

**Creating a Green Community:
Understanding Student Environmental Behaviors for
Increased Campus Participation at
Northwestern University**

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August 2008

Abstract

Today, the world is facing a crisis the likes of which has not been seen before. The onset of global warming in recent times has initiated the growth of environmental sustainability initiatives in organizations across the world. Higher education is the ideal place to initiate sustainable practices as these institutions are all generally based on the mission of providing education, research, and public service in and to society. Moreover, colleges and universities have a historically moral imperative to better society through both research and practice.

This study will assess the environmental climate and effectiveness of sustainability initiatives at Northwestern University, focusing on one of the major campus stakeholder groups – students. Through the use of surveys, interviews, and observations, this study serves to determine the environmental awareness and responsiveness of Northwestern students through their environmental behaviors as well as discover ways to increase and improve such environmental practices on campus.

Table of Contents

Research Question 4

Rationale4

Literature Review6

Data Collection 32

Data Results Summary 36

Data Interpretation 70

Conclusions 78

References 83

Appendices 91

 A: Student Survey Protocol 92

 B: Student Interview Protocol 108

 C: Interview Consent Form 109

Research Question

How can Northwestern University motivate its students to practice more environmentally responsible behaviors as members of the campus community?

Rationale for the Project

David Orr, Professor and Chair of the Department of Environmental Studies at Oberlin College, made the inevitable problem of climate change for Americans and the world very clear when he said, “we now face the first truly global crisis which concerns our survival as a species, the terms by which we might do so, and what it means to be human” (Cortese, 1999). The evidence for global warming and climate change has been growing at an exponential rate and the time for action has arrived, whether or not society is prepared.

Stories of environmental stewardship and sustainability initiatives are popping up on campuses across the United States and universities are becoming increasingly aware of the impending economic and social impacts of climate change. The Bruntland Report entitled *Our Common Future*, first published in 1987, popularized the definition of sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Bartlett & Chase, 2004, p.6). Sustainability requires a new way of looking at how we exist. It incorporates the domains of economic prosperity, environmental quality, and social justice – what is known as the “Triple Bottom Line” (Elkington, 1998, p.2).

Sustainability studies the intersection of these three domains and creates programs that serve to benefit all three.

The topic of sustainability is especially important for Northwestern University, considered one of the most elite institutions in the United States. As one of the top schools in the nation, creating an ethos of sustainability on campus and within the community is incredibly important for Northwestern. Sustainability movements have

taken root throughout higher education over the past decade and the top institutions are all vying for the title of “most sustainable university in the nation.” Developing an ethos of sustainability on campus is not only important for Northwestern in terms of its competition for faculty and applicants, but because it represents Northwestern’s commitment to an incredibly important and necessary environmental endeavor that will have significant impacts beyond the walls of the university itself.

Literature Review

What follows is a review of the current literature specifically addressing the following domains in order to more accurately inform the ultimate research question: 1) the current environmental sustainability movement in the United States; 2) the growing sustainability movement on American college and university campuses as a form of civic engagement; 3) the field of environmental psychology; 4) the cultural organization of the university and institutional change; and 5) the use of community-based social marketing.

The exploration of the first and second domains will provide the basis for understanding the culture in which Northwestern finds itself, both globally and more locally at the level of American higher education. The third domain will help to shed light on the behavioral attitudes of the Northwestern student body. The fourth domain reveals the specific culture in which the recommendations from the research will be implemented, acknowledging the uniquely complicated organization and culture of the institutions of higher learning. Finally, the concept of community-based social marketing is used as a tool for understanding the ways that participation in and behaviors regarding environmental practices can be most effectively developed in the community setting. When looked at together, it becomes apparent from the literature that the emerging sustainability movement at Northwestern University has the potential to benefit from the implementation of a more effective system of communication and outreach in order to successfully create a stronger sense of community involvement in sustainability.

The Movement for Environmental Sustainability

Before we can tackle the issue of sustainability in the university setting, we must understand the overarching cause of this movement. The environmental crisis in which

our earth currently finds itself is rapidly becoming more problematic for all the living inhabitants of our planet. The sustainability movement has been heralded as the solution to this global quandary.

Climate change, also known as “Global Warming,” refers to a “change in climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable periods of time,” as defined by the 1994 Framework Convention on Climate Change (Rappaport & Creighton, 2007, p.14). Even small changes of single degrees can have huge consequences for our existence on earth in the near future. Today, global warming has been deemed “unequivocal” by the Intergovernmental Panel on Climate Change (IPCC). Experts around the world are calling for a massive and immediate effort to reverse the effects of global warming before the consequences become inescapable. In fact, the United States is one of the worst contributors to the climate crisis, holding only five percent of the world’s population but producing over a quarter of total greenhouse gas emissions – more than any other country in the world (Rosenthal & Revkin, 2007).

The Kyoto Protocol was the first major international policy initiative stemming from the growing concern of global warming. In 1997, representatives from over 160 countries met in Kyoto, Japan, and committed to significantly reducing emissions targets from all industrialized countries. As part of the Kyoto Protocol, a challenge was laid out to the international university community to promote sustainability through not only environmental education, but through physical institutional operations (Wright, 2002). It is interesting to note that the United States, while part of the Framework Convention on

Climate Change, has chosen not to ratify the Kyoto Protocol, claiming that it will have a negative impact on the nation's economy (The White House, 2001). North America, however, is the "highest fossil-fuel, carbon dioxide-emitting region of the world with 1.65 billion tons of carbon in 2000, and the United States accounts for about 93 percent of the North American emissions" (Rappaport & Creighton, 2007, p.20). For this reason, it is especially important that, if not the government, then the citizens and educational institutions of the United States begin to take action against this looming catastrophe.

When talking about climate change, there are three major issues that must be communicated to the general population (Rappaport & Creighton, 2007). First, human activity is harming the earth's climate. The "greenhouse effect" describes the process of gases that trap heat from the sun and allows life to grow on earth. In the past 150 years since the Industrial Revolution, the concentration of greenhouse gases has grown exponentially and the temperatures of our planet are beginning to shift out of balance. Burning fossil fuels for energy and large-scale deforestation – activities entirely driven by humans – are the cause of this destructive warming (IPCC, 2001).

Secondly, the problem of climate change is one that cannot wait for a future generation to solve. Even if we stop all CO₂ admissions today, scientific models show that temperatures on earth would still rise for another thirty years before it begins to fall again (IPCC, 2001). Just because we take our foot off the gas pedal does not mean that the car will automatically stop. Just as a car will continue to move forward without the active application of the breaks, global temperatures will continue to rise unless there is an active decrease of carbon emissions.

Finally, people must understand that there are solutions to this seemingly hopeless problem. Students, faculty, administrators, parents, siblings and the community at large must be made aware of the simple, everyday solutions that can help to combat climate change. Furthermore, the Frameworks Institute, a strategic communications research group, found that “detailing the litany of problems caused by climate change (such as melting polar ice caps) does little to inform understanding or motivate change” (Rappaport & Creighton, 2007, p.16). But what can people do to actively fight global warming? The answer lies in the sustainability movement.

The Bruntland Report, entitled *Our Common Future*, published in 1987, popularized the definition of sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Bartlett & Chase, 2004, p.6). Sustainability requires a new way of looking at how we exist. It incorporates the three important domains of environmental quality, economic prosperity, and social justice – what is now commonly known as the “Triple Bottom Line” (Elkington, 1998, p.2). More specifically, according to Dale and Newman (2005),

“Sustainability is the reconciliation of three imperatives. These are the ecological imperative to live within global biophysical carrying capacity and to maintain biodiversity, the social imperative to ensure the development of democratic systems of governance that can effectively propagate and sustain the values that people wish to live by, and the economic imperative to ensure that basic needs are met worldwide” (p.352).

Sustainability studies the intersection of these three domains and creates programs that serve to benefit all three.

There are those who criticize the feasibility and “appropriateness” of using sustainability so influentially in the education realm. Jickling (2000) argues that sustainable development is too ambiguous to tackle the complexities of our future society thereby rendering it ineffective in its goals. But it is this very ambiguity that defines this new and increasingly multi-dimensional society – to draw strict lines and borders between domains defeats the purpose of creating a more collaborative and interdisciplinary way of learning. Even Jickling concedes that, “sustainability talk potentially brings together different groups in society searching for a common language to discuss environmental issues” (Wals & Jickling, 2002, p.222). Newport, Chesnes and Lindner (2003), however, are right to point out that although sustainability has been adopted as the mascot for a primarily environmental movement, the social and economic components are of equal importance. It can be conjectured that the success of the environmental sustainability movement inherently relies on the likewise enhancement of social equality and healthy economic development. For the purpose of this study, however, the environmental component of sustainability will be our primary focus. It is this focus on the environmental component that is most apparent on American college and university campuses today.

Approaches to Sustainability on College Campuses

Higher education is uniquely equipped to be a leader in the environmental stewardship movement. “Institutions bear a profound moral responsibility to increase awareness, knowledge, skills and values needed to create a just and sustainable future,”

says Anthony Cortese (1999), President of Second Nature, a nonprofit organization to promote sustainable action in higher education, co-director of American College & University Presidents Climate Commitment (ACUPCC), and co-founder of Association for the Advancement of Sustainability in Higher Education (AASHE) and Higher Education Association Sustainability Consortium (HEASC). In his statement, Cortese clearly illuminates how the mission of universities will uniquely prepare students to achieve future sustainability goals. As such, universities must actively work to define, shape, and realize these goals. The modern university must create strategies that not only reduce the environmental footprint of the institution itself, but aid in the formation of “environmentally sound and socially just behavior” in its students (Cortese, 2001).

The purpose of a university is illuminated in its overarching mission of providing education, research and public service in and to society. Moreover, colleges and universities have a historically moral imperative to better society through both research and practice. According to Clough, Chameau and Carmichael, “one of the distinguishing values of these [research university] institutions is their willingness to take on an issue of importance simply because it is the right thing to do” (2006, p.32). Furthermore, it would be misleading to have faculty teaching students about the need for certain environmental practices while the administration does something else. “Education is the essential component for achieving sustainability and higher education institutions owe it to society to promote high ethical values in their customers” (Nicolaidis, 2006, p.418).

Many researchers now advocate the implementation of an Environmental Management System (EMS). Simkins and Nolan (2004) explain that this involves “better regulation of responsibilities and better environmental performance documentation,

reduced risk of regulatory breaches, cost reduction, improved personnel motivation and training, and better environmental communication” (p.5). Simkins and Nolan go on to explain that with regard specifically to universities, EMS will ideally help to enhance social responsibility of all campus community members, encourage more environmental student education, training and research grants, and encourage inter-departmental collaboration. Implementing EMSs on university campuses will aid in creating a community that is environmentally literate. In this way, the university not only promotes itself as a role model for a future of sustainable living but also prepares its students to be future leaders of the environmental movement. Creating an overarching ethos of environmental sustainability and awareness will strengthen both the health and connectedness of the community.

In addition, universities have the unique academic freedom and autonomy to develop and experiment with new ideas of sustainability. The campus becomes a laboratory for researching new methods to improve ways of living. This has the added benefit of increasing student and staff involvement in the community. Educational psychologists contend that students retain 80 percent of what they do as opposed to only 10-20 percent of what they read or hear (Cortese, 1999). By creating and implementing collaborative projects on campus, the university can more effectively prepare its students to lead environmentally responsible lives post-graduation. This is especially important considering the increasing need for sustainability practices in today’s business world. In fact, according to a study of Fortune 500 CEOs, 90 percent reported that they believed sustainability was important to the future of their company, but only 30 percent said they had the “skills, information, and personnel to meet the challenge” (Elder, 2007, p.1). It is

clear that an education in environmental sustainability is no longer just required for researchers and environmental specialists. Preparing all students with a sound education in sustainable practices can be an asset in their personal and professional lives, whether they plan to enter the laboratory or the corporate boardroom.

Sustainability is not just about teaching students to be more ecologically conscious upon graduation, however. Sustainability is about the integration of these important social and environmental tenets into the overarching academic function of the institution. Sharp states that universities must “become skillful at the process of change itself” (2002, p.129) as will be illuminated in the following sections.

Clugston (1999) and Leal Filho (1999) developed the following list of practices that should be required of higher education institutions that claim to integrate concepts of sustainability:

- Written missions statements,
- Academic programs,
- Energy and purchasing practices,
- Outreach,
- Faculty hiring,
- Faculty development,
- Integration of sustainability in measurable objectives,
- Awareness of the role of the post-secondary educational institution in social and ecological systems,
- Use of the knowledge of sustainability as a criterion for promoting faculty and granting tenure,

- Support of campus life services which emphasize practices promoting sustainability,
- And the engagement in forming partnerships both locally and globally to enhance sustainability

(as cited in Davis, Edmister, Sullivan & West, 2003, p. 170).

It is clear that there is a great deal of difference between simply shifting the transmission of classroom knowledge and embarking on a wholesale transformation of institutional culture. How then do institutions of higher education go about making changes?

One way is through the practice of civic engagement. Civic engagement can be defined as: “working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes” (Ehrlich, 2000, p.vi). On university campus, there is an increased trend towards creating a culture of civic engagement for students. Civic engagement initiatives include: “grounding academic knowledge in real-world conditions, connecting knowledge to practice, bringing academics and practitioners into closer relationships, improving conditions in local communities, and building democracy and civil society” (Ostrander, 2004, p.74). The literature on civic engagement has grown immensely in recent decades and some researchers even say that the future of research universities will be jeopardized unless they adapt their educational focus to incorporate more real-world problems and reach out to the local and global communities outside the

ivory tower (Overton & Burkhardt, 1999). The institution of higher education must remain socially relevant.

In recent times, however, there is concern across the nation about an apparently decided lack of civic engagement on college campuses. This general social and political apathy “is more widespread among young people than was true in previous decades” (Dresner & Blatner, 2006, p.213). The National Association of State University and Land-Grant Colleges (NASULGC), along with the American Association of State Colleges and Universities (AASCU), developed the Kellogg Commission in 1996 as a call for universities and colleges to “return to their roots” and reconnect to their communities in collaborative ways. In the 1999 report on “The Engaged Institution,” the Kellogg Commission states, “In the end, the clear evidence is that, with the resources and superbly qualified professors and staff on our campuses, we can organize our institutions to serve both local and national needs in a more coherent and effective way. We can and we must do better” (NASULGC, p.3).

There is a now a much stronger impetus for universities to actively engage with their communities and the broader society in the form of the sustainable movement. Dresner and Blatner, in a study of civic engagement specifically through the lens of environmental issues, state:

“Citizens who have a sense of the common good may develop more informed opinions and might collaborate more effectively on overall environmental protection. A more participatory process would engage more citizens, build a more widespread sense of active democracy, and could possibly deflect some future conflicts. To help develop more

engaged citizens, we need to generate both increased environmental literacy in basic environmental science and a focus on the common good” (2006, p.218).

An increased awareness of all stakeholder groups within the community, an adoption of collaborative research and discussion, and the opening of multiple lines of communication in order to solve the real-world problems of global climate change are needed in order to create a fully engaged and successful campus ethos of sustainability.

Environmental Psychology

In order to create an ethos of sustainable behavior on campus however, one must first understand the psychological theories that motivate students to participate in such behaviors in the first place. Current studies suggest that, “a general environmentalist attitude is becoming more and more prevalent” (Kaiser et al., 1999, p.59). However, the relationship between this attitude of concern and the actual enactment of more environmentally responsible behaviors (ERB) is not necessarily correlated. In the last two decades, there has been more focus on research regarding motivational incentives for ERB.

The rational-choice theory is the most popular theory studied in the field of environmental psychology. Rational-choice theory states that humans inherently act in a rational way, looking at situations in terms of costs and benefits, or in the case of environmental behaviors, in terms of rewards versus punishments (Scott, 2000).

Rational-choice theory is reliant on the trait of self-interest of human beings. However, rational-choice theory does not allow for the influence of the moral aspect of ERB.

Kaiser contends that the moral norm-activation theory plays a much more important role in promoting ERB. “Ecological behavior,” he states, “is seen more and more as a pro-social or an altruistic behavior, . . . [putting it] at least partially into the moral domain” (1999, p.60). Schwartz’s (1977) norm-activation model focuses primarily on the issue of personal obligation.

“A person’s personal obligation to act in favor of others depends on at least two things: The ascription of personal responsibility and awareness of the consequences of a given behavior. Thus, the norm-activation model, at least implicitly, assumes that people tend to feel obligated for the welfare of others beyond the prudential interest in favor of one’s own wellbeing. A sense of personal obligation for the welfare of others implies that people feel a responsibility to act for the benefit of others, so the model promotes feelings of responsibility as a personal moral obligation” (Schwartz, 1977, as cited in Kaiser, 1999, p.61).

Kaiser acknowledges the importance of moral obligation, or “responsibility feelings,” as having a strong influence on ecological behavior, in addition to the factors of environmental values and environmental knowledge. In a study involving the predictive outcomes of “ecological behavior intentions,” or EBI, Kaiser found that “EBI could be predicted more accurately by including Responsibility Feelings into the sort of conceptual structure that unifies most extant environmental attitude approaches. Although Environmental Knowledge and Environmental Values were already significant preconditions of EBI, . . . an additional 5% of the variance could be explained by including participants’ Responsibility Feelings regarding the environment” (1999, p.66).

The importance of moral values on ERB is supported by moral development theories as well. Kohlberg's cognitive moral development theory states that morality is dependent upon cognitive ability and that the ability to utilize moral judgment requires understanding perspectives outside the self and is correlated with maturity (1984).

Thogersen expands upon Kohlberg's assertion, stating that, "Personal norms derive their motivational content from a person's belief (understanding) that pro-social behavior leads to valued and consequently self-relevant outcomes" (2006, p.249). Thogersen describes personal norms as being the "self-expectation of specific action in a particular situation, experienced as a feeling of moral obligation" (2006, p.248). Personal norms are differentiated from "social norms" in that social norms are based on group expectations that are adhered to because of external social pressures as opposed to internal individualized pressures. States Thogersen, "Empirical evidence indicates that ERB depends on the strength of personal norms for the behavior in question, while social pressure is less important" (p.248).

This idea that external social pressures are less directly influential on ERB than internal motivations is expanded by the self-determination theory (SDT) developed by Deci & Ryan (1985). As explained by Osbaldiston and Sheldon, "SDT posits that people are more likely to engage in a behavior if they perceive that the motivation to do it comes from within them rather than from an external, controlling agent" (p.349). SDT proposes that these intrinsic values that come from within are "inherently satisfying to pursue, as they are directly relevant to important psychological needs such as autonomy, competence, and relatedness" (Sheldon, 2004, p.210). Such examples of intrinsic values

include personal growth, social connection, and societal contribution. Extrinsic values are found to be far less satisfying.

Most ERB motivation research has focused on only two motivations: “providing material incentives and disincentives sufficient to make the behavior worth attending to and focusing on the altruistic reasons for engaging in the behavior” (De Young, 2000, p.509). Regarding the first point, research conducted by Geller (1992) determined that environmentally responsible behaviors could be motivated by the use of such incentives as material reward. However, other research has shown that although the use of incentives may be effective in the short-term, as soon as they are removed, behaviors tend to revert back to the pre-incentive state (Katzev & Johnson, 1987). There is no lasting or durable behavior change when external incentives are the primary source of motivation.

Regarding the second and more complicated issue of altruism Kaplan (2000) questions the overall effectiveness of using such a factor as a primary motivator. Altruism, as Kaplan describes, is a “feeling of acting on behalf of the welfare of others in cases where self-interest could not be involved. Thus, to the extent that altruistic action involves any costs or effort, it necessarily entails sacrifice, since there cannot be a compensating benefit to the self” (2000, p.494, 491). Kaplan takes issue with the use of altruism because, “the altruism-centered approach is seen as having several inadvertent consequences, including contributing to helplessness and stressing sacrifice rather than quality-of-life-enhancing solutions” (2000, p.491).

De Young supports this belief, stating that, “While frugality may be accepted as a necessary feature of the future it is usually portrayed as an onerous undertaking, one requiring personal sacrifice of the highest order. People, it is argued, are being asked to

give up a modern, high-technology existence for an austere, bleak but needed substitute” (1990-91, p.216). The idea that altruism inherently requires a significant sacrifice has the negative effect of communicating, “a powerful, if unintended, message, namely that ERB inherently leads to a reduction in the quality of life” (Kaplan, 2000, p.494). This negative view of altruism substantially mars the inherent human hope and desire for a better future and is detrimental to any motivation to practice personal ERB.

The remedy, suggests De Young, is that self-interest be used in concert with altruism to create a more effective motive, such as that of economic self-interest (2000, p.514). “We normally see self-interest and altruism as being at opposite poles,” explains Mansbridge. “Indeed, conceptually we know what we mean by altruism only by contrasting it with self-interest. In practice, however, altruism must coincide with self-interest sufficiently to prevent the extinction of either the altruistic motivation or the altruist” (1990, p.133). This apparent dichotomy between altruism and self-interest is not necessarily indicative of the actual thinking of many environmentalists. Kaplan explains the self-interested motives that are inherent in the reasoning of many environmentalists, saying, “they love nature and they treasure the benefits they experience from it. They fear the impact its destruction would have, for their own lives and the lives of their descendants, as well as for humanity as a whole” (2000, p.496).

From these findings, Kaplan asserts his theory of the Reasonable Person Model (RPM). RPM states that, “by recognizing human inclinations and the circumstances that are supportive of human motivations, it may be easier to get people to behave in environmentally responsible ways without calling on guilt or sacrifice” (Kaplan, 2000, pp.497-498). These human inclinations include the desire to understand what is

happening, the desire to learn and discover, and the desire to participate and play a role in the movements going on around them. By creating ways to make people feel more in control and knowledgeable, and less helpless about the environmental situation, one will likely see an increase in ERB.

University Culture and Institutional Change

One cannot, however, analyze the behavioral traits of students and how to enact such motivators without understand the environment in which these behaviors occur. While the university as microcosm for experimentation has the potential to be the perfect breeding ground for a new generation of sustainability-educated citizens, higher education institutions tend to be “structurally conservative, favoring incremental over revolutionary change” (Clough et al., 2006, p.37). Understanding the organization and culture of higher education institutions, and their inherent aversion to change, is of the utmost importance with regards to the outcomes of this study.

To understand the survival of ERB within the structure of the university, we must first understand the university in the context of the canon of western knowledge. Bowers (1997) states in his book, *The Culture of Denial*, that there is a seeming “double-bind” in the university. The ecologically centered cultures favored by sustainability are seen as “primitive” and are not considered to be functioning under “high-status knowledge” (Bowers, 1997, p.6-7). This is because the university in Western culture sees the individual as the “basic social unit” with “pursuit of self-interest and the sense of being separate from nature” being the most important focus of an academic education for the modern autonomous student. Western knowledge is also set in an anthropocentric worldview where societal values are created from a strictly humanistic perspective.

Likewise, technological progress is seen as inherently good and traditional cultures and practices are seen as inhibiting that progress.

“The globalization of commoditized knowledge and relationships (with computers being the latest expression of this market place mentality) is justified in evolutionary terms, with the elite elements of Western culture (technology, science, consumer lifestyle) being represented as the most full evolved” (Bowers, 1997, 8).

This modern consumer society with its strong focus on light-speed technological advancements is difficult to reconcile with the inevitable need for a more ecologically conscious existence. This paradox takes place in the arena of the campus institutional culture. Kuh and Whitt (1988) define institutional culture in higher education as:

“The collective, mutually supporting patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institution of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off campus (as cited in Toma, Dubrow & Hartley, 2005, p.39).

It provides the context in which different members of the campus community come together and form a common identity. Toma contends that a strong institutional culture “coalesces round the collegiate ideal” and this helps to bring together the multiple stakeholders under a brand and also attract outside resources to help continue to sustain and develop the campus. Why then is sustainability such a hard ideal to adopt in many institutions of higher education today?

Change is influenced by variety of forces, including parents, trustees, students, faculty, alumni, businesses, philanthropists, and the ever-present pressure of public opinion (Clough et al., 2006). Changing the campus culture to adopt an inherently different means of existence is difficult, although not impossible. This difficulty is in part, a product of the mindset that exists in academia that Sharp refers to as the “myth of rationality.” According to Sharp, the “myth of rationality...propagates the assumption that universities have attained the highest possible levels of functionality and that whatever is lacking must be accepted as an inevitable limitation of the system” (2002, p.136). In other words, higher education cannot be wrong, and therefore has no reason to change. This assertion claims that higher education keeps its existence by holding its place in society as the premier source for education and research, and must therefore likewise portray a most consistent rationality (Sharp, 2002, p.135).

This irrational “rationality” is perpetuated by the diverse and often disconnected stakeholder groups that make up the university community. Subcultures are an inherent and vital part of the organization of universities, but this also makes communication and decision-making much more difficult than in a typical business setting. In some larger universities the only features keeping the institution brand together are the common name, common governing board, and a loosely related purpose (Toma et al., 2005). So how is the message of sustainability to be spread through the campus communities’ many stakeholders? First, an understanding of these various subcultures must be obtained to see what role each plays within the institution as a whole.

Students

Students are usually the driving force behind grass roots environmental movements on campus. As a stakeholder group, however, students are lacking several key factors needed to help create change in the university. Students are strapped with classes, exams, papers, and a multitude of extra-curricular responsibilities. They are also at the bottom of the proverbial totem pole in terms of getting access to funding. Most importantly, in many cases and on many campuses, students have no real way of entering into the formal decision-making structure of the university and have no real knowledge of how policies and decisions on campus are truly made (Sharp, 2002). What students do have is the ability to make “noise” on campus. As sharp describes, “the tendency is for students to engage in short term activities that aim to raise the profile of certain issues and sometimes to embarrass the university into responding to popular demand” (2002, p.137). Many student groups’ key priority with respect to the environment is bringing attention and awareness to the issues. But there is still little actual change within the university structure that students can affect without the help of participants from one or more of the other stakeholder groups. The goal of creating more long-term systematic change currently lies outside the reach of the typical student groups on campus.

Faculty

Faculty are an incredibly important, but most often absent, part of the sustainability movement on university campuses. To begin, the idea of “greening the curriculum” by incorporating sustainability as a way of increasing awareness in a variety of university courses has met with backlash from the academic community. Although there are now environmental studies departments on most campuses, the idea of integrating sustainability into other areas of academic study, such as history, economics,

philosophy and sociology, is still seen by many as unnecessary (Bowers, 1997). This is indicative of the avoidance by faculty of interdisciplinary studies in general.

Additionally, studying the environmental movement, according to Bowers, is still seen by “more orthodox colleagues as being engaged in trendy, and thus not scholarly pursuits. These marginalized faculty are also penalized in the academic reward system when they volunteer their time to help the usually under-funded environmental studies program survive” (Bowers, 1997, p.14).

The issue of penalization is indicative of the university culture that continues to promote the tenets that underpin the saying, “publish or perish.” The traditional academic reward system is still based primarily on research and scholarship. O’Meara (2005) describes the new movement towards multiple forms of “scholarly work.” These “new” forms include teaching, campus engagement, integration and application. O’Meara proposes that if these multiple forms are encouraged on campuses, benefits will include “increased faculty involvement in multiple forms of scholarship, improved faculty satisfaction and retention, improved reward systems, and increased institutional effectiveness” (2005, pp.479-480). These projected benefits are necessary factors for obtaining and sustaining faculty involvement in the environmental sustainability movement.

However, university culture has traditionally kept faculty out of any sort of campus engagement in general. It is the role of the administration to take care of the campus so that the faculty can focus on the “core mission of teaching and research” (Sharp, 2002, p.139). Faculty members need to be allowed to see the campus as a place where teaching and research can and do take place in tandem. Sharp contends that

“working with faculty to remove perceived mission conflicts between teaching, research and campus operations will provide the greatest leverage in freeing universities to become learning organizations of the highest caliber” (2002, p.140).

Administration

Administration and staff, in opposition to the traditional role of faculty, are considered less directly related to the core mission of the university and have the primary goal of taking care of the service and operational needs of the institution as a whole. While they may not officially have as much political or structural power because of the “consistency, relationship building and access to organization information, [administrators] are able to significantly influence decisions, through the establishment of informal channels of influence and the provision of information” (Sharp, 2002, p.140). The literature regarding the role of administrative staff in relation to the whole institutional community is not prolific, but it is clear that there is a strong tension between administrators and the students and faculty that they serve.

Stakeholder Interactions

The literature regarding the actual interactions between these three important stakeholder groups in making decisions within the larger realm of university governance is decidedly lacking. Technically the administration holds the power to enact change on campus, but faculty and students can still have a strong influence on such decisions, especially in large numbers. Kezar’s 2004 study of the issues of modern institutional governance shed some light on the relatively untouched subject. Kezar acknowledges that traditional governance structures and processes “do not allow for timely review or for effective, expertise-based decision making; further more they are not responsive to

external concerns” (2004, p.36). Kezar suggests that instead of restructuring and creating more formal processes and rules, universities should focus on creating better leadership, more access to training in governance, and building the trust and relationships that will make institutional decision-making far more efficient. The more recent literature on institutional governance and communication, although limited, seems to agree with Kezar’s conjecture – relationships are more important than structures. Additionally, studies have shown that “interpersonal dynamics” within the institutional culture as well as “group motivation and interest” are key factors in dealing with significant issues on campus (Kezar, 2004).

One study, conducted by Barbara Lee (1991) however, found that informal interactions outside of the traditional structures and roles that defined the university were most important in creating an effective and successful working relationship. Tierney and Minor (2004) corroborate Lee’s finding, concluding that effective governance “is defined not so much by the presence of an efficient structure or by the number of votes the faculty concludes in a year. Effective governance pertains more to the understanding and management of meaning such that the core values of the faculty and of the institution are not merely preserved, but advanced” (p.92). Without this form of effective communication, engaging the larger campus community in acts of civic engagement such as environmental sustainability will be nearly impossible.

Community-Based Social Marketing

When faced with the problem of a disjointed governance structure lacking in a culture of shared communication between various stakeholders, it is indeed difficult to get large-scale initiatives such as campus sustainability campaigns off the ground. This is

compounded by the fact that concern for the possibility, or in fact, probability that global warming will have disastrous effects on the future of our planet is not always consistent with present behaviors of individuals. One solution to this conundrum may be the use of community-based social marketing, as coined by Doug McKenzie-Mohr (1999).

Community-based social marketing contends that there are three basic explanations for why people do not engage in certain activities: (1) people are not aware of the activity or its benefits; (2) even if people are aware of the activity they “may perceive that there are significant difficulties or barriers associated with engaging in it”; and (3) “while people may feel that there are no significant barriers associated with an activity, they may perceive that they benefit most from continuing to engage in their present behavior” (McKenzie-Mohr & Smith, 1999, p.2). Benefits and barriers are the main concerns when attempting to develop a successful social marketing campaign.

Likewise, in the realm of environmental sustainability, adopting one behavior will often mean rejecting another behavior. Because of this, successful campaigns must find ways to create benefits to the new behavior that outweigh those of the old. Most importantly, when looking at the university community, one must acknowledge the fact that the benefits of and barriers to various behaviors will differ vastly amongst the different stakeholder groups on campus. For this reason, McKenzie-Mohr and Smith (1999) explain that, “we need to understand the perceived barriers and benefits which underlie the behavioral choices that individuals make. Further...we need to be able to deliver programs that remove barriers and enhance benefits for large segments of the population” (p.3).

There are many studies showing that information and education about environmental issues alone has no tangible, positive impact on sustainable behaviors. For example, in a study conducted by Jordan, Hungerford, & Tomera, high school students were given a six-day workshop that focused on increasing awareness of environmental issues. Two months later the researchers found that the students who had participated in the intensive workshop were no more likely to engage in pro-environmental behaviors than before the workshop (1986). Likewise, in a study by Bickman (1972), over 500 people were interviewed about their personal responsibility to pick up trash and litter. Ninety-four percent reported that individuals were indeed responsible for picking up trash, but upon finishing the interview, only two percent of the subjects picked up the litter that had been planted outside by the researcher.

Many researchers have also suggested that appealing to the financial advantages of environmentally sustainable behaviors will influence people to become more involved in such activities. However, when economic appeals alone are used the initiatives tend to fail, just as they did with solely education-based initiatives (McKenzie-Mohr & Smith, 1999). One must always remember to acknowledge the multi-faceted dimensions of human behavior, not excluding cultural practices, social interactions, personal feelings, group norms, institutional influences and perceived inconveniences. Traditional marketing campaigns alone will not succeed in creating a campus community willing to actively change its behaviors for the betterment of the common good.

Community-based social marketing involves “identifying barriers and benefits to a sustainable behavior, designing a strategy that utilizes behavior change tools, piloting the strategy with a small segment of a community, and finally, evaluating the impact of

the program once it has been implemented across a community” (McKenzie-Mohr & Smith, 1999, p.15). This study will attempt to tackle the first two steps of creating a successful CBSM initiative by identifying the perceived barriers and benefits of the Northwestern campus community and suggesting strategies that will help to modify environmental behaviors in the various stakeholder groups.

Conclusion

Environmental sustainability is a term that has gained evermore credence as research on the topic continues to grow. Universities present the perfect platform for initiating and growing the continued behavior of such environmental practices as recycling, electricity and water conservation, and other sustainable endeavors. But success in such initiatives first requires that a student to be aware and engaged in the campus community.

So how can one create an ethos of engagement on campus tailored specifically to environmental stewardship? Much of the literature contends that in order for the sustainable movement to take hold and truly be successful, universities such as Northwestern must go beyond the students who already have an interest in environmentalism, to reach the student body as a whole. For environmental sustainability to become a cornerstone of the campus consciousness, a community-based social marketing scheme must be put in place. This study intends to investigate the Northwestern student mindset regarding environmentalism on campus and discover ways in which the university can better serve the ecological needs of the university.

Data Collection

The data collected for this project was both qualitative and quantitative. Three types of sources were utilized: student surveys, follow-up student interviews, and campus observations. All students participating in this study are current members of the student body, both undergraduate and graduate, and members of the Northwestern University campus community.

The project is a case study at Northwestern University – a private, Midwestern, Research I university. Northwestern was founded in Evanston, Illinois in 1851. The university is made up of approximately 8,000 undergraduate students and 7,000 graduate students. The university is comprised of two campuses – the main Evanston campus is approximately 240 acres, running along the shore of Lake Michigan, and the Chicago campus is approximately 25 acres in the Gold Coast area of downtown Chicago. Consistently ranked as one of the top twenty universities in the nation, Northwestern has strong programs at the undergraduate, graduate and professional levels (*US News & World Report, 2008*).

Data Sources

Survey of Student Awareness and Campus Involvement in Environmental Sustainability

Survey participants were recruited for the survey via email, through public website listings of campus student organizations. All undergraduate and graduate students were eligible to participate (n=127). Each survey was conducted online through SurveyGizmo, an internet-based survey tool. Surveys were disseminated through the method of “convenience sampling” whereby email invitations to take the survey were sent to leaders of a large number of randomly selected number of dormitories, residential

colleges, and student organizations. These student leaders then had the choice to send the survey invitation to their specific communities.

Survey questions were designed with the help of Northwestern University recycling director, Julie Cahillane, and Philip Kreycik of the Harvard Green Campus Initiative. The survey itself consisted of four major sections. First, students were asked general questions regarding their awareness and interest in various social and political issues, both on campus and in the larger national community. These issues were chosen based on a review of current events.

Second, students were asked to reflect on how change happens on campus. The questions asked students to reflect on a personal experience where they might have attempted to enact change on campus, whether it was trying to get a new course offered or initiating a new student project. The questions also asked students to rate Northwestern's perceived willingness to allow for change and new initiatives.

Thirdly, the students were asked to discuss their general environmental awareness and how important they found the issue of environmental sustainability to be. Students were asked to rate the importance of various aspects of environmentalism from "not at all important" to "very important".

Finally, students were asked to go through a short series of questions on each of the following specific environmental topics: waste and recycling, computing and printing, electricity consumption, water consumption, and miscellaneous topics at the end. The types of survey questions included ratings of different practices from "not at all" to "all the time," multiple choice questions, and questions where any number of reasons or answers could be chosen ("check all that apply").

Student Interviews

Six Northwestern students were interviewed in order to gain more in-depth opinions from subjects who lived and/or studied on the Northwestern campus. The group was a diverse mixture of age, sex, and school. The participants ranged in age from 18 to 23 years and division by gender was split evenly – three men and three women. The interviews took place during the spring quarter of 2008. Students were contacted to participate in the interview through self-selection on the initial survey. On the survey, students were asked to provide their email address if they wished to be contacted for follow-up questions.

Each interview was held in the spring of 2008 in an academic building on campus and lasted for approximately 20 to 30 minutes. The interviews were conducted in an open manner, but utilized a semi-structured questioning protocol in order to maintain continuity between subjects. The questions first asked students about their personal participation in environmental behaviors and then asked students to reflect on what the university was doing with respect to environmental practices.

Student Behavioral Observations

Students were observed on Northwestern's Evanston campus in two different locations. Locations and behaviors were chosen based on preliminary data collected from the initial survey. First, students were observed in the main dining hall on campus at the Norris Student Center Food Court. Then, students were observed in the core reserve wing of the central Evanston campus library. The observer watched for behaviors regarding the practice of recycling and waste disposal including whether recyclable

materials were properly sorted. Data collected from these observations was used to either corroborate or refute the attitudes of the students as portrayed in the initial surveys.

Consents Secured

All survey and interview participants signed a consent form that described their rights, as well as confidentiality, risks and benefits of the study. The online survey, administered by SurveyGizmo, provided an electronic consent page that did not allow participants to move on from that page to complete the survey without first accepting. The interview participants were all required to sign paper consent forms provided by the interviewer prior to starting the interview. The researcher also signed the consent form. A copy of the consent form is provided in Appendix C.

Ethics Considered

Risks were minimal to all participants and were clearly communicated to each participant. Participants were allowed to remove themselves from participation at any time during the study. The survey participants' identities were unknown to the researcher. Although the identities of the interviewees were made known to the interviewer, all participant names were changed for the purpose of recording findings in the final study report. The health and wellbeing of the participants was considered throughout the course of the study. All research was reported fully and honestly and credit was given where appropriate

Data Results Summary

The combined analysis of the student surveys, interviews and behavioral observations revealed a substantial amount of information regarding the degree of student participation in environmental sustainability practices on the Northwestern University campuses. This section of the report provides a summary of the results collected and organized according to data source. Emergent themes will be introduced in this section and will be further analyzed and interpreted in the following section.

Northwestern Background

Before analyzing the collected data, it is important to understand what has already been done on the Northwestern campus in terms of sustainable initiatives. The information provided in this section was gathered through the research of a number of sources including the Daily Northwestern newspaper, the Northwestern Sustainability website, the Northwestern Alumni Magazine, and interviews with Northwestern's recycling and refuse manager, Julie Cahillane, and Director of Operations, Gary Wojtowicz.

Environmental sustainability has become a hot topic on campuses of higher education around the country and Northwestern is not immune to the trend., Cahillane has largely headed up this initiative, publishing *Sustainable You! A Guide to Living Green @ NU* and organizing the various recycling projects on campus. According to Northwestern's Facilities Management website on environmental sustainability (www.northwestern.edu/fm/environmental_sustainability.htm), Northwestern has committed to taking on several large-scale projects in the coming years. For example,

Northwestern has pledged to follow LEED (Leadership in Energy and Environmental Design) certification standards for all future construction and renovations.

Northwestern has also purchased Renewable Energy Certificates to cover twenty percent of the university's electricity consumption. The Chicago campus currently reduces its costs and pollution by using a cogeneration plant that produces both thermal and electrical energy and there is discussion of doing this in Evanston as well. The university has also made commitments to starting to replace current equipment with low-flow toilets, double-insulated glass, compact fluorescent light bulbs (CFLs) and motion-sensor light switches. Additionally, the university-run escort service, SafeRide, has now been outfitted with Toyota Prius hybrids and facilities management vehicles are starting to be replaced by dual-fuel E-85 vehicles (Hargadon, 2007, p.28).

There are likewise, many student groups on campus trying to make a difference in the environmental movement including SEED (Students for Ecological and Environmental Development), ECO (Environmental Community Outreach), ESW (Engineers for a Sustainable World) and KGI (Kellogg Greening Initiative). SEED is the main coordinator of Green Cup, an annual competition now in its third year at Northwestern. The competition is between each of the dormitories and residential colleges to conserve per-capita water and energy use over the course of six weeks in the winter. Winners are rewarded with prizes in a hope to increase the overall awareness of impact of personal actions on the environment and society (Truong, 2008). All of these student organizations continue to push for increased action by the university and its members on campus.

Responding to the constant call for more sustainable action, Northwestern recently created the Sustainability Working Action Group (SWAG) on campus. The committee was formed to brainstorm and coordinate environmental efforts on campus. This environmental task force of Northwestern students, staff and administrators has begun meeting to discuss future initiatives. Eugene Sunshine, senior vice president for business and finance, said in a winter 2007 alumni magazine article, that “sustainability makes sense for us from a business point of view...There is no down side to any of this” (Hargadon, 2007, p.28).

The most recent “green” initiative on campus came in the announcement of a new residential college. In May of 2008, the Group Residence for Environmental Engagement at Northwestern (GREEN) was announced as an eco-friendly experiment in sustainable living that will start in the fall of 2008. Twenty students will live in a converted residential college on the North side of campus. The GREEN house will be a trial initiative and must be presented to the housing committee for renewal for the 2009-2010 school year. This presentation will involve providing “concrete empirical data to show what impact the house had,” according to Mark D’Arienzo, the associate director for university housing. However, there is still a general concern on campus that Northwestern is lagging far behind its peer competitors like Stanford and Tufts in terms of environmental housing initiatives (Peck, 2008).

This concern is not unfounded when Northwestern is compared to many of its peer institutions. When it comes to creating an overarching ethos of sustainability on campus Northwestern appears to fall behind. As of the spring of 2008, Northwestern

University is still one of the only COFHE¹ universities to not be a member of the Association for the Advancement of Sustainability in Higher Education (AASHE). In the latest College Sustainability Report Card, compiled and released by the Sustainable Endowments Institute, Northwestern received an overall grade of C+. According to the report card, Northwestern has made significant gains by investing in renewable energy funds and has committed to making all new buildings in accordance with Leadership in Energy and Environmental Design (LEED) Silver-certification. But in the areas of administration, climate change and energy, food and recycling, transportation, endowment transparency and shareholder engagement, Northwestern is still in need of major improvement (Sustainable Endowments Institute, 2008).

Student Surveys

Participants. One hundred twenty-seven (127) surveys were completed by Northwestern undergraduate and graduate students from both the Evanston and Chicago campuses, with 76 women and 51 men participating. A fairly even number freshmen and sophomores participated (29.9 and 22.1 percent, respectively), with upperclassmen participating at a slightly lower rate (juniors at 11.8 percent and seniors at 5.5 percent). Graduate students as a whole participated in similar numbers to the freshmen and sophomore respondents (with a rate of 30.7 percent). Academically, the largest group within the sample (34.7%) reported their primary major to be within the Weinberg College of Arts & Sciences, followed by those identifying with the McCormick School of Engineering (18.3%). Seventy-eight students identified themselves as living on-campus

¹ COFHE (Consortium on Financing Higher Education) is an institutionally supported organization of 31 private institutions of higher education, including the following universities: Brown, Columbia, Cornell, Duke, Georgetown, Harvard, Johns Hopkins, MIT, Northwestern, Princeton, Rice, Stanford, University of Chicago, University of Pennsylvania, University of Rochester, Washington Univ. in St. Louis, Wesleyan, and Yale (www.cofhe.org).

and forty-nine identified as living off-campus. A summary of respondent characteristics can be found in Table 1.

The survey was distributed to participants by means of convenience sampling whereby email invitations to the survey were sent to the leaders of randomly selected student groups, dormitories, residential colleges, fraternities and sororities. Leaders were asked to distribute the survey to their communities in a “snowball sampling” manner. Due to this type of sampling, an accurate response rate could not be calculated.

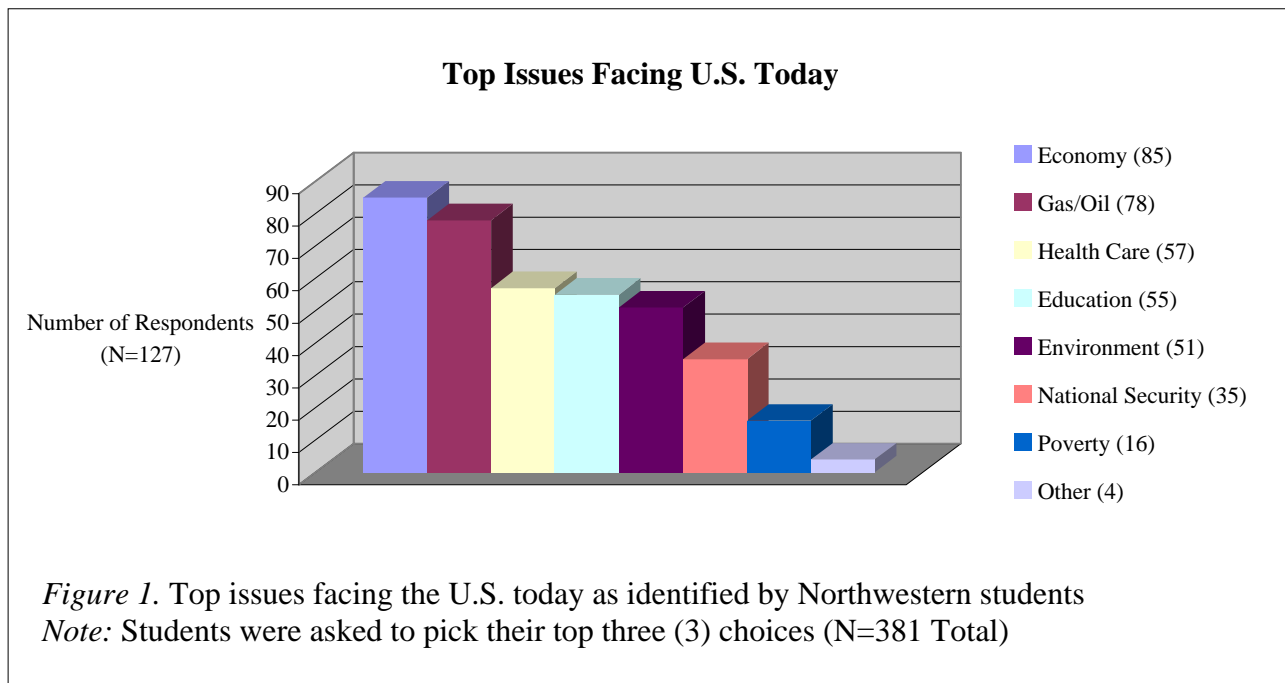
Table 1

Descriptive Statistics of Student Survey Sample

		Frequency (Percentage)
Gender	Female	N= 76 (59.8%)
	Male	N= 51 (40.2%)
Class Standing	Freshman (2011)	N= 38 (29.9%)
	Sophomore (2010)	N= 28 (22.1%)
	Junior (2009)	N= 15 (11.8%)
	Senior (2008)	N= 7 (5.5%)
	Graduate Student	N= 39 (30.7%)
Academic School	Weinberg College of Arts & Sciences (WCAS)	N= 49 (37.4%)
	McCormick School of Engineering (MEAS)	N= 24 (18.3%)
	Feinberg School of Medicine (Feinberg)	N= 19 (14.5%)
	School of Communication (SCHC)	N= 13 (9.9%)
	School of Education & Social Policy (SESP)	N= 8 (6.1%)
	The Graduate School (TGS)	N= 8 (6.1%)
	Medill School of Journalism (Medill)	N= 5 (3.8%)
	Bienen School of Music (SOM)	N= 3 (2.4%)
Living Status	Kellogg School of Management (Kellogg)	N= 0 (0%)
	School of Law (NUSL)	N= 2 (1.5%)
	On-Campus	N= 78 (61.4%)
	Off-Campus	N= 49 (38.6%)

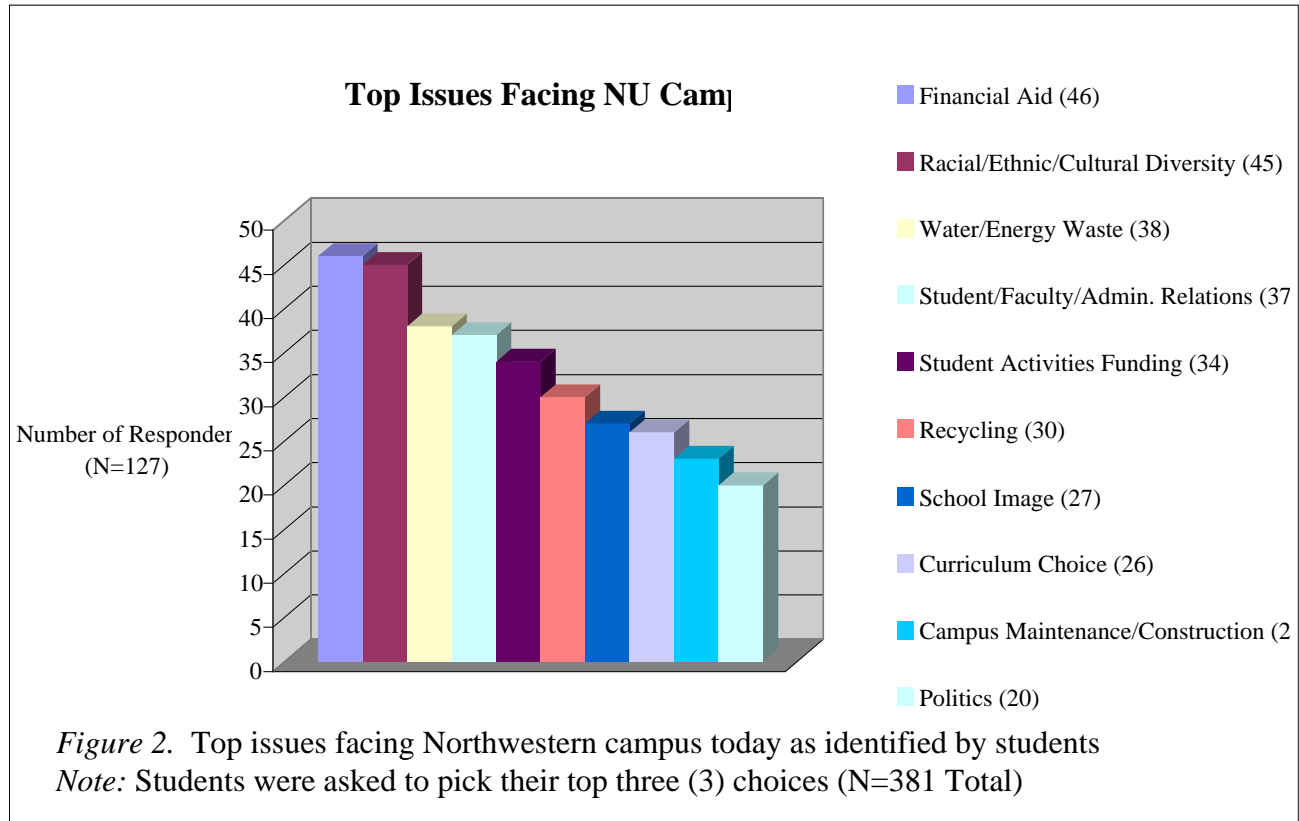
General Student Concerns. The first section of the survey asked students about their general concerns on both a national and campus level. These questions were asked before the students were introduced to the focus of the research topic – that of

environmentally sustainable behavior. These topics were chosen to gauge where environmental issues stood in the consciousness of Northwestern college students. When asked what *three* issues were most pressing on our country today, the environment ranked fifth. The Economy, with 85 students, or 66.9 percent of respondents, and Gas/Oil, with 78 students, or 61.4 percent of the respondents, were the issues that proved to be the most overwhelmingly pressing concerns for the student respondents. Health Care (44.9%) and Education (43.3%) also came in above the Environment with 51 respondents, or 40.2 percent. (See Figure 1)



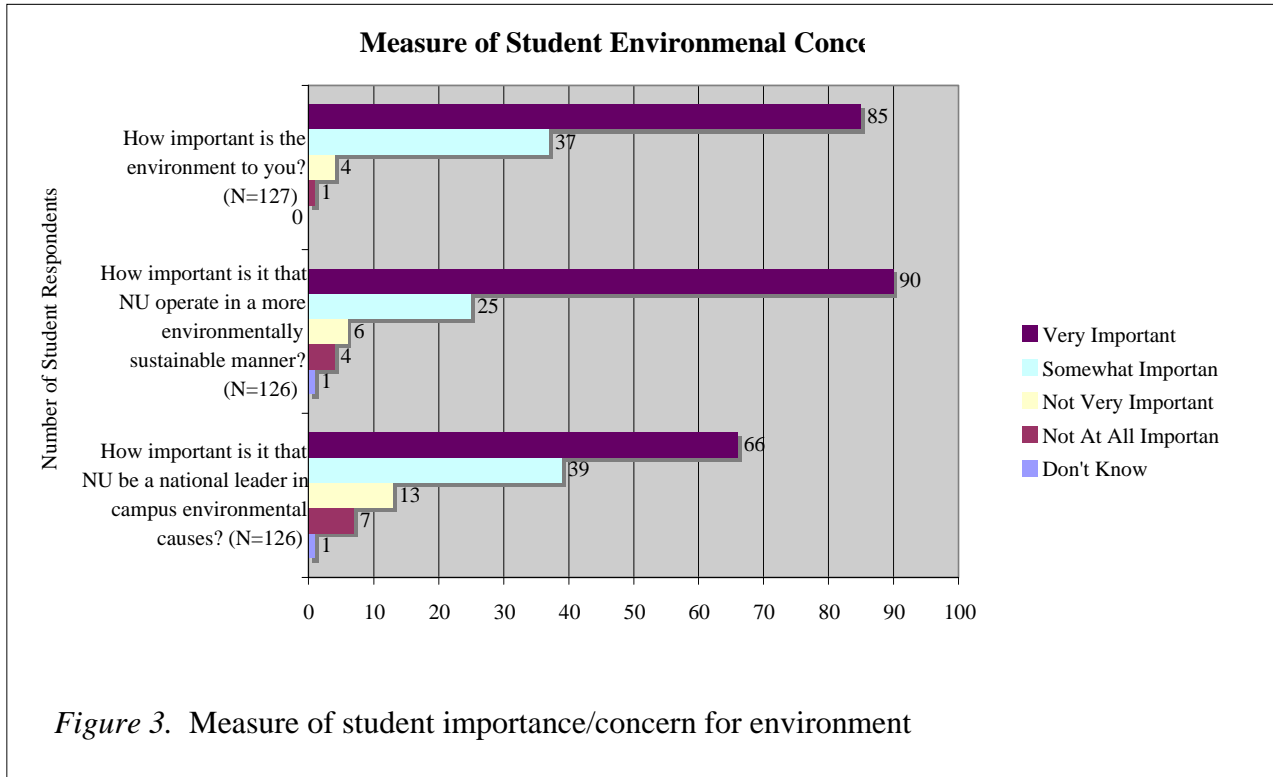
When students were asked to identify the *three* most important issues on the Northwestern campus, the answers were more varied and spread out over a diverse span of issues. Of the top ten issues, Water/Energy Waste came in third with 29.9 percent of respondents agreeing on its importance and Recycling was sixth with 23.6 percent of respondents agreeing. Financial Aid (36.2%) and Racial/Ethnic/Cultural Diversity (35.4%)

received the most responses. However, within the top ten issues there is not nearly as much variance as was found in when determining what issues were most important on a national level. (See Figure 2)

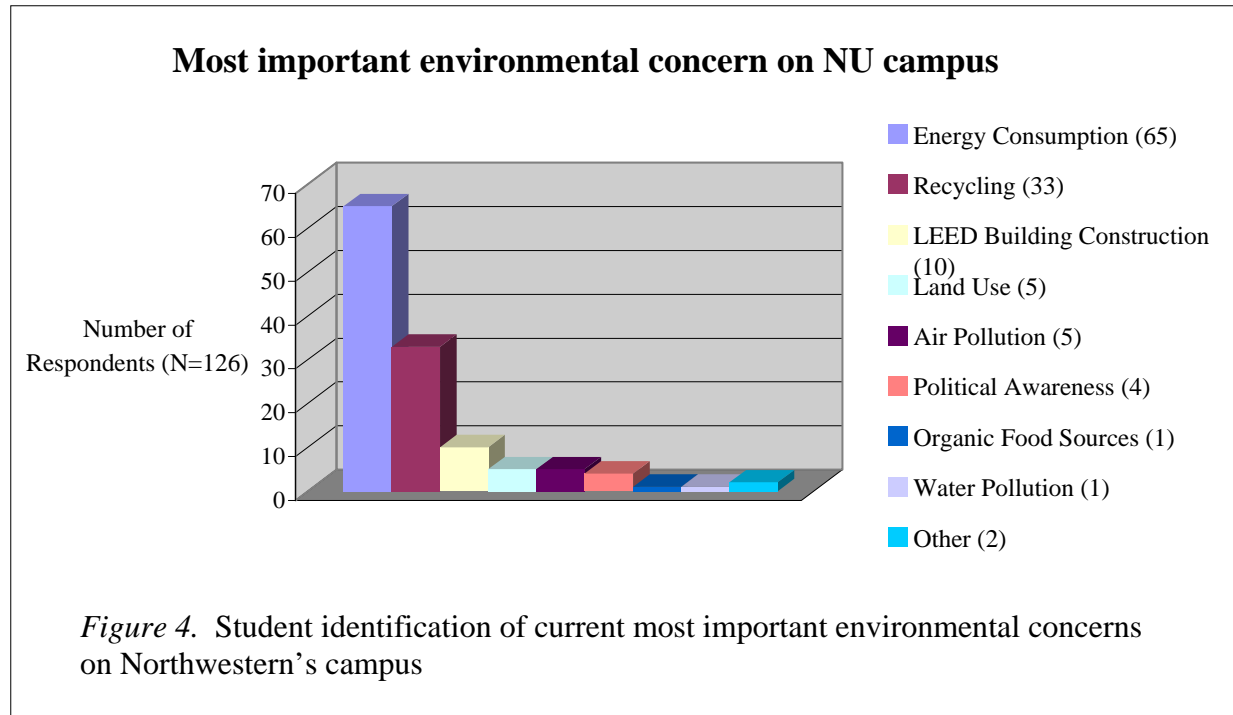


Environmental Awareness. Three specific questions asked students to rate how important they found the environment and Northwestern’s environmental sustainability to be. The data clearly shows that there is an overwhelming importance placed on the environment and Northwestern’s role among a majority of the students surveyed. (See Figure 3) One hundred twenty-two (122) students, or 96 percent of those surveyed, believe that the environment was either somewhat or very important to them. One hundred fifteen (115) students, or 91.2 percent, believe that it was somewhat or very important for Northwestern to operate in a more environmentally sustainable manner. And 105 students or 83.5 percent of

respondents said that it was somewhat or very important that Northwestern be a national leader in the campus environmental movement. (See Figure 3)

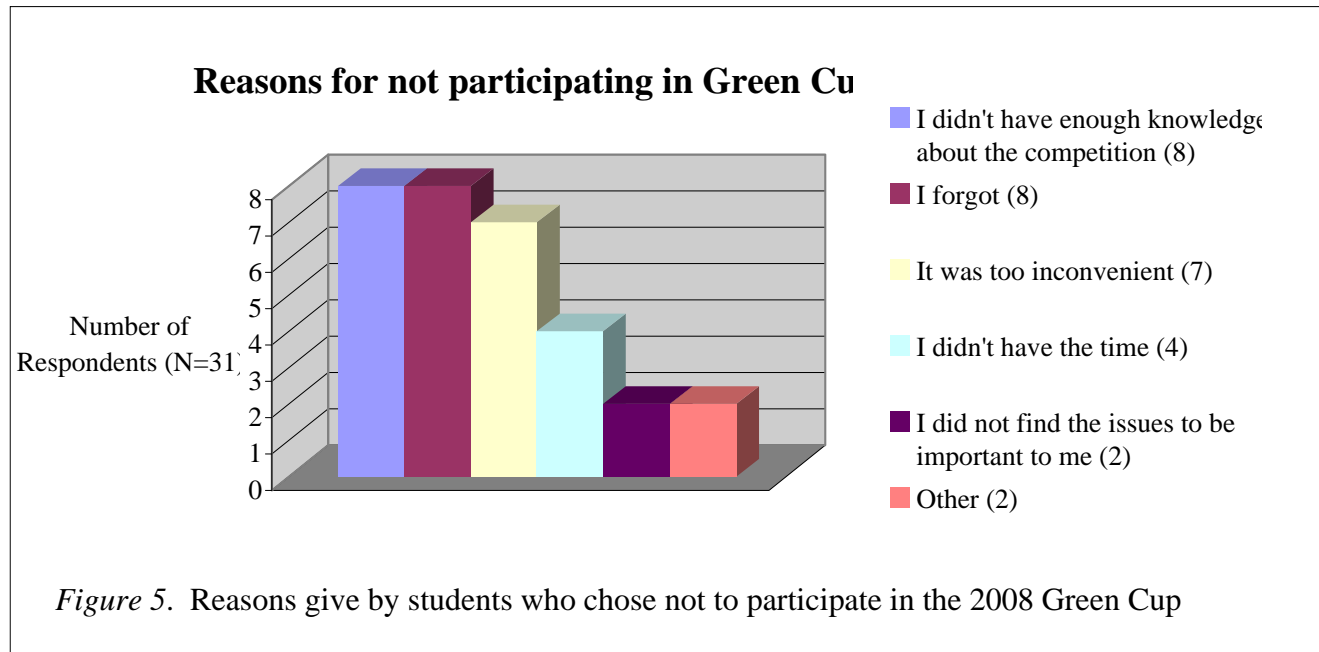


Students were also asked to identify the most important environmental concern currently facing Northwestern’s campus community. Energy consumption revealed to be the overwhelming concern of a majority of students with 65 respondents or 51.6 percent. Recycling was identified as the second most important issue on campus with 33 respondents or 26.2 percent. A full breakdown of the identification of environmental priorities on campus can be found in Figure 4.



Energy Consumption. Energy consumption was identified as the number one concern of the surveyed students on Northwestern campus. Data revealed that a large part of the energy consumption reduction initiatives at Northwestern stemmed from the annual Green Cup competition that rewards the undergraduate dorm or residential college with the most energy conservation over a period of six weeks in winter. Students who identified themselves as undergraduates living on-campus were asked first if they had heard of the Green Cup competition. Sixty-eight (68) of the 76 respondents, or 89.5 percent, said they had heard of the competition. However, when asked if they had participated in the Green Cup competition this year, only 44 respondents, or 58.7 percent, said answered in the affirmative. When asked why those 31 students who did not participate chose not to do so, there was a fairly even distribution between the following answers: "I didn't have enough information about the competition" (25.8%), "I forgot"

(25.8%), “It was too inconvenient” (22.6%), and “I didn’t have the time” (12.8%). A full breakdown of the responses can be found in Figure 5.

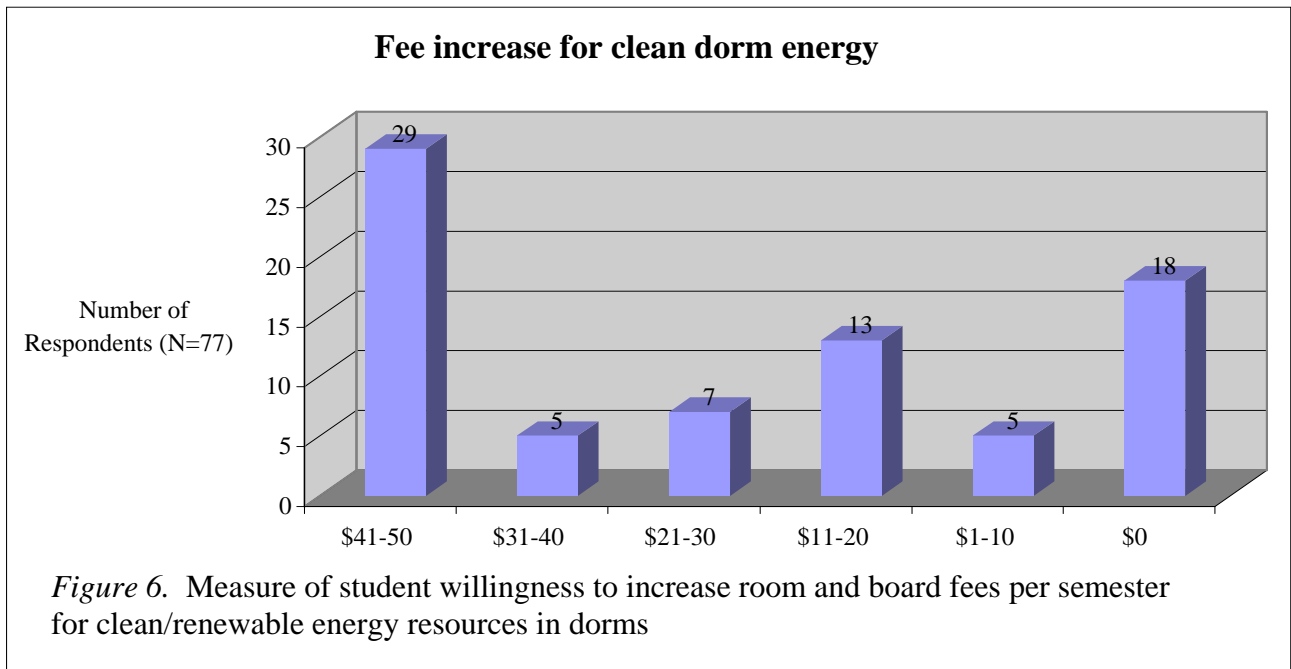


In addition to the Green Cup competition, students were asked to discuss electricity usage regarding such appliances as computers and room lighting. When asked whether students left their computers on all or most of the time, 72 of the 125 respondents, or 57.6 percent, answered yes. When asked why they did so, the most popular answer, checked by 65 students (72.2%), was that “it is more convenient to leave on all the time.” The act of turning off lights when leaving dorm rooms had slightly better results, with 63 of the 99 respondents (63.6%) saying that they always turned off their lights, 30 respondents (30.3%) turning out their lights only sometimes, and only 6 (6.1%) respondents saying that they left their lights on all the time.

The energy consumption practices of the students surveyed revealed two common themes that act as barriers to practicing energy conservation – inconvenience and education. In fact, when answered the question about whether they turned off their

computers several actually said they thought it would damage their computer by turning it off and on and several others believed that turning their computers on and off actually wasted *more energy* than if they just kept it on all the time. Another student specifically asked for “education on why leaving computers on constantly is actually bad.”

It is also interesting to note that when asked if students were willing to pay a fee per semester to have a percentage of their dorm energy come from clean energy resources, a number of students replied in the affirmative. Eighty-three students, or 76.6 percent of respondents said they would be willing to pay some amount of money per semester in order for their dorms to use clean/renewable energy resources. Eighteen (23.4%) students did not think any fees should be charged for clean resources. (See Figure 6)



Not all of those students who were opposed to paying a fee were necessarily against the idea of the university’s use of clean energy, however. As one student mentioned in a comment later in the survey, “by making the dorms more efficient

Northwestern would be saving money anyways. No need to be greedy and make the students front the costs.”

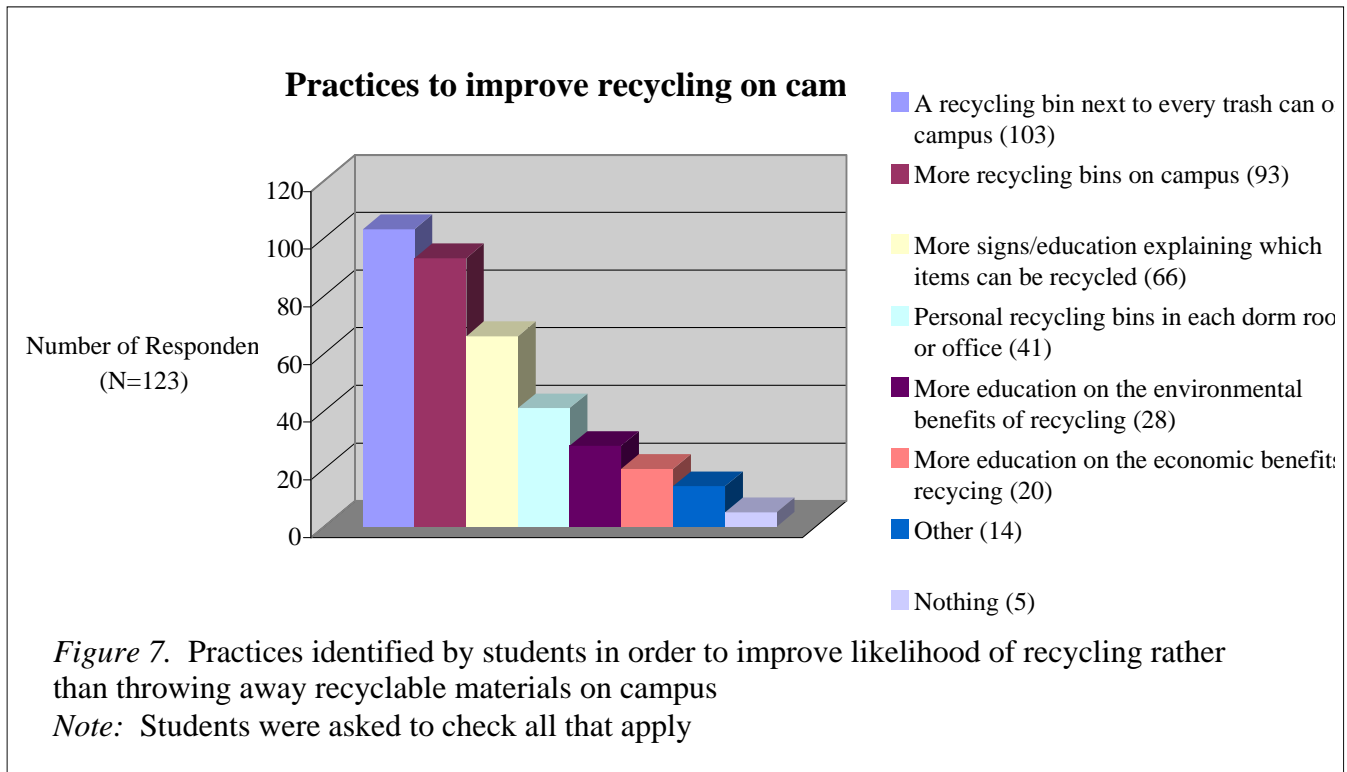
Recycling. Recycling was the second most important issue on the Northwestern campus as identified by students. When asked how often they recycled, 67 respondents, or 53.6 percent, said that they always recycled. Fifty-four (54) students, or 43.2 percent, said they recycled sometimes and only 4 students, or 3.2 percent, said that they never recycled. Students were then asked to rate their satisfaction with the recycling services in the following locations on campus: Dormitories, Classrooms & Administration Buildings, Dining Facilities, Libraries, and Laboratories. While classrooms were rated the highest on average and laboratories the lowest, the average grade did not reach above a “3” out of “5” for any of the locations. (See Table 2)

Table 2

Results of student ratings on recycling in the various campus locations

ITEM	1	2	3	4	5	N/A	Avg.	Total
Dormitories	6.4% 8	8.0% 10	11.2% 14	26.4% 33	16.0% 20	32.0% 40	2.4	125
Classroom & Admin. Buildings	13.6% 17	19.2% 24	25.6% 32	32.0% 40	5.6% 7	4.0% 5	2.9	125
Dining Facilities	19.2% 24	22.4% 28	18.4% 23	12.8% 16	7.2% 9	20% 25	2.1	125
Libraries	11.2% 14	16.8% 21	23.2% 29	20.8% 26	6.4% 8	21.6% 27	2.3	125
Laboratories	8.9% 11	19.4% 24	7.3% 9	7.3% 9	2.4% 3	54.7% 68	1.1	124
Outdoors	27.4% 34	32.3% 40	18.6% 23	11.3% 14	2.4% 3	8.0% 10	2.1	124
Average %:	14.5%	19.7%	17.4%	18.4%	6.7%	23.4%		

When asked in what ways these recycling problems might be remedied, a majority of students believed that putting a recycling bin next to every trashcan on campus would be most effective (83.7%). More recycling bins in general as well as more education about what can be recycled were also suggested as ways to improve recycling on campus. (See Figure 6)



Specifically looking at the issue of paper recycling, a majority of students said that they still used a paper notebook to take notes in class rather than a laptop. Ninety-three (93) of the 125 respondents, or 74.4 percent, primarily used a notebook while only 30 respondents, or 24.0 percent, used a laptop. Students also responded that they preferred to read their course text in hard/paper copy rather than online or electronically. 110 respondents, or 88.0 percent, preferred paper texts and only 13 respondents, or 10.4 percent, preferred to read their texts online. Two students (1.6%) claimed to not take

notes or read course texts at all. These results show that there are still some behaviors on which students will not compromise. While these results were overwhelmingly pro-paper usage, 98 of 123 respondents, or 79.7 percent, said that they would be interested in using a “draft” printer – a printer that would be fed pages that already had printing on one side – if one were available for use in your computer lab or the library, thus showing that students are aware of the importance of conserving paper.

These results again show the student focus on both convenience – in having more recycling bins in more convenient places – as well as an importance placed on having more education about what can actually be recycled and why it is important to do so. Comments made in the survey support these influences as well. Regarding the need for convenience, one student suggested that the university “make things really really easy. It's not that I don't care about the environment - it's that I am so caught up in turning in assignments that sometimes I don't go out of my way to do stuff.” Another student agreed, explaining that, “I think it needs to be easier for students to recycle/conserve. All too often, we act out of availability – how close the waste bin is as opposed to the recycling bin.”

Regarding education, one respondent explained, “People need to be made more aware of what kinds of things can be recycled because I see so much recyclable stuff in the trash cans in my dorm.” Similar sentiments were echoed by other students: “I think by providing more information about landfills and how our environment is going down the drain would help people be more aware,” “We need more information about how much water/trash/energy we are wasting/producing. Something really needs to shock these kids into taking the initiative to recycle and conserve energy on their own,” and

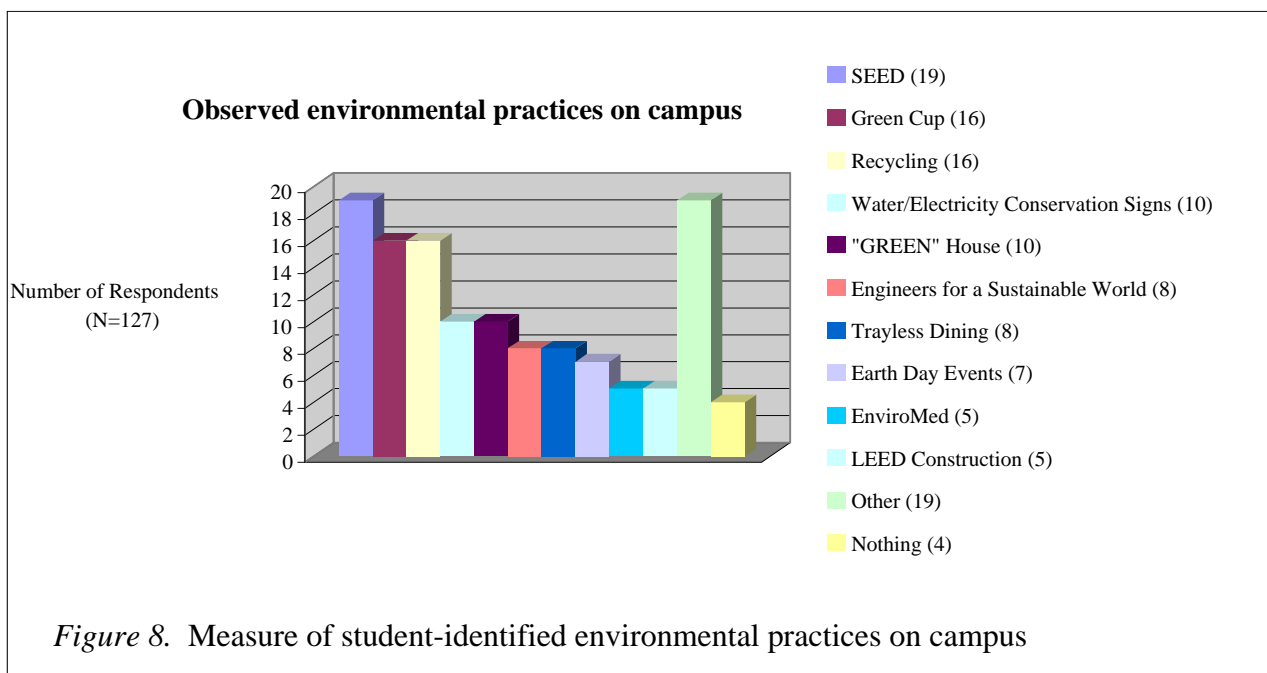
“The university needs more publicity about how to be better to the environment like educating about using bags or mugs and publicizing what can be recycled. If it is made more popular and acceptable hopefully more people will do it.”

One of the major concerns regarding recycling, however, came in an unpredicted comment made by several students throughout the survey. “There is a myth (at least I hope it is a myth) on campus that Northwestern does not actually recycle,” said one student. “Often when I tell people to recycle, people say ‘they put it all in the same bin anyways, I’ve seen them doing it,’ or simply ‘Northwestern doesn’t recycle.’ This is one of the major reasons recycling has not taken off more on campus.” Another student corroborated this observation, saying, “I have heard rumors from fairly reliable sources that the sorted recycling bin waste gets thrown into the trash anyway, and wont actually start being recycled until next year.” Whether or not this is true, the result of this information is that students are less motivated to recycle. “Students won’t take the time to sort their garbage if it will be thrown into the same bin anyway,” said another student. “Northwestern University needs to me a conscious effort to make facilities environmentally friendly and conserve.”

Communication with the University. Regarding communication between the university and its students, a definite disconnect was uncovered. When asked whether students believed it was important to teach and learn about environmental sustainability at the university 114 out of 124 respondents, or 91.9 percent, said yes, and only 10, or 8.1 percent, of the students said no. However, when students were asked, as members of the campus community, whether they had learned anything about environmental sustainability from university events or practices, only 58 respondents, or 46.8 percent, of

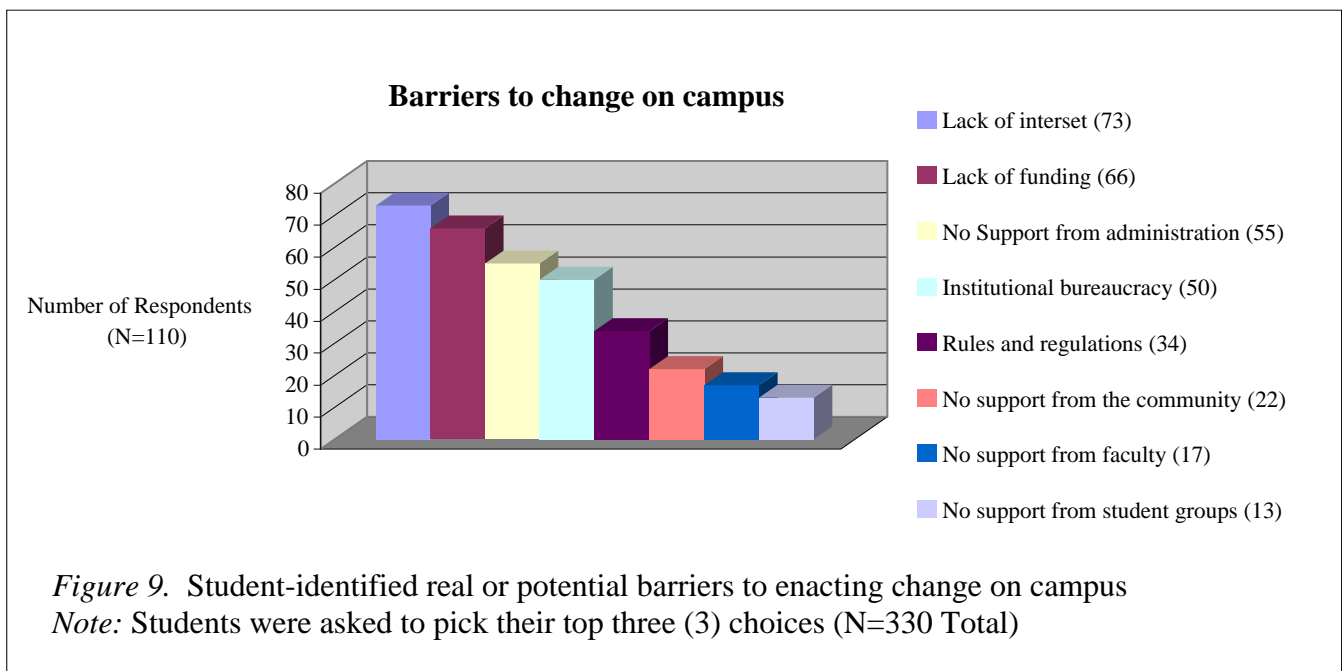
respondents answered in the affirmative, with a majority of students – 66, or 53.2 percent – said that they had not learned anything from the university.

This lack of communication is further evidenced by the fact that when students were asked to describe environmental activities and initiatives they saw around campus several of the most prominent responses were actually enacted and promoted by student groups rather than directly by the university. The most prominent action that students saw on campus came in the form of the student environmental group, SEED (19 respondents). This was closely followed by the Green Cup competition that is run by SEED (16 respondents). General campus recycling initiatives were identified by 16 respondents as the first major source of direct university action regarding environmental affairs. Of the top ten activities and initiatives self-identified by students in the survey, five of the actions were directly linked to student groups and their personal initiatives (SEED, Green Cup, ESW, Earth Day Events, EnviroMed – the medical school environmental group). A full breakdown of identified environmental behaviors on campus is found in Figure 8.



Barriers to Change. In addition to the issue of communication with administration, students were asked to discuss general barriers to enacting change on campus. Only 27 of 125 respondents, or 21.6 percent, identified themselves as having attempted to enact some sort of change on campus, whether it be starting an American Sign Language student group, attempting to create a new area of academic studies (Latino Studies), or getting student committees added to trustee meetings on investments. However, when respondents were asked to reflect on the real or potential barriers to change in the university, 104 students responded. The top barriers identified were “lack of interest,” “lack of funding,” and “no support from administration.” (See Figure 9)

When asked how they would rate Northwestern’s general willingness and effort to allow for change and new initiatives, a majority of students (55.3%) still responded with the answer of “somewhat strong.” 40 percent of students said that Northwestern’s support was “not very good” or found that there was “none at all”. Only five students or 4.8 percent said that Northwestern’s willingness and support was “very strong.”



Negative responses. Not all surveyed students had positive comments about the general environmentalism movement. Two surveyed students provided particularly negative responses to the issue of environmentalism on campus:

“I wish it were approached as a debate and recognized as an issue that has multiple sides. Instead, there is an implicit assumption that all ‘green’ initiatives MUST be right and that any disagreement renders one a horrible person. That may be caricaturing it a bit, but that's the general feel. I'm sick of the whole tone of environmentalism nowadays.”

This student's comments express the need for education about environmentalism on campus to be approached in a strongly non-partisan and practical approach. Another student corroborates this feeling of being “backed into a corner” by the environmental movement.

“I'm all for Northwestern's environmentalism, but you can't force us. For example, in Foster-Walker dining hall, they actually cover up the trays with a tarp so that we don't take them. Sometimes I need a tray. Also, our bathrooms have the air hand dryers. But maybe I want paper towels. Those air things do not dry your hands, not unless you stand there for five minutes. I don't want them to install low-flow toilets that will back up all the time, or whatever with showers that will make my shower less comfortable, or the triggered sinks that never come on when you want them to and don't give out enough water. You can't make me be environmental, and I'd rather you didn't raise my tuition in order to try to.”

This response is also important because it shows that there may be some students who will not be willing to participate even if education and incentives are in place. This student's response serves as a reminder that campuses are diverse places with many different attitudes and opinions and that any initiative must be undertaken with sensitivity and all policies must be clearly announced and explained so as not to incur unnecessary backlash.

Campus Observations

The second component of the data collection involved various campus observations of student behaviors. In the first observation, the researcher investigated refuse disposal habits in Norris Food Court – the main cafeteria on campus, located at the student union. The researcher remained in a centrally located position in the main room of the cafeteria for one and a half hours during the prime lunchtime, from 12:30pm to 2:00pm on a weekday. At 12:30pm the food court was approximately 80% full. By 1:45pm the food court was only about 30% full. The majority of the occupants in the food court were of traditional student age. Over the course of the observation, 147 students disposed of their meals in one of three centrally located trash/recycling stations in the main room. The disposal bins had clearly labeled openings for Paper, Cans/Bottles, and Trash.

Of the 147 disposed meals, only 25 meals had actually recyclable materials. The majority of the meals utilized plastic plates, plastic utensils, Styrofoam soup bowls and cups, plastic cups, and plastic yogurt containers – none of which are recyclable on campus. Of those students who had recyclable materials on their trays, only 17 recycled their bottles/cans, representing a recycling rate of 53%. Other observations of note

included the fact that 17 students disposed of their trash but carried out a bottle or can (presumably to be disposed of later). Only one student deposited trash in the bottle/can recycling container. It was also noted that one cafeteria employee, upon collecting the trays, pulled a can from the trash and put it into the recycling bin.

In the second observation, located in the second floor core reserve wing of the Evanston campus central library, the observer again looked for responsible student behaviors regarding recycling. The observation took place from 10:00pm to 12:00am on a weeknight. There were a total of eleven unlabeled trash bins located around the floor, all within approximately five steps of any sitting area. At 10:00pm the floor held 50 students and was at half-capacity. At that time, the observer counted 43 disposable items (bottles and cans) being used by students. The observer also counted 14 bottles and cans already in the trash at the start of the observation. Over the course of the two hour period only one additional person entered the floor to study. At midnight, 23 students were left in the library. The observer counted 15 recyclable items still with students on the tables and 37 recyclable items in the trash bins.

Because the observer was unable to account for what students did with recyclable items after they left the floor, an exact recycling rate was not determined. However, over the course of two hours 23 recyclable items were placed in trash bins around the library floor. This is almost a 1-to-1 ratio to the number of students that left the library. The observer directly recorded a number of students over the course of the two-hour period simply throwing away their recyclable materials in the nearest trash bin to their tables. One can qualitatively predict from this observation that the amount of recycling conducted during the course of the observation was relatively low.

Student Interviews

The final source of data came from a series of six student interviews. All six subjects identified in the online survey that they would be willing to speak with the researcher in a follow-up interview. It is important to note that the interviews were self-selecting the students are not necessarily representative of the entire student population. All six students were involved in environmentalism in some way, whether on a personal or larger organizational level. Because of this, interview questions were tailored to reflect on personal motivations and barriers as well as reflection on the role of the university in the environmental movement. (See Appendix B for Interview Protocol.) A summary of the six students interviewed is shown in Table 3.

Table 3

Student Interviewee Demographics

	Stanley	Greg	Julie	Bill	Amy	Mary
Gender	Male	Male	Female	Male	Female	Female
School	WCAS	TGS	SCHC/ WCAS	SCHC/ WCAS	WCAS	SESP
Major	Classics & Political Science	Economics	Film & Anthropology	Radio/TV & Political Science	Sociology	Human Development & Psych.
Year	2010	1 st Yr. Grad.	2011	2010	2010	2010
Current Residence	Bobb- McCulloch	Off-Campus	Shepard Residential College	CRC	Allison Hall	Bobb- McCulloch
Hometown	Bethesda, MD	Medicine Hat, Alberta, Canada	Tallahassee, FL	St. Louis, MO	Morton Grove, IL	Waukegan, IL

From these interviews several common themes were revealed. Themes covered both barriers and motivations to participating (or not participating) in environmentally responsible behaviors on campus.

Motivation. Across the board, all six students cited personal morals and values as the root of motivation for practicing environmentally responsible behaviors. With this feeling of personal value and moral imperative, for several students came the belief that if they did not act that there would be serious consequences. A summary of the reasons given for what motivates each student to practice such behaviors can be found in Table 4 below.

Table 4

Student motivations for practicing environmentally responsible behaviors

Subject	Response
Amy	“I guess because it’s really not that hard to do it and <u>it’s a good thing to do.</u> ”
Bill	“I think that as the saying goes, small actions times many people equals big change, or something like that. I mean, we can sit around and wait for our government to make decisions for us or we can all just [do] little things [that] barely inconvenience us and make a big difference on our own. I view it as a <u>moral imperative</u> to do whatever you can for other people [and that] includes trying to preserve what we have for our grandchildren.”
Stanley	“The more you learn about it, the more it kind of eats away at your conscience if you don’t do it so it’s kind of a real world application. It seems like a simple kind of <u>morality issue</u> where it’s really in everyone’s best interest if we do recycle and we do conserve energy and look for sustainable resources. So it kind of, it gives me, it’s <u>something I care about</u> and I’m hoping, if this is a future career path, it definitely gives me some kind of meaning to what I’m doing with my life. And it really seems like such an impending cloud on this generation’s horizon that I want to lead the way.”
Greg	“For me, I think <u>it’s a value that you have</u> , I feel this passion for justice and I think that has different dimensions – it has a social dimension, it has a personal dimension, it has a relational dimension, and it certainly has an environmental dimension – and when I see like ...a forest being clear cut and that sort of thing – it gets me and that bothers me and <u>I fully realize that my lifestyle contributes to it...</u> And the consequences are that a lot of people are going to suffer and a lot of people are going to die and that’s really upsetting and I think that with that comes a necessity to change how we try to do things.”

Mary “Around my house everything is really developed and stuff, and there isn’t that much nature and forest preserves that I can see. I really appreciate and value [nature] so I know that I’m not going to throw something on the ground...I just know that it’s important to recycle and if you don’t it’s just silly.”

Julie “I feel like this isn’t just our planet, we’re sharing it with millions of other species and we’re just one of them. We seem to be having the most impact and I feel like if we want the earth to be the same way for our children and grandchildren and future generations we have to act now because things are declining rapidly. We lose thousands of acres of tropical rainforest every year and it’s not going to be here in 30 years or so if we keep on going at the rate we’re going.”

Incentives and Motivation for Students. Most of the subjects interviewed said that the most effective form of motivation for students on campus was not financial incentives, as might have been supposed, but increased education about environmental issues. Said one student,

“I think education is important. I think showing that every individual action really has an impact is the best way to do it. You can’t have cameras everywhere and watch people turn off lights or offer an ipod nano for every turned off light . . . it’s hard because it’s about a way of life, it’s not about participating in an organization or something. I think it’s just all about education and the guilt trip inherent in that education.”

In direct relation to the question of incentives and motivation for students on campus, every undergraduate student (five of the six subjects) mentioned the Green Cup competition on campus. Most felt that Green Cup was a good idea in theory, but ineffective in practice. One student was the environmental chair for her residential college and helped them to win the 2008 Green Cup title. She spoke about how she motivated her community saying,

“I used [Residential College] pride to kind of motivate people saying, ‘Come on, we don’t want to lose again – we came in like 5th place last year, we don’t want to let that happen.’ I also used a points motivation system, like we have points for our housing to live there the next year and if you were on the committee or did sweep up or something, you would get a certain number of points.”

However, when asked whether these behaviors continued after the competition ended, the student stated that,

“I really don’t think the behaviors have continued at all. It was really a struggle even *during* Green Cup to keep them motivated for six weeks. I know SEED’s kind of reasoning behind it was that [behaviors] will become habits if you do it for six weeks and that does have some merit, but what I mostly saw was an increasing complacency about what [students] were doing. Like in the beginning, people were turning off lights and taking shorter showers but as time went on they kind of forgot about it. And certainly now that Green Cup is over I really have not seen any change in the way people behave – maybe one or two people. But I really don’t think it had much of a lasting impact.”

This sentiment is indicative of the reactions given by each of the undergraduates interviewed, all of whom participated in Green Cup this past year. Another student explained why the Green Cup incentives are particularly ineffective in larger dorms, saying that:

“When [Green Cup] incentives are like, a nice “munchies” (dorm-sponsored food events), it’s not as effective because being such a big dorm and having social funds every other week, we have an equivalent munchies so its not that big an incentive.”

Education was the common recommendation for increased environmentally responsible behavior from all of the subjects. One student made the comment that environmental education was not just about what is taught in college, but what is started at a young age and continues throughout one’s academic career.

“I wonder all the time, ‘why don’t people just think instinctively to recycle this’ – it’s almost out of the realm of incentives and back into education and upbringing and not just early education, but continuing on through middle school and high school where there are field trips in elementary school to the Audobon society. It’s very nature-gearred, but it kind of drops off after that and in these kind of formative years if you don’t get that kind of sticking point, I don’t know, it just doesn’t last.”

The major concern permeating throughout all the interviews was that environmentally responsible behaviors were difficult to teach and even more difficult to maintain with any sense of longevity. Education was thought to be the best way to have a *lasting* influence on student behaviors.

Barriers. All of the interview subjects were quick to point out many of the major barriers to practicing these environmental behaviors. Recurring barriers mentioned throughout the interviews included apathy, convenience, and a lack of trust in the administration. Five of the six students mentioned apathy as a main barrier to students

adopting more sustainable behaviors. Each of these students expressed how they took it upon themselves to recycle in their residences but found it frustrating that the majority of their dorm-mates did not do the same. Said one student, “I think it’s mostly just apathy. I’m not sure what compels you to put paper in the cans, glass and plastic recycling bin. It might be apathy and just laziness. I’d like to think that everyone knows how to recycle so I don’t think that’s the issue.” The same student went on to describe the frustrations she has found working as the environmental coordinator for her fraternity on campus:

“We have recycling bins on every floor and [my predecessor] has put up signs and everything. By every single receptacle there is a detailed description of what is and what is not recyclable. And I just always double check to make sure everything sorted because despite the signs being like an inch away from the cans there is always confusion. I always announce this at chapter too and I feel like I’m either not getting through or people are just that lazy.”

Another student reflected on her experience interacting with other students in her residential hall, saying:

“I think they just don’t realize how much difference one person can make. They think, ‘what’s going to be the difference if I turn off my lights when I leave the room for maybe an hour? It’s not going to change anything . . . I mean, the earth is not going to die if I take five more minutes in the shower.’”

Four of the five students who live on campus also made the direct comment, in one form or another, that while they had heard of other dorms participating in Green Cup or trying

being more environmentally conscious, none of them had seen anyone in their dorm or college participating at all. Said one student, “for me it was pretty much like the people in my hall didn’t really do anything different before [Green Cup] . . . or after . . . or during.” Another student put it succinctly when he explained, “a lot of people just don’t see their own personal decisions as having worth, value, or making a difference so they don’t bother to make those decisions. That’s the biggest obstacle.”

In addition to the barrier of apathy, students reflected on the fact that many people find “living green” to be inconvenient. One student described her residential hall saying:

“We only have a bin that’s only for cans, glass and plastic, and if you want to recycle paper and cardboard you have to go into the lounge which is on the other side of the dorm. I mean, it’s pretty much on your way out, by the door that you exit all the time anyway, it’s right by there – so its not so far away, but people see it as inconvenient. All the time there’s always paper and cardboard in the cans, glass and plastic bin.”

Another student described how many of her peers did not participate in Green Cup because it became too inconvenient. Said the student, “Six weeks long was a huge increase this year. Before it was two weeks and more people participated because it was easier to forgo doing your laundry or buying from a vending machine for two weeks. But once it was six weeks people were like, ‘well it’s not really worth my effort to try to keep this up for six weeks.’”

It is important to note that not even the environmentally conscious students who were interviewed were completely immune to the barriers of giving up convenience, and with that the “luxuries” that most students take for granted. Four of the six students

interviewed admitted to having trouble changing certain behaviors that are environmentally detrimental. One student described the difficulty in attempting to change such behaviors:

“Changing behaviors is a very challenging thing to do and even those of us who are committed to changing our behaviors I think struggle with breaking old habits and seeing where to best put our energies. I certainly have a few things that I do which are not the best for the environment, like flying is a big thing. And I haven’t given up meat – I’m an indoor vegetarian but I still eat meat when I eat out. And when I came back from Burkina Faso [where I spent time on an exchange], I was very excellent at the very short showers because there it was the bucket baths, but I quickly went back to my ten minutes of warm water glory.”

Similarly, the other students expressed regret over not really being able to give up certain parts of their personality and behavior, acknowledging that there are trade offs to be made. One student proclaimed herself a “neat freak” and described her cleaning behaviors, saying, “I feel like I waste so many paper towels and stuff because like, that’s just me. I mean, I try to not, but I know I could do better with that.” Regarding showers – a common “vice” amongst the respondents – another student described them as being, “kind of relaxing, you know, its more than just cleaning yourself – sometimes you need these kind of luxuries to keep yourself sane . . . I turn off the water when I brush my teeth and shave – but when I need a long shower I’m going to take a long shower.”

Although the majority of students do not have cars on campus, including those interviewed, driving was acknowledged to be another vice that would be difficult to give up or cut back on. Said one student:

“A lot of times its convenience in that you really see this with everyone . . . It’s easy for me now because I don’t have a car on campus, my impact is lessened, but at the same time I know I live probably only a 10-15 minute walk into town back home and I’ve *never* walked into town. I always drive, I enjoy driving, you know, and it’s hard to know that I’ll make some sacrifices such as turning off the lights and recycling, but at the same time I still like eating red meat, which is huge, if we get into the realm of food shortages and water. It’s hard to live a completely green life and there are some things like that that I don’t seem myself compromising but at the same time, if it’s right in front of me then I have to act on it in a responsible way.”

One student made the comment that a lot of people are scared off by starting to be environmentally more responsible precisely because there are so many things that one *could* give up.

“I think a lot of people look at living environmentally-friendly as like an all or nothing thing, but the way I’ve gone about it is by taking it one step at a time. First it was paper, then light bulbs, then unplugging appliances, and now I’m working on not using a tray in the dining hall. I think every individual just has to do what he or she can. Balancing one’s own interests and conveniences with greater responsibilities.”

One of the most surprising findings in the surveys – the lack of trust that the administration was actually following through with its recycling program – was corroborated in more detail in the interviews. Three of the six subjects specifically mentioned that they were unsure whether the university actually recycled the material that had been sorted into recycling bins. One student recounted having several such conversations with friends and peers:

“I don’t know if it’s true or not but I’ve heard rumors that the university – the stuff that actually goes into the recycling bins – they actually just throw it away. Then people just tell me, “Mary, they just throw it away anyway.” So then people are like, ‘Oh, if they just throw it away anyway, I’m just going to throw it in the garbage.’”

Another student confirmed this encounter, stating that, “a lot of students have that suspicion. Everyone says that.” The student went on to say that, “if there is a trust issue it just arises because students don’t see the university making the investment that they feel should be made for the future, since there’s not a green projects fund and there aren’t even recycling resources for off-campus students.” This disconnect between students and the administration exemplifies the last common theme to arise in the student interviews.

Communication with Administration. The most major concern expressed by all student subjects was the distinct lack of communication between the university administration and its students regarding what the university was actually doing to make the campus more environmentally responsible. While Northwestern has made large strides in investing in renewable energy resources, pledged to construct buildings according to LEED standards, created the sustainability working group, and starting

swapping out incandescent lighting for CFLs, many students are unaware that any of this is actually going on. Said one student, “Really, the only thing that I’ve seen is Green Cup and the little signs in the dorm and the dining hall. I don’t really know of anything else.” When asked if she knew anything about energy purchasing or green building, the students responded that she was not aware of any such initiatives. “I think they haven’t really been doing much,” said the same student. “I don’t even know about the light bulbs – are we using energy efficient light bulbs? I have no idea . . . it’s important to me so if it was happening I would know about it, but if it’s not important to other people they would have no clue that it’s going on.”

The remarks of this student, a self-proclaimed environmentally responsible student who takes many efforts on and around campus to recycle and reuse resources, commented that she herself would know if something was going on because she is personally invested. But if even students who are personally involved are not aware of the initiatives and steps that Northwestern is taking to become more environmentally responsible, then there is appears to be a definite break down in the lines of communication between the university and its students. The awareness of different Northwestern initiatives, as reported by the student subjects themselves, can be seen below in Table 5.

Table 5

Student reporting of current university environmental practices

Activity currently conducted on campus	Mentioned by Subject	Not mentioned by Subject
Recycling	A, B, G, J, M, S	
Prius Saferides	B, J	A, G, M, S
CFLs in Dorms/Buildings	B, S	A, G, J, M*
Timed/Motion-Sensor Lights	B	A, G, J, M*, S
Sustainability Working Group	B	A, G, J, M, S
Water Conservation Stickers in Dorms	A, B, M, S	J, G
Energy Purchasing	J, G	A, B, M, S*
“GREEN” House	G	A, B, J, M, S
LEED Construction/Renovations		A, B, G, J, M, S*

Note: “*” denotes that student actively thought that Northwestern was NOT participating in that particular activity.

It is important to note that “B” (Bill) is a member of a student environmental group on campus and was thus likely to have more access to this information than any of the other students. Recycling was the only initiative that all students actively discussed when asked what Northwestern was currently doing on campus. None of the students made mention of Northwestern’s commitment to conduct all future constructions according to LEED standards. While it is not certain whether these students had ever heard of the initiatives or not, the initiatives were not important enough to mention over the course of the interview.

Another student commented on the influence that the university had over the students and the inherent responsibility the university had to make their positive behaviors more readily known to the community.

“When the students see projects designed to benefit the environment I think it subconsciously helps them to realize the importance of these

things. When they see other people working for these things they see that it's valuable. But when students see the laxness with which the university installs recycling containers around the campus – for example, when I can walk out of the entrance of 1834 Hinman to the corner of Hinman and Sheridan, passing three trash cans and NO recycling bins – that sends a message to students that the environment is not a priority to the administration.”

Many of the students interviewed expressed the same concerns – that “you just have to see things done on campus, things have to be very visible.” Another student who is involved in one of the student environmental groups on campus made the comment that he was shocked when he, who had been involved in this work for over a year, discovered that Northwestern even had a sustainability website. “I never even knew and it's a decent website! I didn't even know about it until somehow I got directed there within only the past month or something.”

Another student made the insightful comment that part of the reason for this disconnect between the administration and students was what he referred to as “the nature of the beast.” Said the student:

“These administrators are there for twenty plus years and they've got fulltime jobs, they're busy with other things. Students are by their very nature transients and they have big demands but at the end of the day it's not students – I mean it can be in some circumstances students that are doing this work – but at the end of the day if it's institutional change it's the university that's footing the bill and providing the staff to make things

happen. That's really the only way that things can happen. So that creates natural frictions . . . it's really important that you get those people to sit down together but it's hard to make that happen because of time constraints on both sides and a lot of things, but it can help move this forward for sure."

Every student interviewed described this lack of communication between the university and themselves in some form. The students made it clear that they believed this was a large part of why such environmentally responsible behaviors were not more prevalent on campus in general. Said one student,

"I feel like if the students knew that the university was doing more maybe they would feel more motivated to do something, and I kind of feel the same way. I'm wondering like what's going on behind the scenes and I feel like if I knew what the university was doing something maybe I could do something to kind of help out with what the university was doing."

If students knew more about what the university was doing, not only would they be more willing to trust in the administration, they would be far more likely to participate in the environmental movement on campus in general.

Data Interpretation

The data presented in this study reveals a number of common barriers and motivations to student participation in ERB. Survey data indicated that while not the most pressing issue concerning either the nation or the school, the health of the environment was a major concern for a large number of students, as depicted in Figure 1. This concern for the environment was echoed in the qualitative data produced from the follow-up interviews with students. Along with this focus on the importance of environmental sustainability was the equally prevalent theme of defining barriers to achieving a more environmentally sustainable campus, community and society.

Barriers to Environmentally Sustainable Behavior

Inconvenience. One of the major barriers identified by students in both the survey and interviews was the issue of convenience. Students cited inconvenience as a major barrier to such ERB as turning off the lights when leaving the room, turning off the computer when it is not being used, reading course texts online, participating in the Green Cup competition, and recycling. This is in line with what McKenzie-Mohr and Smith (1999) recognized as the biggest issues to engaging in community-based social marketing – that in the minds of many people, the inconveniences of the new behavior do not outweigh the ease and familiarity of the old and less sustainable behavior.

This trend of inconvenience is most clearly outlined by the findings from the two environmental observations conducted on campus. In the Norris Food Center where students had ample access to recycling containers strategically connected to the trash receptacles, there was a recycling rate of 53 percent. In the second observation in central library, however, where students had no readily available access to recycling bins without

leaving the actual wing of the library and walking down several floors, the recycling rate was considerably less. When faced with the ease of throwing a bottle into a bin five steps from the table versus walking to another wing of the library, most students will simply throw the bottle in the trash.

Lack of Knowledge. In both the survey and interviews, students also identified a lack of knowledge about different facets of environmentalism as being a barrier, both to their own behavior and that of their peers. McKenzie-Mohr and Smith (1999), again citing their community-based social marketing theory, support this finding. They state that the reason why people do not engage in certain activities is first, because they are not aware of the activities or the benefits that such activities afford. For example, 53.7 percent of students surveyed believe that having more signs and education explaining what items can be recycled on campus would help increase student recycling behaviors. Likewise, the number one reason that students did not participate in the Green Cup competition was because they did not have enough knowledge about the program.

Additionally, many students were noticeably acting under the assumptions of incorrect knowledge. For example, several believed that turning their computers on and off would damage the machine and several others believed that turning their computers on and off actually wasted *more energy* than if they just kept it on all the time, both of these assumptions being false. These responses show that there is a distinct need not only to support these practices but to provide the appropriate education for why students should adopt these behaviors.

Some discrepancy between the literature and the data appeared when discussing the impact of education regarding ERB. Several studies have shown that information and

education about environmental issues has no tangible impact on sustainable behaviors (Jordan et al., 1986; Bickman, 1972). The students at Northwestern, however, felt very strongly that education is a key factor to getting a larger portion of the community to adopt these ecological behaviors. One interviewed student reflected on how his student environmental group clearly saw an impact, stating, “to the people that we are able to reach out to I see our education and our initiatives making a big difference . . . It’s all about finding the best means of reaching people.”

Apathy. Finding ways of reaching out to students is made far more difficult, however, when students are apathetic to the cause. A third major barrier to ERB revealed by the data was student apathy. Apathy was raised as a concern primarily within student interviews. Five of the six students interviewed related issues of dealing with student apathy in trying to get introduce environmental initiatives in the dorms and around campus. This is in line with the findings by Dresner and Blatner (2006) who have found that today’s college campuses are decidedly lacking in civic engagement as evidenced by a general social and political apathy that is “more widespread among young people than was true in previous decades” (p.213).

This sense of apathy seems to be rooted, at least partially, in the fact that many students believe participating in ERB will not actually make a difference. This is evidenced by the repeated concern, in both the survey and interviews, that students saw and heard that Northwestern was not actually recycling and just dumping all of the recyclable materials being sorted around campus into the trash. This lack of trust is indicative of the feeling of “helplessness” described by Kaplan (2000). ““Research suggests that helplessness is not only an important issue in the context of ERB, it is

perhaps *the* pivotal issue . . . people who feel helpless, who feel that their behavior would not make a difference, are less likely to participate in ERB” (Kaplan, 2000, pp.498-499). When this happens, students may appear to be less concerned with the environment and this can manifest itself in the form of apathy – as appears to be the case with many Northwestern students.

Communication with Administration. This lack of trust in the actions of the university is directly related to a lack of communication between the administration and students. Sharp (2002) describes the difficulty students face in trying to enter into the formal decision-making structure of the university and the barriers this produces when trying to create environmental policies and get funding for sustainability projects. The issue of communication between administration and students was the biggest barrier that students identified in terms of promoting ERB on campus. One student, in describing his attempt to get recycling receptacles for batteries and printer cartridges, bemoaned the fact that “there’s so much bureaucracy at the university that it probably won’t get through just for stupid reasons.” This attitude was echoed throughout the survey and interviews.

Kezar’s (2004) research supports this observation by students and makes the suggestion that universities need to focus on creating better relationships and trust between the stakeholders of the university community. These very “interpersonal dynamics” and issues of “group motivation” that the students are describing in their interactions with the administration are the key factors that Kezar pinpoints as being most significant for dealing with major issues of change on campus. This is apparent in the responses of students when asked to identify any and all barriers to change they have faced or observed on campus. Sixty percent indicated a lack of funding from the

university, 50 percent indicated zero support from the administration, and 45.5 percent blamed institutional bureaucracy. Overall, only 4.8 percent rated Northwestern's willingness and effort to allow for change and new initiatives as "very strong." These results are not surprising as they keep well in line with the description of university culture in general as being "structurally conservative" and unwilling to undergo "revolutionary change" (Clough et al., 2006, p.37). Without the support of the administration, indicated as lacking by the students, it is unlikely that ERB will take hold on a mass scale within the campus community.

Motivations for Environmentally Sustainable Behavior

Material Incentives. Although Geller (1992) determined that ERB could be motivated by incentives such as material reward or punishment, in practice this form of motivation does not produce long-term behaviors. Katzev and Johnson found that "although monetary incentives are able to initiate ERB, they seem unable to produce durable behavior change" (1987). The data fully supports this conclusion, most clearly evidenced by the transient spike in student ERB during the annual Green Cup competition where the dorm that saves the most energy is rewarded with prizes. Each of the undergraduate students who participated in Green Cup also made note of the fact that they did not see the behaviors persist beyond the competition. In fact, some students explained that because the competition was extended to six weeks this year, some students did not even practice these behaviors for the full term of the competition, even with the incentives of prizes and awards.

Peer Pressure and Guilt. Social norms such as peer pressure and guilt were noted in some of the interviews and surveys, but were not as prevalent as one might have

expected from a college student body. One student described using a form of motivational guilt to get her residential college to participate in Green Cup by reminding them that they had not placed well last year. Another student described her interactions with her non-recycling roommate. The student explained that because of her constant “nagging,” her roommate was starting to come around. This form of guilt was also implemented by a student who attempted to get his fraternity brothers to recycle paper and turn off lights to conserve energy. “I was kind of going from the angle of ‘if your peer, your brother, is doing it and cares about it, out of respect you should start thinking about that,” said the student.

The students, although explaining that they used these techniques, did not expressly vouch for the success of such pressure on their peers. This is consistent with the literature that describes social pressure and guilt as actively used, but not necessarily successful forms of influence. For example, Thøgersen (2007) states that, “the use of guilt appeals is increasingly popular in both private and public sector advertising. However, although there are studies that indicate that guilt appeals can be persuasive, most studies of guilt appeals in advertising find little impact” (p.247). In fact, research reveals that “ERB depends on the strength of personal norms for the behavior in question, while social pressure is less important (or at least only important in an indirect way)” Thøgersen, 2007, p.248).

Research also supports the conclusion that the students who are influenced to adopt ERB through peer social pressure as described in the data will be far less likely to maintain such behaviors because “a person with more self-oriented motives (e.g., esteem enhancement, personal development) tends to remain a volunteer longer. In contrast, a

person with more community, social-issue-focused, or value-based reasons tends to volunteer for a shorter period” (De Young, 2000, 514-515). It appears then that the intrinsic motivations expressed by many of the students are far more compelling reasons for why students begin and maintain participation in ERB.

Personal Morals and Values. The form of motivation that was unanimously cited as the driving force behind each students’ ERB, as indicated in the interviews, was a deeply intrinsic value and moral obligation to practice such behaviors. “Moral norms,” according to Kaiser (1999), “derive from moral concepts, for instance, another’s welfare, another’s rights, and fairness or justice considerations. In contrast, one’s conventional norms are grounded in social customs or traditions, appeals to authorities, and one’s need for social appreciation” (p.61). Students did not find a lasting change in behavior when they or their peers were forced by the administration (authority) or pressured by peers (social appreciation) to practice ERB. Students, instead, overwhelmingly agreed that it was a moral imperative that drove them to continue such behaviors. One student described how he saw sustainability as an issue of “social justice” and several others expressed their concern for the wellbeing of future generations as a motivating factor in their behavior. This corroborates the conclusions of Kaiser’s study that places an additional importance on “responsibility feelings” as being predictors for ecological behavior (1999).

Deci & Ryan’s (1985, 2000) theory of self-determination and its focus on the influence of intrinsic values are also strongly supported by the results of this study. Most of the students interviewed had been involved in some sort of environmental leadership, whether it was through student groups or residential colleges and dorms. This fits with

the SDT concept that “when people feel a sense of ownership of the goals they select, they typically try harder and longer” (Osbaldiston & Sheldon, 2003, p.350).

The need to relate these altruistic behaviors to a sense of self-interest (Kaplan, 2000; De Young, 2000; Mansbridge, 1990), however, was not as clearly apparent from the data. Students described the “sacrifice” of being environmentally responsible as a moral imperative, but were less able or inclined to directly link their ERB practices to a sense of personal satisfaction or benefit. One might hypothesize that one reason for this omission of motivation is that there is an inherent equating of self-interest with selfishness (Kaplan, 2000). The socially desirable nature of the topic and the current popularity and unanimous agreement surrounding the importance of the topic in media and politics may have influenced students to respond with answers colored somewhat by external influences. The moral obligation at the heart of each student’s response, however, is still strongly supported by the large amount of research showing the importance of moral norms on ERB (Kohlberg, 1984; Thogersen, 2007; Kaiser, 1999). De Young (2000) most accurately describes this passion that was embodied in each of the students interviewed when he explains, “that when people discern a role for themselves and become convinced that their efforts truly matter, a powerful motive force is unleashed” (p.520).

Conclusions

This study has served to reveal and confirm a number of behavioral trends regarding the adoption of environmentally sustainable and responsible behaviors by students on the campus of Northwestern University. Although this is only a preliminary study into the sustainability movement at Northwestern, several important trends and communal concerns were uncovered that will help to shape future initiatives for implementation on campus. Limitations of the study and suggestions for future research are provided, as well as the development of several recommendations for the university's consideration.

Limitations of the Study

The strongest limitation of the study was that the survey and interviews were self-selecting in nature. While the survey was relatively evenly distributed, judging from the self-reported knowledge about environmental sustainability, a large percentage of respondents (96%) said that the environment was at least somewhat important to them. More limiting than the survey population however was the number of students who, from the survey, offered to sit for follow-up interviews. The six students who were interviewed were all involved in environmentalism, whether on a personal or broader organizational level. Therefore, the study was unable to locate or question students who were more apathetic to the environmental movement. However, because of the interest and involvement of the six students interviewed, the study was able to discern some of the major issues that these students dealt with in trying to get their peers to become more involved in such environmentally responsible behaviors.

Additionally, it is important to recognize the social impact of the environmental movement and the effect it may have had on the answers provided by students. There is generally considered to be a social desirability in practicing environmentally responsible behaviors and this is particularly prevalent in academic circles. Students also tend to be more inclined than a random sampling of adults to answer questions with responses that they believe they *should* produce, whether or not it is entirely true to practice (Kaiser et al., 1999, p.70). The survey questions were inherently sensitive to social desirability effects and it was difficult to get a truly accurate depiction of student attitudes and behaviors.

Another limitation of the study involved the small number of respondents (N=127) in relation to the overall student population (approximately 15,000 students, both graduate and undergraduate). Should this research be taken forward in the future, a more broadly distributed survey would need to be conducted. This would require the help of the university for direct access to student email directories and lists – something which was not allowed by the administration for the current research study. The small number of respondents was also partially limited by time constraints (the survey only being open for two weeks) and one can assume that with more time, a larger number of respondents would have participated.

It is also important to recognize that this study was particular to the students at Northwestern University. The specifically chosen scope and focus of the research study, while important to the advancement of this particular institution, is a case study and cannot necessarily be generalized to encompass the larger college student population on a national level. Similar studies of a variety of different institutions (public, private,

religious, community colleges) with different student populations, school missions, geographic locations, and sources of funding would have to be surveyed in order to get a more complete picture of student attitudes towards environmentally responsible behaviors on a national level.

One final limitation of the study is that the field of environmental sustainability is a constantly changing concept. In the six months over which this study was conceived of and carried out, Northwestern made several announcements regarding environmental initiatives, including the creation of an sustainability working group (SWAG) and the opening of a “GREEN living” dorm for the fall of 2008. This is indicative of the strong influence that the environmental movement is having on campuses nation-wide even as we speak.

Future Directions for Research

The study and its findings raise a number of questions to be considered for future research. In a follow-up to this study, it would be important and much more informative to be able to conduct a university-wide survey to target more apathetic and less environmentally aware students. More students with a wider range of opinions towards the environment will need to be surveyed and interviewed in order to get a more complete picture of where the university stands.

Additionally, the scope of this research did not take into account any major differences between the Chicago and Evanston campuses. Further research should consider looking into tangible differences between environmental practices on the two campuses and whether there are discernable differences in behavior between the

Evanston campus – with the entire undergraduate population – and the Chicago campus – which is made up of primarily professional graduate students.

Likewise, most studies looking at environmental behaviors on campus tend to focus on student behaviors and awareness. It would be both interesting and important to look at the behaviors and attitudes of the other various stakeholders of the university. Faculty, staff, administration and trustees all play major parts in creating an environmentally sustainable campus. These stakeholders, even more than the students, may be important for creating a lasting sustainable culture because of their longevity within the institution as opposed to the transient nature of most students. What types of motivators and barriers can be found for these different stakeholders and how do they compare to those of the students on campus?

Suggestions for the Institution

While far from complete, the picture painted by this preliminary study does uncover a number of suggestions that will help to improve the nature of the environmental culture on campus. The most important recommendation for Northwestern to improve its environmental sustainability practices is to form an office of sustainability. This would serve as a command center for a more coordinated effort to increase communication and publicity about the initiatives being conducted on campus. Having a full-time director to create and organize actual quantitative assessments of campus projects is most important for setting institutional benchmarks. Likewise, an office of sustainability will be beneficial to both the administration and the students in that the director will serve as a conduit for communication between the two parties – communication that is desperately needed as evidenced by the findings in this study.

Simkins and Nolan (2004) highly support the idea of all universities implementing such offices on campus. These “Environmental Management Systems” will help to enhance the social responsibility of all the different stakeholders within the campus community and encourage an increase in education, training, communication and collaboration (p.5).

A second suggestion is the creation of Green Funds for the benefit of student sustainability projects. There are several strong and passionate student groups on campus with the ideas and the motivation to take Northwestern’s campus forward in the sustainability movement. By providing students with the funding to embark on targeted environmentally sustainable initiatives around campus, the university will help to create better relationships between students and administration. By putting specific funding towards student initiatives in sustainability, the university will also increase awareness and publicity for the movement and help to encourage the entire campus and community at large to adopt more environmentally responsible behaviors.

This study has shown that the initiative and continuance of environmentally responsible behavior of college students is a complicated but not impossible task for a university to undertake. Students are impeded by barriers such as inconvenience, apathy, lack of communication, and lack of knowledge. But they are motivated by the powerful concept of moral obligation. College students are at a most hopeful and inquisitive time in their lives and for many, the experience these students have at college will shape and define their lives in the future. As the campus sustainability movement continues to grow and develop, Northwestern must address its own moral and social imperatives and join in the campaign that has driven hundreds of other campuses across the nation to adopt and support more environmentally responsible behaviors.

References

- Bartlett, P.F., & Chase, G.W. (Eds.). (2004). *Sustainability on campus: Stories and strategies for change*. Cambridge, Massachusetts: The MIT Press.
- Bickman, L. (1972). Environmental attitudes and actions. *Journal of Social Psychology*, 87, p.323-324.
- Bienen, Henry S. "State of the University." Northwestern University. Evanston, IL. 21 February 2008.
- Bowers, C.A. (1997). *The culture of denial: Why the environmental movement needs a strategy for reforming universities and public schools*. Albany, NY: State University of New York Press.
- Clough, W.G., Chameau, J., & Carmichael, C. (2006, Winter). Sustainability and the university. *The Presidency*, 30-40.
- Clugston, R.M. and Calder, W. (2002). Critical dimensions of sustainability in higher education. In W.L. Filho (Eds.), *Sustainability and University Life*. Frankfurt, Germany: Peter Lang Publishers.
- Consortium on Financing Higher Education Website*. Retrieved April 21, 2008, from <http://web.mit.edu/cofhe/>.
- Cortese, A.D. (1999). *Education for sustainability: The university as a model for sustainability*. Retrieved December 3, 2007, from <http://www.secondnature.org/pdf/snwritings/articles/univmodel.pdf>.
- Cortese, A.D. (2003). The critical role of higher education in creating a sustainable future. *Planning for Higher Education*, Retrieved December 6, 2007, from http://www.aashe.org/resources/pdf/Cortese_PHE.pdf.

- Creighton, S.H. (1998). *Greening the ivory tower: Improving the environmental track record of universities, colleges, and other institutions*. Cambridge, Massachusetts: The MIT Press.
- Dale, A. & Newman, L. (2005). Sustainable development, education and literacy. *International Journal of Sustainability in Higher Education*, 6(4), 351-362.
- Davis, S.A., Edmister, J.H., Sullivan, K. & West, C.K. (2003). Educating sustainable societies for the twenty-first century. *International Journal of Sustainability in Higher Education*, 4(2), 169-179.
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deci, E.L., & Ryan, R.M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), pp.68-78.
- De Young, R. (1990-91). Some psychological aspects of living lightly: Desired lifestyle patterns and conservation behavior. *Journal of Environmental Systems*, 20, pp.215-227.
- De Young, R. (2000). Expanding and evaluating motives for environmentally responsible behavior. *Journal of Social Issues*, 56 (3), pp. 509-526.
- Dresner, M. & Blatner, J.S. (2006). Approaching civic responsibility using guided controversies about environmental issues. *College Teaching*, 54(2), 213-219.
- Ehrlich, T. (2000). *Civic responsibility and higher education*. Washington, DC: The American Council on Education and The Oryx Press.
- Elkington, J. (1998). *Cannibals with forks: The triple bottom line of 21st century business*.

- Gabriola Island, British Columbia: New Society Publishers.
- Geller, E.S. (1992). Solving environmental problems: A behavior change perspective. In S. Staub & P. Green (Eds.), *Psychology and social responsibility: Facing global challenges* (pp.248-268). New York: New York University Press.
- Hargadon, S. (2007, Winter). Northwestern turning green. *Northwestern Magazine: For Alumni and Friends of Northwestern University*, 28.
- International Association of Universities (1993), *Kyoto Declaration: Proceedings of the Ninth International Association of Universities Round Table*, IAU, Paris.
- IPCC (2001). Climate change 2001: The scientific basis – Summary for Policymakers. A report of working group 1 of the intergovernmental panel on climate change. *IPCC Third Assessment Report*. Retrieved on February 27, 2008, from <http://www.ipcc.ch>.
- Jickling, B. (2000). Education for sustainability: *A seductive idea, but is it enough for my grandchildren?* Retrieved February 27, 2008, from http://www.ec.gc.ca/education/ee_jickling_e.htm.
- Jordan, J.R., Hungerford, H.R., & Tomera, A.N. (1986). Effects of two residential environmental workshops on high school students. *Journal of Environmental Education*, 18, p.15-22.
- Kagawa, F. (2007). Dissonance in students' perceptions of sustainable development and sustainability: Implications for curriculum change. *International Journal of Sustainability in Higher Education*, 8(3), p.317-338.
- Kaiser, F.G., Ranney, M., Hartig, T. & Bowler, P.A. (1999). Ecological behavior,

- environmental attitude, and feelings of responsibility for the environment.
European Psychologist, 4(2), pp.59-74.
- Kaplan, S. (2000). Human nature and environmentally responsible behavior. *Journal of Social Issues*, 56(3), pp.491-508.
- Katzev, R.D., & Johnson, T.R. (1987). *Promoting energy conservation: An analysis of behavioral research*. Boulder, CO: Westview Press.
- Kellogg Commission on the Future of State and Land-Grant Universities. (1999).
Returning to our roots: The engaged institution (Third Report). Washington, D.C.: NASULGC.
- Kezar, A. (2004). What is more important to effective governance: Relationships, trust, and leadership, or structures and formal processes? *New directions for Higher Education*, 127, p.35-46.
- Kohlberg, L. (1984). *Essays on moral development: The psychology of moral development*, vol. II. New York: Harper & Row Publishers, Inc.
- Lee, B.A. (1991). Campus leaders and campus senates. *New Directions for Higher Education*, 19(3), 41-61.
- M'Gonigle, M. and Starke, J. (2005). *Planet U: Sustaining the world, reinventing the university*. Gabriola Island, British Columbia: New Society Publishers.
- McKenzie-Mohr, D. & Smith, W. (1999). *Fostering sustainable behavior: An introduction to community-based social marketing*. Gabriola Island, British Columbia: New Society Publishers.
- Newport, D., Chesnes, T., & Lindner, A. (2003). Ensuring that sustainability stands on

- three legs. *International Journal of Sustainability in Higher Education*, 4(4), 357-363.
- Nicolaides, A. (2006). The implementation of environmental management towards sustainable universities and education for sustainable development as an ethical imperative. *International Journal of Sustainability in Higher Education*, 7(4), p.414-424.
- Northwestern University. *Northwestern Facts*. Retrieved February 27, 2008, from <http://www.northwestern.edu/about/facts/>.
- Osbaldiston, R. & Sheldon, K.M. (2003). Promoting internalized motivation for environmentally responsible behavior: A prospective study of environmental goals. *Journal of Environmental Psychology*, 23, pp.349-357.
- O'Meara, K.A. (2005). Encouraging multiple forms of scholarship in faculty reward systems: Does it make a difference? *Research in Higher Education* 46(5), 479-510.
- Ostrander, S.A. (2004). Democracy, civic participation, and the university: A comparative study of civic engagement on five campuses. *Nonprofit and Voluntary Sector Quarterly*, 33(1), 74-93.
- Overton, B.J. & Burkhardt, J.C. (1999). Drucker could be right, but...: New leadership models for institutional-community partnerships. *Applied Developmental Science*, 3(4), 217-227.
- Peck, S. (2008, May 5). Dorm to offer 'green' living: New house will serve 20 students

- fall quarter. *The Daily Northwestern*. Retrieved May 27, 2008, from <http://media.www.dailynorthwestern.com/media/storage/paper853/news/2008/05/02/Campus/Dorm-To.Offer.green.Living-3360491.shtml>.
- Raill, S. & Hollander, E. (2006) How campuses can create engaged citizens: The student view. *Journal of College & Character*, 7(1), 1-7.
- Rappaport, A. & Creighton, S.H. (2007). Degrees that matter: Climate change and the university. Cambridge, Massachusetts: The MIT Press.
- Rosenthal, E. & Revkin, A.C. (2007, February 3). Science panel calls global warming 'unequivocal.' *The New York Times*. Retrieved April 14, 2008, from <http://www.nytimes.com/2007/02/03/science/earth/03climate.html>.
- Scott, J. (2000). Rational choice theory. In G. Browning, A. Halcli, & F. Webster (Eds.), *Understanding contemporary society: Theories of the present* (pp.126-138). London: Sage Publications Ltd.
- Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. Currency Doubleday: New York.
- Sharp, L. (2002). Green campuses: The road from little victories to systemic transformation. *International Journal of Sustainability in Higher Education*, 3(2), p.128-145.
- Sheldon, K.M. (2004). Positive value change during college: Normative trends and individual differences. *Journal of Research in Personality*, 39, pp.209-223.
- Simkins, G. & Nolan, A. (2004, March). *Environmental management systems in universities: Occasional paper for the Environmental Association for Universities and Colleges*. Cheltenham, U.K.: EAUC.

- Sterman, J.D. & Sweeney, L.B. (2002). Cloudy skies: Assessing public understanding of global warming. *System Dynamics Review*, 18(2), 207-240.
- Sustainable Endowment Institute. (2008). *College sustainability report card: A review of campus & endowment policies at leading institutions*. Retrieved November 26, 2007, from <http://www.endowmentinstitute.org/sustainability/>.
- The White House (2001). *President Bush discusses global climate change*. Retrieved February 27, 2008, from <http://www.whitehouse.gov/news/releases/2001/06/20010611-2.html>.
- Thøgersen, J. (2007). Norms for environmentally responsible behaviour: An extended taxonomy. *Journal of Environmental Psychology*, 26, pp.247-261.
- Toma, J.D., Dubrow, G., and Hartley, M. (2005). *The uses of institutional culture: Strengthening identification and building brand equity in higher education*. San Francisco: Jossey-Bass.
- Truong, A. (2008, Jan. 21). Green cup challenges dorms' thirst for energy efficiency. *The Daily Northwestern*. Retrieved May 27, 2008, from <http://media.www.dailynorthwestern.com/media/storage/paper853/news/2008/01/21/Campus/Cup-Challenges.Dorms.Thirst.For.Energy.Efficiency-3159165-page2.shtml>.
- Wals, A.E.J. & Jickling, B. (2002). "Sustainability" in higher education: From Doublethink and newspeak to critical thinking and meaningful learning. *International Journal of Sustainability in Higher Education*, 3 (3), 221-232
- Wolfe, V.L. (2001). A survey of the environmental education of students in non-

environmental majors at four-year institutions in the USA. *International Journal of Sustainability in Higher Education*, 2(4), p.301-315.

Wright, T.S.A. (2002). Definitions and frameworks for environmental sustainability in higher education. *International Journal of Sustainability in Higher Education*, 3(2), 203-220.

APPENDIX

- A: Student Survey Protocol
- B: Student Interview Protocol
- C: Interview Consent Form

Appendix A

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Sustainability at Northwestern University
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==== Consent Page
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Northwestern University
Master of Science in Education
School of Education and Social Policy

CONSENT FORM

Principal Investigator: Lois Trautvetter
Student Investigator: Nika Hasegawa
Faculty Advisor: Lois Trautvetter

Introduction/Purpose: You are being asked to participate in a study being conducted for a graduate thesis at Northwestern University's School of Education and Social Policy. You are being asked to participate in this study because, as a student at Northwestern University and an important stakeholder of the university, we are interested in your opinion about this topic. The purpose of this research study is to better understand the involvement and motivation of Northwestern students to participate in the sustainability movement on campus.

Procedures: As a participant in this study you are being asked to participate in an online survey. The surveys will be collected anonymously and data will be compiled and analyzed from the responses received. At any time in the study, you may decide to withdraw from the study. If you withdraw no more information will be collected from you.

Risks: Your participation in this study does not involve any physical risk or emotional risk to you. If you feel unable to or uncomfortable answering any of the questions at any time you may choose to abstain from commenting or withdraw from the study.

Benefits: While there may be no direct benefit to you by your participation in this study, the research has the potential to aid in developing more effective and meaningful sustainability initiatives on Northwestern University's campus in the future.

Alternatives: You have the alternative to choose not to participate in this research study. You are free to withdraw your participation at any time during the study without repercussion.

Confidentiality: Participation in this research study may result in a loss of privacy, since persons other than the investigator(s) might view your study records. Unless required by law, only the study investigator, members of the investigator's staff, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have authority to review your study records. They are required to maintain confidentiality regarding your identity. Results of this study may be used for teaching, research, publications, and/or presentations at scientific meetings. If your individual results are discussed your identity will be protected by replacing your first and last name with pseudonyms.

Centralized data collection or registries: The results of your survey will be collected in a centralized computer at Northwestern University, in Evanston, Illinois. All research material will be kept under the control of the researcher. Procedures to protect your identity will be followed in all reports associated with this project. Information derived from this study will only be used for research purpose within the context of this graduate thesis.

Financial Information: Your participation in this study will involve no cost to you. You will not be paid for your participation in this study.

Subjects' Rights: Your participation in this study is voluntary and you are free to withdraw at any time. You are free to choose not to answer particular questions if you do not want to. Participation or withdrawal will not affect any rights to which you are entitled.

Contact Persons: If you have any questions about this study you may contact Nika Hasegawa at telephone number (847) 373-9197 or nikahasegawa2008@u.northwestern.edu. I can be reached at any time, including evenings and weekends. If you have any questions about your rights as a research subject you may call the Office for the Protection of Research Subjects of Northwestern University at telephone number (312) 503-9338. You may also call the Director of the Higher Education Policy and Administration Program, Dr. Lois Trautvetter at (847) 491-3901 if you have any additional questions.

Consent: I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have

additional questions, I have been told whom to contact. I agree to participate in the research study described above and affirm this by clicking on the Yes, I agree button below.

Yes, I agree.

==== Instructions

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Instructions:

Some questions are multiple choice where you must select one answer. Other questions allow you to check all answers that apply. Other questions ask for your suggestions.

Answer "n/a" on questions that do not apply to you or which you do not wish to answer. If a question is unclear to you, either leave it blank or take your best guess.

This survey is confidential. We ask for your e-mail address only if you wish to participate in a brief (30min.) follow-up interview. No identifying information will be used in the research or analysis of your data.

If you encounter technical difficulties or have general questions regarding the survey/study, please contact nikahasegawa2008@u.northwestern.edu.

==== Biographical Information

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Biographical Information

2. Are you:

- Male
- Female

3. Are you:

- undergraduate student
- graduate student

4. With which college are you affiliated?

- Weinberg College of Arts and Sciences
- The Graduate School
- Feinberg School of Medicine
- Kellogg School of Management
- McCormick School of Engineering & Applied Science
- Medill School of Journalism
- School of Communication
- School of Continuing Studies
- School of Education and Social Policy
- School of Law
- School of Music

Other

5. If you are an undergraduate, what is your class year/affiliation?

- 2011
- 2010
- 2009
- 2008
- Other

6. Do you live on campus?

- Yes
- No

==== General Information (1 of 3)

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General Information

7. What are the three most important issues facing the U.S. today?

- Economy
- Terrorism/National Security
- Warfare/Nuclear Weapons
- Gas/Oil
- Environment/Natural Resources
- Education
- Population Growth
- Health Care
- Taxes
- Poverty/Homelessness
- Other

==== General Information (2 of 3)

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8. What are the three most important issues on the Northwestern campus today?

- Racial/Ethnic/Cultural Diversity
- Litter/Trash
- Recycling
- LGBTQ Awareness
- Religious Tolerance
- Financial Aid
- Campus Maintenance and Construction
- Politics
- Curriculum Choice
- Water & Energy Waste
- University Endowment
- Student Activities Funding
- School Image
- Student/Faculty/Administration Interactions
- Other

==== General Information (3 of 3)

=====
9. What are the top three resources you use to find out about campus initiatives, events and information?

- Daily Northwestern
- University Publications
- Emails from Administration
- Emails from Student Groups
- In Class/Faculty
- Campus TV
- Campus Radio
- Posters/Flyers
- University Website
- Students/Peers
- RAs/CAs
- Other

==== Change on Campus

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Change on Campus

10. Have you ever tried to enact change or initiate a project on campus? (For example, have you tried to implement a new academic program or attempted to get the administration to change its position on an issue?)

- Yes
- No

11. If yes, in what capacity did you work to enact this new change or initiative? (Describe the activity or initiative and whether it succeeded.)

12. What barriers to change did you face? If your answer to 9 was No, what barriers to change can you foresee? (Please pick top three choices.)

- Lack of Funding
- No Support from Administration
- No Support from Faculty
- No Support from Student Groups
- No Support from the Community
- Lack of interest
- Institutional bureaucracy
- Rules and regulations
- Other

13. How would you rate Northwestern's willingness/effort to allow for change and new initiatives?

- None at all (1)
- Not very good (2)
- Somewhat strong (3)
- Very strong (4)
- N/A (5)

==== General Environmental Information (1 of 3)
=====

General Environmental Information

14. When you hear the term "sustainability" what do you think of? (Check all that apply.)

- Ability to sustain life on earth
- Environment/Natural Resources
- Conservation/Recycling
- Promoting Longevity
- Don't know
- Other

15. How important is the environment to you?

- Not at all important (1)
- Not very important (2)
- Somewhat important (3)
- Very important (4)
- Don't know (5)

16. How important is it to you that Northwestern try to operate in a more environmentally sustainable manner regarding energy, water, land, recycling, etc.?

- Not at all important (1)
- Not very important (2)
- Somewhat important (3)
- Very important (4)
- Don't know (5)

17. How important is it to you for Northwestern University to be a national leader in campus environmental causes?

- Not at all important (1)
- Not very important (2)
- Somewhat important (3)
- Very important (4)
- Don't know (5)

==== General Environmental Information (2 of 3)
=====

18. Which do you believe is the most important environmental concern on Northwestern's campus right now?

- Recycling
- Air Pollution
- Environmentally-friendly Building Construction
- Organic Food Sources
- Water Pollution
- Energy Consumption
- Land Use
- Political Awareness
- Other

19. Please describe any kind of programs, notifications and/or other initiatives you have seen on the Northwestern campus with regard to the environment and/or sustainable efforts:

==== General Environmental Information (3 of 3)
=====

Environmental Sustainability is defined as the potential longevity of vital human ecological support systems such as the planet's climate system.

20. On a scale of 1 to 5, with 1 being "none at all" and 5 being "very strong" how would you describe your personal knowledge of environmental sustainability?

- 1
- 2
- 3
- 4
- 5

21. As a member of the campus community, have you learned anything about environmental sustainability from university events and/or practices?

- Yes
- No

22. Do you believe it is important to teach and learn about environmental sustainability at the university?

- Yes
- No

==== Specific Topic - Waste and Recycling (1 of 4)
=====

Specific Topic - Waste and Recycling

23. Using a scale of 1 to 5 with 1 meaning "Very unaware" and 5 meaning "very knowledgeable," rate how knowledgeable you feel about what can be recycled on campus:

- 1
- 2
- 3
- 4
- 5

24. How often do you recycle?

- Always
- Sometimes
- Never

25. Which of these reasons to recycle is most important to you?

- extension of supply of natural resources
- energy conservation
- preservation of landfill space
- economic benefits from job creation
- better organized personal waste disposal
- other

26. Using a scale of 1 to 5 with 1 meaning "not satisfied" and 5 meaning "very satisfied," please rate the ease of recycling in the following types of campus buildings:

Dormitories [25]

- 1
- 2
- 3
- 4
- 5
- N/A

Classroom & Admin. Buildings [26]

- 1
- 2
- 3
- 4
- 5
- N/A

Dining Facilities [27]

- 1
- 2
- 3
- 4
- 5
- N/A

Libraries [28]

- 1
- 2
- 3
- 4
- 5
- N/A

Laboratories [29]

- 1
- 2
- 3
- 4
- 5
- N/A

Outdoors [30]

- 1
- 2
- 3
- 4
- 5
- N/A

==== Specific Topic - Waste and Recycling (2 of 4)

=====

27. In what ways have you seen recycling initiatives/programs being implemented on campus? (Check all that apply.)

- Signs in dorms
- Signs in public buildings (academic buildings, dining halls, library, etc.)
- RAs/CAs & Dorm Education Programs
- Green Cup
- Environmental Groups on Campus
- Northwestern Recycling Website
- Orientation
- Educational Pamphlets/other literature around campus
- Presence of Recycling Bins on Campus
- Other

==== Specific Topic - Waste and Recycling (3 of 4)

=====

28. Of the following options, which would help to increase the likelihood of your recycling rather than throwing away recyclable materials? (Check all that apply)

- More recycling bins on campus
- More education on the environmental benefits of recycling
- More education on the economic benefits of recycling
- A recycling bin next to every garbage can on campus
- More signs/education explaining which items can be recycled
- Personal recycling bins in each dorm room or office
- None of the above
- Other

29. Besides recycling, what steps are you taking, if any, to reuse and reduce? (For example, some students carry their own mugs, purchase in bulk, buy recycled products):

30. Overall, do you feel that the Northwestern recycling program is doing an effective job on campus?

- Yes
- No

==== Specific Topic - Waste and Recycling (4 of 4)

=====

ONLY ANSWER QUESTIONS 30-32 IF YOU ARE CURRENTLY AN UNDERGRADUATE STUDENT LIVING ON CAMPUS. IF NOT, SKIP TO THE NEXT PAGE.

31. Have you heard of the Green Cup Competition?

- Yes
- No

32. Did you participate in the Green Cup Competition this year?

- Yes
- No

33. If you did not participate in Green Cup, for which of the following reasons did you not participate? (Check all that apply)

- I didn't have the time
- I didn't have enough knowledge of the program/competition
- I did not find the issues to be important to me
- It was too inconvenient
- I forgot
- Other
- N/A

==== Specific Topic - Computing and Printing (1 of 2)

=====

Specific Topic - Computing and Printing

34. You work primarily on:

- a Laptop
- a Desktop
- Both equally
- N/A

35. Do you leave your computer on all or almost all of the time?

- Yes
- No
- N/A

36. If you do usually leave your computer on, check all reasons:

- it is used as a server
- I need to access it from a remote location
- it networks printer for the suite/office
- I believe that turning it on and off wastes energy
- I believe that turning it on and off damages it
- it is more convenient to leave on all the time
- I'm already putting the system or monitor on stand-by or sleep mode
- unsure
- N/A

Other

37. On an average weekday, for how many hours of the 24-hour day is the primary computer you use turned on? ("On" means the system is not in standby or sleep mode, though the "monitor" may be. Hibernation is equivalent to turning off.)

- 21-24
- 16-20
- 11-15
- 5-10
- 0-4
- N/A

==== Specific Topic - Computing and Printing (2 of 2)
=====

38. Using a scale of 1 to 5 with 1 meaning "Price is most important" and 5 meaning "Recycled content is more important," rate how important recycled content in paper you buy is to you as compared to price:

- 1
- 2
- 3
- 4
- 5

39. What do you primarily use to take notes (in class, in meetings, etc.)?

- Laptop
- Notebook (paper)
- N/A
- Other

40. How do you prefer to read your course texts?

- Online/Electronically
- Hard Copy/Paper
- N/A

41. When printing, do you ever do any of the following in order to conserve paper? (Check all that apply)

- print double-sided
- print more than 1 "page" per sheet of paper
- decrease font size or margins
- save or download files/articles rather than printing
- read articles on-line
- none of the above

42. Would you use a "draft" printer if one were available to your computer lab or office? (A "draft" printer would be fed with pages that already have printing on one side.)

- Yes
- No

==== Specific Topic - Electricity Consumption
=====

Specific Topic - Electricity Consumption

(ONLY ANSWER QUESTIONS 42-45 IF YOU ARE CURRENTLY LIVING OR WORKING ON CAMPUS. IF NOT, SKIP TO THE NEXT PAGE.)

43. Do any of the lamps in your dorm or office use compact fluorescent light bulbs? (Compact fluorescent light bulbs give off the same amount of light as regular light bulbs, use less power, and last longer.)

- All
- Some
- None
- N/A

44. If you do not use compact fluorescent light bulbs, what reason(s) most closely match your own? (Check all that apply)

- They are too expensive
- I don't know where to buy them
- I like standard bulb lighting better
- My dorm/office does not supply them
- Other
- I have never heard of them before
- N/A

45. Do you leave your dorm or office lights on when you leave the room for an extended period of time?

- Always
- Sometimes
- Never
- N/A

46. How much would you be willing to see room/board costs increase per semester in order to have a percentage of your dorm energy come from clean energy resources (solar, wind, water, etc.)?

- \$0
- \$1-10
- \$11-20
- \$21-30
- \$31-40
- \$41-50
- N/A

==== Specific Topic - Water Consumption
=====

Specific Topic - Water Consumption

(ONLY ANSWER QUESTIONS 46-49 IF YOU ARE CURRENTLY LIVING ON CAMPUS. IF NOT, SKIP TO THE NEXT PAGE.)

47. Do you leave the water running while brushing your teeth?

- Yes
- No

48. Do you leave the water running while shaving (if applicable)?

- No
- Yes
- N/A

49. Do you make a conscious effort to take short showers?

- Yes
- No

50. Check any of the following that may help encourage you (and other students) to conserve water:

- Automatic sink faucets
- A water meter show how much water your shower used
- A sign (or other visible reminder) about conservation in the bathrooms
- Education about reasons to conserve water
- Low-flow toilets, showers and/or aerating sink fixtures
- None of the above
- Other

==== Specific Topics - Miscellaneous

=====

Special Topic - Miscellaneous

51. Overall, how important should environmental concerns be in campus purchasing decisions (ex: buying recycled paper, using environmentally-friendly cleaning products, buying energy efficient washer/driers, etc.)?

- Not at all important (1)
- Not very important (2)
- Somewhat important (3)
- Very important (4)
- Don't know (5)

52. How important is it to you for Northwestern to convert its existing fossil fuel campus vehicles to more energy efficient fuel (biodiesel, electric, hybrid)?

- Not at all important (1)
- Not very important (2)
- Somewhat important (3)
- Very important (4)
- Don't know (5)

53. How important is it to you for Northwestern to commit to constructing all new buildings and undertaking all new renovation projects following environmentally-friendly standards?

- Not at all important (1)
- Not very important (2)
- Somewhat important (3)
- Very important (4)
- Don't know (5)

54. If you live or work on campus, how is the heat in your room during the winter?

- Too hot (1)
- Too cold (2)
- Comfortable (3)
- Fluctuates between too hot and too cold (4)
- N/A (5)

==== Conclusion

=====

55. What other ideas can you think of that would help Northwestern students facilitate any of the above topics (recycling, water/electricity conservation, computing & printing, etc.) more efficiently? Are there other topics of importance that you wish were discussed in this survey or on campus?

56. Are you willing to be contacted for further discussion about this topic? If so, please provide your email below:

- No, I am not interested in talking more about sustainability at Northwestern.
- Yes, I am interested in talking more, here is my email:

==== Thank You!

=====

Thank you for taking our survey. Your response is very important to us.

If you have any further questions about the survey or study please do not hesitate to contact Nika Hasegawa (nikahasegawa2008@u.northwestern.edu).

Appendix B

Follow-Up Interview Questions

1. Tell me about yourself (your year, hometown, studies, and activities on campus).
2. In what ways, if any, do you participate in environmental sustainability on campus?
3. When did you start practicing these environmentally responsible behaviors?
4. Did this start at home before you came to NU?
5. What personally motivates you to continue these behaviors?
6. What personal barriers do you face to living environmentally behavior?
7. What incentives or motivation work for students? What doesn't?
8. What could the university do to improve its environmental awareness and practices?
9. What do you think the university is doing well in this regard?
10. In light of the experiences you've had on campus, do you think you will take any environmental practices with you once you have graduated?

Appendix C

Northwestern University

Master of Science in Education – School of Education and Social Policy

CONSENT FORM

Project Title: Creating a Green Community: Understanding Student Environmental Behaviors for Increased Campus Participation at Northwestern University

Principal Investigator: Lois Trautvetter

Student Investigator: Nika Hasegawa

Faculty Advisor: Lois Trautvetter

Introduction/Purpose:

You are being asked to participate in a study being conducted for a graduate thesis at Northwestern University's School of Education and Social Policy. You are being asked to participate in this study because, as a student at Northwestern University and an important stakeholder of the university, we are interested in your opinion about this topic. The purpose of this research study is to better understand the involvement and motivation of Northwestern students to participate in the sustainability movement on campus.

Procedures:

As a participant in this study you will be asked to meet for a one-time interview. This interview will last approximately thirty (30) minutes and will be conducted in a place agreed upon by the researcher and subject. The interview will be scheduled at a time that is convenient to you. We will conduct this interview in a location of your choice and at a time of your choosing. I will audiotape this interview and take detailed notes afterward. I will do so only with your permission. You have the right to review and edit the tape in order to delete any material you do not want on the tape. You may also turn the tape off at any point in the conversation. After the interview, the tape will be transcribed and analyzed. At any time in the study, you may decide to withdraw from the study. If you withdraw no more information will be collected from you. When you indicate you wish to withdraw the investigator will ask if the materials already collected in the study can be used.

Risks:

Your participation in this study does not involve any physical risk or emotional risk to you. If you feel unable to or uncomfortable answering any of the questions at any time you may choose to abstain from commenting or withdraw from the study.

Benefits:

While there may be no direct benefit to you by your participation in this study, the research has the potential to aid in developing more effective and meaningful sustainability initiatives on Northwestern University's campus in the future.

Alternatives:

You have the alternative to choose not to participate in this research study. You are free to withdraw your participation at any time during the study without repercussion.

Confidentiality:

Participation in this research study may result in a loss of privacy, since persons other than the investigator(s) might view your study records. Unless required by law, only the study investigator, members of the investigator's staff, the Northwestern University Institutional Review Board, and representatives from the Office for Human Research Protections (DHHS) will have authority to review your study records. They are required to maintain confidentiality regarding your identity. Results of this study may be used for teaching, research, publications, and/or presentations at scientific meetings. If your individual results are discussed your identity will be protected by replacing your first and last name with pseudonyms.

Centralized data collection or registries:

The results of your participation will be collected in a centralized computer at Northwestern University, in Evanston, Illinois. All research material will be kept under the control of the researcher. Procedures to protect your identity will be followed in transcription and in all reports associated with this project. Information derived from this study will only be used for research purpose within the context of this graduate thesis. Your identity will be kept confidential and any audiotapes will be destroyed once the transcription is complete.

Financial Information:

Your participation in this study will involve no cost to you. You will not be paid for your participation in this study.

Subjects' Rights:

Your participation in this study is voluntary and you are free to withdraw at any time. You are free to choose not to answer particular questions if you do not want to. You may ask that the tape recorder be turned off at any point during the interview if there is something that you do not want to have recorded. Participation or withdrawal will not affect any rights to which you are entitled.

Contact Persons:

If you have any questions about this study you may contact Nika Hasegawa at telephone number (847) 373-9197 or nikahasegawa2008@u.northwestern.edu. I can be reached at any time, including evenings and weekends. If you have any questions about your rights as a research subject you may call the Office for the Protection of Research Subjects of Northwestern University at telephone number (312) 503-9338. You may also call the Director of the Higher Education Policy and Administration Program, Dr. Lois Trautvetter at (847) 491-3901 if you have any additional questions.

Consent:

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form. I will receive a copy of this consent form after I sign it.

Subject's Name (printed) and Signature

Date

Name (printed) and Signature of Person Obtaining Consent