.) and then sell them back to the community in a giant yard sale during finals week each quarter.”

6. Which sustainable initiatives has your student group helped establish within the campus community?
FTP: “Recycled Paper products on campus.”
“We helped established the recycled paper policy, in which all University purchasers must buy at least 30% post-consumer content recycled paper.”
SFR: “I’m not really sure what our group has done in the past, but Dump and Run collections at the end of the year and small campaigns to increase recycling.”
“Recycling and waste reduction.”

7. How does the university administration aid you with these events or initiatives?
FTP: “They followed through with a quarter of our paper policy initiative.”
“We worked with the administration for two years on the recycled paper purchasing initiative. Originally, we tried to work with the administration, but later found ourselves at a stalemate with little agreement among parties.”
SFR: “Manpower.”

8. Approximately how often does your student group communicate with university administration about your events or initiatives?
Daily: 0 Weekly: 3 Monthly: 1 Quarterly: 0
9. Through what channels does the university administration communicate with your group about other sustainable initiatives on campus?

<table>
<thead>
<tr>
<th>Method</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>4</td>
</tr>
<tr>
<td>In Person</td>
<td>4</td>
</tr>
<tr>
<td>Phone</td>
<td>4</td>
</tr>
<tr>
<td>List Serv</td>
<td>1</td>
</tr>
<tr>
<td>E-Newsletter</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
</tbody>
</table>

10. Through what channels does the university administration communicate with your group about other sustainable events or initiatives on campus?

<table>
<thead>
<tr>
<th>Method</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>4</td>
</tr>
<tr>
<td>In Person</td>
<td>4</td>
</tr>
<tr>
<td>Phone</td>
<td>3</td>
</tr>
<tr>
<td>E-Newsletter</td>
<td>1</td>
</tr>
<tr>
<td>Text Message</td>
<td>0</td>
</tr>
<tr>
<td>MySpace</td>
<td>0</td>
</tr>
<tr>
<td>Facebook</td>
<td>0</td>
</tr>
</tbody>
</table>

11. Ideally, through which channels would you like the university to communicate with your group about other sustainability initiatives on campus?

-No Responses-

12. In what ways do you communicate with other members of your group? (Communicating for group-related needs or meetings, rather than social reasons.)

<table>
<thead>
<tr>
<th>Method</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>4</td>
</tr>
<tr>
<td>Facebook</td>
<td>4</td>
</tr>
<tr>
<td>ListServ</td>
<td>4</td>
</tr>
<tr>
<td>Phone</td>
<td>4</td>
</tr>
<tr>
<td>In Person</td>
<td>3</td>
</tr>
<tr>
<td>Text Message</td>
<td>2</td>
</tr>
<tr>
<td>E-Newsletter</td>
<td>1</td>
</tr>
<tr>
<td>MySpace</td>
<td>0</td>
</tr>
</tbody>
</table>
APPENDIX E

COMPLETE RESPONSES OF THE SURVEY OF ADMINISTRATORS

Survey for Sustainability Officers at Other Universities: Complete Responses

Responses were gathered online at www.surveymonkey.com in May 2008. Sustainability Officers or Administrators from various American universities with positive sustainability track records were asked to respond to the survey. Out of approximately 15 sustainability officers asked, only five responded. Their responses tallied after each question; data is not displayed in percentages because the sample size is so small.

Please select the approximate number of students on your campus: (undergraduate + graduate)

- Less than 2,000: 1
- At least 2,000: 0
- At least 5,000: 0
- At least 10,000: 0
- At least 20,000: 1
- At least 30,000: 0
- At least 40,000: 2
- At least 50,000: 1
In which of the following applications has your university implemented sustainable initiatives? (Please check all that apply)

- Recycling: 5
- Electronics Recycling: 5
- Green Building Directives: 5
- Transportation: 5
- Energy Conservation: 5
- Resource Consumption: 2
- Food Services: 5
- Land Use / Grounds Keeping: 4
- Purchasing: 4
- Other: 1

Which initiatives have been the most successful? Why? Which initiatives have presented the most challenges? Why? (Two respondents skipped this question.)

1. “Because of our decentralized campus, those initiatives that involve a larger (rather than smaller) number of decision-makers -- like Purchasing or Transportation -- have proved the most challenging. On the other hand, recycling has been on this campus for decades and involves every person on campus as a decision maker.”

2. “Most are still in the planning stages because the scale of our university is so large. For instance, we recently signed a contract to install between 4-7 MW of rooftop PV for solar energy generation on our Tempe campus. We have an extensive sustainable engagement from our food service (Aramark). Our Honors College is currently building a sustainable dormitory, which should open next year. We have not yet figured out exactly how we will attain carbon neutrality by 2018, one of our stated goals.”

3. “Most recently energy conservation actions are plugging the leaks and raising awareness. We’ve all begun to expand the recycling program in both material type and locations. Concentrated efforts across a wide range of actors within the university.”
How do you share information about these initiatives with the students in your campus community? (Please check all that apply)

- Email: 4
- Posters: 4
- Seminars: 4
- Newsletters (online): 3
- Newspaper (printed): 3
- Info Sessions: 2
- Blogs: 1
- Facebook: 1
- Newsletters (printed): 1
- Newspaper (online): 1
- Mailers/Announcements: 1
- Other: 1 [Interaction with groups and club]
- Phone: 0
- Text Message: 0
- MySpace: 0
- Twitter: 0
- Brochures: 0
- News feeds: 0

Are students involved in creating and or implementing these initiatives? If yes, how?

1. Yes, students are very active in every area of implementation of environmental initiatives.
2. Yes, they propose strategies for implementation, and to a limited extent advise the administrators that are responsible for making these initiatives real.
3. Yes
4. Some. Students are part of committees and planning teams.
5. Yes, we have a sustainability assistant program (like other eco-reps), student organizations involved, and student members on the campus environmental committee.

How do you determine what needs your students have in terms of sustainable living?

1. Our Chancellor's Advisory Committee on Sustainability is roughly 1/3 students. But students here don't always wait to be asked what they want...they come and tell us or just start a project themselves.
2. Dialogue with student groups.
3. Yes
4. We have done focus groups and surveys.
5. No institutional method for determining needs.
From where do you get financial support for the sustainability initiatives? (Please check all that apply)

- University Budget: 5
- Internal Grants: 4
- External Grants: 3
- Endowments: 2
- State Government: 2
- Local Government: 2
- Individuals/Alumni: 2
- Corporate Donations: 1
- Federal Government: 1
- Non-profit/Philanthropic Organizations: 1

From what areas of the university community do you get support (in terms of cooperation/involvement/volunteering) for the sustainability initiatives?

- Students: 3
- Faculty: 1
- President’s Office: 3
- Alumni: 3
- Grounds Keeping: 3
- Facilities / Building Services: 4
- Dining Services: 3
- Housing / Residential Life: 4
- Other: 3

Other Responses: 1. “Other administrators, including deans and VPs”
2. “Other units on campus”
3. “Vice presidents for finance and operations and provost”

Who would you identify as the biggest sustainability “champion” in the university? (Individual or group)

1. “Our recycling services office”
2. “Individual: President Michael Crow, Group: Global Institute of Sustainability (I’m the director)”
3. “Myself, director of Campus Sustainability”
4. “Facilities”
As an individual, what methods do you use to communicate or to share/gather
information?

- Email: 5
- Newspaper (online): 3
- Phone: 3
- Brochures: 2
- Newsletters: 2
- Newspaper (printed): 2
- News feeds: 2
- Blogs: 1
- Facebook: 1
- Written Letters: 1
- Other: 1 [“Face to face meetings, orientation sessions, programs.”]
- Text Message: 0
- MySpace: 0
- Twitter: 0
It’s Homework Time!
First of all, thanks for participating in my research project! Your opinions and ideas will help me come up with a better solution to improve communication on campus about sustainable issues.

This homework packet will guide you through some of the topics we will cover in the brainstorming session on October 3rd. Please complete this packet and bring it with you to the brainstorming session. The questions within will ask you about the various activities or events your department offers to students and how you communicate about these events, as well as about sustainable/environmental issues on campus. You are also asked to take some photos and bring them to the brainstorming session, so please plan ahead for time to print the photos out.

Completing this packet ahead of time and having your thoughts down on paper can help you organize your thoughts beforehand, as well as help the brainstorming session go more smoothly. So please, like mom always said, do your homework!!

If you have any questions about the homework or the brainstorming session please feel free to contact me.

Thanks! Annie Abell | MFA Candidate | OSU Department of Design
**Sustainability: What’s working on campus? What isn’t?**

Which sustainable initiatives are you aware of on campus? (For example: recycling programs, efforts to reduce energy consumption, etc.)

Which of these initiatives or programs do you think is the most successful? Why?

Which do you think is the least successful? Why?

What opportunities do you see in our campus community to improve sustainability?

How could these improvements be implemented?

**Photos of Sustainable Successes and Problems**

If possible, take photographs of three sustainable successes and three sustainable problems in our campus community. The photos could be of objects, buildings, places, services or even from past events or activities... or anything else you can think of. There are no limits!

Please print out the photos and bring them to the brainstorming session. They don’t have to be a particular size, but color photos are preferable.

On the following pages, write a few thoughts or comments about each of your photographs in the space provided in each photo frame. Perhaps comment on the reasons you think the ‘success’ is important, or on how the ‘problem’ could be solved.
Photos of Sustainable Successes at Ohio State

Please write a few thoughts about each of your photos in the space provided below.

Success Photo #1

Success Photo #2

Success Photo #3

Photos of Sustainable Problems at Ohio State

Please write a few thoughts about each of your photos in the space provided below.

Problem Photo #1

Problem Photo #2

Problem Photo #3
**Events and Activities vs. Communication**

Think about the various activities, events, and services that your department or office has provided for students over the past few years. These could include educational events, social activities, guest speakers, wellness services- anything your department has offered. Be sure to include any sustainable initiatives!

Have you used different communication methods for different types of events, activities, or initiatives? Check the boxes in the matrix below to indicate which communication methods you’ve seen used for each activity or event. Check as many as necessary, and feel free to add activities or communication methods on the blank lines.

<table>
<thead>
<tr>
<th>Email</th>
<th>Poster</th>
<th>Dept. Newsletter</th>
<th>Brochure</th>
<th>In-Class promotion</th>
<th>Campus Newspaper</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of these activities or events were the most successful? Why do you think they were so successful?

Which of these activities or events were the least successful? What challenges did they present?
Thanks for doing your homework!

During the brainstorming session on October 3rd we will discuss these topics in greater detail, but having your thoughts down ahead of time will help the session flow smoothly.

Remember to bring in printed photos of sustainable successes or problems to use in the brainstorming session.

If you have any questions about the homework or the brainstorming session, please don’t hesitate to email me. Also, if you find that you are not able to attend the session, please let me know so that I can schedule someone else to come in your place.

Thanks again!
Annie Abell
abell.9@osu.edu
APPENDIX G

COMPLETE ‘HOMEWORK’ GIVEN TO STUDENTS BEFORE THE PARTICIPATORY WORKSHOP

It’s homework time!
First of all, thanks for participating in my research project! Your opinions and ideas will help me come up with a better solution to improve communication on campus about sustainable issues.

This homework packet will guide you through some of the topics we will cover in the brainstorming session on October 3rd. Please complete this packet and bring it with you to the brainstorming session. The questions here will ask you about your time at Ohio State and the various ways you’ve learned about activities and events on campus, as well as about sustainable/environmental issues on campus. You are also asked to take some photos and bring them to the brainstorming session, so please plan ahead for time to print the photos out.

Completing this packet ahead of time and having your thoughts down on paper can help you organize your thoughts beforehand, as well as help the brainstorming session go more smoothly. So please, like your mom always said, do your homework!!

If you have any questions about the homework or the brainstorming session please feel free to contact me.

Annie Abell  |  MFA Candidate  |  OSU Department of Design  |  abell.9@osu.edu
Sustainability: What’s working on campus? What isn’t?

Which sustainable initiatives are you aware of on campus? (For example: recycling programs, efforts to reduce energy consumption, etc.)

Which of these initiatives or programs do you think is the most successful? Why?

Which do you think is the least successful? Why?

What opportunities do you see in our campus community to improve sustainability?

How could these improvements be implemented?
Photos of Sustainable Successes and Problems

If possible, take photographs of three sustainable successes and three sustainable problems in our campus community. The photos could be of objects, buildings, places, services or even from past events or activities... or anything else you can think of. There are no limits!

Please print out the photos and bring them to the brainstorming session. They don’t have to be a particular size, but color photos are preferable.

On the following pages, write a few thoughts or comments about each of your photographs in the space provided in each photo frame. Perhaps comment on the reasons you think the ‘success’ is important, or on how the ‘problem’ could be solved.
Photos of Sustainable Successes at Ohio State

Please write a few thoughts about each of your photos in the space provided below.

Success Photo #1  Success Photo #2  Success Photo #3

Photos of Sustainable Problems at Ohio State

Please write a few thoughts about each of your photos in the space provided below.

Problem Photo #1  Problem Photo #2  Problem Photo #3
Think back to your freshman year at Ohio State...

What kinds things did you learn at orientation? Did you get information about activities on campus? Organizations? How to use Swipes & Dining Services? What services are available?

How was this information presented to you? (Brochures, Meetings, signing up for email lists)

Which information is most memorable to you now?

From what you learned at orientation, which activities, events, or services did you end up signing up for or using throughout your freshman year?

If applicable, what activities, services or events did you learn about later in college?

Are there any activities, services, or events that you wish you would have learned about freshman year but didn’t? If so, which ones?
**Events & Activities you learn about vs. How you learn about them**

Think about the various activities, events, and services on campus that you’ve heard about over your years at Ohio State. How do you learn about each one?

Check the boxes in the matrix below to indicate which communication methods you’ve seen used for each activity or event. Check as many as necessary, and feel free to add activities or communication methods on the blank lines.

<table>
<thead>
<tr>
<th></th>
<th>Email</th>
<th>Poster</th>
<th>Friends/Roommates</th>
<th>Brochure</th>
<th>E-Newsletter</th>
<th>In Class</th>
<th>Campus Newspaper</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sporting Events</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Clubs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorm Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Events</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSU Social Events</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thanks for doing your homework!

We will discuss these topics in more detail at the brainstorming session on October 3rd, but having your thoughts down ahead of time will help the session flow smoothly.

Remember to bring in printed photos of sustainable successes or problems to use in the brainstorming session.

If you have any questions about the homework or the brainstorming session, please don’t hesitate to email me. Also, if you find that you are not able to attend the session, please let me know so that I can schedule someone else to come in your place.

Thanks again!
Annie Abell
abell.9@osu.edu
BIBLIOGRAPHY


Green, Heather. "The Water Cooler is Now on the Web: With a nod to Facebook, Large Companies are Starting In-House Social Networks." *Business Week*, October 1, 2007: 78.


